

wöhner

PRODUCT MANUAL
2015

ALLES MIT SPANNUNG



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The following technical information
awaits you:

Product data

185Power, system for 185mm busbar technology
MOTUS® ContactronControl
CrossLink® Technology
System 30Compact, 3 and 5-poles
amongst many others

Product specifications

EPLAN data
CAD symbols (2D and 3D)
Dimensional diagrams
Mounting instructions
Computation programmes for:
– Short-circuit strength
– Current capacity
– Aid in drafting design verification as based on EN 61439

Product films

60mm system
CrossLink® Technology
MOTUS® ContactronControl

WHAT'S NEW AT WÖHNER A BRAND IN MOTION

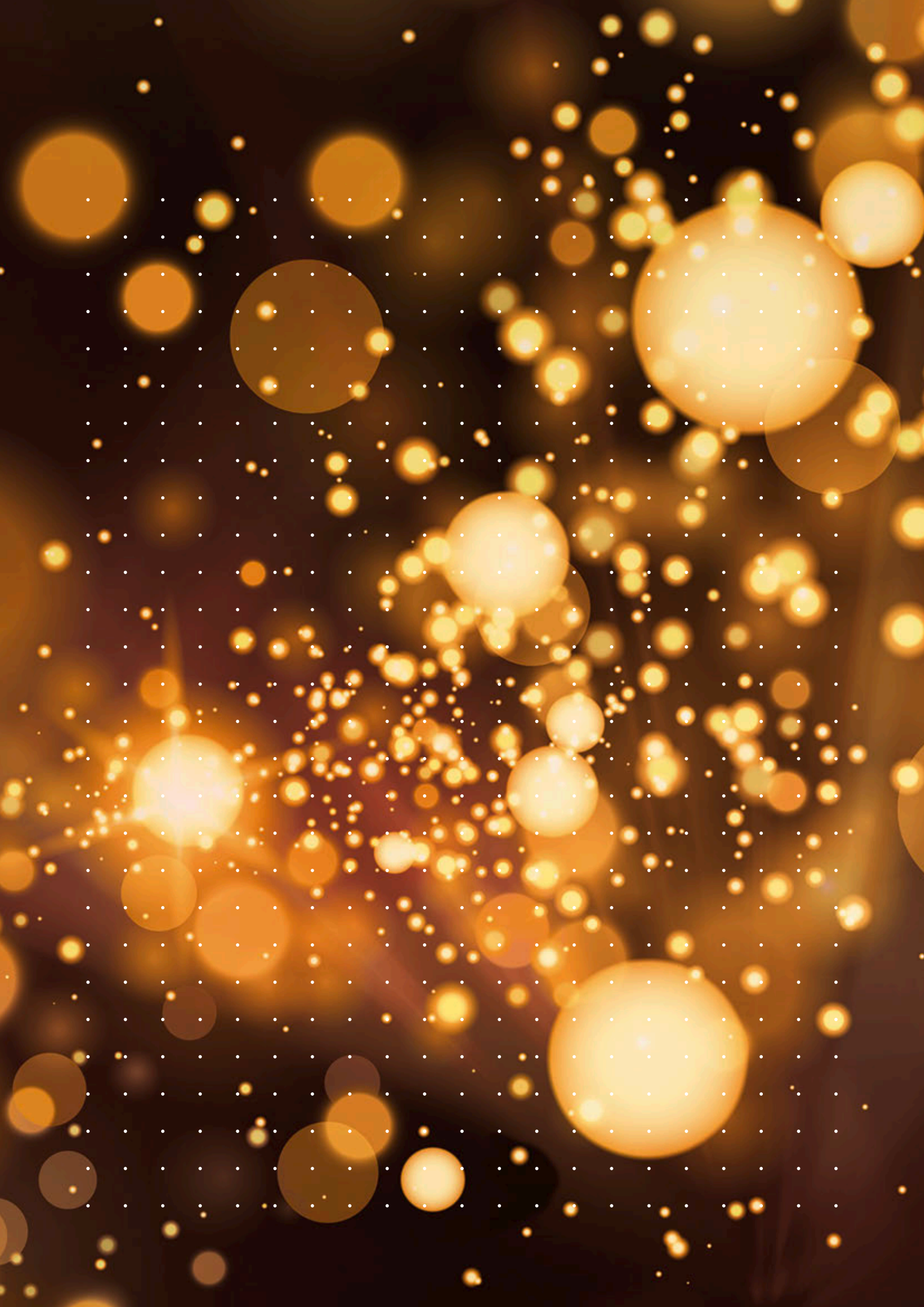
As always, the “Wöhner” brand continues to provide fascinating and trail-blazing solutions for the safe use of electricity.
Come and discover our Wöhner cosmos!

Following our extensive system solution for the 60mm busbar technology which has had such an instrumental effect on markets to date, Wöhner is now providing a revolutionary system solution for switch-gear power distribution, utilizing the 185mm busbar spacing. Wöhner's 185Power presents a perfectly matched system with high-capacity components and maximum safety thanks to CrossLink® Technology. From busbar supports, in-feed/connection modules, circuit-breaker adapters to a new NH in-line fuse switch disconnecter series, this system includes all those elements for a sustainable system. A particular highlight comes in the form of the new CrossLink® covering system ensuring optimum all-round touch safe protection. As a result, the switch-gear is particularly safe for the user and – on account of perfectly matched components – mounting times are reduced.

The Wöhner product range is being constantly extended from innovations, such as the new 185Power system, and product refinements implemented over the past few years. This growth has prompted us to launch a new, simplified name system for the entire product portfolio beginning in 2015. A full explanation is given on the following pages.

All Wöhner components meet the requirements exacted for deployment in low-voltage switchgear combinations on the basis of IEC 61439. The Wöhner website www.woehner.de/technik provides you with an aid in the design verification and downloading individual product-specific verifications.

Discover with us the fascination of electrical energy in the Wöhner cosmos.



THE NEW NAME STRUCTURE

Wöhner has over 2400 products each with their own specific names. Over the last few years this has given rise to a complex name system. We have now optimised it. There has been no change to classification with system and product family names. However, the names have been simplified and a reference created between product family and system.



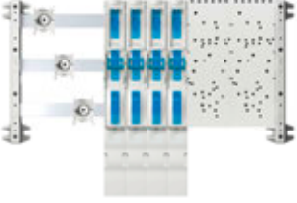
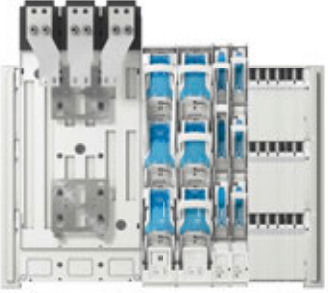

THE NEW SYSTEM NAMES

We differentiate between five system names. Particulars 30, 60, 100 and 185 refer to the bus centre spacing within the respective busbar systems. "30" in the 30Compact system refers to the smallest-possible 30mm gap in the 5-pole system. Panel mounted products are labelled as "panel".

The system name is made up of dimension and system descriptor:

30Compact

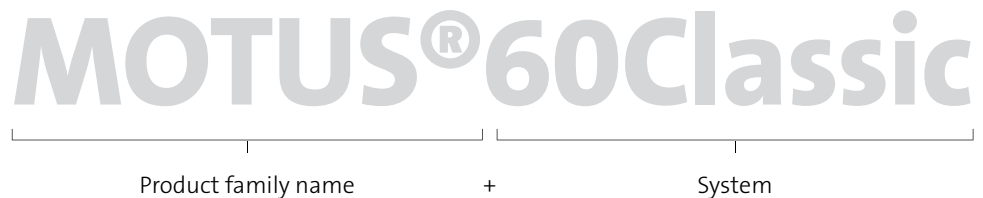
Dimension + System

OLD		NEW
60mm system compact		30Compact
60mm system classic		60Classic
100mm system		100Energy
185mm system power		185Power
Panel mounted components		Panel

THE NEW PRODUCT FAMILY NAMES

There has been no change to product family names such as AMBUS®, CUSTO®, EQUES®, QUADRON®. The respective English supplement no longer applies. The new name supplement now highlights the system in which the product can be used. A fresh definition has also been given to assigning products to the families. For instance, the product families of the fuse holders are now classified in accordance with the fuse holding fixture. This is the reason why, in just a few instances, products have changed their product family.

The product family names now additionally includes the system name:



OLD

NEW

EQUES®EasyConnector
EQUES®PowerConnector
EQUES®MotorController



Busbar adapter

EQUES®30Compact
EQUES®60Classic
EQUES®100Energy
EQUES®185Power

QUADRON®CrossLinkCarrier
QUADRON®CrossLinkBreaker
QUADRON®CrossLinkSwitch



NH fuse
switch disconnecter

QUADRON®30Compact
QUADRON®60Classic
QUADRON®100Energy
QUADRON®185Power
QUADRON®Panel

AMBUS®PowerSwitch



Strip-type switch disconnectors
for D0 fuses

SECUR®Panel

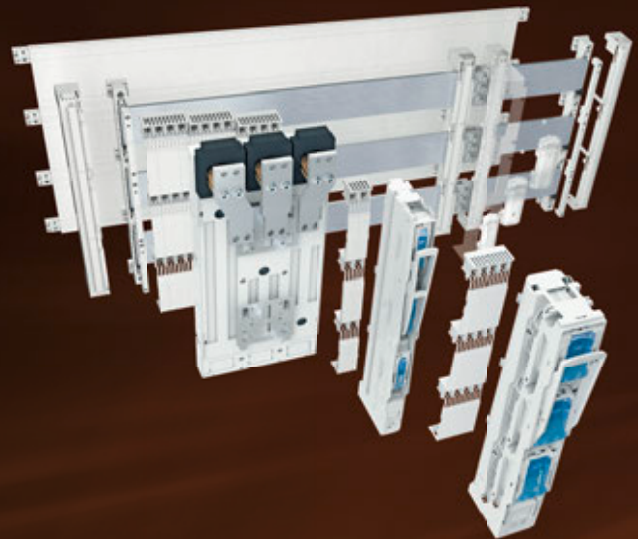
NEW PRODUCT DEVELOPMENTS

The latest innovations from Wöhner

185POWER – THE FIRST SYSTEM SOLUTION IN 185MM BUSBAR TECHNOLOGY

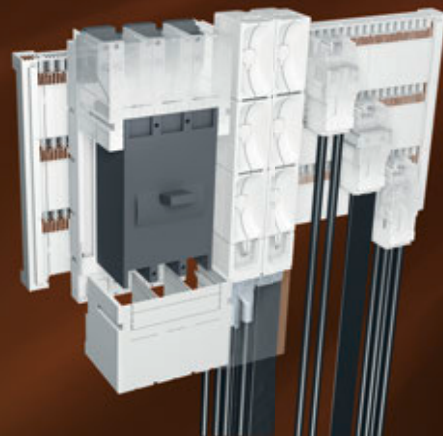
| CrossLink®185Power, Covering system

Ensuring an optimum all-round busbar system touch safe protection are the front 185Power cover profiles, the back base plate profiles and the busbar connecting terminal support cover. This total system shrouding saves time with installation work and – thanks to the matched components – provides an optimum degree of safety.



| EQUES®185Power, Adapter for circuit-breakers

The adapters enable circuit-breakers to be quickly and easily mounted on the 185Power system. They can also be used for both feed-in and outgoing feeders from the busbar system – something that, of course, applies to all the customary circuit-breakers up to 1600A. There are also 3-pole terminal strips and 1-pole connection modules.



| QUADRON®185Power, NH in-line fuse switch disconnecter

There is no trouble in fitting any variant of the QUADRON®185Power NH in-line fuse switch disconnecters of Sizes 00 to 3 in the 185Power system. Based on individual requirements of the switchgear, the in-line switch disconnecters can be conveniently, quickly and securely mounted with clamps or with conventional screw fitting to the drilled busbar.



| EQUES®30Compact, Busbar adapter for Siemens 3VA1

Wöhner has developed an appropriate busbar adapter for the new Siemens 3VA compact circuit-breaker series.

In the Wöhner 30Compact system the adapter is used for size 3VA1 up to 160A. The resilient combined feet and high-capacity inner busbar ensure secure adaptation of the circuit-breaker. This design with an installation width of only 76mm is UL-certified.



| EQUES®60Classic, Busbar adapter for Siemens S2 motor starter

A specially adjusted adapter has also been devised for the new Siemens S2 motor starter. This busbar adapter with an installation width of only 45mm provides a space-saving solution for those applications up to 80A.



| EQUES®60Classic, Busbar adapter for Siemens 3VA1 and 3VA2

Also available for the 60Classic system is a 76mm wide busbar adapter for size 3VA1 up to 160A. 60Classic also has a busbar adapter for the Siemens compact circuit-breakers of size 3VA2 up to 250A featuring a 105mm width. Tried-and-tested connection methods ensures that the switchgear mechanisms are securely connected. Both devices are UL-certified.



Notes on the use of this manual



Products with CrossLink® adapter technology



Products certified to UL 508A or with other UL approval for feeder circuits up to 600V

Part no.	
01 625	06
01 626	06
01 627	06
01 617	07
01 562	07
01 767	06

Designation for UL

Product group number

Dimensioned drawings in Chapter 9

Illustrated products

New products

Additional information in Chapters 7, 8, 9

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30Compact 200A / 360A







System advantages

With an installed height of 160mm, the 30Compact system is a space-saving solution for distribution boards up to 360A. It offers major space advantages over conventional 60mm systems, in the power range in which 40mm systems were previously often used. Another major advantage is the possibility of combining the 30Compact system with the 60Classic system: the large variety of components provides users with a great range of benefits. Moreover, the components of the 30Compact system satisfy the requirements of large creepage and clearance distances as per UL 508. They are therefore suitable for use in North America. You can find comprehensive information about this in the Approval Overview on page 8/61 onwards, and in the Product Descriptions on the internet at www.woehner.com.

If you have any further questions, our UL Hotline is at your disposal: +49 (0) 9563 / 751 508.

Connection technology

Convenient terminals for connection without drilling are available for conductor cross-sections from 1.5 to 150mm² and flat conductors up to 2 x 20 x 10mm. Terminal plates ensure shock protection and compliance with air and creepage distances, also in accordance with North American UL and CSA standards.

MOTUS®30Compact

Motor starter with additional functions: direct and reversing starters, overload protection and safety-oriented switch-off. The compact design with a width of just 22.5mm saves space in the control cabinet. Integrated functions considerably simplify the wiring. Furthermore, service life is extended by the hybrid switching technology. The switching lifespan is up to 10 times longer than in conventional switchgear such as contactors. The broad range adjustment also reduces the number of variants: just 3 versions are required for settings from 0.075A to 9A. With CrossLink® adapters for the 30Compact system, power is fed through the busbar system. The adapter locks securely in place on the busbar structure. The busbars remain safely covered and out of reach even if the MOTUS® controllers are removed. Suitable for use around the world, with UL508 approval for the North American market as well.

EQUES®Technology

Adapter technology for the secure mechanical and electrical connection of switchgear to the busbar structure. EQUES®EasyConnectors in a compact size can be combined to create larger switchgear assemblies, and with adapters of the 60Classic system series for circuit breakers with a nominal current of over 100A.



NEW

EQUES®30Compact

Busbar adapter 3-pole

For Siemens 3RA1 up to 160A

76mm installation width, 160mm long

UL approval



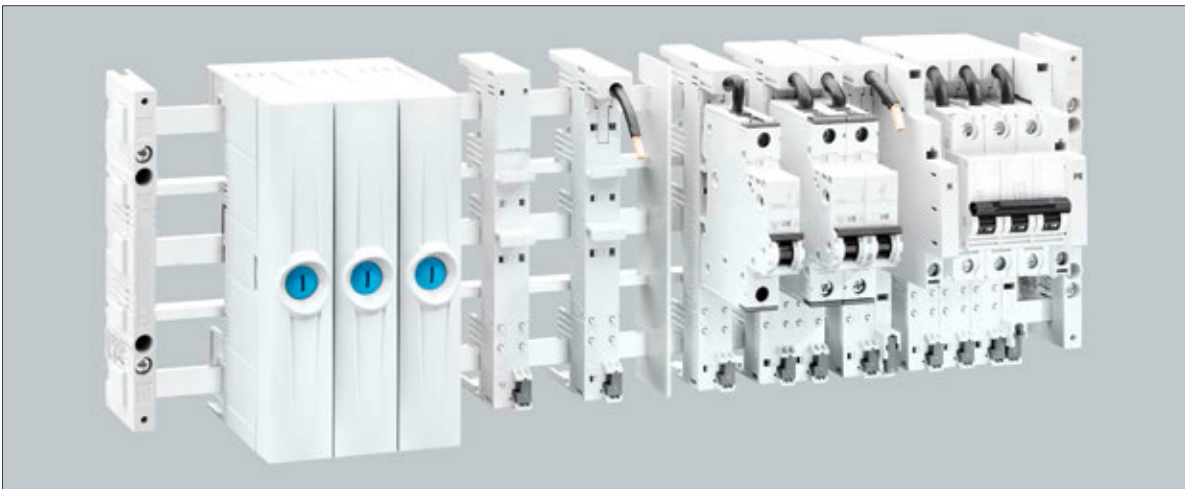
MOTUS®30Compact

Hybrid motor starter with reversing function

Installed width 22.5mm,
length 160mm

Setting ranges from 0.075 to 0.6A,
0.18 to 2.4A and 1.5 to 9A

UL approval



System 30Compact 5-pole

Space-saving system up to 200A

Installed height 160mm with
up to 5 busbars



EQUES®30Compact

Busbar adapter 1-pole

18mm wide, for circuit breakers

Contact adjustable to L1, L2, L3 or N

Versions for up to 32A and up to 63A

CUSTO®30Compact

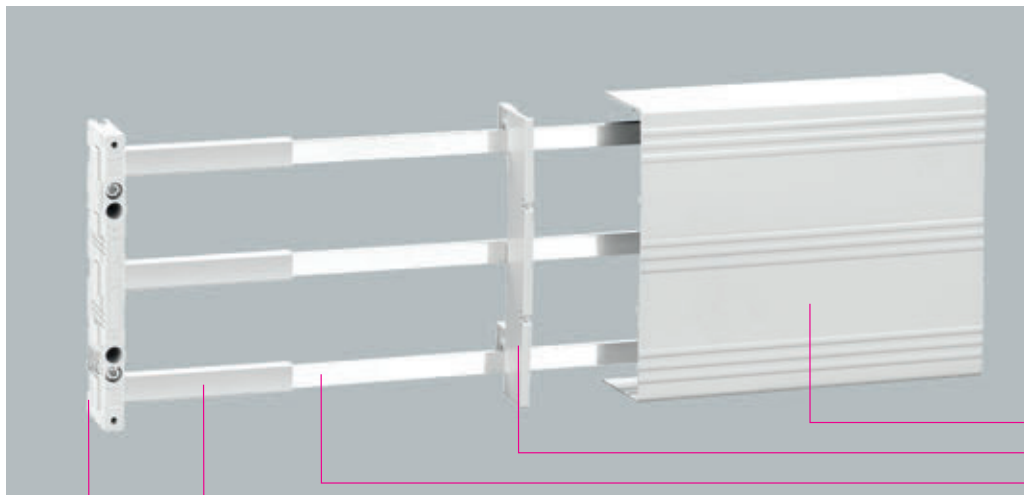
The use of fuses allows a high fault-current capacity coupled with the lowest possible energy let-through in the event of a short circuit. In this way, sub-distribution boards with D02 bus-mounting fuse elements in compact design save a great deal of space on installation.

QUADRON®30Compact

The compact design of our size 000 NH fuse switch disconnectors allows the space saving advantages of the 30Compact system to be fully exploited. When combined with the 60Classic system, the range of applications can also extend to other sizes. CrossLink® Technology opens the door to additional possibilities for use, as devices can be exchanged between identical adapter modules. More detailed information on CrossLink®Technology is also available in Chapter 2.

System components, 5-pole

The installed height of the 30Compact system remains at 160mm in the 5-pole version: N and PE conductors are positioned between the phases. This opens up new opportunities for saving space, as the busbar supports of the 30Compact system accommodate all 5 busbars. The busbars, cover sections and optional base plate remain the same. The connection technology offers a variable terminal module. For connecting conductors up to 120mm², single-pole elements are used, which can be combined as desired using connectors. The adapters are specially designed for a module width of 18mm. 1-pole elements can be adjusted to make contact with any one phase busbar or the N busbar. Empty adapters and connectors allow installation that is simultaneously variable and compact. Narrow N and PE modules for cable connection complete the system.

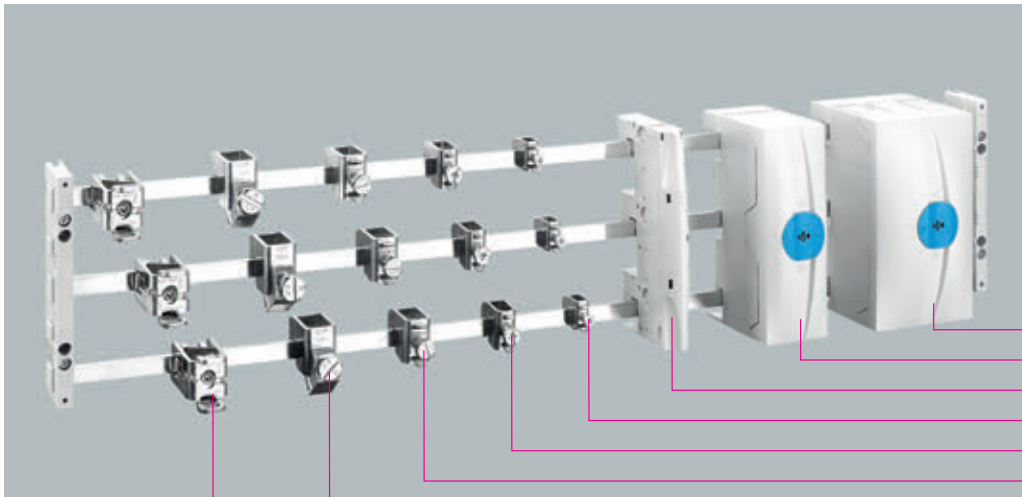


- 01 314
- 01 317
- 01 618
- 78 463
- 01 272

30Compact, 3-pole, system height 160mm

for busbar 12 x 5, 10

Busbar supports						
Type	Pack size	Weight		Part no.		
		kg/100 u.				
3-pole, for 12 x 5 and 12 x 10 flat busbars, with end cover	10	6.8		01 272	06	
18mm separator for UL 508, fits under 01 272	10	5.2		01 374	06	
Busbar E-Cu, tin-plated						
Type	Length	Cross section	Pack size	Weight		Part no.
				kg/100 u.		
12 x 5	2400	60	1	128.4		01 618 06
12 x 10	2400	120	1	257.0		01 623 06
shorter lengths on request for current carrying capacity of busbars see page 8/7 or 8/8						
Cover section, 3-pole						
Type	Pack size	Weight		Part no.		
		kg/100 u.				
0.7m long	2	42.0		01 314	06	
mount for 01 314	10	1.8		01 317	06	
Busbar cover, 1m long						
for 12 - 30 x 5	10	8.7		01 244	06	
for 12 - 30 x 10	10	10.1		01 245	06	
for 12 x 5	10	3.2		78 463	06	



- 01 165
- 01 401
- 01 562
- 01 284
- 01 285
- 01 287
- 01 068
- 01 135

30Compact, 3-pole, system height 160mm

for busbar 12 x 5, 10

CRITO®, universal conductor connecting terminal

For busbars	Connection min. - max.	Terminal space W x H	For use up to max.	Pack size	Weight kg/100 u.		Part no.	
for 5mm flat busbars	1.5 - 16	7.5 x 7.5	180A	100	2.1		01 284	07
	4 - 35	10.5 x 11	270A	50	4.6		01 285	07
	16 - 70	14 x 14	400A	25	7.1		01 287	07
	16 - 120	17 x 15	440A	25	10.6		01 068	07
for 10mm flat busbars	1.5 - 16	7.5 x 7.5	180A	100	2.3		01 289	07
	4 - 35	10.5 x 11	270A	50	4.7		01 290	07
	16 - 70	14 x 14	400A	25	7.5		01 292	07
	16 - 120	17 x 15	440A	25	10.9		01 203	07

CRITO®, brace terminal

for 12-20 x 5-10 flat busbars	*	35 - 150	20 x 22	480A	6	10.2		01 135	07
* not maintenance-free if aluminium conductors are used (see page 8/2)									

CRITO®30Compact, connection module 3-pole, for 12 x 5 and 12 x 10, with spring terminals, with cover cap

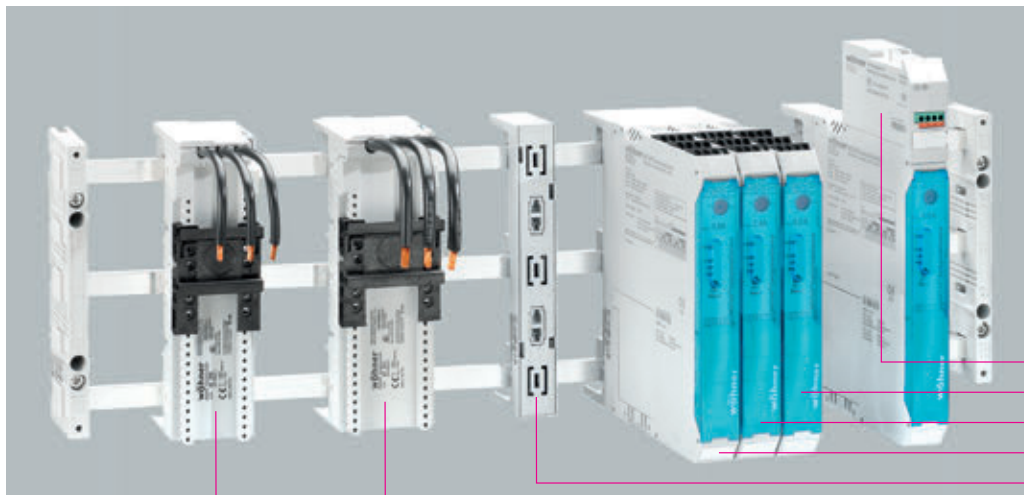
Connection	Width	For use up to max.	Pack size	Weight kg/100 u.		Part no.	
1.5 - 16mm ²	20	80A	6	16.0		01 562	07

CRITO®30Compact, connection module 3 pole, with cap

Type	Width	For use up to max.	Pack size	Weight kg/100 u.		Part no.	
6-50mm ² round conductors, Ia. Cu 7x4 to 9x10	54	300A	1	20.6		01 401	07
35-150mm ² round conductors, Ia. Cu 15x5 to 18x10	90	480A	1	57.5		01 165	07

Busbar connector, for same-size busbars

For busbars	Length	System separation	For use up to max.	Pack size	Weight kg/100 u.		Part no.	
12-20 x 5-10	55	5 - 10	520A	12	19.2		01 166	07
12-20 x 5-10	150	100 - 110	520A	3	52.4		01 193	07



- 36 209
- 36 107
- 36 104
- 36 101
- 36 113
- 32 591
- 32 590

30Compact, 3-pole, system height 160mm

for busbar 12 x 5, 10

EQUES®30Compact, busbar adapter

Type	Pack size	Weight kg/100 u.		Part no.	
32A, 1 mounting rail, 54 x 160mm	4	19.8		32 590	05
63A, 1 mounting rail, 54 x 160mm	4	21.8		32 591	05
160A, for Siemens 3VA1 and 3VT160, connection to the system top	1	78.0		32 661	05
9mm side-mounted module, connectable on both sides	* 10	2.0		32 912	05
* for 32 590 and 39 591					

MOTUS®30Compact, hybrid motor starter with reversing function and CrossLink®Technology, 22.5mm wide

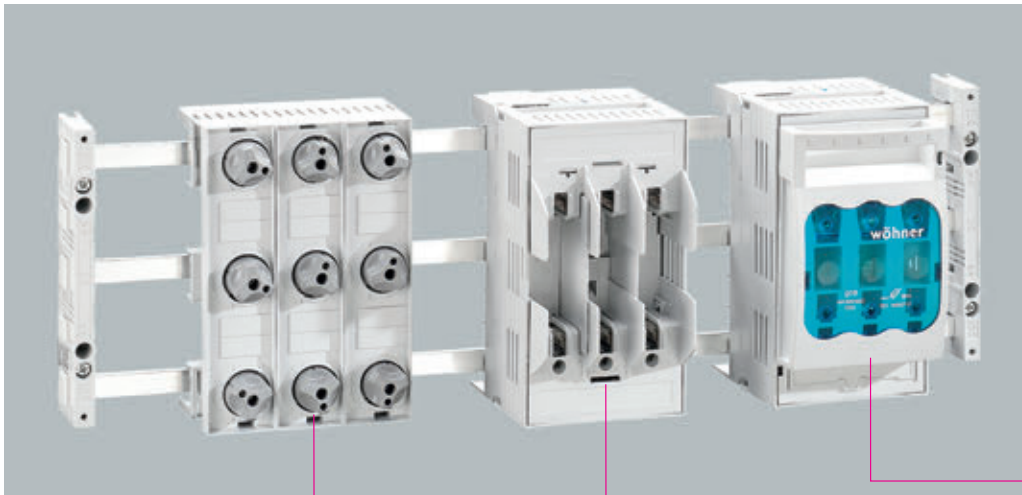
0.075 - 0.6A direct and reversing starter	1	61.9		36 101	21
0.18 - 2.4A direct and reversing starter	1	61.9		36 104	21
1.5 - 9A direct and reversing starter	1	61.9		36 107	21

Module for connection to SmartWire-DT®

for all MOTUS®	1	6.5		36 209	21
further components for SmartWire-DT on page 7/2					

Spare components MOTUS®

16A fuse for 0.6A and 2.4A versions	3	2.8		31 567	21
20A fuse for 9A version	3	2.8		31 568	21
30A fuse for 9A version for motors with heavy starting	3	2.8		31 569	21
0.075 - 0.6A electronics module for direct/reversing starters	1	57.1		36 109	21
0.18 - 2.4A electronics module for direct/reversing starters	1	57.1		36 110	21
1.5 - 9A electronics module for direct/reversing starters	1	57.1		36 111	21
adapter for MOTUS®30Compact	1	9.3		36 113	21



33 416
03 316
31 554

30Compact, 3-pole, system height 160mm

for busbar 12 x 5, 10

CUSTO®30Compact, D0 bus-mounting fuse base 63A

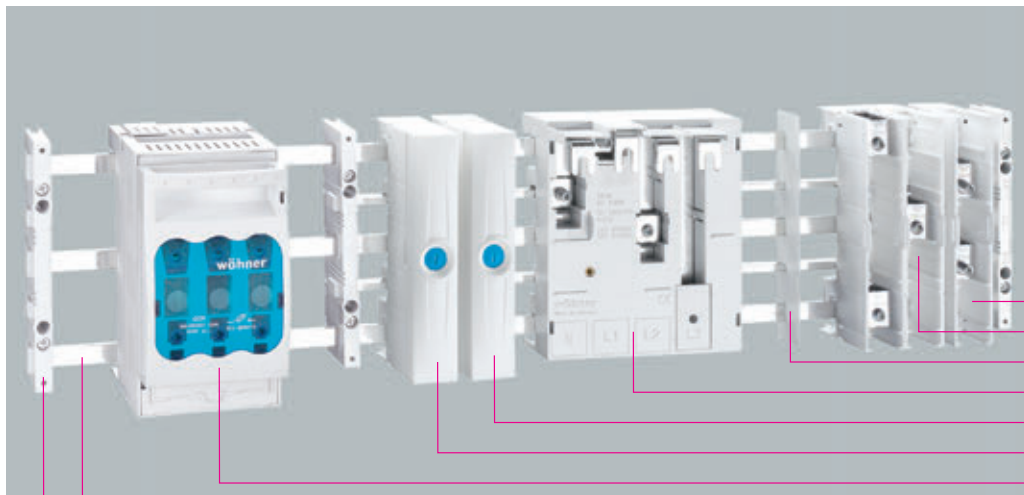
Type	Pack size	Weight kg/100 u.	Part no.	
3-pole 36 x 160mm, Size D0	6	13.0	31 554	01

QUADRON®30Compact, NH bus-mounting fuse base 125A

3-pole, 90 x 160mm, size NH000, NH00C	1	70.3	03 316	10
grip lug cover, 1 unit required for each NH fuse base	4	2.7	03 287	10

QUADRON®30Compact, NH bus-mounting fuse base 125A

3-pole, 90 x 160mm, size NH000, NH00C	1	90.0	33 416	09
pilot switch for monitoring lid position	1	1.1	33 156	09



- 01 427
- 01 426
- 01 376
- 32 640
- 01 367
- 01 364
- 33 416
- 01 618
- 01 272

30Compact, 5-pole, system height 160mm

for busbar 12 x 5

Busbar supports

Type	Pack size	Weight		Part no.	
		kg/100 u.			
3, 4, 5-pole, for 12 x 5 flat busbars, with end cover	10	6.8		01 272	06

Intermediate busbar brace, 2mm wide

for 3, 4, 5-pole system	10	1.5		01 376	06
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Busbars

12 x 5 flat busbar, 2.4m long, tin-plated	1	128.4		01 618	06
for current carrying capacity of busbars see page 8/7 or 8/8					

Cover section, can only be used with holder 01 317

0.7m long	2	42.0		01 314	06
mount for 01 314	10	1.8		01 317	06
base plate, 0.7m long	2	26.7		01 371	06

CRITO®30Compact, Connection set with cover flap

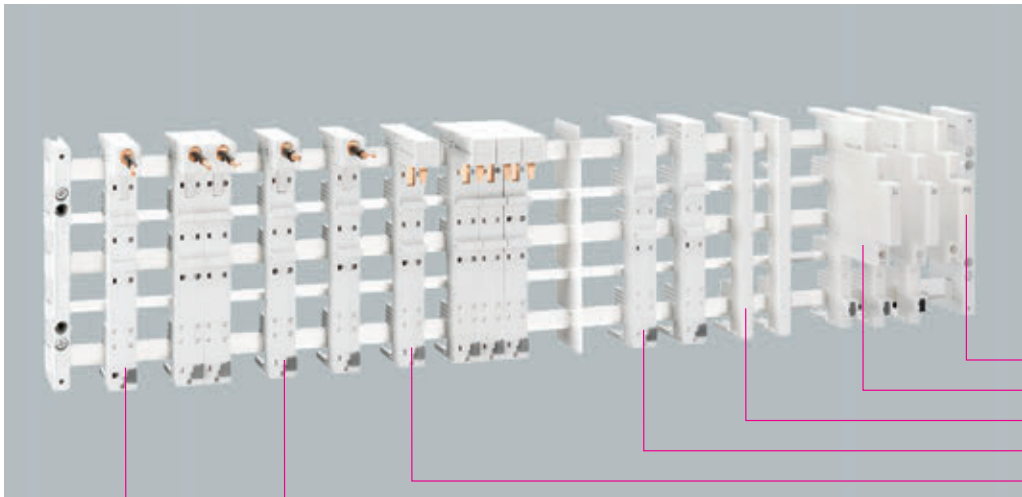
Type	Width	Length	Pack size	Weight		Part no.	
				kg/100 u.			
connection set, 3-pole, 10-120mm ²	90	160	1	60.0		01 370	07
connection module N, 10-120mm ²	30	160	1	21.5		01 364	07
connection module PE, 10-120mm ²	30	160	1	21.5		01 367	07
connection set, 3-pole, 10-120mm ²	60	160	1	51.5		01 426	07
connection module N+PE, 10-120mm ²	30	160	1	30.0		01 427	07

QUADRON®30Compact, NH bus-mounting fuse switch disconnecter 125A, only for use in 3-pole system

Type	Pack size	Weight		Part no.	
		kg/100 u.			
3-pole, 90 x 160mm, size NH000, NH00C	1	90.0		33 416	09

EQUES®30Compact, Busbar adapter, 4-pole

Type	Width	Pack size	Weight		Part no.	
			kg/100 u.			
160A, for Schneider Electric INS100-160	141	1	64.0		32 640	05



- 32 634
- 32 632
- 32 633
- 32 631
- 32 628
- 32 630
- 32 629

30Compact, 5-pole, system height 160mm

for busbar 12 x 5

EQUES®30Compact, Busbar adapter, modular

Type	Adapter width	Adapter length	Pack size	Weight kg/100 u.		Part no.		
1-pole, 32A	18	160	12	6.0		32 629	05	
1-pole, 63A	18	160	12	6.6		32 630	05	
1-pole, 63A, for Schneider Electric iC60, iC65 and C60	18	160	12	7.0		32 628	05	
contact can be set to L ₁ , L ₂ , L ₃ or N								
module N, with terminal 16mm ²	9	160	12	4.4		32 632	05	
module PE, with terminal 16mm ²	9	160	12	4.4		32 634	05	
component support, 1-pole	18	160	6	3.3		32 631	05	
side-mounted module	9	160	12	1.2		32 633	05	
connection set for creating multi-pole adapters (50 connections possible)			1	2.0		31 390	05	
* without separate lock to the busbar system. it must be plugged onto the modular busbar adapter.								

60Classic
630A (800A)/2500A





System advantages

The 60Classic busbar system enables a broad or wide range of busbars to be used, and therefore offers easy adaptation to suit a great variety of currents. The hallmark of this system is its especially safe, space-saving and simple design, not to mention its very extensive choice of components. In addition, many components of the 60Classic system satisfy the through-air and over-surface arcing distances as per UL 508. They are therefore suitable for use in North America.

You can find detailed information about this in the Approval Overview on page 8/61 onwards, and in the Product Descriptions on the internet at www.woehner.com.

Connection technology

Conductors with a cross-section of up to 300mm² can be connected without drilling to universal conductor terminals or terminal plates. Uncut conductors can also be connected to terminal plates, for connecting multiple busbar systems, for example. With the jaw-type terminals of the CRITO®, round and sector-shaped conductors can be connected quickly and conveniently. End-to-end busbar connections enable busbar systems to be extended effortlessly.

MOTUS®60Classic

Hybrid motor starter with additional functions: direct and reversing starters, overload protection and safety-oriented switch-off. The compact design with a width of just 22.5mm saves space in the control cabinet. Integrated functions simplify the wiring considerably. Furthermore, service life is extended by the hybrid switching technology: the lifespan is up to 10x greater than in conventional switchgear such as contactors. The broad range adjustment also reduces the number of variants: just 3 versions are required for settings from 0.075A to 9A. With CrossLink® adapter for the 60Classic system, power is fed through the busbar system. The adapter locks securely in place on the busbar. The busbars remain safely covered and out of reach even if the MOTUS® basic devices are removed. Suitable for use around the world, with UL508 approval for the North American market as well.

EQUES®Technology

The adapter technology in the 60Classic system: with a host of innovative details, the EQUES®60Classic adapters of various types effect reliable, easy connection on 12 x 5mm to 30 x 10mm buses and on double/triple T profiles. At the same time, designs with CrossLink® technology with the double set-up provide new application fields involving considerably greater safety. After all, the busbar remains contact-protected when switchgear is replaced. New variants for additional switchgear continually extend the deployment spectrum. Accessories and non-standard designs allow the 4-pole circuit-breakers to bond directly on the 60Classic busbar system.



NEW

EQUES®60Classic

Busbar adapter 3-pole

For Siemens 3RA2 up to 250A

105mm installation width, 200mm long

convertible for outgoing feeder
at top or bottom

UL approval



SECUR®60Classic

Switch disconnecter with D0 fuses

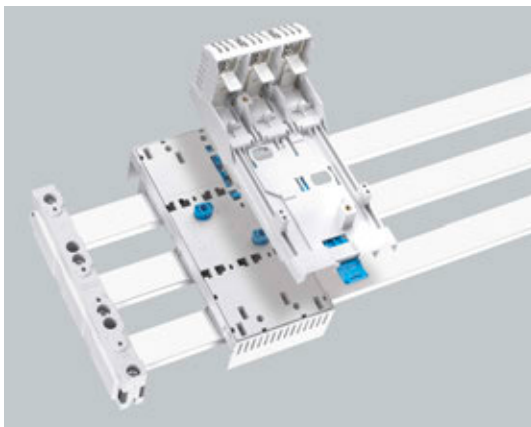
Flat design

SnapLock technology: Tool-free connection
using spring-loaded terminals

Captive drawer for holding adapter
sleeve and fuse link



- CrossLink® Technology
- Suitable for use in a varied range of applications
- Various device components are fitted without the need for screws, using the same adapters
- Optimum shock protection for more safety
- Changing the connection direction is simple, and components can be replaced and retrofitted with ease, providing greater flexibility



- EQUES®60Classic
- Busbar adapter 3-pole
- CrossLink® Technology
- For circuit-breakers up to 160A
- Selectable top / bottom outgoing feeder
- UL approval

SECUR®60Classic

Bus-mounting switch disconnecter for D0 fuses. Tried-and-tested drawer-type method and convenient spring-type terminals for attaching leads up to 16mm² both easily and rapidly. Flat design and also for use in installation distributors. The SECUR®60Classic switches in an operator-independent manner; it can be shut down in the switched-off state and sealed when switched on. The power version is designed for more exacting requirements. All 3 phases are conveniently combined at the bottom. The load switching function is of the 3-pole type and convertible to a single pole operation.

Bus-mounting fuse base and bases

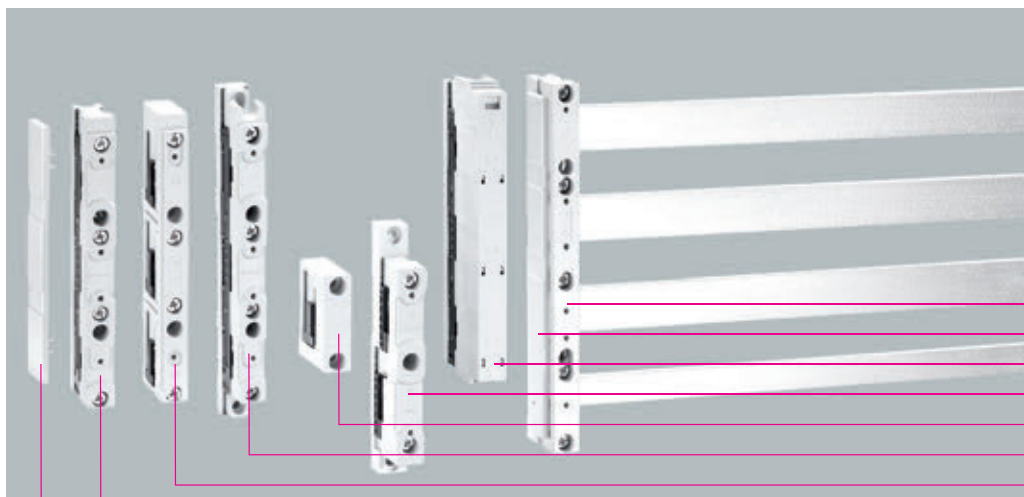
The 60Classic system can be fitted out with 3-pole bus-mounting fuse bases in the D0 and D sizes. The CUSTO®60Classic devices have comprehensive shock protection including a strip cover. Contact-protected NH fuse bases up to size 2 are available. Specific NH bases are available for semi-conductor protection purposes.

CrossLink® Technology

The new CrossLink® Technology enables wide-ranging use for various applications. Different system components in the same device category all have the same installed width and the same adapters. In this way, CrossLink®Technology improves the design versatility and safety of systems.

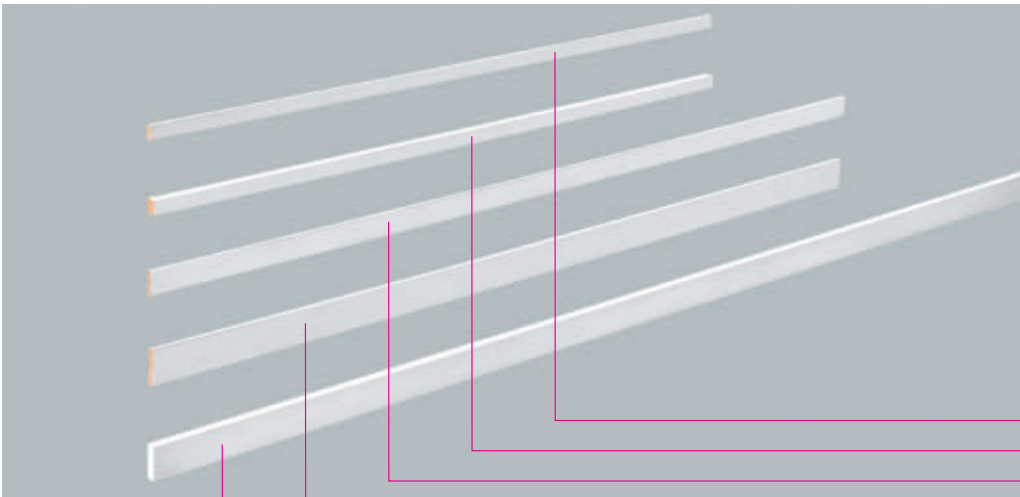
QUADRON®60Classic

The new bus-mounting fuse base for Class J fuses feature an exceptionally compact form, non-tool fuse change and integrated shock protection. It complies with the UL and CSA standard for the North American market. The highlight of the CrossLink® Technology is the bus-mounting switch disconnecter with NH fuses. Its spring-operated mechanism ensures safe, operator-independent switching. The QUADRON®60Classic with operating mechanism has a switch-on preventer with the lid opened and a shut-down device with up to 3 locks. The NH fuses can be easily and safely changed.



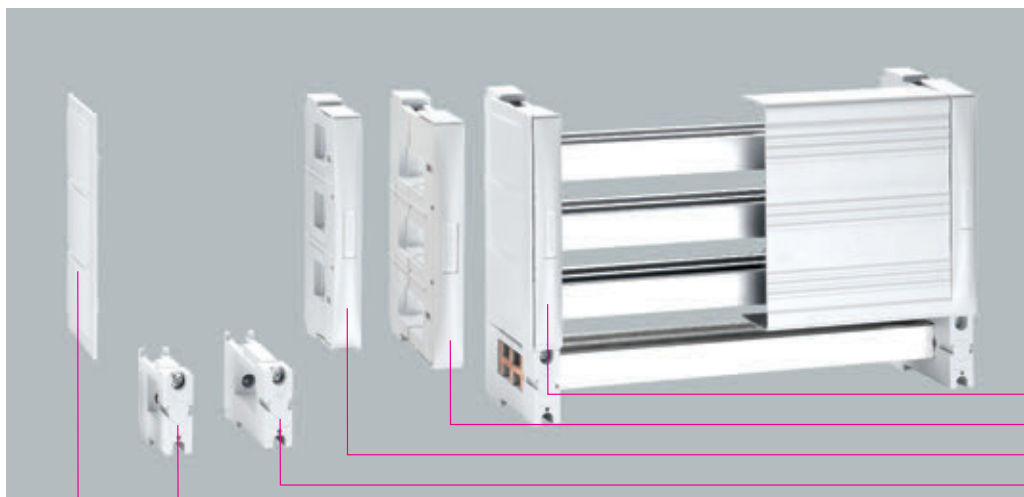
- 01 485
- 01 131
- 01 484
- 01 356
- 01 601
- 01 500
- 01 508
- 01 495
- 01 573

Universal busbar supports					
Type	For busbars	Pack size	Weight kg/100 u.	Part no.	
2-pole with internal screw holes	12, 20, 30 x 5, 10	1	8.3	01 602	06
3-pole with internal screw holes	12, 15, 20, 25, 30 x 5, 10	10	12.7	01 495	06
3-pole with additional external screw holes	12, 15, 20, 25, 30 x 5, 10	10	13.7	01 500	06
4-pole with internal screw holes	12, 15, 20, 25, 30 x 5, 10	10	26.6	01 485	06
UL busbar supports					
3-pole with internal screw holes	12, 20, 30 x 5, 10	10	14.0	01 508	06
spacer, fits under 01 508		10	9.1	01 358	06
4-pole with internal screw holes	12, 20, 30 x 5, 10	10	19.7	01 357	06
spacer, fits under 01 357		10	13.1	01 359	06
Base plate for UL busbar supports 01 508, 01 231, 01 232					
Type		Pack size	Weight kg/100 u.	Part no.	
240 x 1100		2	73.7	01 518	06
240 x 700		2	46.9	01 515	06
PE/N busbar supports, including PE and N labels					
Type	For busbars	Pack size	Weight kg/100 u.	Part no.	
2-pole, indiv. mountable	* 12, 15, 20, 25, 30 x 5, 10	10	9.5	01 356	06
1-pole, indiv. mountable	12, 20, 30 x 5, 10	1	5.9	01 601	06
* busbars at different heights and depths					
Connection busbar support					
3-pole, with integrated terminals 1.5 - 16mm ²	12, 15, 20, 25, 30 x 5, 10	10	25.6	01 484	06
End cover, for covering busbar ends					
Type		Pack size	Weight kg/100 u.	Part no.	
for busbar support 01 356 and 01 601		10	0.7	01 325	06
for busbar support 01 602		1	1.5	01 363	06
for busbar supports 01 495, 01 500, 01 508 and 01 484		10	2.0	01 573	06
for busbar supports 01 357 and 01 485		5	5.6	01 131	06



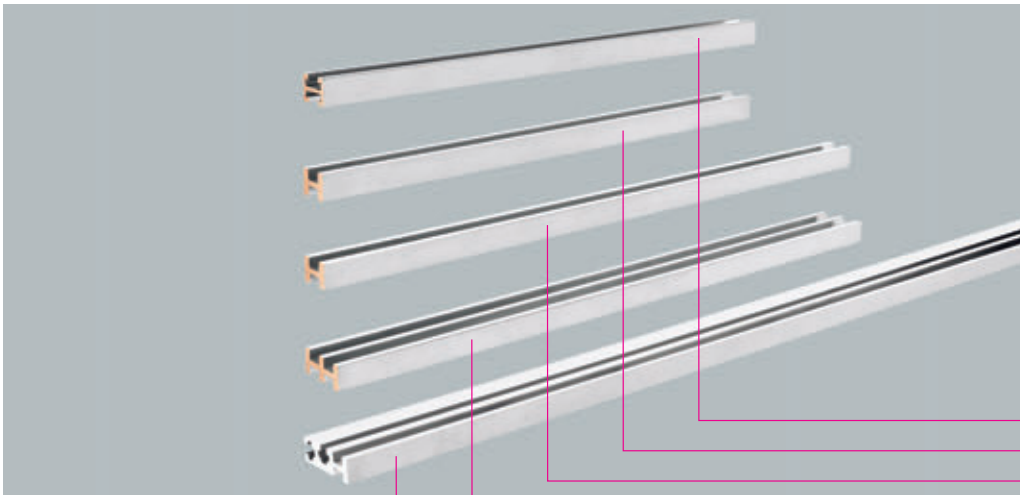
- 01 618
- 01 623
- 01 620
- 01 622
- 01 625

Busbar E-CU, flat busbars, tin-plated						
Type	Length	Cross section	Pack size	Weight		Part no.
				kg/100 u.		
12 x 5	2400	60	1	128.4		01 618 06
15 x 5	2400	75	1	160.6		01 619 06
20 x 5	2400	100	1	214.4		01 620 06
25 x 5	2400	125	1	267.8		01 621 06
30 x 5	2400	150	1	321.4		01 622 06
12 x 10	2400	120	1	257.0		01 623 06
20 x 10	3600	200	1	650.0		01 140 06
	2400	200	1	428.6		01 624 06
30 x 10	3600	300	1	970.0		01 204 06
	2400	300	1	643.2		01 625 06
shorter lengths on request for current carrying capacity of busbars see page 8/7 or 8/8						



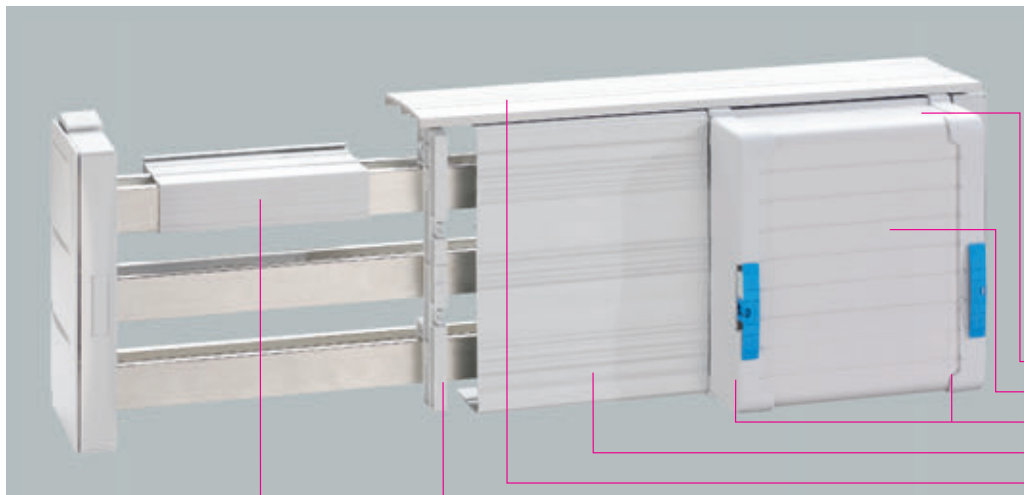
01 232
01 422
01 231
01 132
01 116
01 234

Busbar supports, for double-T section, without end cover					
Type	Pack size	Weight		Part no.	
		kg/100 u.			
1-pole, for connection to 01 231 and individually mountable	4	13.0		01 116	06
3-pole, with internal screw holes	3	59.1		01 231	06
Busbar supports, for triple-T section, without end cover					
1-pole, for connection to 01 232 and individually mountable	4	15.0		01 132	06
3-pole, with internal screw holes	2	69.7		01 232	06
Busbar supports, for TCC section, without end cover					
3-pole with internal screw holes	2	69.7		01 422	06
End cover					
for busbar supports 01 116 and 01 132	4	1.8		01 373	06
for busbar supports 01 231 and 01 232	4	4.8		01 234	06
for busbar support 01 422	4	5.3		01 425	06



- 01 224
- 01 608
- 01 190
- 01 227
- 01 610

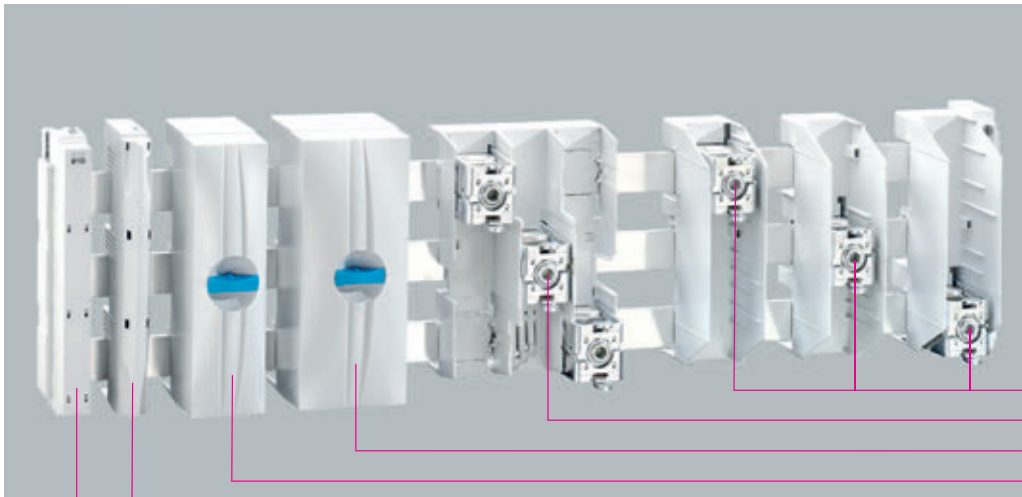
Busbar E-CU, section busbars tin-plated						
Type	Length	Cross section	Pack size	Weight		Part no.
				kg/100 u.		
double-T section busbars 500mm ²	3600	500	1	1596.0		01 224 06
	2400	500	1	1062.0		01 609 06
double-T section busbars 720mm ²	3600	720	1	2334.0		01 190 06
	2400	720	1	1554.0		01 608 06
triple-T section busbars 1140mm ²	3600	1140	1	3693.6		01 227 06
	2400	1140	1	2462.4		01 187 06
TCC section busbars 1600mm ²	2400	1600	1	3416.0		01 610 06
shorter lengths on request for current carrying capacity of busbars see page 8/7 or 8/8						
Busbar E-CU, section busbars plain						
double-T section busbars 500mm ²	3600	500	1	1596.0		01 223 06
	2400	500	1	1060.0		01 250 06
double-T section busbars 720mm ²	3600	720	1	2332.0		01 229 06
	2400	720	1	1556.0		01 249 06
shorter lengths on request for current carrying capacity of busbars see page 8/7 or 8/8						



- 01 555
- 01 554
- 01 136
- 01 025
- 01 237
- 01 026
- 01 252

Busbar cover, 1m long					
Type	Pack size	Weight		Part no.	
		kg/100 u.			
for 12 - 30 x 5 busbar	10	8.7		01 244	06
for 12 - 30 x 10 busbar	10	10.1		01 245	06
for double-T and triple-T section	5	38.0		01 252	06
for 12 x 5 busbar	10	3.2		78 463	06
independent of the system, for individual busbars					
Cover section, 3-pole					
0.7m long, can only be used with mount 01 026 or 01 320					
mount, 32mm depth, for cover section 01 025	10	3.9		01 026	06
mount, 107mm depth, for cover section 01 025, can be combined with 01 237, 01 238	8	12.0		01 320	06
for systems with 12 - 30 x 5/10mm busbars, double-T and triple-T section					
System cover, 3-pole					
holder set (left + right) for cover sections, 3-pole					
	1	18.0		01 136	07
front cover section (3-pole), 1.1m long, only with holder 01 136					
	1	45.1		01 554	07
top/bottom cover section, 1.1m long, only with holder 01 136 or 01 137					
	2	27.1		01 555	07
top/bottom cover section, slotted, 1.1m long, only with holder 01 136 or 01 137					
	2	23.0		01 417	07
can be used for systems with 12, 15, 20, 25, 30 x 5/10 busbars, double-T and triple-T section					
System cover, 4-pole					
holder set (left + right) for cover sections, 4-pole					
	1	21.0		01 137	07
front cover section (4-pole), 1.1m long, only with holder 01 137					
	1	58.0		01 599	07
top/bottom cover section, 1.1m long, only with holder 01 136 or 01 137					
	2	27.1		01 555	07
top/bottom cover section, slotted, 1.1m long, only with holder 01 136 or 01 137					
	2	23.0		01 417	07
can be used for systems with 12, 15, 20, 25, 30 x 5/10 busbars, double-T and triple-T section					
Compartment section, for adjusting the installation depth in double-T and triple-T busbar systems					
48mm deep, 2.4m long					
	1	70.0		01 236	06
76mm deep, 2.4m long					
	1	105.0		01 237	06
106mm deep, 2.4m long					
	1	140.0		01 238	06

Designation for UL				
Approvals	8 61-71	Technical data	8 4	→
		Dimensions	9 6,7,8,9	→



01 537
01 754
01 243
01 240
01 563
01 484

Connection busbar support

Type	For busbars	Pack size	Weight kg/100 u.	Part no.
3-pole, with integrated terminals 1.5 - 16mm ²	12, 15, 20, 25, 30 x 5, 10	10	25.6	01 484 06

CRITO®60Classic, connection module 3-pole, for 12, 15, 20, 25, 30 x 5, 10 with spring terminals, with cover cap

Connection	Width	For use up to max.	Pack size	Weight kg/100 u.	Part no.
1.5 - 16mm ²	20	80A	8	18.1	01 563 07

CRITO®60Classic, connection module 3 pole, for 12 x 5 - 30 x 10 and double T and tripe T profile, with cap

6 - 50mm ² , rm, f, f +AE, la. Cu 7x4 to 9x10	54	300A	1	45.1	01 240 07
35 - 120mm ² , rm, f, f +AE, la. Cu 12x4 to 15,5x10	81	440A	1	53.5	01 243 07

Accessories

Type	Pack size	Weight kg/100 u.	Part no.
additional individual cover for the terminals in 01 240	3	0.4	01 300 07
additional individual cover for the terminals in 01 243	3	0.5	01 301 07

CRITO®60Classic, connection module, 3-pole, for 20 x 5 - 30 x 10 and double T and tripe T profile, with cap

Connection	Width	For use up to max.	Pack size	Weight kg/100 u.	Part no.
Cu and Al 95 - 185mm ² , rm, sm; Cu also f	* 135	460A	1	132.2	01 199 07
Cu and Al 120 - 300mm ² , rm, sm; Cu or f	* 135	560A	1	165.7	01 754 07
for la. Cu 20x3 to 32x15	** 135	800A	1	144.7	01 753 07

* not maintenance-free if aluminium conductors are used (see page 8/2)

** observer minimum terminal space (see page 8/10)

CRITO®60Classic, connection set, 3-pole, for 20 x 5 - 30 x 10 and double T and tripe T profile, without cap

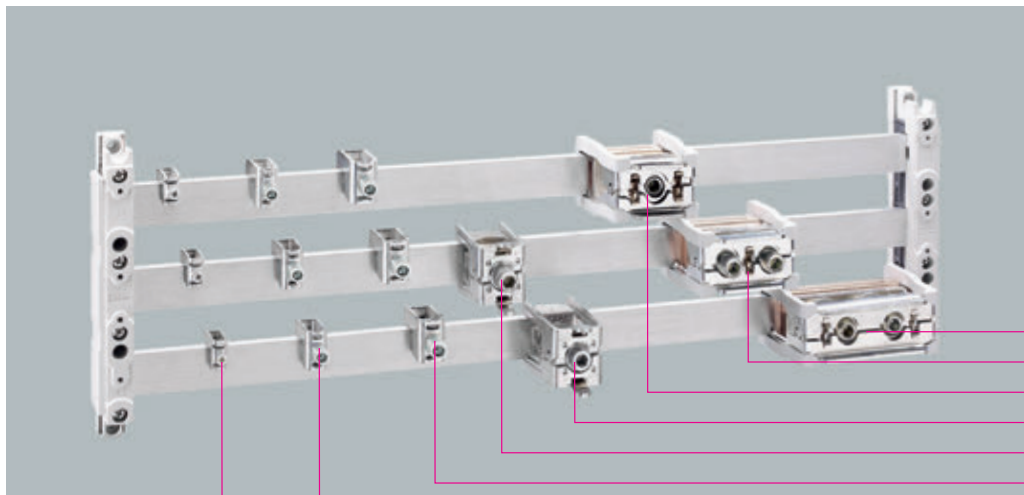
Cu and Al 120 - 300mm ² , rm, sm; Cu or f	* 153	560A	1	155.5	01 537 07
for flat busbars up to 32 x 20	153	800A	1	132.5	01 538 07

* not maintenance-free if aluminium conductors are used (see page 8/2)

CRITO®60Classic, connection set, 4-pole, for 20 x 5 - 30 x 10 and double T and tripe T profile, without cap

Cu and Al 120 - 300mm ² , rm, sm; Cu or f	* 204	560A	1	210.0	01 147 07
for flat busbars up to 32 x 20	204	800A	1	180.0	01 162 07

* not maintenance-free if aluminium conductors are used (see page 8/2)



- 01 071
- 01 070
- 01 069
- 01 759
- 01 318
- 01 292
- 01 290
- 01 289

CRITO®, universal conductor terminal

for busbars	Connection min. - max.	Terminal space W x H	For use up to max.	Pack size	Weight kg/100 u.	Part no.
5mm flat busbars	1.5 - 16	7.5 x 7.5	180A	100	2.1	01 284 07
	4 - 35	10.5 x 11	270A	50	4.6	01 285 07
	16 - 70	14 x 14	400A	25	7.1	01 287 07
	16 - 120	17 x 15	440A	25	10.6	01 068 07
10mm flat busbars	1.5 - 16	7.5 x 7.5	180A	100	2.3	01 289 07
	4 - 35	10.5 x 11	270A	50	4.7	01 290 07
10mm flat busbars, double-T and triple-T section	16 - 70	14 x 14	400A	25	7.5	01 292 07
	16 - 120	17 x 15	440A	25	10.9	01 203 07

CRITO®, brace terminals for round conductor

for busbars	Connection	For use up to max.	Pack size	Weight kg/100 u.	Part no.
12-20 x 5-10	Cu and Al 35 - 150mm ² , rm; Cu or f, f+AE	480A	6	10.2	01 135 07
20-30 x 5-10, double-T and triple-T section	Cu and Al 95 - 185mm ² , rm, sm; Cu or f	500A	6	31.2	01 318 07
	Cu and Al 120 - 300mm ² , rm, sm; Cu or f	600A	3	42.5	01 760 07

01 318 and 01 760: Not maintenance-free if aluminium conductors are used
 * not maintenance-free if aluminium conductors are used (see page 8/2)

CRITO®, brace terminals for flat conductor

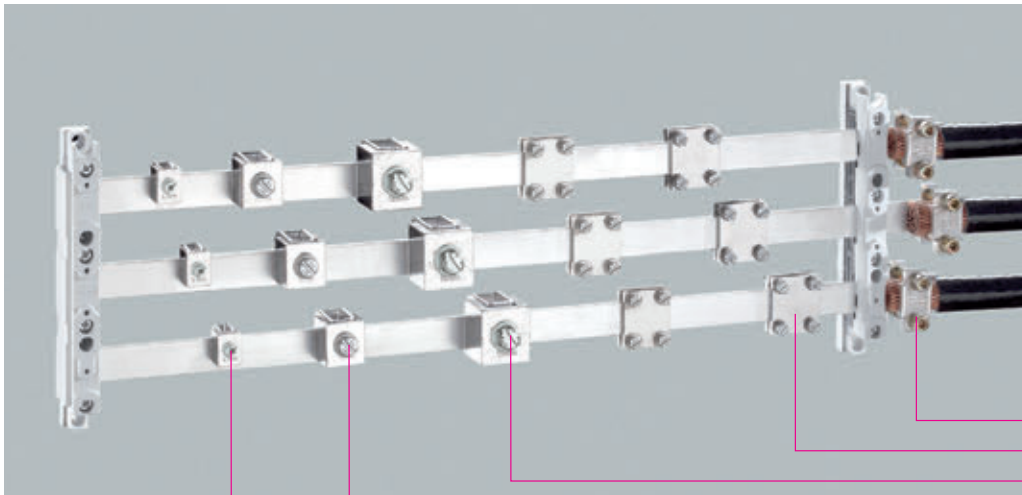
for busbars	Terminal space W x H	Side supply	Centre supply	Pack size	Weight kg/100 u.	Part no.
20-30 x 5-10, double-T and triple-T section	30 x 20	630A	750A	6	30.3	01 319 07
	32 x 20	630A	800A	3	34.7	01 759 07
30x10; double-T, triple-T and TCC section	55 x 10 - 28	1600A	2000A	3	50.0	01 069 07
	68 x 10 - 28	1600A	2000A	3	63.0	01 070 07
	105 x 10 - 28	1600A	2800A	3	84.0	01 071 07

Cover cap, 3-pole, can also be used as reserve section cover

Type	for busbars	Pack size	Weight kg/100 u.	Part no.
54 x 200 x 55	12-30 x 5-10, double-T and triple-T section	1	14.7	01 590 07
84 x 200 x 55	12-30 x 5-10, double-T and triple-T section	10	14.9	01 413 07
135 x 200 x 90	20-30 x 5-10, double-T and triple-T section	1	29.5	01 756 07
180 x 200 x 90	12-30 x 5-10, double-T and triple-T section	1	33.0	01 539 07
228 x 200 x 90	12-30 x 5-10, double-T and triple-T section	1	37.3	01 596 07
250 x 200 x 90	12-30 x 5-10, double-T and triple-T section	1	39.3	01 540 07
270 x 200 x 90	20-30 x 5-10, double-T and triple-T section	1	64.7	01 757 07

Cover cap, 4-pole, can also be used as reserve section cover

228 x 260 x 90	12-30 x 5-10, double-T and triple-T section	1	45.0	01 597 07
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01 201
01 996
01 749
01 748
01 747

CRITO®, clip-on screw clamp connection, for cable lugs DIN 46 234

Type	Terminal space	For use	Pack size	Weight		Part no.
		up to max.		kg/100 u.		
for undrilled flat busbars, 5mm thick	M5 x 8	360A	25	4.8		01 747 07
	M8 x 8	490A	20	16.0		01 748 07
	M10 x 10	630A	6	35.8		01 749 07
for undrilled flat busbars, 10mm thick	M5 x 8	360A	25	5.0		01 512 07
for undrilled flat busbars, 10mm thick and double-T and triple-T section	M8 x 8	490A	20	16.5		01 514 07
	M10 x 10	630A	6	36.2		01 047 07

Busbar connector, to connect flat busbars and la. Cu

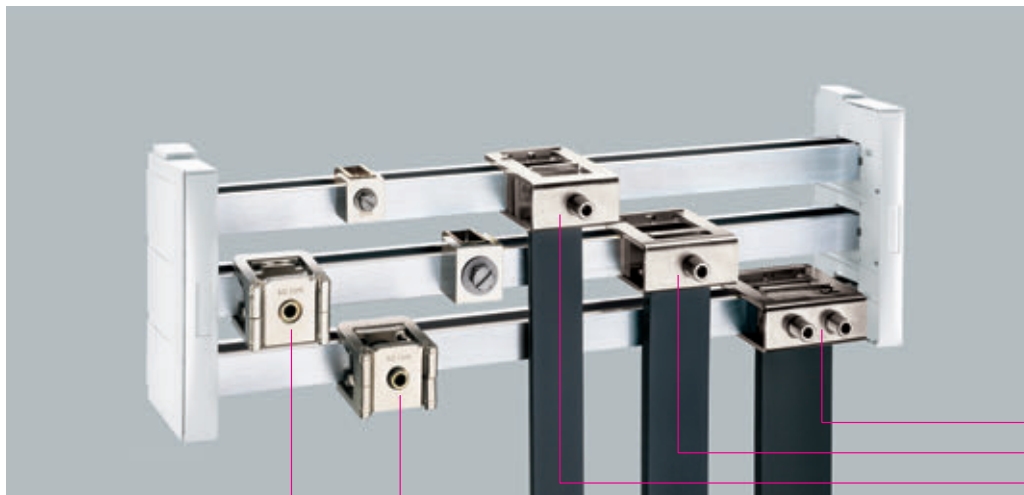
Terminal space	Terminal space	Pack size	Weight		Part no.
W x L	max. height		kg/100 u.		
25 x 20	20	10	14.9		01 996 07
30 x 20	20	10	16.2		01 997 07
30 x 30	20	10	19.8		01 586 07
35 x 30	20	10	21.5		01 587 07
40 x 20	20	10	17.8		01 206 07
40 x 32	20	6	27.6		01 616 07

Busbar connection, along length with wedge clamp terminal

For busbars	Round cond.	Flat cond.	Pack size	Weight		Part no.
	min. - max.	W x H		kg/100 u.		
20 x 5 - 10	120 - 240	21 x 4 - 20	3	11.0		01 201 07
25 x 5	150 - 300	25 x 5 - 20	3	13.4		01 202 07

Busbar connection, along length with brace terminal, for la. Cu

30 x 10 and double-T and triple-T section	-	32 x 1 - 15	3	50.0		01 069 07
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- 01 907
- 01 906
- 01 185
- 01 092
- 01 094

CRITO®, profiled terminal, for double-T profiled bars

Connection cross section	Terminal space W x H	Side	Centre	Pack size	Weight kg/100 u.		Part no.
		supply	supply				
320 - 800mm ²	41 x 20 - 42	1600A	1600A	3	67.0		01 185 07
500 - 750mm ²	51 x 5 - 28	1600A	1600A	3	70.5		01 906 07
600 - 900mm ²	64 x 5 - 28	1600A	1600A	3	84.0		01 907 07
500 - 1000mm ²	51 x 20 - 42	1600A	2000A	3	73.5		01 936 07
600 - 1200mm ²	64 x 20 - 42	1600A	2000A	3	85.9		01 911 07
800 - 1600mm ²	81 x 20 - 42	1600A	2500A	3	101.1		01 934 07
1000 - 2000mm ²	101 x 20 - 42	1600A	2800A	3	113.7		01 935 07
for the connection of flat busbars and laminated copper busbars							

CRITO®, profiled terminal, for triple-T profiled bars

320 - 800mm ²	41 x 23 - 45	1600A	1600A	3	105.0		01 513 07
500 - 1260mm ²	64 x 23 - 45	2000A	2500A	3	124.0		01 008 07
1200 - 3600mm ²	101 x 23 - 45	2500A	3200A	3	172.7		01 186 07
for the connection of flat busbars and laminated copper busbars							

CRITO®, brace terminals for busbars 30 x 10 and section busbars

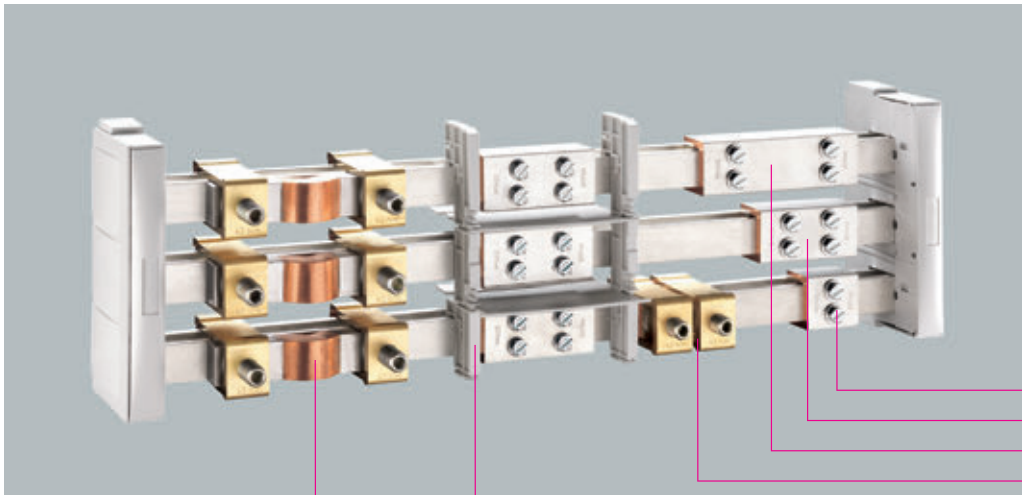
30 x 10 and double-T and triple-T section	55 x 10 - 28	1600A	2000A	3	50.0		01 069 07
30 x -10 and double-T and triple-T section	68 x 10 - 28	1600A	2000A	3	63.0		01 070 07
	105 x 10 - 28	1600A	2800A	3	84.0		01 071 07
for the connection of flat busbars and laminated copper busbars							

CRITO®, connecting terminal

For busbars	Connection	For use	Pack size	Weight		Part no.
		up to max.		kg/100 u.		
30 x -10 and double-T and triple-T section	95 - 300	630A	3	85.7		01 094 07
	for flat busbars up to 40 x 25	1250A	3	81.7		01 092 07

Laminated copper busbars, Cu blank, insulated, length 2m

Dimensions	Rated current 50K	Cross section	Pack size	Weight		Part no.
				kg/100 u.		
10 x 40 x 1	1053A	400	1	746.0		01 615 06
10 x 50 x 1	1244A	500	1	932.0		01 509 06
10 x 63 x 1	1481A	630	1	1180.0		01 510 06
10 x 80 x 1	1777A	800	1	1490.0		01 061 06
10 x 100 x 1	2110A	1000	1	1870.0		01 273 06
further cross sections see page 7/7 and 7/8						



- 01 827
- 01 145
- 01 829
- 01 905
- 01 361
- 30 322

Busbar connector, for same-size busbars

For busbars	Length	System spacing	For use up to max.	Pack size	Weight kg/100 u.	Part no.
12-20 x 5-10	55	5 - 10	520A	12	19.2	01 166 07
	150	100 - 110	520A	3	52.4	01 193 07
20-30 x 5-10	40	9 - 20	630A	6	23.3	01 990 07
	40	13 - 20	630A	6	25.2	01 823 07
	95	50 - 60	630A	3	54.4	01 141 07
	150	100 - 110	630A	3	86.6	01 886 07
double-T section	50	9 - 20	1600A	6	49.4	01 827 07
	95	50 - 60	1600A	3	94.3	01 145 07
	150	100 - 110	1600A	3	146.1	01 829 07
	70	5 - 10	1600A	3	113.9	01 905 07
triple-T section	95	50 - 60	2500A	3	120.6	01 274 07
	150	100 - 110	2500A	3	178.0	01 275 07

3 units required for a 3-pole connection, use 01 026 or 01 320 and 01 025 as a cover (see page 2/5). the use of the UL phase separator sets below is essential for UL-compliant end-to-end busbar connection.

UL phase separator set for busbar connectors, 3-pole

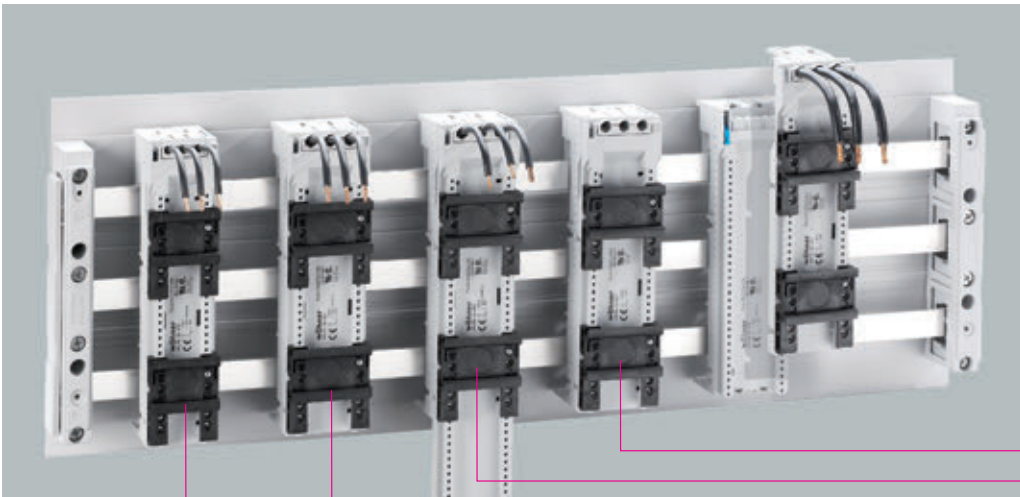
Type	Width	Pack size	Weight kg/100 u.	Part no.
for connections 01 990, 01 823, 01 827	* 105	1	17.2	01 360 06
for busbar connector 01 141, 01 145, 01 274	* 145	1	19.6	01 361 06
for connections 01 886, 01 829, 01 275	200	1	21.8	01 362 06

* each depth dimension has to be cut to size

Connection set, 3-pole, for section busbars

Type	For use up to max.	Pack size	Weight kg/100 u.	Part no.
for a flexible connection, double-T section	* 1600A	1	536.0	30 322 07
for a flexible corner coupling, double-T section	* 1600A	1	638.0	30 473 07
for a flexible connection, triple-T section	* 2500A	1	940.0	01 295 07

* one set is required for a 3-pole connection



32 421
32 416
32 404
32 400

EQUES®60Classic

With **removeable upper section CrossLink® lower section** stays contact-protected on the bus system.
All adapters for busbars 12, 15, 20, 30 x 5, 10; section busbars

EQUES®60Classic, 16A, busbar adapter, with removeable upper section, with leads AWG 14 (2.5mm²)

Type	Adapter width	Adapter length	Pack size	Weight kg/100 u.	Part no.	
16A, 2 mounting rails, leads 2.5mm ² , 125 long	45	200	4	42.7	32 401	05

EQUES®60Classic, 25A, busbar adapter, with removeable upper section, with leads AWG 12 (4mm²)

2 mounting rails	45	200	4	42.7	32 400	05
2 mounting rails	45	260	4	45.0	32 402	05

EQUES®60Classic, 32A, busbar adapter, with removeable upper section, with leads AWG 10 (6mm²)

2 mounting rails	54	200	4	49.2	32 404	05
2 mounting rails	54	260	4	54.4	32 408	05

EQUES®60Classic, 45A, busbar adapter, with removeable upper section, with leads AWG 8 (10mm²)

2 mounting rails	54	200	4	52.9	32 412	05
2 mounting rails	54	260	4	56.7	32 416	05

EQUES®60Classic, no-load, busbar adapter, with removeable upper section, without electrical contacts

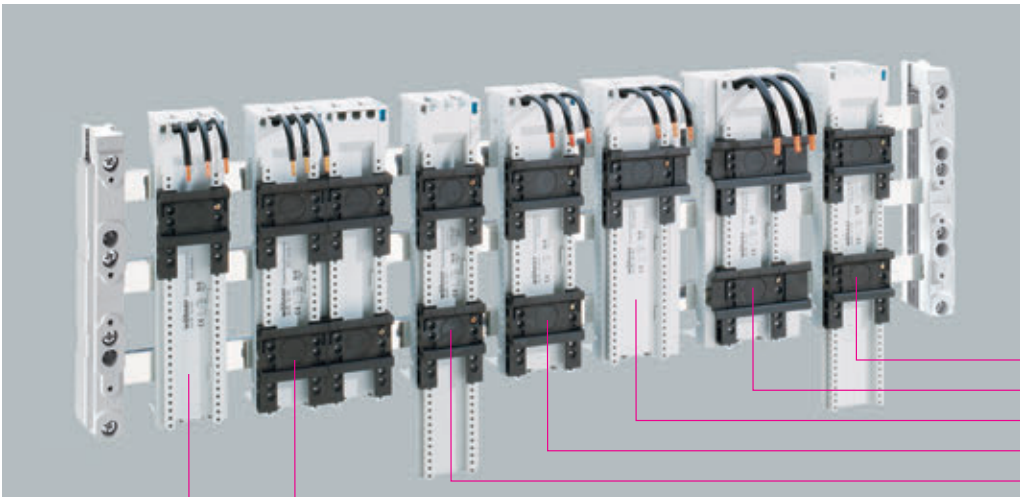
2 mounting rails	45	200	4	34.9	32 420	05
2 mounting rails	54	200	4	38.8	32 421	05
2 mounting rails	45	260	4	36.2	32 425	05
2 mounting rails	54	260	4	42.1	32 426	05
side module, connectable on both sides	9	200	10	4.3	32 964	05

Module for connecting to SmartWire-DT®

for all EQUES® adapters in 60Classic up to 80A, 3 inputs, 2 outputs further components for SmartWire-DT on page 7/2			1	8.0	36 230	21
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Accessories for EQUES®60Classic

mounting rail 45mm			10	1.4	32 947	05
mounting rail 54mm			10	1.5	32 948	05
mounting rail 63mm			10	1.8	32 949	05
mounting rail 72mm			10	2.0	32 950	05
mounting rail 81mm			10	2.1	32 951	05
mounting rail end stop			50	0.1	32 969	05
connecting element, universal			50	0.1	32 954	05
8-pole connector, with support, 250V			10	3.4	32 511	05
10-pole connector, with support, 250V			10	4.0	32 513	05
micro switch for EMC			10	0.9	32 956	05



- 32 472
- 32 459
- 32 443
- 32 442
- 32 439
- 32 432
- 32 430

EQUES®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

EQUES®60Classic, 25A, busbar adapter, with leads AWG 12 (4mm²)

Type	Adapter width	Adapter length	Pack size	Weight kg/100 u.		Part no.	
1 mounting rail	45	200	4	32.5		32 430	05
2 mounting rails	45	200	4	32.6		32 431	05
2 mounting rails	90	200	2	57.1		32 432	05
2 mounting rails	45	260	4	35.7		32 433	05

EQUES®60Classic, 25A, busbar adapter, with connecting terminals 6mm², without leads

2 mounting rails	45	200	4	32.2		32 436	05
2 mounting rails	45	260	4	35.2		32 439	05
UL terminal cap for 32 436 and 32 439	45	15	4	0.7		32 973	05

EQUES®60Classic, 32A, busbar adapter, with leads AWG 10 (6mm²)

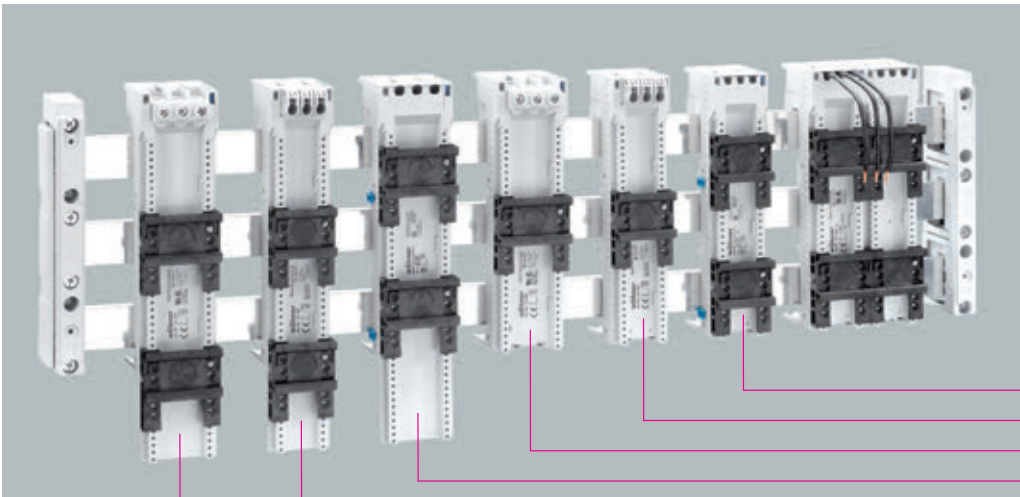
1 mounting rail	45	200	4	33.3		32 655	05
1 mounting rail	54	200	4	36.6		32 441	05
2 mounting rails	54	200	4	38.0		32 442	05
1 mounting rail	63	200	4	44.5		32 443	05
1 mounting rail	72	200	4	44.3		32 444	05
2 mounting rails	81	200	4	49.5		32 446	05
2 mounting rails	54	260	4	43.3		32 449	05

EQUES®60Classic, 63A, busbar adapter, with leads AWG 8 (10mm²)

1 mounting rail	54	200	4	39.2		32 454	05
2 mounting rails	54	200	4	41.0		32 455	05
1 mounting rail	63	200	4	44.9		32 456	05
1 mounting rail	72	200	4	47.6		32 457	05
2 mounting rails	81	200	4	51.3		32 459	05
2 mounting rails	54	260	4	43.0		32 461	05

EQUES®60Classic, 80A, busbar adapter, with terminals 16mm², without leads

1 mounting rail	54	200	4	37.3		32 466	05
2 mounting rails	54	200	4	38.9		32 467	05
1 mounting rail	72	200	4	45.0		32 469	05
2 mounting rails	54	260	4	43.8		32 472	05
UL terminal cap for 32 466, 32 467, 32 469 and 32 472	54	15	4	0.8		32 974	05



32 477
32 486
32 464
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32 487
32 465

EQUES®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

EQUES®60Classic

Type	Mounting rails	Adapter width	Adapter length	Pack size	Weight kg/100 u.	Part no.	
32A, special type with spring term. 1.5-6mm ² at front	1	45	200	4	32.5	32 486	05
	2	45	260	4	35.5	32 487	05
80A, special type with screw terminal 1.5-16mm ² at front	1	54	200	4	37.3	32 464	05
	2	54	260	4	41.2	32 465	05

EQUES®60Classic, no-load, busbar adapter, without electrical contacts

universal	2	45	200	4	24.8	32 477	05
	2	54	200	4	27.7	32 478	05
	2	45	260	4	27.9	32 484	05
	2	54	260	4	38.5	32 485	05
side module, connectable on both sides		9	200	10	2.3	32 963	05

PE/N adapter module, with 16mm² terminals, top and bottom, without leads

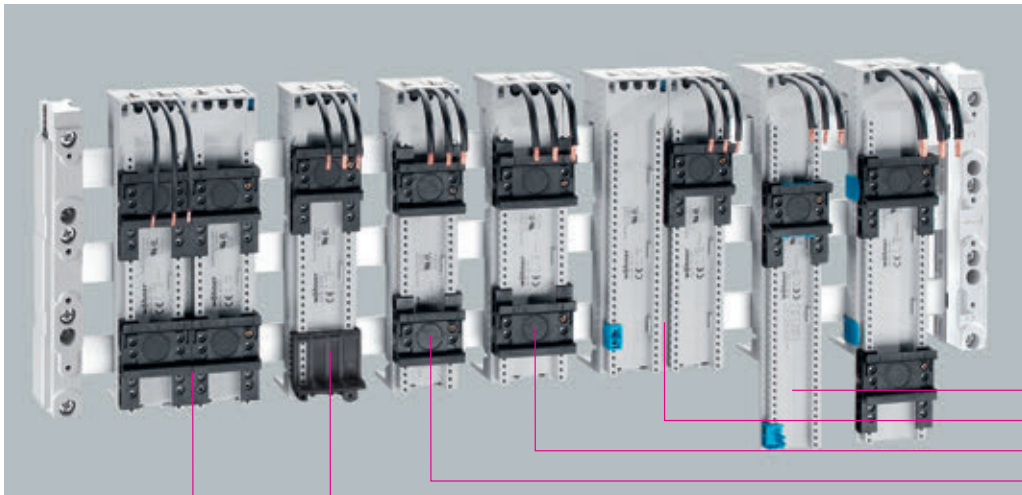
can be connected on both sides, only for use with EQUES adapter	18	242	4	14.1		32 146	05
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Accessories for EQUES®60Classic

Type	Pack size	Weight kg/100 u.	Part no.	
mounting rail 45mm	10	1.4	32 947	05
mounting rail 54mm	10	1.5	32 948	05
mounting rail 63mm	10	1.8	32 949	05
mounting rail 72mm	10	2.0	32 950	05
mounting rail 81mm	10	2.1	32 951	05
mounting rail end stop	50	0.1	32 969	05
connecting element, universal	50	0.1	32 954	05
8-pole connector, with support, 250V	10	3.4	32 511	05
10-pole connector, with support, 250V	10	4.0	32 513	05
lead AWG 14 (2.5mm ²), 105mm long	* 24	0.3	32 921	05
lead AWG 10 (6mm ²), 130mm long	* 24	0.7	32 907	05
lead AWG 4 (25mm ²), 210mm long	* 24	5.1	32 914	05
double-lead 2 x AWG 10 (2 x 6mm ²), 130 / 280mm long	* 24	2.5	32 915	05
* both lead ends ultrasound compressed				

Module for connecting to SmartWire DT™

for all EQUES® adapters in 60Classic up to 80A, 3 inputs, 2 outputs	1	8.0	36 230	21
further components for SmartWire-DT on page 7/2				



- 32 428
- 32 448
- 32 534
- 32 533
- 32 450
- 32 440

EQUES®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

EQUES®60Classic, 16A, busbar adapter, with leads AWG 14 (2.5mm²)

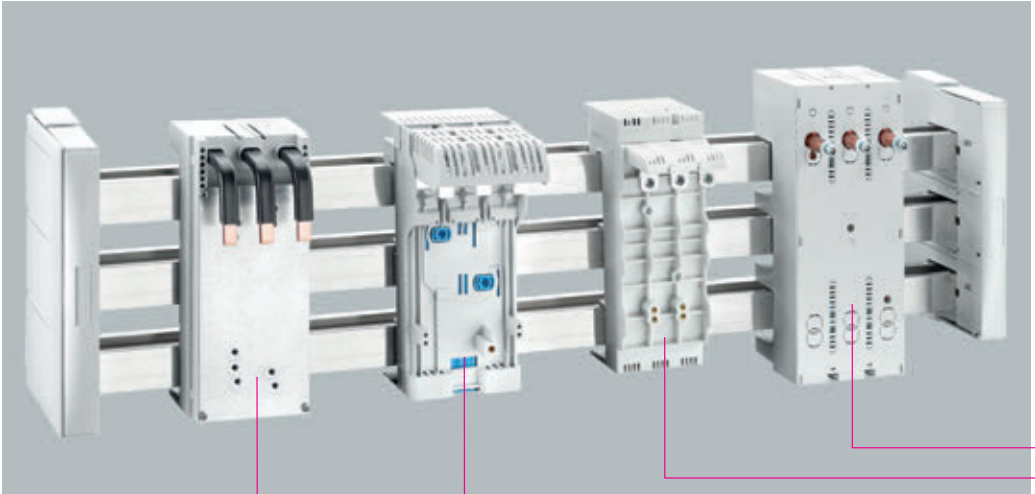
Type	Mounting rails	Adapter width	Adapter length	Pack size	Weight kg/100 u.		Part no.	
for direct/reversing starters with spring terminal connection Allen-Bradley 140M-RC2E, Eaton PKZM0, Siemens S00, Schneider Electric GV2	2	45	200	4	31.0		32 429	05
for direct / reversing starters with spring terminals Allen-Bradley 140M-RC2E, Eaton PKZM0, Siemens S00, Schneider Electric GV2	2	90	200	2	57.0		32 440	05

EQUES®60Classic, 25A, busbar adapter, with leads AWG 12 (4mm²)

for direct starter Eaton PKZ0/BG1	1	45	200	4	33.0		32 450	05
for reversing starter Eaton PKZ0/BG1	1	90	200	2	54.6		32 452	05
for direct starter Siemens S00 with screw connection	1	45	200	4	33.0		32 445	05
for direct starter Siemens S00 with spring terminal connection	1	45	260	4	30.7		32 637	05
for reversing starter Siemens S00 with screw connection	1	90	200	2	54.1		32 448	05

EQUES®60Classic, 32A, busbar adapter, with leads AWG 10 (6mm²)

for direct starter ABB MS116/132	2	45	200	4	36.4		32 498	05
for direct starter Eaton PKZ0/BG2	2	45	200	4	36.4		32 451	05
for reversing starter Eaton PKZ0/BG2	2	90	200	2	61.2		32 453	05
for direct starter Allen-Bradley 140MC/D	2	45	200	4	32.5		32 533	05
for reversing starter Allen-Bradley 140M-C/D	2	54	200	4	38.0		32 534	05
for direct starter Schneider Electric GV2-M/P	2	45	200	4	33.3		32 434	05
for direct starter Schneider Electric GV2-M/P	2	45	260	4	36.2		32 438	05
for direct starter Schneider Electric LUB12/32	1	45	200	4	32.2		32 427	05
for reversing starter Schneider Electric LU2B12/32	1	45	260	4	35.1		32 428	05
for direct starter Siemens S0 with screw connection	1	45	260	4	33.3		32 639	05
for direct starter Siemens S0 with spring terminal connection	1	45	260	4	32.1		32 638	05
for direct starter Siemens S0 with spring terminal connection	1	45	200	4	32.1		32 659	05
for direct starter Siemens 3RA6	1	45	200	4	44.0		32 588	05



32 017
32 660
32 570
32 575

EQUES®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

EQUES®60Classic, 63A, busbar adapter, with leads AWG 8 (10mm²)

Type	Mounting rails	Adapter width	Adapter length	Pack size	Weight kg/100 u.	Part no.	
for direct starter ABB MS45x, Eaton PKZM4, Siemens S2	2	55	260	4	43.2	32 460	05
for direct starter Allen-Bradley 140M-F	2	54	200	4	43.0	32 535	05
for direct starter ABB MS45x and Eaton PKZ5	2	72	260	2	51.4	32 463	05

EQUES®60Classic, 80A, busbar adapter, with leads AWG 4 (25mm²)

Type	Mounting rails	Adapter width	Adapter length	Pack size	Weight kg/100 u.	Part no.	
for Siemens S2, top connection to the system	1	54	200	1	52.1	32 662	05
for direct starter Siemens S2, top connection to the system	2	54	260	1	59.1	32 663	05
for reversing starter Siemens S2, top connection to the system	2	117	260	1	87.3	32 664	05

EQUES®60Classic, busbar adapter, 3-pole, phase division 23-30mm

Type	Rated current	Adapter length	Adapter width	Pack size	Weight kg/100 u.	Part no.	
for Siemens S3, ABB MS49x, top connection to system	100A	200	72	1	66.0	32 981	05
for Siemens 3VA1 and 3VT160, top connection to the system	160A	200	76	1	81.0	32 660	05
for Eaton NZM1, connection top/bottom	160A	200	92	1	81.0	32 570	05
for Allen-Bradley 140U-H, top connection to system	160A	200	90	1	81.0	32 577	05
for Allen-Bradley 140-CMN, top connection to system	160A	200	90	1	81.0	32 549	05
for ABB T-max T1 / XT1, T-max T2 / XT2, GE FD160, Schneider El. NS80, NSX80, top connection to system	160A	200	90	1	81.0	32 575	05
for ABB T-max T1, XT1, XT2, Allen-Bradley 140G-G and H, circuit breaker with terminals for flexible copper bars top connection to system	160A	200	90	1	81.0	32 018	05
for ABB T-max T1, XT1, XT2, Allen-Bradley 140G-G and H, circuit-breaker with connections for flexible copper bars bottom connection to the system	160A	200	90	1	81.0	32 020	05



32 157
32 140

EQUES®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

EQUES®60Classic, busbar adapter, 3-pole, phase division 35-36mm

Type	Rated current	Adapter length	Adapter width	Pack size	Weight kg/100 u.		Part no.	
for ABB T-max T4, Siemens 3RV1, connection to the system top	290A	240	105	1	122.0		32 601	05
for ABB T-max XT4, Allen-Bradley 140G-J	250A	192	105	1	122.0		32 023	05
for Allen-Bradley 140U-J and 140M-J	250A	192	106	1	90.0		32 137	05
for Schneider Electric NSX100-NSX250, GV7	250A	192	106	1	93.8		32 156	05
for Eaton NZM2-XKR40 and NZM2-XKR4U	250A	200	106	1	90.1		32 140	05
for Siemens 3VL1 UL	160A	192	108	1	95.3		32 976	05
for Siemens 3VL2, 3VL3 UL	250A	192	108	1	95.3		32 977	05
for Siemens 3VT250, OEZ BD250	250A	240	105	1	102.0		32 651	05
for Siemens 3VA2	250A	240	105	1	102.0		32 017	05
for Terasaki S250-NJ, top connection to system	250A	240	105	1	102.0		32 592	05

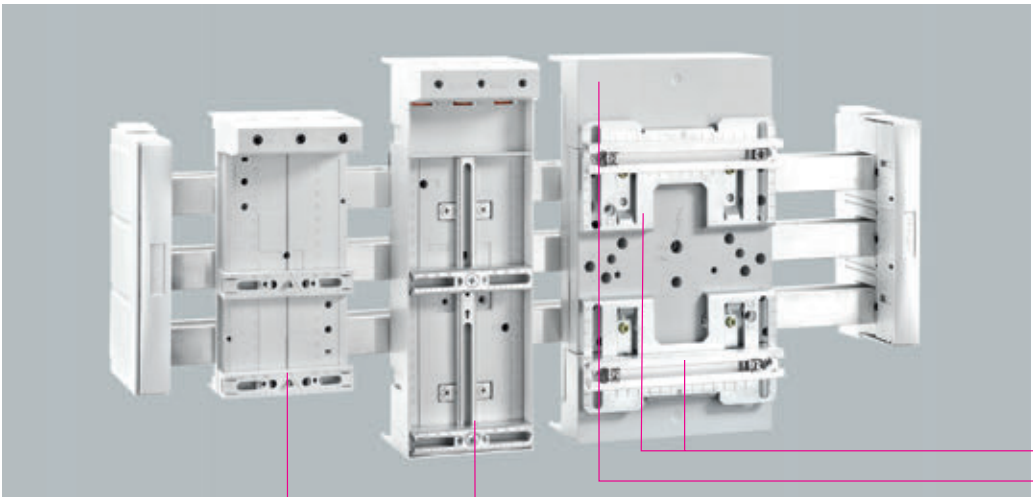
EQUES®60Classic, busbar adapter, 3-pole, phase division 43-45mm

for ABB T-max T5 and Allen-Bradley 140G-K	580A	300	140	1	252.0		32 593	05
for Allen-Bradley 140U-K, 140U-L, 140M-L	600A	272	140	1	212.0		32 138	05
for Schneider Electric NS400/630, NSX 400/630	570A	272	140	1	222.6		32 157	05
for Eaton NZM3-XKR130 and NZM3-XKR13U	630A	300	140	1	250.0		32 978	05
for Siemens 3VL4	400A	295	140	1	222.4		32 975	05
For Siemens 3VT630, OEZ BH630	600A	300	140	1	250.0		32 641	05

EQUES®60Classic, busbar adapter, 3-pole, phase division 63mm, top connection

for Siemens 3VL5	580A	325	184	1	276.0		32 980	05
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for 4-pole adapter see page 2/36



32 982
32 004
32 168
32 214

EQUES®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

EQUES®60Classic, universal busbar adapter up to 250A

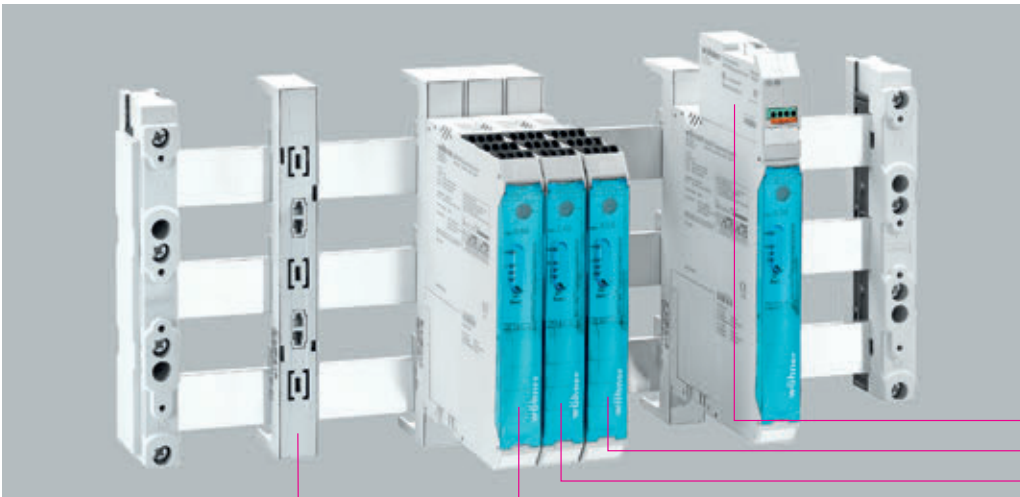
Type	Adapter length	Adapter width	Pack size	Weight kg/100 u.		Part no.	
200A top connection to system	222	108	1	84.2		32 214	05
200A bottom connection to system	222	108	1	86.0		32 215	05
250A top connection to system	320	110	1	160.4		32 168	05
250A bottom connection to system	320	110	1	164.0		32 216	05
for all commercially available switchgear with M4 fixing screws (see accessories for M5 screws)							

Accessories for universal busbar adapters

M5 slide nut for 32 214, 32 215, 32 168 and 32 216			4	0.4		32 937	05
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EQUES®60Classic, universal busbar adapter 630A

screw M10 top or bottom	320	184	1	278.0		32 004	05
metal accessory plate, adjustable	315	180	1	82.0		32 982	05

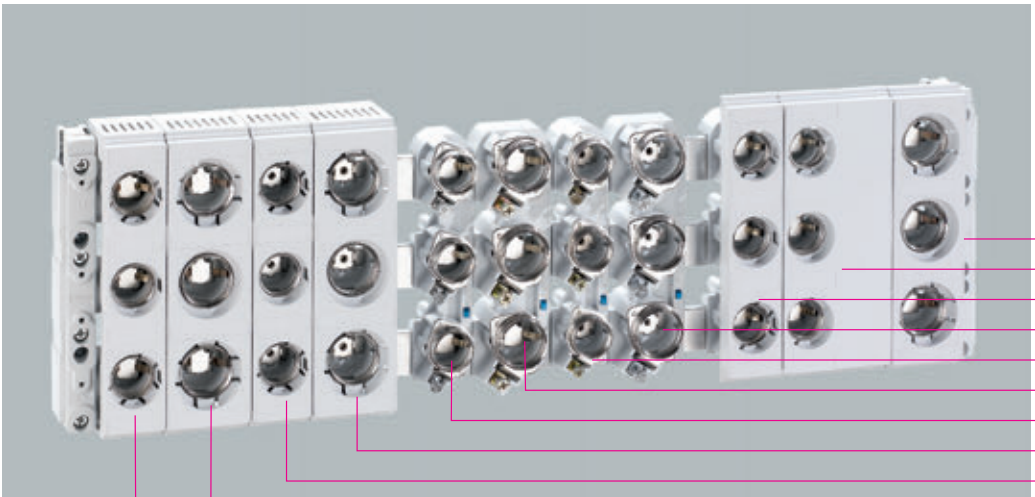


36 209
36 108
36 105
36 102
36 114

MOTUS®60Classic

MOTUS®60Classic, hybrid motor starter with reversing function and CrossLink®Technology, 22.5mm wide

Type	Pack size	Weight kg/100 u.	Part no.	
0.075 - 0.6A direct/reversing starter	1	62.6	36 102	21
0.18 - 2.4A direct/reversing starter	1	62.6	36 105	21
1.5 - 9A direct/reversing starter	1	62.6	36 108	21
Module for connection to SmartWire-DT®				
for all MOTUS®	1	6.5	36 209	21
further components for SmartWire-DT on page 7/2				
Spare components MOTUS®				
16A fuse for 0.6A and 2.4A versions	3	2.8	31 567	21
20A fuse for 9A version	3	2.8	31 568	21
30A fuse for 9A version for motors with heavy starting	3	2.8	31 569	21
0.075 - 0.6A electronics module for direct/reversing starters	1	57.1	36 109	21
0.18 - 2.4A electronics module for direct/reversing starters	1	57.1	36 110	21
1.5 - 9A electronics module for direct/reversing starters	1	57.1	36 111	21
adapter for MOTUS®60Classic	1	11.0	36 114	21



- 31 071
- 31 072
- 31 070
- 31 442
- 31 441
- 31 919
- 31 918
- 31 951
- 31 950
- 31 947
- 31 946

CUSTO®60Classic, D bus-mounting fuse base shock protected with strip cover, for gauge rings

For busbars	Type	Base width	Pack size	Weight kg/100 u.	Part no.
12, 15, 20, 25, 30 x 5, 10; double-T and triple-T section	E 27 / 25A / 500V	42	8	29.7	31 946 01
	E 33 / 63A / 500V	57	6	39.8	31 947 01

CUSTO®60Classic, D bus-mounting fuse base shock protected with strip cover, for gauge screws

12, 15, 20, 25, 30 x 5, 10; double-T and triple-T section	E 27 / 25A / 500V	42	8	28.7	31 950 01
	E 33 / 63A / 500V	57	6	38.7	31 951 01

CUSTO®60Classic, D bus-mounting fuse mount, for gauge ring

12, 15, 20, 25, 30 x 5, 10; double-T and triple-T section	E 27 / 25A / 500V	42	10	23.3	31 918 01
	E 33 / 63A / 500V	57	10	32.0	31 919 01

CUSTO®60Classic, D bus-mounting fuse mount, for gauge screw

12, 15, 20, 25, 30 x 5, 10; double-T and triple-T section	E 27 / 25A / 500V	42	10	22.3	31 441 01
	E 33 / 63A / 500V	57	10	30.9	31 442 01

D strip cover

Type	Base width	Pack size	Weight kg/100 u.	Part no.
E 27	42	10	4.9	31 070 01
E 33	57	10	6.2	31 071 01
E 27	84	5	8.4	31 072 01
E 33	114	5	10.8	31 073 01

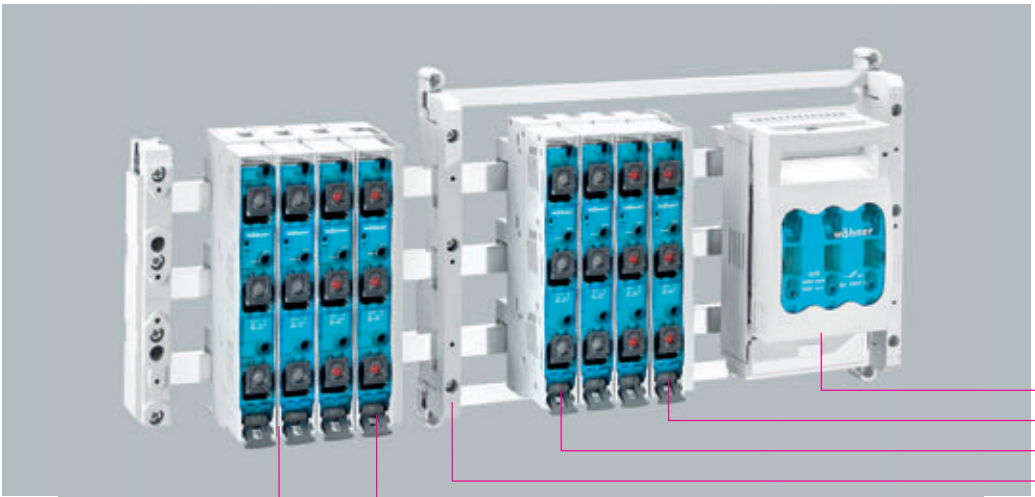
Shock protection, for all strip covers

Type	Pack size	Weight kg/100 u.	Part no.
clips onto side	10	1.3	79 663 01



31 158
01 981
01 424
01 980
01 498
01 647
31 936
31 935

SECUR®60Classic , PowerLiner, elevated type, bus-mounting switch disconnecter with fuses, 3-pole, 3-pole switching							
Type	Rated current / Rated voltage	Use category	Depth	Pack size	Weight kg/100 u.		Part no.
for D01 & D02 *	63A / 400V	AC-23A (400V)	104	1	75.9		31 158 01
for 10 x 38mm NFC cylinder fusing	32A / 690V	AC-23A (400 V) AC-22A (690V)	104	1	76.0		31 232 01
convertible to 1-pole switching.							
* the use of side module 31 901 is recommended for continuous loads above 35A. please observe DIN EN 61,439-2 table 101.							
SECUR®60Classic , PowerLiner, bus-mounting switch disconnecter with fuses, with LED , 3-pole, 3-pole switching							
for D01 & D02 *	63A / 400V	AC-23A (400V)	104	1	76.5		31 525 01
convertible to 1-pole switching.							
* the use of side module 31 901 is recommended for continuous loads above 35A. please observe DIN EN 61,439-2 table 101.							
Accessories , for SECUR®60Classic, PowerLiner							
pilot switch				1	0.7		31 903 01
9mm side module				5	6.1		31 901 01
D02 reducer for D01 fuses 2-16A				20	0.1		31 902 01
CUSTO®60Classic , D0 bus-mounting fuse base shock protected with strip cover, for gauge ring							
Busbars	Type	Base width	Pack size	Weight kg/100 u.			Part no.
12, 15, 20, 25, 30 x 5, 10; double-T and triple-T section *	E 18 / 63A / 400V	27	8	14.4			31 935 01
	E 18 / 63A / 400V	36	6	16.1			31 936 01
* 36mm wide type provides good lead placement and heat dissipation							
CUSTO®60Classic , D0 bus-mounting fuse mount, for fitting sleeve							
12, 15, 20, 25, 30 x 5, 10; double-T and triple-T section *	E 18 / 63A / 400V	27	10	14.7			01 647 01
	E 18 / 63A / 400V	36	10	15.5			01 498 01
* 36mm wide type provides good lead placement and heat dissipation							
D0 strip cover							
Type	Base width	Pack size	Weight kg/100 u.				Part no.
E 18	27	10	2.6				01 980 01
E 18	36	10	3.1				01 424 01
E 18	54	10	4.0				01 981 01
Shock protection , for all strip covers							
clips onto side				10	1.3		79 663 01
fuse links are not included in the scope of delivery							



33 075
31 579
31 578
01 138
31 575
31 574

SECUR®60Classic

SECUR®60Classic, EasyLiner, flat design, bus-mounting switch disconnecter with fuses, 3-pole, 3-pole switching for the **3-pole** busbar system

Type	Rated current / Rated voltage	Use category	Depth	Pack size	Weight kg/100 u.	Part no.
for D01 & D02 *	63A / 400V	AC-22B (400V)	80	1	33.0	31 574 01
for D01 & D02, with LED *	63A / 400V	AC-22B (400V)	80	1	33.0	31 575 01

* the use of side module 9mm is recommended for continuous loads above 35A.
please observe DIN EN 61,439-2 table 101.

SECUR®60Classic, EasyLiner, bus-mounting switch disconnecter with fuses, 3-pole, 3-pole switching for the **5-pole** busbar system

for D01 & D02 *	63A / 400V	AC-22B	80	1	33.0	31 578 01
for D01 & D02, for Hensel Co. busbar systems 250A, 400A and 630A *	63A / 400V	AC-22B	80	1	33.0	31 588 01
for D01 & D02, with LED *	63A / 400V	AC-22B	80	1	33.0	31 579 01

* the use of side module 9mm is recommended for continuous loads above 35A.
please observe DIN EN 61,439-2 table 101.

Accessories, for SECUR®60Classic, EasyLiner

Type	Pack size	Weight kg/100 u.	Part no.
pilot switch	1	0.7	31 976 01
9mm side module for 31 574 and 31 575	5	6.1	31 914 01
9mm side module for 31 578 and 31 579	5	6.1	31 915 01
D02 reducer for D01 fuses 2-16A	20	0.1	31 902 01

QUADRON®60Classic, NH Sizes 00 and 1, NH bus-mounting switch disconnecter, connection bottom/top, 3-pole with short connection module for **5-pole** busbar systems and distribution boards

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.
box terminal	160A	NH00	1	100.0	33 075 09
connection screw M8	160A	NH00	1	100.0	33 079 09
connection screw M10	250A	NH1	1	357.0	33 194 09

Busbar support, 60mm-System, 3, 4, **5-pole**, for VMS (GE) and AKi (Spelsberg) enclosure range

for 3x (12, 20, 30 x 10) and 2x (12, 20, 25 x 5, 10) busbars	30	16.7	01 138 06
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Reducer, for 5mm busbar

for Item No. 01 138 (3 pcs needed for a bus support)	100	0.1	01 170 06
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fuse links are not included in the scope of delivery



31 963
31 955
31 958
31 960
31 570

AMBUS®60Classic

fuse holder

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

AMBUS®60Classic, bus-mounting fuse base, 1-pole, 1-pole isolating

Type	Can be used with	Rated current / Rated voltage	Width	Pack size	Weight kg/100 u.	Part no.	
for fuses 10 x 38 IEC 60 269-6	30 x 5/10	30A / 1000V DC	22.5	12	5.0	31 570	01
for fuses 10 x 38 IEC 60 269-6	20 x 5/10	30A / 1000V DC	22.5	12	5.0	31 572	01

AMBUS®60Classic, bus-mounting fuse base, 2-pole, 2-pole isolating, with spring terminals

for fuses 10 x 38 IEC 60 269-2	12, 15, 20, 25 and 30 x 5 or 10	32A / 690V	27	6	12.2	31 961	01
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AMBUS®60Classic, bus-mounting fuse base, 3-pole, 3-pole isolating, with spring terminals

for fuses 10 x 38 IEC 60 269-2	12, 15, 20, 25 and 30 x 5 or 10	32A / 690V	27	4	18.5	31 954	01
for fuses 10 x 38 IEC 60 269-2, with LED 110-690V AC/DC		32A / 690V	27	4	18.7	31 955	01
for fuses class CC UL 248-4	12, 20 and 30 x 5 or 10	30A / 600V	27	4	18.6	31 958	01
for fuses class CC UL 248-4, with LED 110-600V AC/DC		30A / 600V	27	4	18.8	31 959	01

AMBUS®60Classic, bus-mounting fuse base, 3-pole + N, all-pole isolating, with spring terminals

for fuses 10 x 38 IEC 60 269-2	12, 15, 20, 25 and 30 x 5 or 10	32A / 690V	27	4	25.2	31 963	01
for fuses 10 x 38 IEC 60 269-2, with LED 110-690V AC/DC		32A / 690V	27	4	25.2	31 964	01

SECUR®60Classic, PowerLiner, bus-mounting switch disconnecter, 3-pole, 3-pole switching

Type	Rated current / Rated voltage	Pack size	Weight kg/100 u.	Part no.
for 10 x 38mm NFC cylinder fuses IEC 60 269-2	32A / 690V	1	76.0	31 232

fuse links are not included in the scope of delivery



33 324
33 198
33 402
03 199
32 594

QUADRON®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

QUADRON®60Classic, NH bus-mounting fuse base, connection top/bottom, 3-pole

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
box terminal	160A	NH00	1	87.0	03 199	10
connection screw M8	160A	NH00	1	87.0	03 299	10
with shock protection, without grip lug covers; for further NH bus-mounting fuse bases see pages 2/31 and 3/7						

QUADRON®60Classic, class J bus-mounting fuse base, connection top/bottom, 3-pole

box terminal	30A	class J 30A	1	138.0	33 421	16
box terminal	60A	class J 60A	1	135.0	33 422	16
box terminal *	100A	class J 100A	1	129.0	33 402	16
* do not use any fuse links with sharp-edged contact blades						

QUADRON®60Classic, NH bus-mounting fuse switch connector, connection top/bottom, 3-pole

box terminal	160A	NH00	1	100.0	33 198	09
connection screw M8	160A	NH00	1	103.0	33 398	09
box terminal, electronic fuse monitoring	160A	NH00	1	117.0	33 324	09
connection screw M8, electronic fuse monitoring	160A	NH00	1	117.0	33 394	09
box terminal, electro-mechanical fuse monitoring	160A	NH00	1	180.0	33 206	09
connection screw M8, electro-mechanical fuse monitoring	160A	NH00	1	180.0	33 420	09
NH bus-mounting fuse switch disconnecter size 00, with short connection module for 5-pole busbar systems, and distribution boards see page 2/20 and 7/3						

CrossLink®60Classic, busbar adapter, 3-pole, phase division 33mm

Type	Adapter length	Adapter width	Pack size	Weight kg/100 u.	Part no.	
for system components with module width 106mm; to be used as spare slot mounting, busbar cover	200	106	2	36.5	32 594	09



33 911
33 503
33 540
33 506
33 500

QUADRON®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

QUADRON®60Classic, NH bus-mounting switch disconnecter with fuses, 3-pole, with multi-functional handle (spring-operated mechanism)

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
bottom connection, box terminal	125A	NH00	1	219.0	33 500	15
top connection, box terminal	125A	NH00	1	219.0	33 501	15
bottom connection, box terminal, electronic fuse monitoring, 690V AC, 250V DC	125A	NH00	1	236.0	33 506	15

circuit diagram for fuse monitoring on page 9/49

QUADRON®60Classic, NH bus-mounting switch disconnecter with fuses, 3-pole, for door coupling rotary handle (spring-operated mechanism)

bottom connection, box terminal, front drive	125A	NH00	1	208.0	33 503	15
top connection, box terminal, front drive	125A	NH00	1	208.0	33 504	15

additional extension shaft and door coupling twist handle required
further QCS for door coupling twist handle with side actuation on request

QUADRON®60Classic, bus-mounting switch disconnecter, 3-pole, with multifunctional handle (spring-controlled switch mechanism)

Type	Rated current	Pack size	Weight kg/100 u.	Part no.	
bottom connection, box terminal	* 160A	1	216.0	33 540	14
top connection, box terminal	* 160A	1	216.0	33 541	14

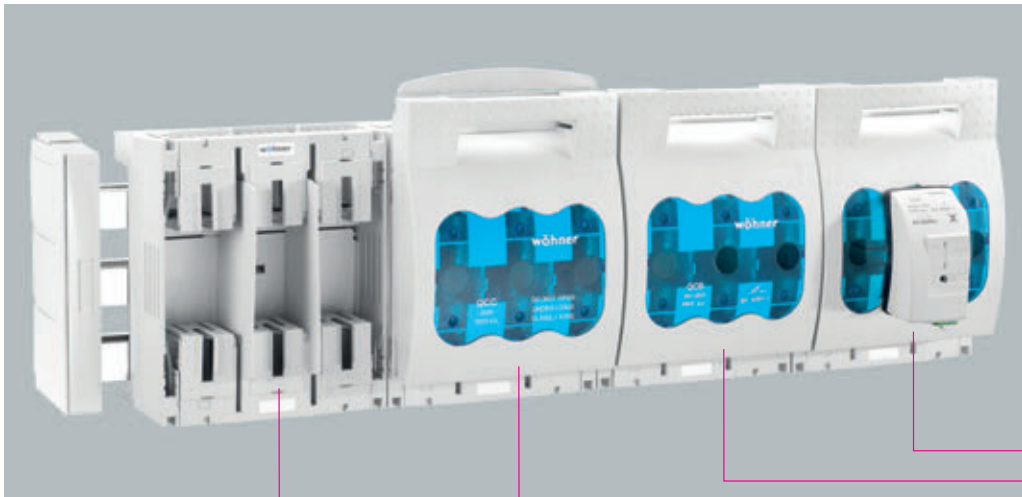
* as main switch or emergency stop switch only with the following maximum operating current: 125A/690V AC

QUADRON®60Classic, bus-mounting switch disconnecter, 3-pole for door coupling drive (spring-controlled switch mechanism)

bottom connection, box terminal, front drive	* 160A	1	208.0	33 543	14
top connection, box terminal, front drive	* 160A	1	208.0	33 544	14

additional extension shaft and door coupling twist handle required
* as main switch or emergency stop switch only with the following maximum operating current: 125A/690V AC

fuse links are not included in the scope of delivery



33 325
33 601
33 403
03 300

QUADRON®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

QUADRON®60Classic, NH bus-mounting fuse base, bottom/top connection, 3-pole

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
box terminal	250A	NH1	1	210.5	03 300	10
connection screw M10	250A	NH1	1	198.5	03 301	10
with shock protection, without grip lug covers; for further NH bus-mounting fuse bases see pages 2/32 and 3/7						

QUADRON®60Classic, class J bus-mounting fuse base, connection top/bottom, 3-pole

wedge clamp terminal AWG 2-MCM300 *	200A	class J 200A	1	278.0	33 403	16
* do not use any fuse links with sharp-edged contact blades						

QUADRON®60Classic, NH bus-mounting fuse switch disconnecter, bottom/top connection, 3-pole

box terminal	250A	NH1	1	266.0	33 600	09
connection screw M10	250A	NH1	1	266.0	33 601	09
connection screw M10, electronic fuse monitoring	250A	NH1	1	223.0	33 325	09
connection screw M10, electro-mechanical fuse monitoring	250A	NH1	1	333.0	33 160	09

CrossLink®60Classic, Busbar adapter, 3-pole, phase division 57mm

Type	Adapter length	Adapter width	Pack size	Weight kg/100 u.	Part no.	
for system components with module width 184mm; to be used as spare slot mounting, busbar cover	210	184	2	75.5	32 595	09



- 33 911
- 33 513
- 33 550
- 33 516
- 33 511

QUADRON®60Classic

devices can be directly mounted on 12, 15, 20, 25, 30 x 5, 10 busbars and section busbars

QUADRON®60Classic, NH bus-mounting switch disconnecter with fuses, 3-pole, with multi-functional handle (spring-operated mechanism)

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
bottom connection, connection screw M10	250A	NH1	1	567.0	33 510	15
top connection, connection screw M10	250A	NH1	1	589.0	33 511	15
top connection, connection screw M10, electronic fuse monitoring	250A	NH1	1	625.0	33 516	15

circuit diagram for fuse monitoring on page 9/49

QUADRON®60Classic, NH bus-mounting switch disconnecter with fuses, 3-pole, for door coupling drive (spring-operated mechanism)

bottom connection, connection screw M10	250A	NH1	1	555.0	33 513	15
top connection, connection screw M10	250A	NH1	1	577.0	33 514	15

additional extension shaft and door coupling twist handle required
QCS for door coupling twist handle with side actuation on request

QUADRON®60Classic, bus-mounting switch disconnecter, 3-pole, with multifunctional handle (spring-controlled switch mechanism)

Type	Rated current		Pack size	Weight kg/100 u.	Part no.	
bottom connection, connection screw M10	*	320A	1	565.0	33 550	14
top connection, connection screw M10	*	320A	1	587.0	33 551	14

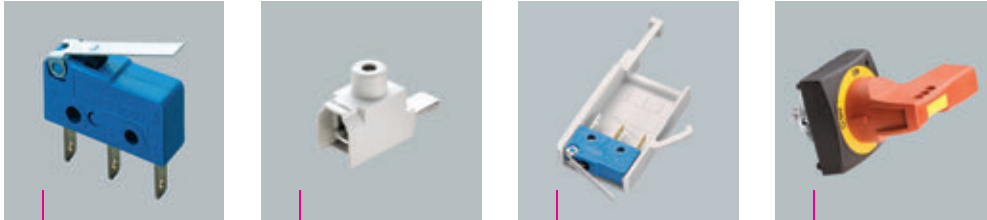
* as main switch or emergency stop switch only with the following maximum operating current: 280A/400V AC, 250A/690V AC

QUADRON®60Classic, bus-mounting switch disconnecter, 3-pole for door coupling drive (spring-controlled switch mechanism)

bottom connection, connection screw M10	*	320A	1	543.0	33 553	14
top connection, connection screw M10	*	320A	1	565.0	33 554	14

additional extension shaft and door coupling twist handle required
* as main switch or emergency stop switch only with the following maximum operating current: 280A/400V AC, 250A/690V AC

fuse links are not included in the scope of delivery



33 156	33 914	33 908	33 911
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Accessories, module width 106
for CrossLink® Technology

for QUADRON®60Classic, NH bus-mounting fuse base, 3-pole

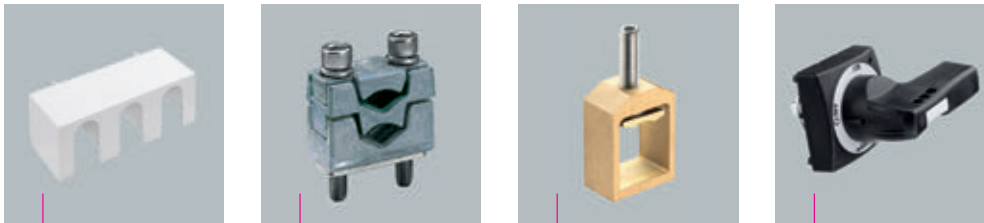
Type	Size	Pack size	Weight kg/100 u.	Part no.	
aux. conductor connection for box term.	00	3	0.6	33 915	09
grip lug cover, 1 unit required for each fuse	00	30	1.2	79 448	10
cover, for cable lugs, can be clipped on top and bottom	00	1	2.8	79 811	09
wedge clamp terminal for screw-clamp connection M8, Cu conductor 16 - 70mm ² rm, sm, f, f+AE, Al conductor 16 - 70mm ² rm, sm *	00	3	3.0	33 224	09
tunnel terminal for screw connection M8, Cu 3 x 1.5-16mm ² rm, Cu 3 x 1.5-10mm ² f + AE	00	3	6.4	01 182	09
* not maintenance-free if aluminium conductors are used (see page 8/2)					

for QUADRON®60Classic, NH bus-mounting fuse base, 3-pole

aux. conductor connection for box term.	00	3	0.6	33 915	09
cover, for cable lugs, can be clipped on top and bottom	00	1	2.8	79 811	09
wedge clamp terminal for screw-clamp connection M8, Cu conductor 16 - 70mm ² rm, sm, f, f+AE, Al conductor 16 - 70mm ² rm, sm *	00	3	3.0	33 224	09
tunnel terminal for screw connection M8, Cu 3 x 1.5-16mm ² rm, Cu 3 x 1.5-10mm ² f + AE	00	3	6.4	01 182	09
pilot switch for monitoring lid position	000, 00, 2, 3	1	1.1	33 156	09
lid interlock for sealing wire	00	10	0.2	03 849	09
* not maintenance-free if aluminium conductors are used (see page 8/2)					

for QUADRON®60Classic, NH bus-mounting switch disconnecter with fuses and bus-mounting switch disconnecter, 3-pole

Type	Can be used with	Pack size	Weight kg/100 u.	Part no.	
aux. conductor connection for box term.	NH00 and 160A	3	0.6	33 915	09
connection terminal 120mm ²		3	12.1	33 914	14
pilot switch, for monitoring the switch position		1	1.1	33 908	14
door coupling twist handle, black, IP 66, lockable in 'off' position, with up to 3 padlocks, door locking can be activated, no extension shaft *	33 503 33 504 33 543 33 544 33 580	1	57.0	33 910	14
door coupling twist handle, red-yellow, IP 66, lockable in 'off' position, with up to 3 padlocks, door locking can be activated, no extension shaft *		1	57.0	33 911	14
ext. shaft 290mm long		1	13.0	33 912	14
ext. shaft 490mm long		1	22.0	33 913	14
* switch can also be installed at a 90° angle to left/right, with the handle in the same position					



33 142	33 145	33 909	33 910
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Accessories, module width 184

for CrossLink® Technology

for QUADRON®60Classic, NH bus-mounting fuse base, 3-pole

Type	Size	Pack size	Weight kg/100 u.	Part no.	
cover, for cable lugs, can be clipped on top/bottom	1	2	10.7	33 142	09
grip lug cover, 3 units are needed for an NH fuse base	1	3	2.5	33 916	10

for QUADRON®60Classic, NH bus-mounting fuse switch disconnecter, 3-pole

cover, for cable lugs, can be clipped on top/bottom	1	2	10.7	33 142	09
pilot switch, for monitoring disconnecter lid position	1	1	1.3	33 917	09
disconnecter lid interlock for 3 locks with a shackle diameter of 4-7mm / sealing wire	1-3	10	0.5	33 157	09
barrier for handle for closing of handle area from rear	1-3	10	2.2	33 155	09
arc chamber, retrofit package for higher utilisation category	1	3	10.7	33 918	09

for QUADRON®60Classic, NH bus-mounting switch disconnecter with fuses and bus-mounting switch disconnecter, 3-pole

Type	Can be used with	Pack size	Weight kg/100 u.	Part no.	
cover, for cable lugs, can be clipped on top/bottom	NH1 and 320A	2	10.7	33 142	09
pilot switch, for monitoring the switch position		1	1.1	33 908	14
door coupling twist handle, black, IP 66, lockable in 'off' position, with up to 3 padlocks, door locking can be activated, no extension shaft	33 513 33 514 33 553 33 554	1	57.0	33 910	14
door coupling twist handle, red-yellow, IP 66, lockable in 'off' position, with up to 3 padlocks, door locking can be activated, no extension shaft		1	57.0	33 911	14
ext. shaft 290mm long		1	13.0	33 912	14
ext. shaft 490mm long		1	22.0	33 913	14
* switch can also be installed at a 90° angle to left/right, with the handle in the same position					

Connection accessories

box terminal for Cu conductors 70-185mm ² f, 35-150mm ² rm, Cu 35-120mm ² f +AE, la. Cu 15.5-24mm wide	NH1 and 320A	3	10.0	33 909	09
wedge clamp terminal, single, for Cu conductor 35 - 150mm ² , rm, sm, f, f + AE, for Al conductor 35 - 150mm ² rm, sm		1	11.6	33 166	09
wedge terminal, double, for Cu conductors 2 x 35-70mm ² rm, sm, f +AE		1	16.6	33 145	09
clamp connection for CU conductor 70-150mm ² , rm, f +AE, la. Cu	33 338, 33 360	1	6.3	33 163	09
terminal power rating, see page 8/32 and 8/34					
* not maintenance-free if aluminium conductors are used (see page 8/2)					



33 063
33 602
33 601

QUADRON®60Classic

QUADRON®60Classic, sizes 000 to 3, NH bus-mounting fuse switch disconnecter, connection top/bottom, 3-pole

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
box terminal	125A	NH000	1	113.0	33 216	09
box terminal	160A	NH00	1	100.0	33 198	09
connection screw M8	160A	NH00	1	103.0	33 398	09
box terminal	250A	NH1	1	266.0	33 600	09
connection screw M10	250A	NH1	1	266.0	33 601	09
connection screw M10	400A	NH2	1	522.0	33 602	09
connection screw M12	630A	NH3	1	756.0	33 603	09

QUADRON®60Classic, size 00 to 3, NH bus-mounting fuse switch disconnecter, connection top/bottom, 3-pole with electronic fuse monitoring

box terminal	160A	NH00	1	117.0	33 324	09
connection screw M8	160A	NH00	1	117.0	33 394	09
connection screw M10	250A	NH1	1	223.0	33 325	09
connection screw M10	400A	NH2	1	572.0	33 326	09
connection screw M12	630A	NH3	1	796.0	33 327	09

QUADRON®60Classic, size 00 to 3, NH bus-mounting fuse switch disconnecter, connection top/bottom, 3-pole with electro-mechanical fuse monitoring

box terminal	160A	NH00	1	180.0	33 206	09
connection screw M8	160A	NH00	1	180.0	33 420	09
connection screw M10	250A	NH1	1	333.0	33 160	09
connection screw M10	400A	NH2	1	574.0	33 161	09
connection screw M12	630A	NH3	1	824.0	33 162	09

circuit diagram for fuse monitoring on page 9/49

Conversion kit

for 5mm busbars	2	1	6.5	33 148	09
for installing on Busbars 12, 15, 20, 25 and 30 x 5 for QUADRON®60Classic Size 2					

devices can be connected directly to 12, 15, 20, 25, 30 x 5, 10mm busbars, double-T and triple-T section.

conversion kit 33 148 is required for mounting size 2 onto 5mm busbars,

size 3 is not suitable for 5mm busbars.

NH bus-mounting fuse switch disconnectors size 00 and 1 with short connection module for 5-pole busbar systems and distribution boards, see page 2/21 and 7/3



33 156	33 155	33 918	01 182	33 145
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Accessories

for QUADRON®60Classic NH fuse strip-type switch disconnecter

Pilot switch, for monitoring disconnecter lid position

Type	Size	Pack size	Weight kg/100 u.	Part no.	
pilot switch: 250V AC / 5A; 30V DC / 4A	000, 00, 2, 3	1	1.1	33 156	09
pilot switch: 1 reversing switch: 250V AC / 5A; 30V DC / 4A	1	1	1.3	33 917	09

Lid interlock

for sealing wire	000	10	0.1	33 051	09
	00	10	0.2	03 849	09
for 3 locks with shackle diameter 4-7mm / sealing wire	1-3	10	0.5	33 157	09

Barrier for handle

for closing of handle area from rear	1-3	10	2.2	33 155	09
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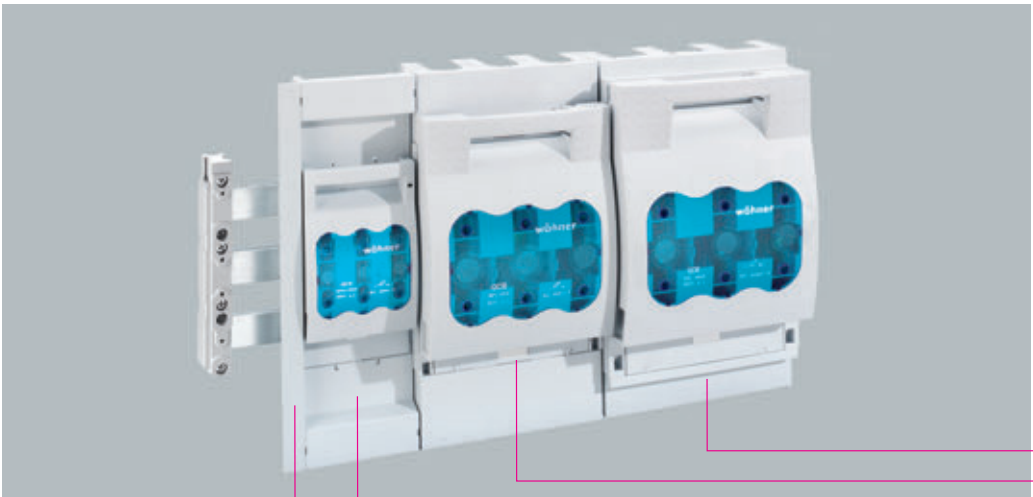
Arc chamber

retrofit package for higher utilisation category	1	3	10.7	33 918	09
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Connection accessories

Type	Connection	Size	Pack size	Weight kg/100 u.	Part no.	
box terminal for Cu conductors	70 - 185mm ² f, 35 - 150mm ² rm, Cu 35 - 120mm ² f+AE, la. Cu 15.5 - 24mm wide	1	3	10.0	33 909	09
clamp connection for Cu conductor rm, f + AE, la. Cu	70 - 150 / 18 x 2 - 14	1	1	6.3	33 163	09
Clamp connection for Cu conductor rm, f + AE, la. Cu	120 - 240 / 21 x 1 - 14	2	1	10.6	33 164	09
	150 - 300 / 25 x 1 - 13	3	1	12.5	33 165	09
wedge clamp terminal, single, for Cu conductor, rm, sm, f, f + AE, for Al conductor rm, sm	* 16 - 70	00 (M8)	3	3.0	33 224	09
	35 - 150	1	1	11.6	33 166	09
	50 - 240	2	1	19.9	33 167	09
	150 - 300	3	1	24.7	33 168	09
wedge terminal, double, for Cu conductors, rm, sm, f +AE	2 x 35 - 70	1	1	16.6	33 145	09
	2 x 70 - 120	2	1	27.8	33 146	09
	2 x 150	3	1	36.8	33 147	09
	2 x 185	3	1	36.8	33 385	09
tunnel terminal	3 x 1.5 - 16	00 (M8)	3	6.4	01 182	09

* not maintenance-free if aluminium conductors are used (see page 8/2)



33 316
33 142
33 315
33 317

Accessories

for QUADRON®60Classic NH fuse strip-type switch disconnecter

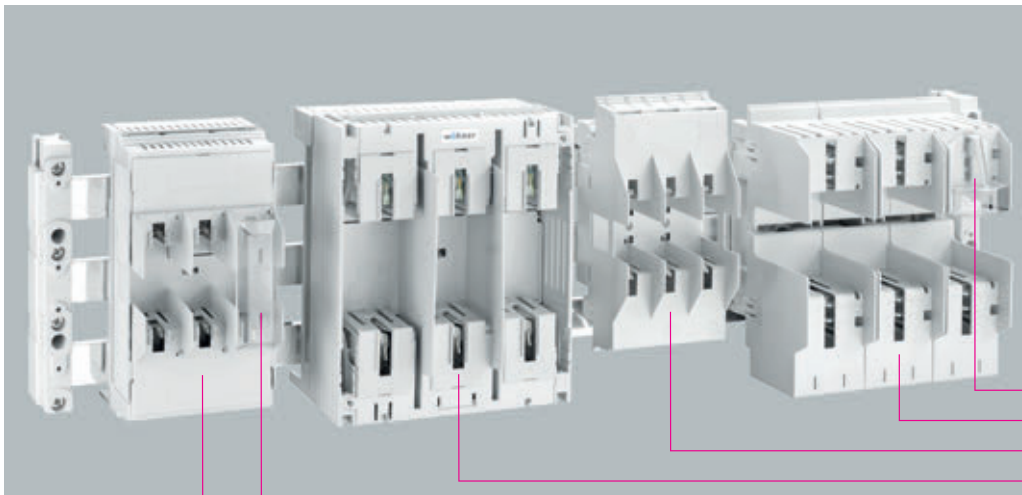
Equalising trim, for adjusting the installation depth

Type	Dimensions W x H	Size	Pack size	Weight kg/100 u.	Part no.	
equalising trim 2 sections	106 x 350	00	1	12.4	33 315	09
trim strip	20 x 350	00	2	6.0	33 317	09
cover, for cable lugs, can be clipped on top/bottom	184 x 350	1	2	10.7	33 142	09
equalising trim 2 sections	210 x 350	2	1	21.1	33 316	09
for mask cutout 300 to 340 high, 83 in front of the front edge of the busbar						

Cover

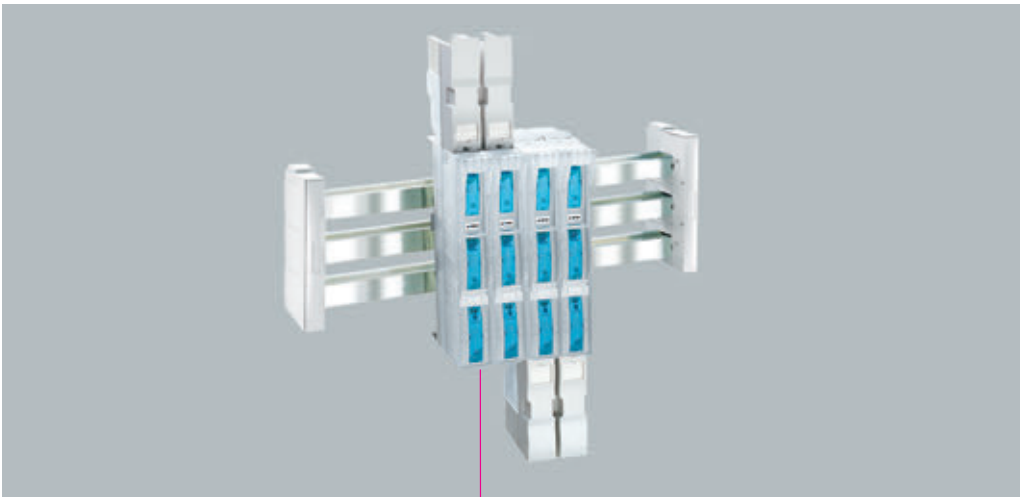
Type	Size	Pack size	Weight kg/100 u.	Part no.	
cover, for cable lugs, can be clipped on top and bottom	00	1	2.8	79 811	09
cover, for cable lugs, can be clipped on top/bottom	1	2	10.7	33 142	09
cover, for cable lugs, can be clipped on at top or bottom	2	2	10.9	33 143	09
	3	2	15.6	33 144	09
for connection area, can be clipped on at top or bottom	2	2	4.0	33 418	09
	3	2	5.4	33 419	09
32 419: the permissible voltage reduces to 600A					

	Dimensions	9 21,47	→



- 79 449
- 03 693
- 03 654
- 03 301
- 79 448
- 03 199

QUADRON®60Classic, NH bus-mounting fuse base, 3-pole, connection top/bottom						
Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
box terminal	160A	NH00	1	87.0	03 199	10
connection screw M8	160A	NH00	1	87.0	03 299	10
box terminal	250A	NH1	1	210.5	03 300	10
connection screw M10	250A	NH1	1	198.5	03 301	10
with shock protection, without grip lug covers; for accessories see pages 2/27 and 2/28 QUADRON®CrossLinkCarrier NH can be fastened directly on busbars 12, 15, 20, 25, 30 x 5, 10mm, double-T and triple-T section.						
QUADRON®60Classic, NH bus-mounting fuse base Size 00, 3-pole, connection top/bottom						
clamp 70mm ²	160A	NH00	4	66.5	03 654	10
connection screw M8	160A	NH00	4	64.5	03 656	10
with shock protection, without grip lug covers						
QUADRON®60Classic, NH bus-mounting fuse base Size 2, 3-pole, connection bottom						
connection screw M10	400A	NH2	1	291.2	03 693	10
with shock protection, without grip lug covers						
Grip lug cover, suitable for NH bases with shock protection						
Size	Type	Pack size	Weight kg/100 u.	Part no.		
00	3 units required to cover an NH base	30	1.2	79 448	10	
1	for 03 300 and 03 301 3 units required to cover an NH base	3	2.5	33 916	10	
1-3	for 03 693 6 units are required to cover a 3-pole NH base	30	1.5	79 449	10	
NH bus-mounting fuse base for direct fastening on busbars 12-30 x 5-10mm, double-T and triple-T section. for further NH bus-mounting fuse bases see page 3/3						



33 234

QUADRON®60Classic

QUADRON®60Classic, NH fuse strip-type switch disconnecter Size 00, 3-pole switching, connection top/bottom

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
clamp 70mm ² / screw M8 with terminal space cover	160A	NH00	1	146.0	33 234	12

QUADRON®60Classic, NH fuse strip-type switch disconnecter Size 00, 3-pole switching, connection top/bottom, **with electronic fuse monitoring, 400V AC**

clamp 70mm ² / screw M8 with terminal space cover circuit diagram for fuse monitoring on page 9/25	160A	NH00	1	146.0	33 285	12
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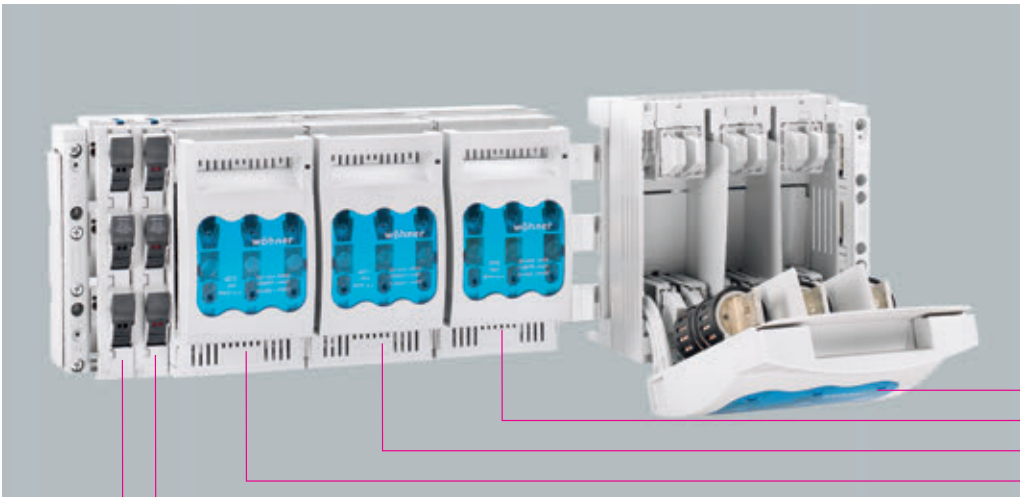
Pilot switch, for monitoring lid position

Type	Size	Pack size	Weight kg/100 u.	Part no.	
pilot switch: 250V AC / 5A; 30V DC / 4A flat push-on connector 2.8 x 0.5 (DIN 46 244-A)	000, 00, 2, 3	1	1.1	33 156	09

Connection accessories

clamp connection 1.5 - 70mm ² for Cu cond., rm, f +AE; la. Cu	00	3	1.5	03 727	09
screw connection M8	00	3	1.4	30 894	09
wedge clamp terminal for screw-clamp connection M8, Cu conductor 16 - 70mm ² rm, sm, f, f+AE, Al conductor 16 - 70mm ² rm, sm	* 00	3	3.0	33 224	09

* not maintenance-free if aluminium conductors are used (see page 8/2)



- 33 403
- 33 402
- 33 422
- 33 421
- 31 959
- 31 958

Holder for fuse links as per UL 248

AMBUS®60Classic, class CC bus-mounting fuse holder, 3-pole, 3-pole disconnecting, with spring clips

Type	Width	Rated current / Rated voltage	Pack size	Weight kg/100 u.	Part no.	
for fuses class CC UL 248-4	27	30A / 600V	4	18.6	31 958	01
for fuses class CC UL 248-4, with LED 110-600V AC/DC	27	30A / 600V	4	18.8	31 959	01
for 12, 20, 30 x 5, 10 busbars, double-T and triple-T section						

QUADRON®60Classic, class J bus-mounting fuse base, connection top or bottom, 3-pole, 3-pole disconnecting

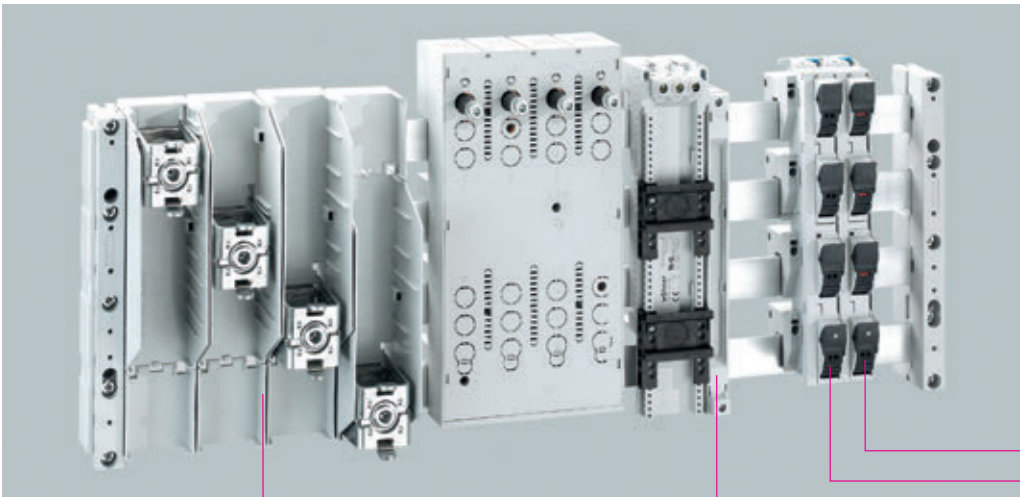
for fuses class J 1 - 30A (21 x 57)	106	30A / 600V	1	138.0	33 421	16
for fuses class J 35 - 60A (27 x 60)	106	60A / 600V	1	135.0	33 422	16
for fuses class J 70 - 100A (29 x 117)	* 106	100A / 600V	1	129.0	33 402	16
for fuses class J 110 - 200A (41 x 146)	* 184	200A / 600V	1	278.0	33 403	16
for 12, 20, 30 x 5, 10 busbars, double-T and triple-T section						
* do not use any fuse links with sharp-edged contact blades						

AMBUS®60Classic, complete solution on busbar adapter, 3-pole, 3-pole isolating

for fuses class J 1-30A (21 x 57), with LED	108	30A / 600V	1	110.0	31 968	16
for fuses class J 35-60A (27 x 60), with LED	126	60A / 600V	1	131.0	31 970	16
for 12, 20, 30 x 5, 10 busbars, double-T and triple-T section						

QUADRON®60Classic, class J bus-mounting fuse base, connection up or down, 3-pole

for fuses class J 225 - 400A (54 x 181)	256	400A / 600V	1	690.0	33 311	16
for 30 x 10mm busbars, double-T and triple-T section						



31 964
31 963
32 146
01 162

System components, 4-pole

Busbar supports

Type	For busbars	Pack size	Weight		Part no.
			kg/100 u.		
IEC, 4-pole, with internal screw holes	12, 15, 20, 25, 30 x 5, 10	10	26.6		01 485 06
UL, 4-pole, with internal screw holes	12, 20, 30 x 5, 10	10	19.7		01 357 06
spacer for 01 357		10	13.1		01 359 06
3-pole with internal screw holes	double-T section	3	59.1		01 231 06
1-pole, for connection to 01 231	double-T section	4	13.0		01 116 06
3-pole with internal screw holes	triple-T section	2	69.7		01 232 06
1-pole, for connection to 01 232	triple-T section	4	15.0		01 132 06

CRITO®60Classic, Connection set, 4-pole, for 20 x 5 - 30 x 10 and double-T and triple-T sections, without cover cap.

Connection	Width	For use	Pack size	Weight		Part no.
		up to max.		kg/100 u.		
Cu and Al 120 - 300mm ² , rm, sm; Cu or f	204	560A	1	210.0		01 147 07
for flat busbars up to 32 x 20	204	800A	1	180.0		01 162 07

* not maintenance-free if aluminium conductors are used (see page 8/2)

System cover, 4-pole

Type	Pack size	Weight		Part no.
		kg/100 u.		
holder set (left + right) for cover sections, 4-pole	1	21.0		01 137 07
front cover section (4-pole), 1.1m long, only with holder 01 137	1	58.0		01 599 07
top/bottom cover section, 1.1m long, only with holder 01 136 or 01 137	2	27.1		01 555 07
can be used for systems with 12, 15, 20, 25, 30 x 5/10 busbars, double-T and triple-T section				

Cover cap, 4-pole

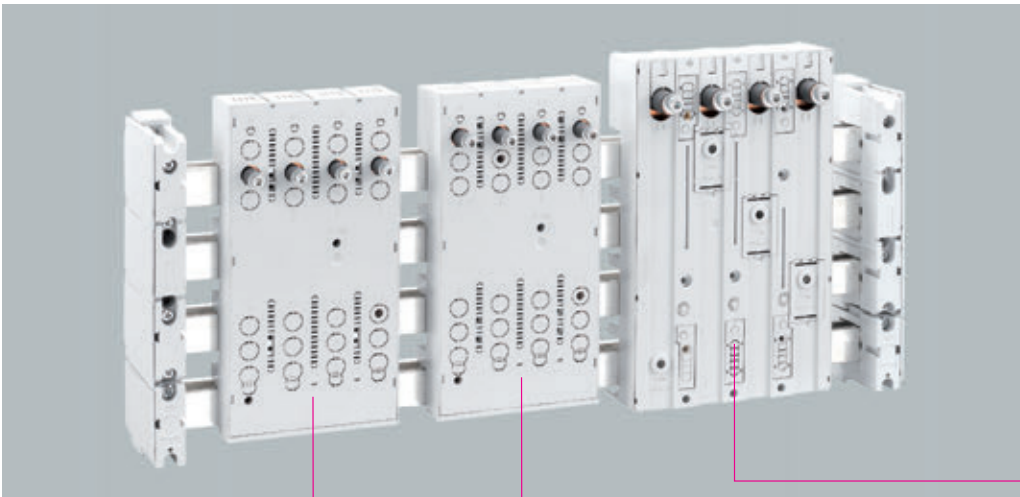
228 x 260 x 90	1	45.0		01 597 07
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PE/N module, with 2 connection terminals 16mm², without leads

Type	Width	Height	Pack size	Weight		Part no.
				kg/100 u.		
can be connected on both sides, only for use with EQUES adapter	18	242	4	14.1		32 146 05

AMBUS®60Classic, bus-mounting fuse base, 3-pole + N, 4-pole isolating, with spring terminals

Type	Rated current / Rated voltage	Pack size	Weight		Part no.
			kg/100 u.		
for fuses 10 x 38 IEC 60 269-2	32A / 690V	4	25.2		31 963 01
for fuses 10 x 38 IEC 60 269-2, with LED 110-690V AC/DC	32A / 690V	4	25.2		31 964 01



32 583
32 580
32 578

EQUES®60Classic, 4-pole

EQUES®60Classic, busbar adapter, 4-pole, phase division 35-36mm, top connection

Type	Rated current	Adapter length	Adapter width	Pack size	Weight kg/100 u.		Part no.		
for ABB Tmax T4	250A	270	140	1	180.0		32 584	05	
for Schneider Electric NSX100-NSX250	250A	270	140	1	180.0		32 582	05	
for Eaton NZM2-XKR4O	250A	270	140	1	180.0		32 580	05	
for Siemens 3VL2, 3VL3	250A	270	140	1	180.0		32 578	05	
top connection of switch to busbar system									

EQUES®60Classic, busbar adapter, 4-pole, phase division 43-45mm, top connection

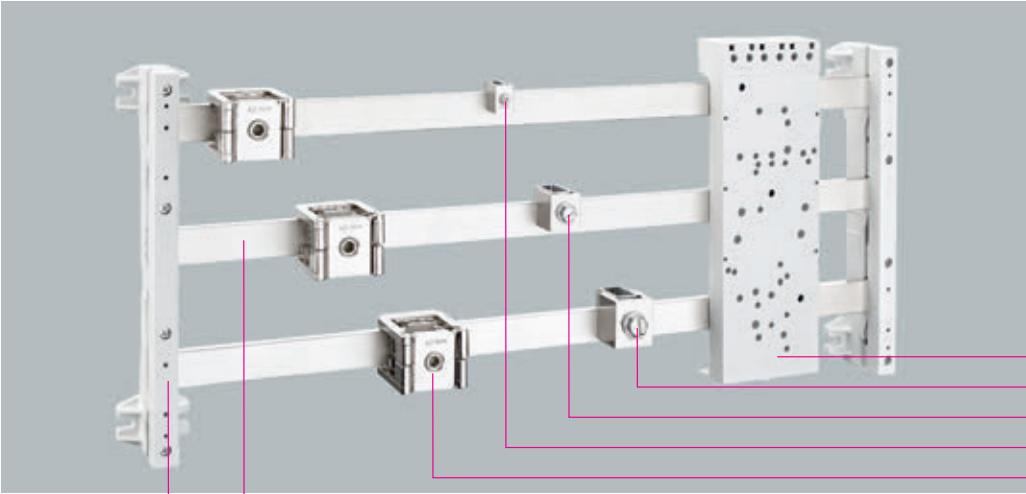
for ABB Tmax T5	500A	300	185	1	360.0		32 585	05	
for Schneider Electric NS400/630, NSX 400/630	500A	300	185	1	350.0		32 583	05	
for Eaton NZM3-XKR13O	500A	300	185	1	350.0		32 581	05	
for Siemens 3VL400	400A	300	185	1	350.0		32 579	05	
top connection of switch to busbar system									

all adapters for busbars 12, 15, 20, 25, 30 x 5, 10, double-T and triple-T section.

100Energy 1250A

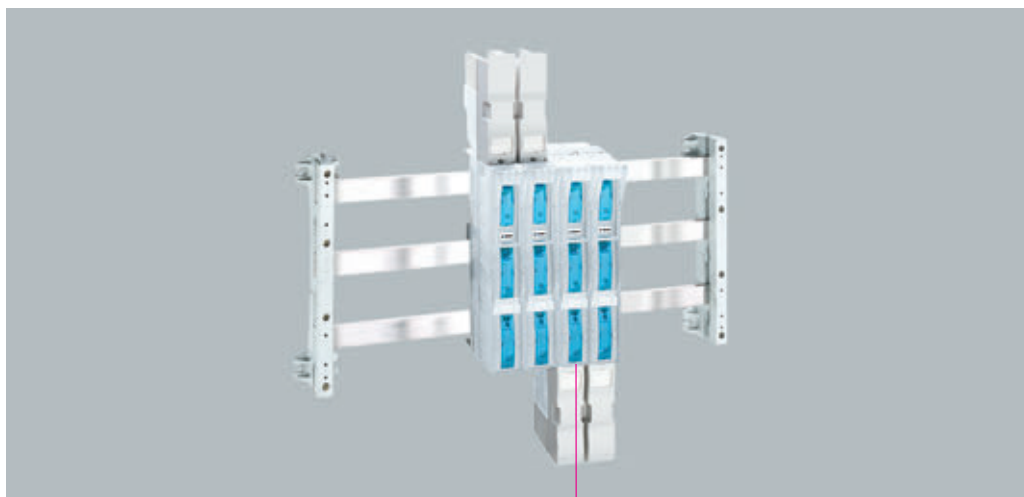






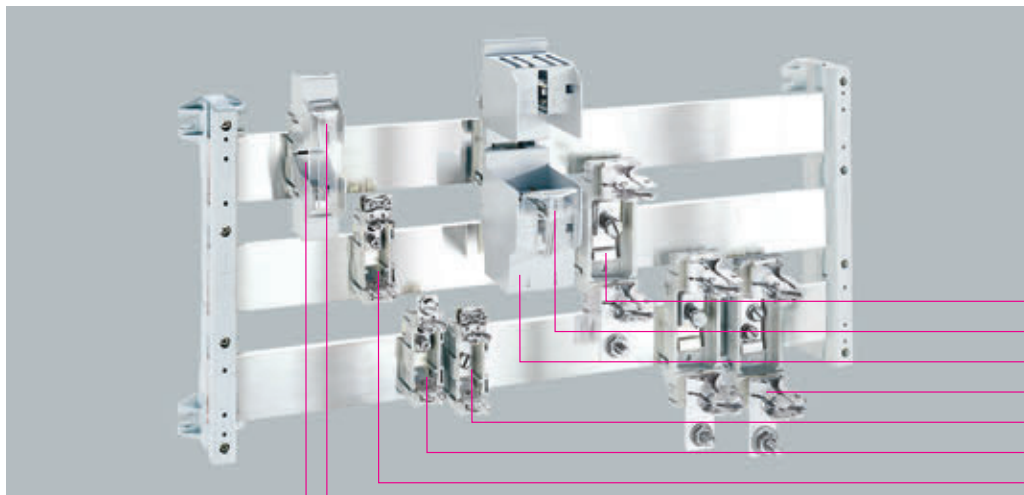
- 32 001
- 01 047
- 01 514
- 01 512
- 01 092
- 01 625
- 01 479

Universal busbar support, 100mm-System, 3-pole					
Type	Pack size	Weight		Part no.	
for undrilled flat busbars 30, 40, 50, 60 x 10	4	kg/100 u. 47.1		01 479	06
End cover					
end cover for 01 479	10	5.3		01 254	06
Busbar E-Cu, tin-plated, length 2.4m, shorter lengths on request					
Dimensions	Cross section	Pack size	Weight	Part no.	
			kg/100 u.		
2400 x 30 x 10	300	1	643.2	01 625	06
2400 x 40 x 10	400	1	856.8	01 626	06
2400 x 50 x 10	500	1	1072.8	01 627	06
2400 x 60 x 10	600	1	1294.0	01 628	06
further cross sections see page 2/2 and 2/4					
Busbar cover, length 1m					
Type	Pack size	Weight		Part no.	
		kg/100 u.			
for 12 - 30 x 10 busbar	10	10.1		01 245	06
40 - 60 x 10	5	17.6		01 251	06
CRITO®, connecting terminal					
For busbars	Connection	For use	Pack size	Weight	Part no.
	min. - max.	up to max.		kg/100 u.	
30 x 10	95 - 300mm ²	630A	3	85.7	01 094 07
30 x 10	40 x 20	1250A	3	81.7	01 092 07
CRITO®, snap-on screw clamp connection, for cable lugs DIN 46 234					
Connection	Terminal space	For use	Pack size	Weight	Part no.
	W x H	up to max.		kg/100 u.	
for undrilled flat busbars, 10mm thick	M5 x 8	360A	25	5.0	01 512 07
for undrilled flat busbars, 10mm thick and double-T and triple-T section	M8 x 8	490A	20	16.5	01 514 07
	M10 x 10	630A	6	36.2	01 047 07
EQUES®100Energy, busbar adapter 200A, for 100mm system, with clamp connection 70mm²					
Type	Adapter	Adapter	Pack size	Weight	Part no.
	length	width		kg/100 u.	
mounting plate: plastic	315	108	1	87.7	32 001 05
for mounting options for DIN rails and various switching devices and product descriptions, see www.woehner.com					



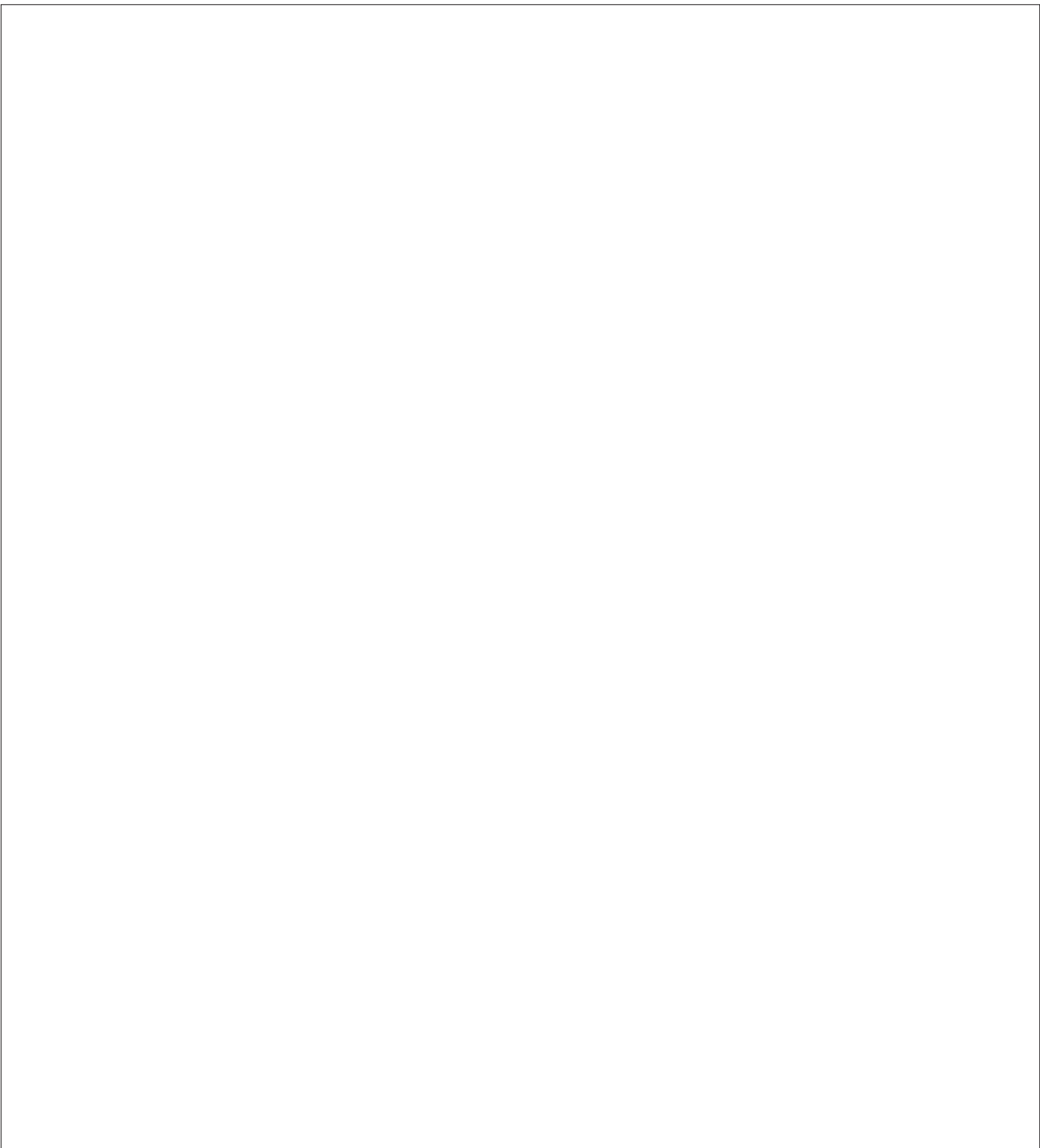
33 235

QUADRON®100Energy, NH fuse strip-type switch disconnecter Size 00, 3-pole switching, connection top/bottom						
Type	Rated current	Size	Pack size	Weight		Part no.
				kg/100 u.		
clamp 70mm ² / screw M8	160A	NH00	1	137.0		33 235 12
with terminal space cover, directly connectable in the 100mm-System						
QUADRON®100Energy, NH fuse strip-type switch disconnecter Size 00, 3-pole switching, connection top/bottom, with electronic fuse monitoring, 400V AC						
clamp 70mm ² / screw M8	160A	NH00	1	143.0		33 286 12
with terminal space cover, directly connectable in the 100mm-System, circuit diagram for fuse monitoring on page 9/25						
QUADRON®100Energy, NH fuse block 00, 3-pole						
wedge clamp terminal 70mm ²	160A	NH00	1	99.5		33 384 12
Accessories						
Type	Size	Pack size	Weight		Part no.	
			kg/100 u.			
terminal clamp 160A for assembly without drilling in the 100mm-System, on 10mm busbars		3	3.1		33 238	12
pilot switch for monitoring lid position	00-3	1	1.1		33 156	09
support angle for fixing front trims	00-3	4	0.5		33 113	12
trim strip, for 33 235 in the 100mm-System	00	2	5.3		33 036	12
Connection accessories						
clamp connection 1.5 - 70mm ² for Cu cond., rm, f +AE; la. Cu	00	3	1.5		03 727	09
screw connection M8	00	3	1.4		30 894	09
wedge clamp terminal for screw-clamp connection M8, Cu conductor 16 - 70mm ² rm, sm, f, f+AE, Al conductor 16 - 70mm ² rm, sm	00	3	3.0		33 224	09
* not maintenance-free if aluminium conductors are used (see page 8/2)						



- 03 599
- 79 449
- 03 793
- 03 790
- 03 585
- 03 370
- 03 369
- 79 448
- 03 791

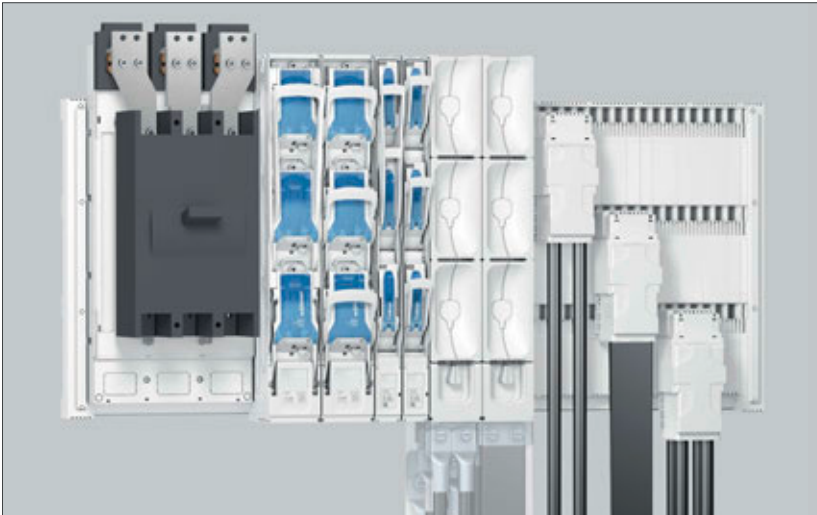
QUADRON®100Energy, NH bus-mounting fuse base Sizes 00 - 1 - 2						
Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
clamp 70mm ²	160A	NH00	10	14.9	03 369	10
screw M8	160A	NH00	10	14.2	03 370	10
screw M10	250A	NH1	3	54.0	03 384	10
screw M10	400A	NH2	3	75.8	03 599	10
1-pole, without shock protection, suitable for direct mounting on busbars						
QUADRON®100Energy, NH bus-mounting fuse base Sizes 00 - 1 - 2 - 3						
screw M8	160A	NH00	10	11.5	03 587	10
screw M10	250A	NH1	3	46.0	03 601	10
screw M10	400A	NH2	3	68.5	03 795	10
screw M12	630A	NH3	3	45.9	03 790	10
1-pole, without shock protection, for screwing onto drilled busbars						
Shock protection, for 1-pole NH bus-mounting fuse bases						
Type	Size	Pack size	Weight kg/100 u.	Part no.		
2 sections	00	10	3.5	03 791	10	
	1	3	12.6	03 792	10	
	2	3	17.1	03 793	10	
	3	3	21.0	03 794	10	
Grip lug cover, suitable for NH bases with shock protection						
grip lug cover, 1 unit required for each fuse		00	30	1.2	79 448	10
2 units required to cover a fuse		1-3	30	1.5	79 449	10



185Power 2500A





**NEW**

185Power

Quick, rapid mounting

Individual and flexible setting up

Extensive shock protection
ensures greater safetyStandardised components permit
time-savings and a more orderly
arrangement in the control cabinet**System benefits**

In low-voltage panel boards – whether as main or sub-distributions, transformer stations or other distribution cabinets – a high energy outlay coupled with a slender design determines the basic set-up requirement.

185Power with its high-capacity components serves requirements by means of a perfectly matched system and both provides for much easier mounting and user safety and plant security.

A highlight of Wöhner's 185Power is the new EQUES®185Power adapter for all standard circuit-breakers (MCCB) as well as all the other elements of a sustainable system – from busbar supports, terminals, system covers for optimum shock protection through to the new QUADRON®185Power NH switch disconnecter series.

CrossLink®system and busbar supports

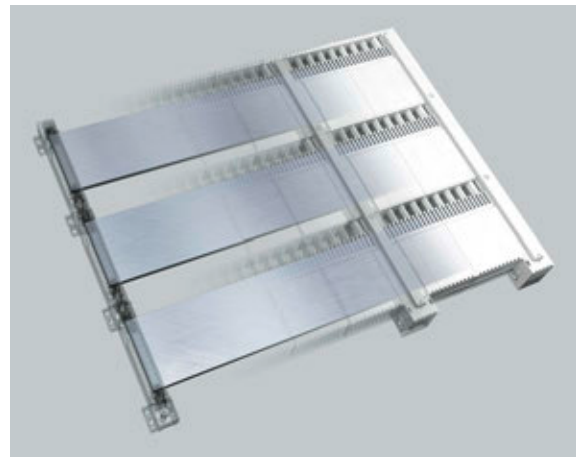
The 185Power system is based on the busbar supports which can be adjusted to the various busbar sizes. They allow flat busbars to be fixed without any drilling. Contact protection is assured by a separate busbar support cover.

The 50mm and 100mm wide CrossLink® contact protection modules make individual solutions a thing of the past. Operation of the CrossLink® busbar covers ensures easy and assured positioning of the components at all times. The risk of an external-ignited arc is minimised.

EQUES®185Power

The adapters enable circuit-breakers to be directly, quickly and easily mounted on the 185Power system. They can also be used for both feed-in and outgoing feeds from the busbar system. This, of course, also holds good for the customary 630A - 1600A circuit-breakers. In general, there are two variants for busbar mounting. The first one is the usual one involving direct connection with screw connections onto the drilled busbars.

The other is the extremely convenient and time-saving variant with clamps as a no-drill mounting on a contact-protected system.

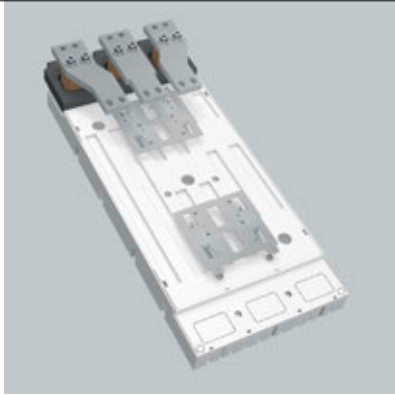
**NEW**

CrossLink®185Power

Optimum shock protection
of the busbar system thanks to
CrossLink shock protection modulesCrossLink shock protection modules
ensure direct and dependable connection
of all components

50mm and 100mm wide modules

Additional base plate profiles permit
phase shrouding



NEW

EQUES®185Power

Adapter for all customary
630A - 1600A circuit-breakers

Terminal and screw connection

Integrated current measurement
with standard current transformers

Shock protection cover for the
connection set and terminal
space of the circuit-breaker



NEW

QUADRON®185Power

NH in-line fuse switch disconnecter
Sizes 00 - 3

Modification outgoing feeder top/
bottom possible

Prepared for fitting of current transformers

Other variants:
Double NH in-line fuse switch
disconnecter, NH in-line fuse switch
disconnecter 910A, fuse monitoring

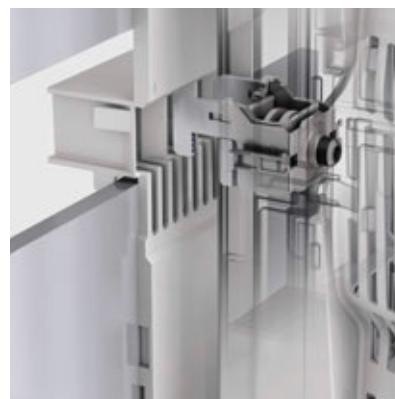
Shock protection covers for connection of the circuit-breaker are available as accessories. This is where busbar system shock protection is continued. Space-saving integration of current transformers can be accommodated on the adapter assembly.

QUADRON®185Power

The newly devised NH in-line switch disconnectors of the 00 to 3 sizes can be mounted rapidly, easily and securely, without the need for drilling. The convenient line terminal and transformer integration represent additional highlights of this innovative strip group. The lateral ducts of the QUADRON®185Power NH in-line switch disconnectors produce a kind of draw-off chimney which acts as a cooling and ventilation system and pinpoints the discharge of switching gases and heat. There is no trouble in fitting any variant of the NH in-line fuse switch disconnectors of Sizes 00 to 3 in the 185Power system. Based on individual requirements, the in-line switch disconnectors can be conveniently, quickly and securely mounted with clamps or with conventional screw fitting to the drilled busbar.

CRITO®185Power

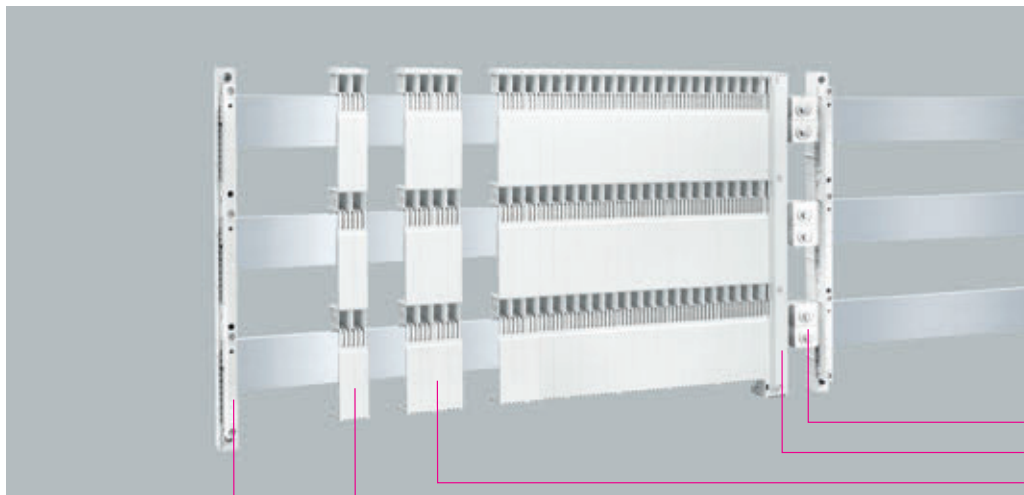
There are basically two ways to effect variable feed-in and connection of busbar systems. The terminal strips enable both conductors and laminated flexible copper busbars up to an installation width of 100mm to be compactly connected. For larger power requirements, the 3 pole connection modules with optional contact protection covers are recommended.



NEW

Clamp of the NH fuse
in-line switch disconnecter
QUADRON®185Power

Straight forward, safe, efficient:
Mounting with clamp
on the contact protector



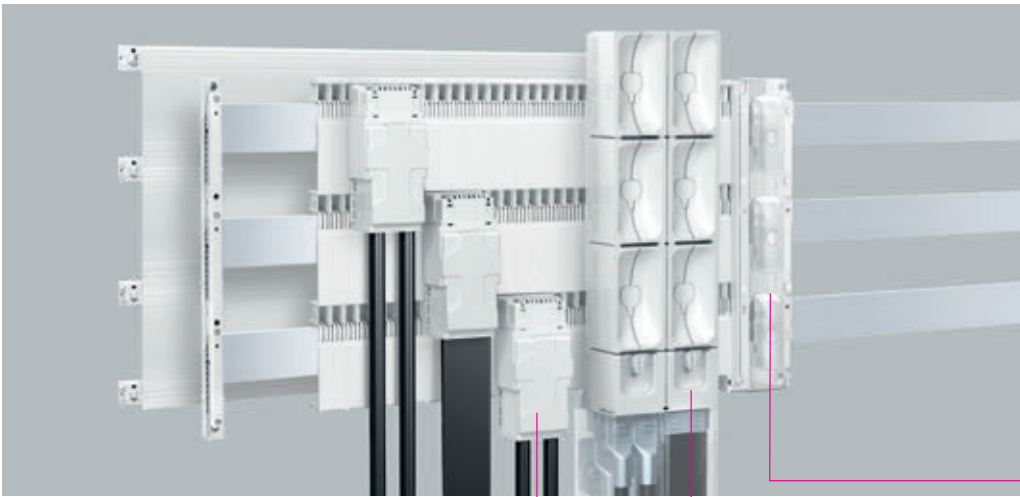
01 480
01 431
01 434
01 433
01 430

Busbar supports and busbar support cover					
Type	Pack size	Weight		Part no.	
universal busbar support 185mm for undrilled flat busbars 30, 40, 60, 80, 100, 120 x 10	4	50.0	kg/100 u.	01 430	06
end cover for busbar support , set for left and right support	1	2.8		01 431	06
cover for busbar support part no. 01 430 when using the busbar support as a center support	2	2.8		01 432	06

Busbar E-Cu, tin-plated, length 2.40m					
Type	Cross section	Pack size	Weight		Part no.
W x H			kg/100 u.		
30 x 10	300	1	643.2	01 625	06
40 x 10	400	1	856.8	01 626	06
50 x 10	500	1	1072.8	01 627	06
60 x 10	600	1	1294.0	01 628	06
80 x 10	800	1	1728.0	01 765	06
100 x 10	1000	1	2174.0	01 766	06
120 x 10	1200	1	2572.8	01 767	06
partial length on request; for busbar cover see Page 3/1					

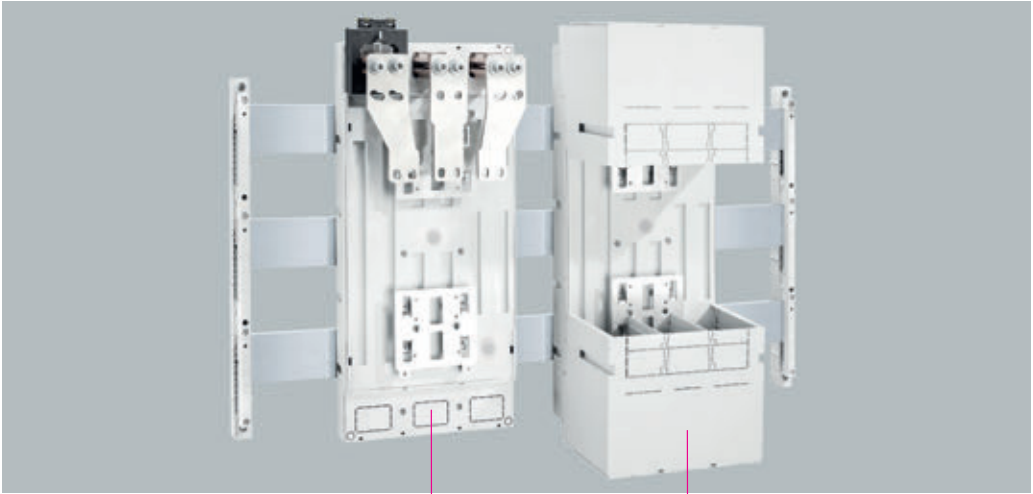
CrossLink®185Power, system cover at front					
Type	Pack size	Weight		Part no.	
		kg/100 u.			
CrossLink® touch-safe protection cover 50mm	8	14.0		01 433	06
CrossLink® touch-safe protection cover 100mm	4	28.0		01 434	06
completion section for stabilising touch-safe protection covers 499mm long	1	70.0		01 440	06
completion section for stabilising touch-safe protection covers 649mm long	1	70.0		01 444	06
the lengths of the border profiles are matched to those of the base plate profiles (see Page 4/2); border profile 499mm long fits part no. 01420, border profile 649mm long fits part no. 01436					

Busbar connector, for same-size busbars					
busbar connecting terminal 40mm for busbars 30, 40, 80 x 10mm	*	3	48.0	01 480	07
busbar connecting terminal 60mm for busbars 60, 120 x 10mm	*	3	74.0	01 481	07
front and rear touch protection cover for a 100mm busbar carrier distance, 1 piece needed for a 3-pole system		1	29.5	01 482	07
* for the connection of busbars 80 x 10mm longitudinal busbar connectors part no. 01 480 needed for the connection of busbars 100 x 10mm longitudinal busbar connectors part no. 01 480 and part no. 01 481 needed for the connection of busbars 120 x 10mm longitudinal busbar connectors part no. 01 481 needed					



- 01 482
- 01 439
- 01 437

CRITO®185Power, connection rail						
Type	Rated current	Width	Pack size	Weight kg/100 u.		Part no.
connection rail 630A/800A 3-pole, screw connection for 2 cable lugs 240mm ² , 100mm wide	* 800A	100	1	-		01 438 07
connection rail 1200A/1400A 3-pole, screw connection for 2 cable lugs 300mm ² , 100mm wide	* 1000A	100	1	-		01 439 07
terminal clamp connection rail for the touch protected busbar system	*		3	15.0		33 738 12
terminal clamp connection rail			3	10.0		33 740 12
* supply start 2nd quarter						
CRITO®185Power, connection module						
Type			Pack size	Weight kg/100 u.		Part no.
connection module, 2x box terminal 240mm ² , Cu and Al	*		1	-		01 441 07
connection module, flat conductor, 2x 80 x 10	*		1	-		01 442 07
connection module for cable lugs, 4x M12			1	-		01 443 07
cover for connection modules			1	-		01 437 07
* supply start 2nd quarter						
System shrouding, at the rear						
base plate profiles, 523mm long for system 550mm long, set consisting 3 base plates and 8 distance pieces			3	70.0		01 420 06
base plate profiles, 673mm long for system 700mm long, set consisting 3 base plates and 8 distance pieces			3	70.0		01 436 06
distance pieces for busbar carriers, for fixing base plates			4	13.1		01 421 06
Busbar connector, for same-size busbars						
busbar connecting terminal 40mm for busbars 30, 40, 80 x 10mm	*		3	48.0		01 480 07
busbar connecting terminal 60mm for busbars 60, 120 x 10mm	*		3	74.0		01 481 07
front and rear touch protection cover for a 100mm busbar carrier distance, 1 piece needed for a 3-pole system			1	29.5		01 482 07
* for the connection of busbars 80 x 10mm longitudinal busbar connectors part no. 01 480 needed for the connection of busbars 100 x 10mm longitudinal busbar connectors part no. 01 480 and part no. 01 481 needed for the connection of busbars 120 x 10mm longitudinal busbar connectors part no. 01 481 needed						



32 750
32 786

EQUES®185Power

EQUES®185Power, busbar adapter up to 1600A, connection to the system on top, **screw connection** for drilled busbars

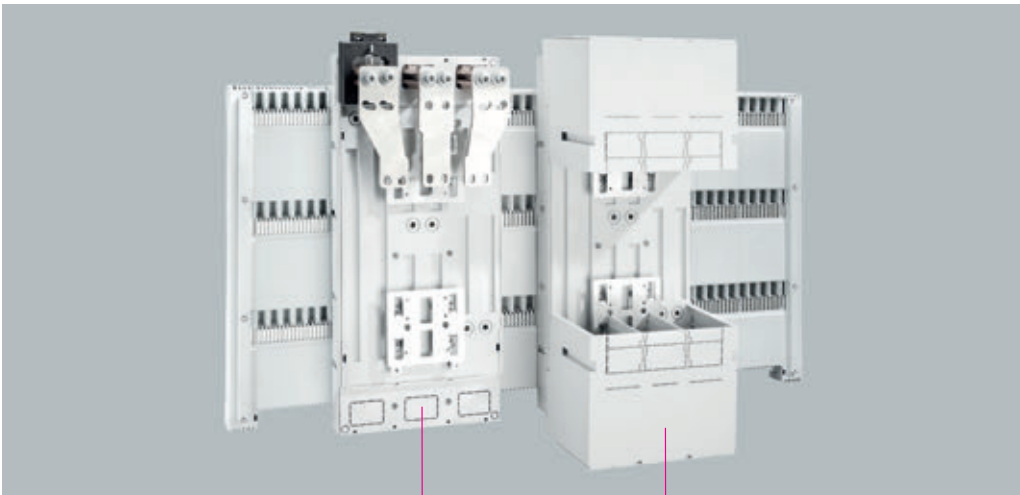
Type	Rated current	Pack size	Weight kg/100 u.		Part no.	
for ABB Tmax T6, T7 (630A, 800A)	* 800A	1	1820.0		32 786	05
for ABB Tmax T7 1000	1000A	1	1820.0		32 785	05
for ABB Tmax T7 1250	1250A	1	2550.0		32 784	05
for Eaton NZM4 630A, 800A	* 800A	1	1900.0		32 782	05
for Eaton NZM4 1000A	* 1000A	1	2600.0		32 779	05
for Eaton NZM4 1250A	* 1250A	1	2600.0		32 781	05
for Eaton NZM4 1600A	1440A	1	2600.0		32 780	05
for Schneider Electric NS630, NS800	* 800A	1	1900.0		32 778	05
for Schneider Electric NS1000	* 1000A	1	1900.0		32 777	05
for Schneider Electric NS1250	1250A	1	2550.0		32 776	05
for Schneider Electric NS1600	* 1450A	1	2700.0		32 775	05
for Siemens VL630, VL800	* 800A	1	1900.0		32 774	05
for Siemens VL1250/3VL7 (1000A)	* 1000A	1	1900.0		32 773	05
for Siemens VL1250/3VL7 (1250A)	1250A	1	2580.0		32 772	05
for Terasaki 1250, 1600	* 1250A	1	2850.0		32 735	05
for Terasaki 800, 1000	* 1000A	1	2050.0		32 736	05
other adapter types on request						
* supply start on request						

Cover for terminal compartment

Type	Pack size	Weight kg/100 u.		Part no.	
protection cover for adapter pluggable top/bottom	1	29.5		32 750	05
cover, accessory for the touch protection cover part no. 32 750, for front closing	1	0.1		32 751	05

Integratable current transformers, accuracy Class1, secondary rated current 5A

Type	Rated current	Pack size	Weight kg/100 u.		Part no.	
for the direct integration into the EQUES®185Power busbar adapter	630A	1	14.0		32 983	05
	800A	1	14.0		32 984	05
	1000A	1	14.0		32 985	05
	1250A	1	14.0		32 986	05
	1600A	1	14.0		32 987	05



32 750
32 767

EQUES®185Power

EQUES®185Power, busbar adapter up to 1600A, connection to the system on top, **terminal connector**
for drill-free mounting for busbar system

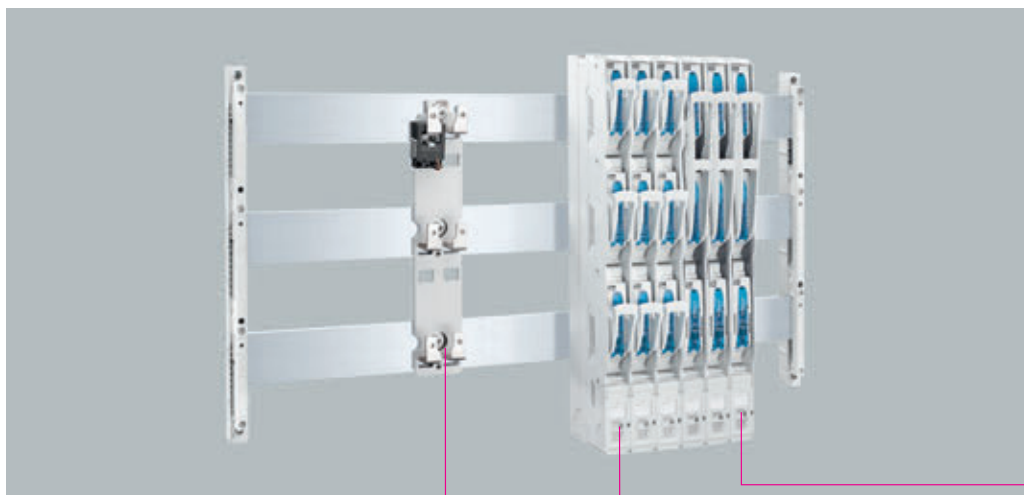
Type	Rated current	Pack size	Weight kg/100 u.		Part no.	
for ABB Tmax T6 (630A), T7 (800A)	* 800A	1	1950.0		32 767	05
for ABB Tmax T7 1000	1000A	1	1870.0		32 766	05
for ABB Tmax T7 1250	1250A	1	2600.0		32 765	05
for Eaton NZM4 630A, 800A	* 800A	1	1950.0		32 768	05
for Eaton NZM4 1000A	* 1000A	1	1950.0		32 763	05
for Eaton NZM4 1250A	* 1250A	1	2850.0		32 762	05
for Eaton NZM4 1600A	1440A	1	2800.0		32 761	05
for Schneider Electric NS630, NS800	* 800A	1	1950.0		32 764	05
for Schneider Electric NS1000	* 1000A	1	1950.0		32 758	05
for Schneider Electric NS1250	1250A	1	2550.0		32 757	05
for Schneider Electric NS1600	1450A	1	2750.0		32 756	05
for Siemens VL630, VL 800	* 800A	1	1950.0		32 754	05
for Siemens VL1250/3VL7 (1000A)	* 1000A	1	1950.0		32 755	05
for Siemens VL1250/3VL7 (1250A)	1250A	1	2620.0		32 753	05
for Terasaki 1250, 1600	* 1250A	1	2850.0		32 735	05
for Terasaki 800, 1000	* 1000A	1	2050.0		32 736	05
other adapter types on request						
* supply start on request						

Cover for terminal compartment

Type	Pack size	Weight kg/100 u.		Part no.	
protection cover for adapter pluggable top/bottom	1	29.5		32 750	05
cover, accessory for the touch protection cover part no. 32 750, for front closing	1	0.1		32 751	05

Integratable current transformers, accuracy Class1, secondary rated current 5A

Type	Rated current	Pack size	Weight kg/100 u.		Part no.	
for the direct integration into the EQUES®185Power busbar adapter	630A	1	14.0		32 983	05
	800A	1	14.0		32 984	05
	1000A	1	14.0		32 985	05
	1250A	1	14.0		32 986	05
	1600A	1	14.0		32 987	05



33 700

33 715

33 728

QUADRON®185Power

QUADRON®185Power, size 00, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom

Type	Rated current	Size	Pack size	Weight kg/100 u.		Part no.	
NH in-line fuse switch disconnecter screw M8, high version appropriate for installing current transformers	160A	NH00	1	260.0		33 700	12
NH in-line fuse switch disconnecter screw terminal clamp, high version appropriate for installing current transformers	160A	NH00	1	260.0		33 770	12
NH in-line fuse switch disconnecter screw M8, flat version	160A	NH00	1	220.0		33 704	12
NH in-line fuse switch disconnecter terminal clamp, flat version	160A	NH00	1	135.0		33 773	12
clamp for use without contact protection modules		00	3	21.7		33 739	12

QUADRON®185Power, size 00, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom with fuse monitoring

NH in-line fuse switch disconnecter screw M8, high version appropriate for installing current transformers	160A	NH00	1	170.0		33 720	12
NH in-line fuse switch disconnecter screw terminal clamp, high version appropriate for installing current transformers	160A	NH00	1	170.0		33 771	12
NH in-line fuse switch disconnecter screw M8, flat version	160A	NH00	1	140.0		33 724	12
NH in-line fuse switch disconnecter terminal clamp, flat version	160A	NH00	1	140.0		33 774	12
clamp for use without contact protection modules		00	3	21.7		33 739	12

QUADRON®185Power, size 00, NH in-line fuse switch disconnecter, 1-pole switchable, connection top/bottom

NH in-line fuse switch disconnecter screw M8, high version appropriate for installing current transformers	160A	NH00	1	255.0		33 715	12
NH in-line fuse switch disconnecter screw terminal clamp, high version appropriate for installing current transformers	160A	NH00	1	160.0		33 772	12
NH in-line fuse switch disconnecter screw M8, flat version	160A	NH00	1	130.0		33 719	12
NH in-line fuse switch disconnecter terminal clamp, flat version	160A	NH00	1	130.0		33 775	12
clamp for use without contact protection modules		00	3	21.7		33 739	12

QUADRON®185Power, size 00, NH fuse block, open version, connection top/bottom

NH-fuse block screw M8, flat version *	160A	NH00	1	195.0		33 705	12
clamp for use without contact protection modules		00	3	21.7		33 739	12

* supply start 2nd quarter



33 700
33 715

QUADRON®185Power

QUADRON®185Power, size 00, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom

Type	Rated current	Size	Pack size	Weight kg/100 u.		Part no.	
NH in-line fuse switch disconnecter screw M8, high version appropriate for installing current transformers	160A	NH00	1	260.0		33 700	12
NH in-line fuse switch disconnecter screw terminal clamp, high version appropriate for installing current transformers	160A	NH00	1	260.0		33 770	12
NH in-line fuse switch disconnecter screw M8, flat version	160A	NH00	1	220.0		33 704	12
NH in-line fuse switch disconnecter terminal clamp, flat version	160A	NH00	1	135.0		33 773	12
clamp for use with the Crosslink®185Power contact protection modules		00	3	7.5		33 737	12

QUADRON®185Power, size 00, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom with fuse monitoring

NH in-line fuse switch disconnecter screw M8, high version appropriate for installing current transformers	160A	NH00	1	170.0		33 720	12
NH in-line fuse switch disconnecter screw terminal clamp, high version appropriate for installing current transformers	160A	NH00	1	170.0		33 771	12
NH in-line fuse switch disconnecter screw M8, flat version	160A	NH00	1	140.0		33 724	12
NH in-line fuse switch disconnecter terminal clamp, flat version	160A	NH00	1	140.0		33 774	12
clamp for use with the Crosslink®185Power contact protection modules		00	3	7.5		33 737	12

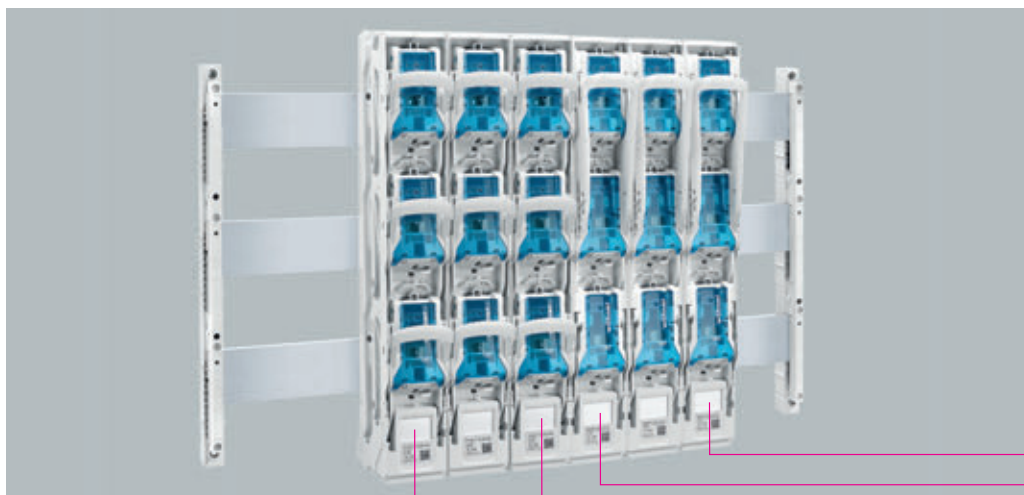
QUADRON®185Power, size 00, NH in-line fuse switch disconnecter, 1-pole switchable, connection top/bottom

NH in-line fuse switch disconnecter screw M8, high version appropriate for installing current transformers	160A	NH00	1	255.0		33 715	12
NH in-line fuse switch disconnecter screw terminal clamp, high version appropriate for installing current transformers	160A	NH00	1	160.0		33 772	12
NH in-line fuse switch disconnecter screw M8, flat version	160A	NH00	1	130.0		33 719	12
NH in-line fuse switch disconnecter terminal clamp, flat version	160A	NH00	1	130.0		33 775	12
clamp for use with the Crosslink®185Power contact protection modules		00	3	7.5		33 737	12

QUADRON®185Power, size 00, NH fuse block, open version, connection top/bottom

NH-fuse block screw M8, flat version *	160A	NH00	1	195.0		33 705	12
clamp for use with the Crosslink®185Power contact protection modules		00	3	7.5		33 737	12

* supply start 2nd quarter



33 703

33 701

33 718

33 716

QUADRON®185Power

QUADRON®185Power, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom

Type	Rated current	Size	Pack size	Weight kg/100 u.		Part no.	
NH in-line fuse switch disconnecter screw M12	250A	NH 1	1	500.0		33 701	12
	400A	NH 2	1	500.0		33 702	12
	630A	NH 3	1	640.0		33 703	12
clamp for use without contact protection modules		1-3	3	10.0		33 740	12

QUADRON®185Power, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom with fuse monitoring

NH in-line fuse switch disconnecter screw M12	250A	NH 1	1	540.0		33 721	12
	400A	NH 2	1	540.0		33 722	12
	630A	NH 3	1	680.0		33 723	12
clamp for use without contact protection modules		1-3	3	10.0		33 740	12

QUADRON®185Power, NH in-line fuse switch disconnecter, 1-pole switchable, connection top/bottom

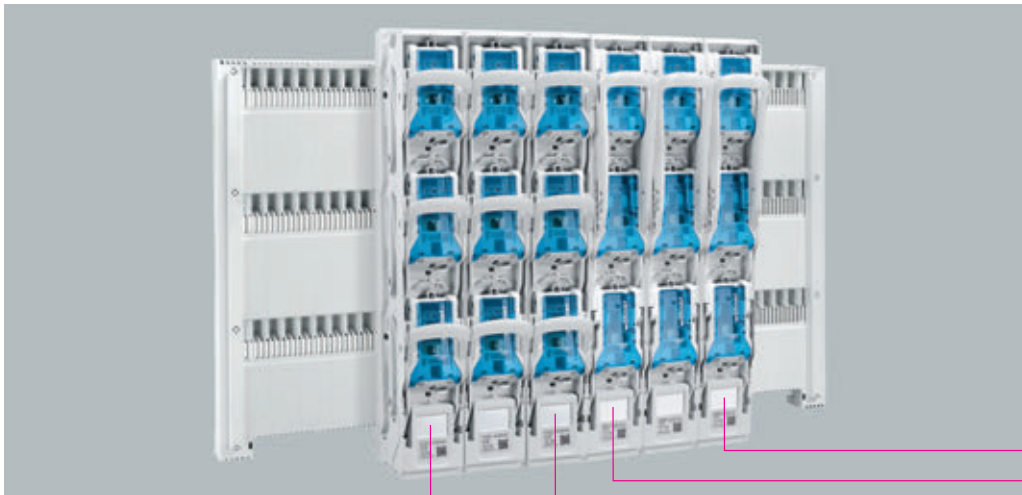
NH in-line fuse switch disconnecter screw M12	250A	NH 1	1	500.0		33 716	12
	400A	NH 2	1	500.0		33 717	12
	630A	NH 3	1	640.0		33 718	12
clamp for use without contact protection modules		1-3	3	10.0		33 740	12

QUADRON®185Power, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom

NH in-line fuse switch disconnecter 910A	*	910A	NH 3	1	-	33 730	12
double NH in-line fuse switch disconnecter, 2 x size 3, 1250A, 4 x screw M12	*	1250A	NH 3	1	-	33 731	12
clamp for use without contact protection modules			1-3	3	10.0	33 740	12
* supply start 2nd quarter							

QUADRON®185Power, NH fuse block, open version, non-standard design

NH-fuse block screw M12	*	250A	NH 1	1	400.0		33 706	12
		400A	NH 2	1	400.0		33 707	12
		630A	NH 3	1	535.0		33 708	12
clamp for use without contact protection modules			1-3	3	10.0		33 740	12
* supply start 2nd quarter								



- 33 703
- 33 701
- 33 718
- 33 716

QUADRON®185Power

QUADRON®185Power, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom

Type	Rated current	Size	Pack size	Weight kg/100 u.		Part no.	
NH in-line fuse switch disconnecter screw M12	250A	NH 1	1	500.0		33 701	12
	400A	NH 2	1	500.0		33 702	12
	630A	NH 3	1	640.0		33 703	12
clamp for use with the Crosslink®185Power contact protection modules	*	1-3	3	15.0		33 738	12
* supply start 2nd quarter							

QUADRON®185Power, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom with fuse monitoring

NH in-line fuse switch disconnecter screw M12	250A	NH 1	1	540.0		33 721	12
	400A	NH 2	1	540.0		33 722	12
	630A	NH 3	1	680.0		33 723	12
clamp for use with the Crosslink®185Power contact protection modules	*	1-3	3	15.0		33 738	12
* supply start 2nd quarter							

QUADRON®185Power, NH in-line fuse switch disconnecter, 1-pole switchable, connection top/bottom

NH in-line fuse switch disconnecter screw M12	250A	NH 1	1	500.0		33 716	12
	400A	NH 2	1	500.0		33 717	12
	630A	NH 3	1	640.0		33 718	12
clamp for use with the Crosslink®185Power contact protection modules	*	1-3	3	15.0		33 738	12
* supply start 2nd quarter							

QUADRON®185Power, NH in-line fuse switch disconnecter, 3-pole switchable, connection top/bottom

NH in-line fuse switch disconnecter 910A	*	910A	NH 3	1	-	33 730	12
double NH in-line fuse switch disconnecter, 2 x size 3, 1250A, 4 x screw M12	*	1250A	NH 3	1	-	33 731	12
clamp for use with the Crosslink®185Power contact protection modules	*		1-3	3	15.0	33 738	12
* supply start 2nd quarter							

QUADRON®185Power, NH fuse block, open version, non-standard design

NH-fuse block screw M12	*	250A	NH 1	1	400.0	33 706	12
		400A	NH 2	1	400.0	33 707	12
		630A	NH 3	1	535.0	33 708	12
clamp for use with the Crosslink®185Power contact protection modules	*			3	15.0	33 738	12
* supply start 2nd quarter							



33 728	33 732	33 739	33 737	33 753
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Accessories Size 00

for QUADRON®185Power

Accessories for drill-free mounting

Type	Size	Pack size	Weight kg/100 u.	Part no.	
terminal clamp for CrossLink® touch - protected busbar system	00	3	7.5	33 737	12
terminal clamp	00	3	21.7	33 739	12

Connecting accessories

connection space cover bottom, high version	00	1	20.0	33 732	12
connection space cover bottom, flat version	00	1	13.4	33 725	12
connection space cover top, high version	00	1	13.4	33 726	12
connection space cover top, flat version	00	1	13.4	33 727	12

Connecting accessories

wedge clamp terminal for 10mm ² - 95mm ²	00	3	3.0	33 734	09
* not maintenance-free if aluminium conductors are used (see page 8/2)					

Adapter for NH in-line fuse switch disconnecter, size 00, 185mm, flat version

double adapter 185 / 185	00	1	55.0	33 728	12
current transformer with part no. 33744, 33753, 33754 can be used					

Integratable current transformers, accuracy class 1, secondary rated current 5A

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
current transformer 80A, with clamps	80A	00	1	14.0	33 741	12
current transformer 150A, with clamps	150A	00	1	14.0	33 742	12
current transformer 150A for adapter 33 728 with wires	150A	00	1	14.0	33 744	12

Integratable current transformers, calibratable, accuracy class 0.5, secondary rated current 5A

current transformer 100A, with clamps	100A	00	1	28.0	33 749	12
current transformer 150A, with clamps	150A	00	1	28.0	33 751	12
current transformer 150A for adapter 33 728 with wires	150A	00	1	28.0	33 753	12

Integratable current transformers, calibratable, accuracy class 0.5, rated current 5A

current transformer 100A, with clamps	100A	00	1	28.0	33 750	12
current transformer 150A, with clamps	150A	00	1	28.0	33 752	12
current transformer 150A for adapter 33 728 with wires	150A	00	1	28.0	33 754	12

Fixing clip for current transformer

Type	Size	Pack size	Weight kg/100 u.	Part no.	
for the use of current transformers on the double adapter part no. 33 728	00	3	0.4	33 300	12

Pilot switch

pilot switch for monitoring of lid position	00-3	1	1.1	33 156	09
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calibrated transformer, national legislation to be taken into account

wöhner

Approvals	8 61-71	Technical data	8 37-39	→
New		Dimensions	9 35,36,47	→



33 735	33 733	33 740	33 738	33 744
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Accessories Sizes 1-3

for QUADRON®185Power

Accessories for drill-free mounting

Type	Size	Pack size	Weight kg/100 u.	Part no.	
terminal clamp for touch protected busbar system *	1-3	3	15.0	33 738	12
terminal clamp	1-3	3	10.0	33 740	12
* supply start 2nd quarter					

Connecting accessories

connecting space cover size 1-3, 100mm wide	1-3	1	30.0	33 733	12
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Connecting accessories

terminal clamp 70mm ² - 240mm ²	1-3	3	14.5	33 735	12
terminal clamp 120mm ² - 400mm ² *	1-3	3	25.5	33 736	12
direct terminal clamp Cu and Al *	3	3	10.1	33 268	12
double direct terminal clamp Cu and Al *	3	3	11.3	33 270	12
* not maintenance-free if aluminium conductors are used (see page 8/2)					

Integratable current transformers with wires, accuracy class 1, secondary rated current 5A

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
current transformer 150A / 5A	150A	1-3	1	14.0	33 744	12
current transformer 200A / 5A	200A	1-3	1	14.0	33 745	12
current transformer 250A / 5A	250A	1-3	1	14.0	33 746	12
current transformer 400A / 5A	400A	1-3	1	14.0	33 747	12
current transformer 600A / 5A	600A	1-3	1	14.0	33 748	12

Integratable current transformers with wires, calibratable, accuracy class 0.5, rated secondary current 5A

current transformer 150A / 5A, calibratable	150A	1-3	1	28.0	33 753	12
current transformer 200A / 5A, calibratable	200A	1-3	3	28.0	33 292	12
current transformer 250A / 5A, calibratable	250A	1-3	3	28.0	33 294	12
current transformer 400A / 5A, calibratable	400A	1-3	3	28.0	33 298	12

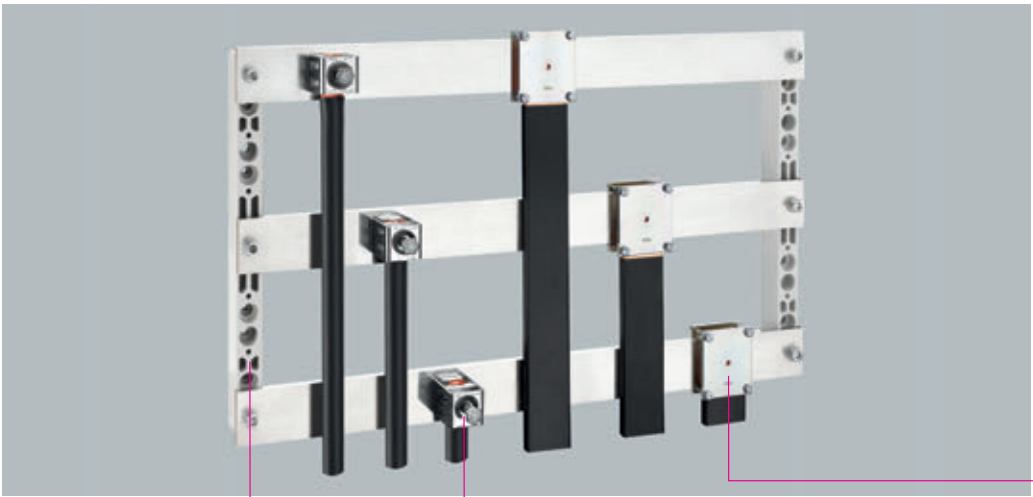
Integratable current transformers with wires, calibratable, accuracy class 0.5, rated secondary current 5A

current transformer 150A / 5A, calibratable	150A	1-3	1	28.0	33 754	12
current transformer 200A / 5A, calibratable	200A	1-3	3	28.0	33 293	12
current transformer 250A / 5A, calibratable	250A	1-3	3	28.0	33 295	12
current transformer 400A / 5A, calibratable	400A	1-3	3	28.0	33 299	12

Signalling switch

Type	Size	Pack size	Weight kg/100 u.	Part no.	
pilot switch for monitoring lid position	00-3	1	1.1	33 156	09

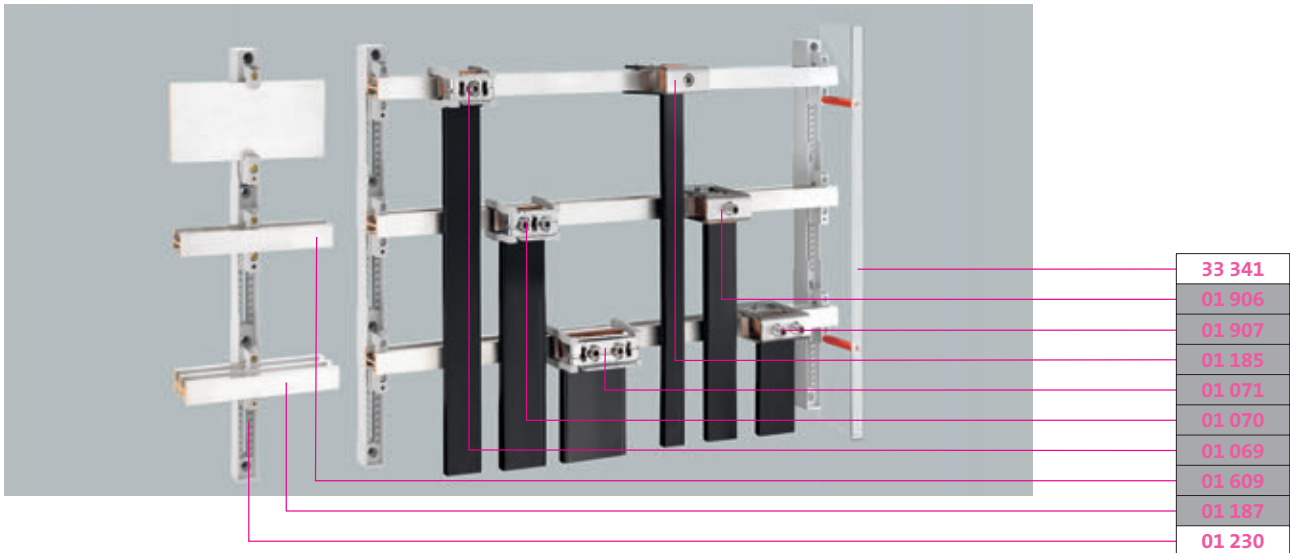
calibrated transformer, national legislation to be taken into account



- 01 617
- 01 429
- 01 742

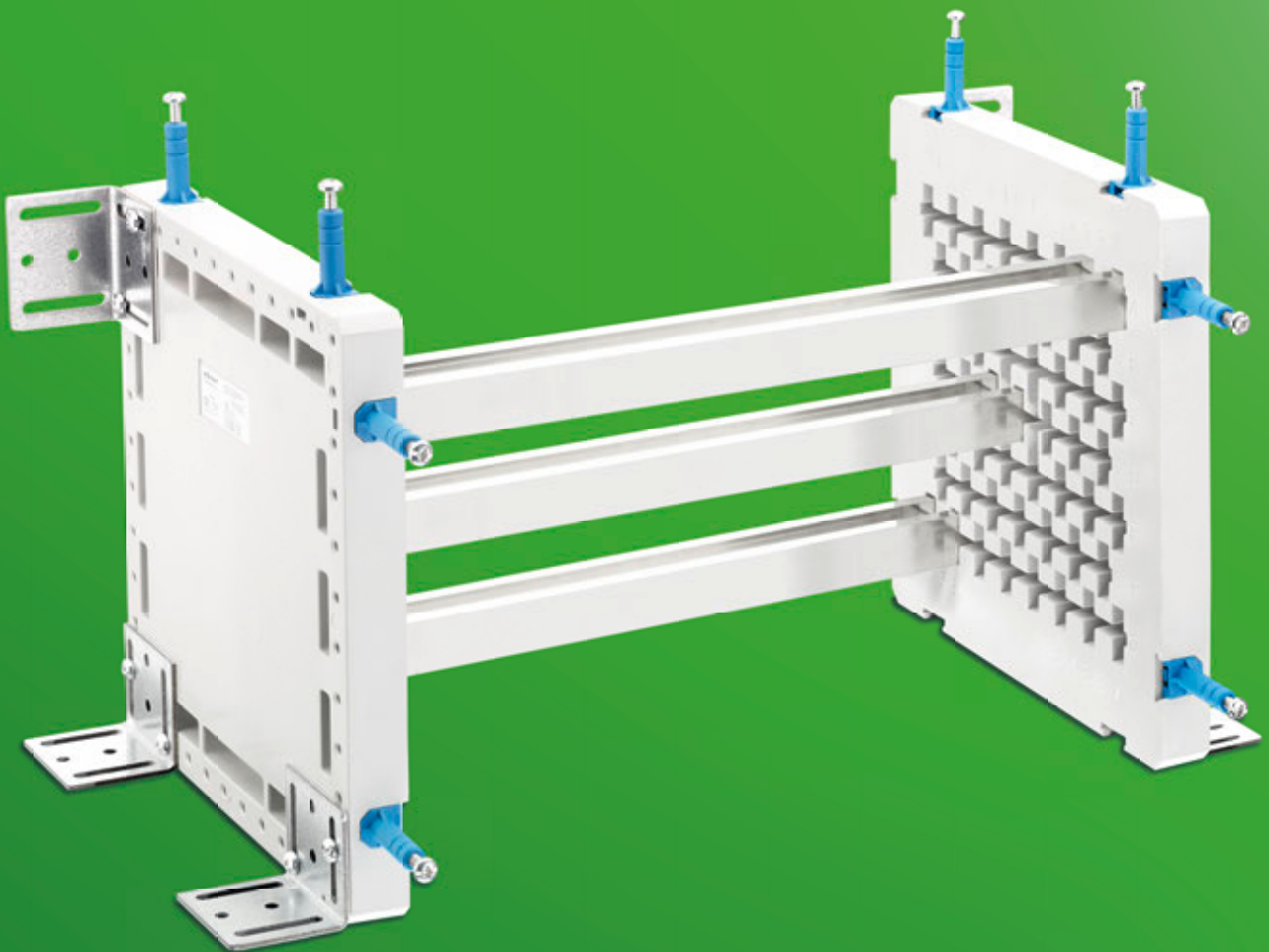
Busbar supports 185mm, 3-pole							
Type		Pack size	Weight		Part no.		
for drilled flat busbars		6	70.3	kg/100 u.	01 742	06	
Busbar E-Cu, tin-plated, length 2.40m							
Type	Cross section	Pack size	Weight		Part no.		
W x H			kg/100 u.				
30 x 10	300	1	643.2		01 625	06	
40 x 10	400	1	856.8		01 626	06	
50 x 10	500	1	1072.8		01 627	06	
60 x 10	600	1	1294.0		01 628	06	
80 x 10	800	1	1728.0		01 765	06	
100 x 10	1000	1	2174.0		01 766	06	
120 x 10	1200	1	2572.8		01 767	06	
shorter lengths on request; for busbar cover see page 3/9							
Busbar connector, to connect flat busbars and Ia. Cu							
Terminal space	Terminal space	Pack size	Weight		Part no.		
W x L	max. height		kg/100 u.				
40 x 20	20	10	17.8		01 206	07	
40 x 32	20	6	27.6		01 616	07	
50 x 32	20	6	32.2		01 207	07	
63 x 40	20	3	43.4		01 218	07	
63 x 50	20	3	51.5		01 617	07	
80 x 40	30	3	84.0		01 222	07	
Terminal							
For busbars	Connection	Terminal space	For use	Pack size	Weight		Part no.
		W x H	up to max.		kg/100 u.		
30 x 10	for flat busbars up to 40 x 25	41 x 25	1250A	3	81.7		01 092 07
Push-on screw connector, for cable lugs DIN 46 234							
Type	Connection	For use	Pack size	Weight		Part no.	
		up to max.		kg/100 u.			
for undrilled flat busbars, 10mm thick	M5 x 8	360A	25	5.0		01 512 07	
for undrilled flat busbars, 10mm thick and double-T and triple-T section	M8 x 8	490A	20	16.5		01 514 07	
	M10 x 10	630A	6	36.2		01 047 07	
FIBUS®, universal conductor terminal for drilled flat busbars							
Type	For use	Pack size	Weight		Part no.		
	up to max.		kg/100 u.				
16 - 240mm ²	630A	3	44.0		01 429	07	
max. 350A current carrying capacity of the terminal point with aluminium conductor							

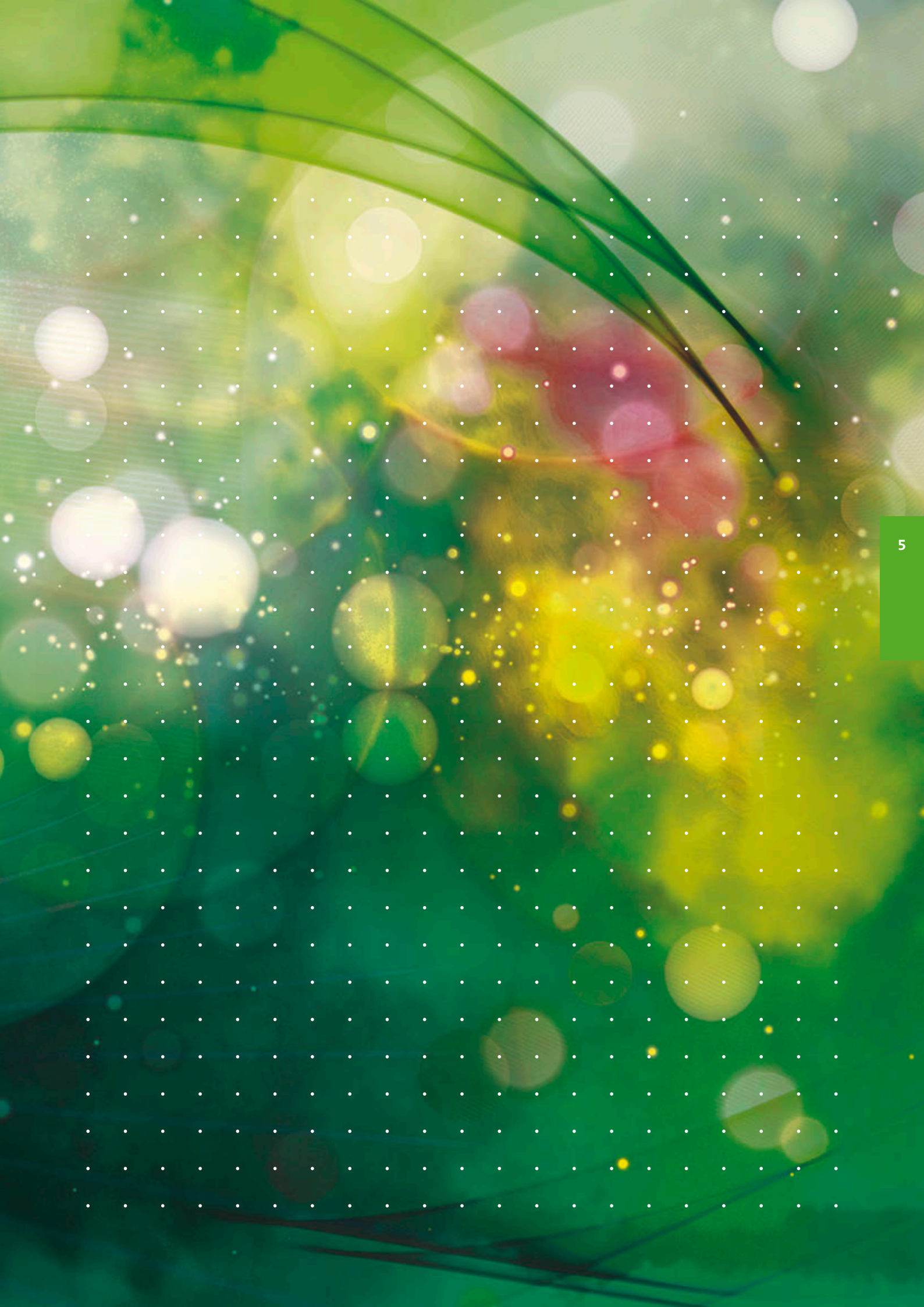
Designation for UL				
Approvals	8 61-71	Technical data	8 6,7,11	→
		Dimensions	9 11,27-30	→

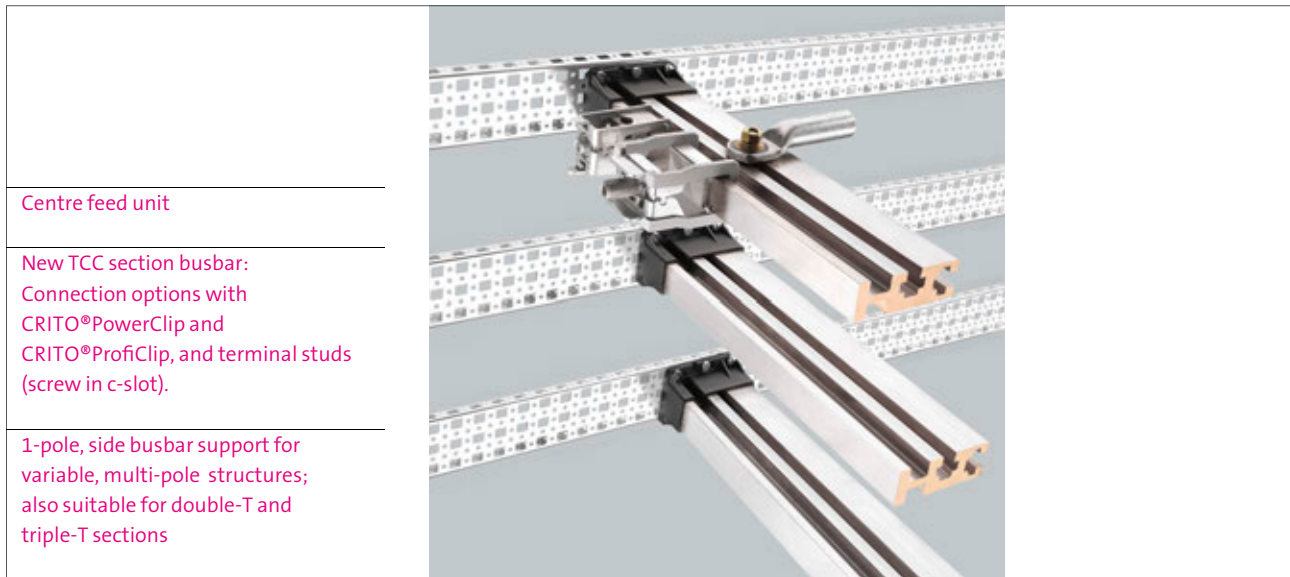


Universal busbar supports 185mm, 3-pole									
Type	Pack size	Weight			Part no.				
for undrilled flat busbars 30 - 120 x 10 and double-T and triple-T section busbars	4	kg/100 u. 50.0			01 230	06			
combined with SECUR®LeanStreamer size 1-3 mountable above. Exception: with terminal clamps at bottom, can only be connected on busbars up to maximum 60mm wide.									
End cover, for covering busbar ends, incl. mounting material									
for 01 230	2	2.8			33 341	06			
E-CU busbar									
Type	Length	Cross section	Pack size	Weight			Part no.		
				kg/100 u.					
double-T busbar section, tin-plated	2400	500	1	1062.0	01 609	06			
	2400	720	1	1554.0	01 608	06			
	2400	1140	1	2462.4	01 187	06			
shorter lengths on request; for current carrying capacity see page 8/8; for further section busbars see page 2/4									
CRITO®, brace terminals for the connection of flat busbars and laminated copper									
For busbars	Terminal space	Side	Centre	Pack size	Weight			Part no.	
	W x H	supply	supply		kg/100 u.				
30 x 10 and double-T and triple-T section	55 x 10 - 28	1600A	2000A	3	50.0	01 069	07		
30 x -10 and double-T and triple-T section	68 x 10 - 28	1600A	2000A	3	63.0	01 070	07		
	105 x 10 - 28	1600A	2800A	3	84.0	01 071	07		
Profile terminal, connection at front and back of busbar section									
Connection	Section	Terminal space	Side	Centre	Pack size	Weight			Part no.
		W x H	supply	supply		kg/100 u.			
320 - 800mm ²	double-T	41 x 20 - 42	1600A	1600A	3	67.0	01 185	07	
500 - 750mm ²	double-T	51 x 5 - 28	1600A	1600A	3	70.5	01 906	07	
600 - 900mm ²	double-T	64 x 5 - 28	1600A	1600A	3	84.0	01 907	07	
500 - 1000mm ²	double-T	51 x 20 - 42	1600A	2000A	3	73.5	01 936	07	
600 - 1200mm ²	double-T	64 x 20 - 42	1600A	2000A	3	85.9	01 911	07	
800 - 1600mm ²	double-T	81 x 20 - 42	1600A	2500A	3	101.1	01 934	07	
1000 - 2000mm ²	double-T	101 x 20 - 42	1600A	2800A	3	113.7	01 935	07	
320 - 800mm ²	triple-T	41 x 23 - 45	1600A	1600A	3	105.0	01 513	07	
500 - 1260mm ²	triple-T	64 x 23 - 45	2000A	2500A	3	124.0	01 008	07	
1200 - 3600mm ²	triple-T	101 x 23 - 45	2500A	3200A	3	172.7	01 186	07	
for the connection of flat busbars and laminated copper busbars									

CENTRE FEED UNIT 3200A/4000A







System benefits

The fuse-free construction of this feed unit is possible due to its high short-circuit rating. The centre feed unit 4000A is designed specifically as a wiring transition point.

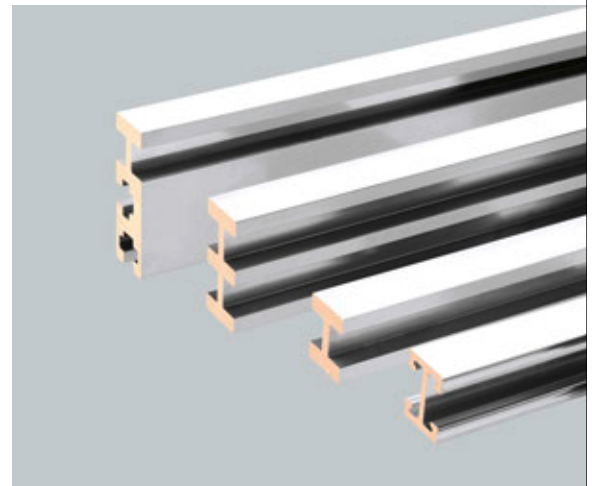
Centre feed unit 4000A

Triple-T profile and corresponding profile terminals allow a secure transmission of currents up to 4000A in centre feeds. The clear design, the drill-free assembly and the direct electrical contact made with the aid of embracing Crito® profile terminals reduce the assembly time to a minimum.

The ability to accommodate multiple incoming connections of up to 300mm² in Cu or Al, and the wide range of outgoing connections up to 2 x 100 x 10mm², together with a choice of 3 or 4-pole construction, make it possible to create customised solutions.

The new TCC section busbars offer even more connection options: one side with a 30 x 10 T section for connection with universal and brace terminals ensure secure and fast connection – and can be retrofitted easily. Two other sides of this busbar are fitted with C-slots for securing studs. Busbars, for example, can be easily connected here; connections can be made on up to three sides simultaneously.

Standardised production and type-testing ensure that units always meet relevant safety standards. Current capacity, which is fully confirmed by type-testing, and a short-circuit withstand capacity of up to 120kA, guarantee that these units are suitable for use in even the most demanding applications. This system has also been listed to the UL508 standard for use in North America.



Busbars for centre-feed unit

Double-T and triple-T sections with
two different cross-sections

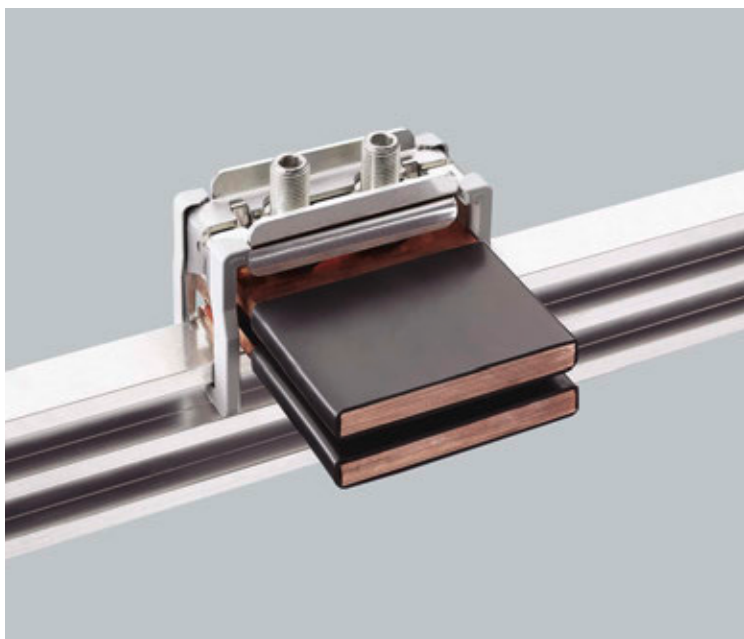
Triple-T sections

TCC section busbar for strong
currents and triple-sided connection
options

Prefabricated lengths for various
enclosure widths



Centre feed unit up to 4000A combines the benefits of high short-circuit withstand capacity, assembly without drilling, clamp-type terminals and simple construction



CRITO®PowerClip

Brace terminals for 50, 63 and 100mm flexible copper busbars

For 30 x 10mm busbars and section busbars

For feeder circuits up to 600V applicable according to UL 508A



35 005
01 318
01 911
35 005

Centre feed unit up to 3200A

Centre feed unit

Cabinet width	Mounting dimensions	Busbar length	Busbar cross-section	Rated current	Pack size	Weight kg/100 u.		Part no.	
600	488 - 563	453	500	1250A	1	1434.0		35 007	11
800	688 - 763	653	500	1250A	1	1716.0		35 006	11
600	488 - 563	453	720	2000A	1	1716.0		35 005	11
800	688 - 763	653	720	2000A	1	2488.0		35 004	11
600	488 - 563	453	1140	3200A	1	2200.0		35 015	11
800	688 - 763	653	1140	3200A	1	2940.0		35 016	11

basic system: 2 busbar supports, 6 fixing brackets with screws, 3 busbars cut to length; 8 supports for covers

CRITO®, universal conductor terminal

Connection	Terminal space W x H	For use up to max.	Pack size	Weight kg/100 u.		Part no.	
16 - 120	17 x 15	440A	25	10.9		01 203	07
95 - 300	41 x 25	630A	3	85.7		01 094	07

CRITO®, brace terminals for round conductor

Connection	For use up to max.	Pack size	Weight kg/100 u.		Part no.	
Cu and Al 95 - 185mm ² , rm, sm; Cu or f	500A	6	31.2		01 318	07
Cu and Al 120 - 300mm ² , rm, sm; Cu or f	600A	3	42.5		01 760	07

CRITO®, Profile terminal, connection at front and back of busbar section

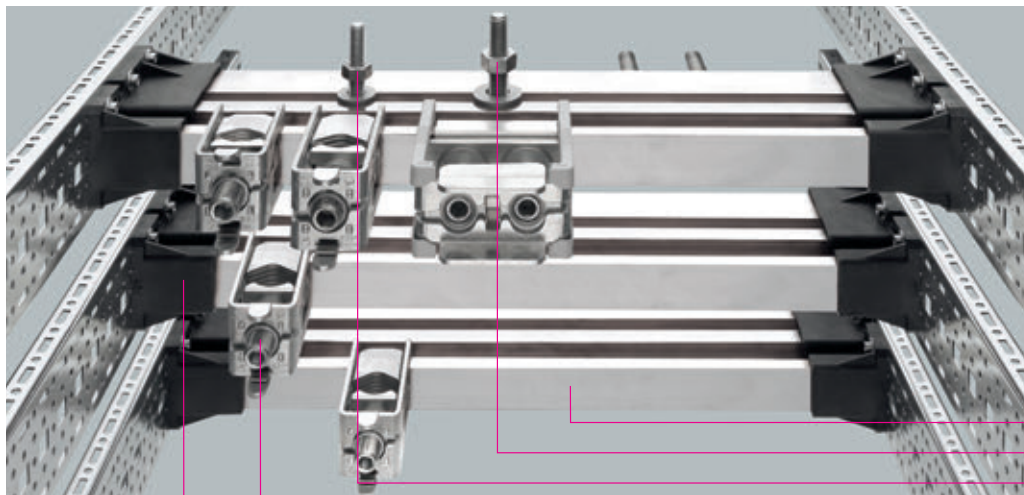
Connection	Section	Terminal space W x H	Side supply	Centre supply	Pack size	Weight kg/100 u.		Part no.	
320 - 800mm ²	double-T	41 x 20 - 42	1600A	1600A	3	67.0		01 185	07
500 - 750mm ²	double-T	51 x 5 - 28	1600A	1600A	3	70.5		01 906	07
600 - 900mm ²	double-T	64 x 5 - 28	1600A	1600A	3	84.0		01 907	07
500 - 1000mm ²	double-T	51 x 20 - 42	1600A	2000A	3	73.5		01 936	07
600 - 1200mm ²	double-T	64 x 20 - 42	1600A	2000A	3	85.9		01 911	07
800 - 1600mm ²	double-T	81 x 20 - 42	1600A	2500A	3	101.1		01 934	07
1000 - 2000mm ²	double-T	101 x 20 - 42	1600A	2800A	3	113.7		01 935	07
320 - 800mm ²	triple-T	41 x 23 - 45	1600A	1600A	3	105.0		01 513	07
500 - 1260mm ²	triple-T	64 x 23 - 45	2000A	2500A	3	124.0		01 008	07
1200 - 3600mm ²	triple-T	101 x 23 - 45	2500A	3200A	3	172.7		01 186	07

for the connection of flat busbars and laminated copper busbars



01 188
35 008

CRITO®, brace terminals for busbars 30 x 10 and section busbars							
For busbars	Terminal space	Side	Centre	Pack size	Weight		Part no.
	W x H	supply	supply		kg/100 u.		
30 x 10 and double-T and triple-T section	55 x 10 - 28	1600A	2000A	3	50.0		01 069 07
	68 x 10 - 28	1600A	2000A	3	63.0		01 070 07
	105 x 10 - 28	1600A	2800A	3	84.0		01 071 07
for the connection of flat busbars and laminated copper busbars							
CRITO®, clip-on screw clamp connection							
Busbars	Terminal space	For use		Pack size	Weight		Part no.
	W x H	up to max.			kg/100 u.		
for cable lug DIN 46 234	M8 x 8	490A		20	16.5		01 514 07
	M10 x 10	630A		6	36.2		01 047 07
Laminated copper busbar, insulated, length 2m							
Connection	Rated current	Cross section		Pack size	Weight		Part no.
	50K				kg/100 u.		
10 x 40 x 1	1053A	400		1	746.0		01 615 06
10 x 50 x 1	1244A	500		1	932.0		01 509 06
10 x 63 x 1	1481A	630		1	1180.0		01 510 06
10 x 80 x 1	1777A	800		1	1490.0		01 061 06
10 x 100 x 1	2110A	1000		1	1870.0		01 273 06
further cross sections see page 7/7 and 7/8							
Components, for individual mounting							
Type	Busbar	Section	Cross section	Pack size	Weight		Part no.
	length				kg/100 u.		
busbar support, outer, universal, incl. fixing materials				2	458.0		35 008 11
busbar support for double-T section, central, 4-pole, incl. fixing materials				1	458.0		35 009 11
busbar support for double and triple-T section, central, 3-pole, incl. fixing materials				1	458.0		35 001 11
additional support for cover, including screw				4	1.4		35 017 11
section busbar, E-Cu, tin-plated	453	double-T	500	1	200.6		01 225 06
	650	double-T	500	1	288.1		01 226 06
	453	double-T	720	1	293.3		01 838 06
	653	double-T	720	1	424.0		01 831 06
	453	triple-T	1140	1	464.0		01 188 06
	653	triple-T	1140	1	672.3		01 189 06



- 01 378
- 01 379
- 01 380
- 01 760
- 01 369

Centre feed unit up to 4000A

Busbar holder, 1-pole, lateral

Type	Pack size	Weight		Part no.
		kg/100 u.		
for 30 x 10, double-T, triple-T and TCC section busbars, 7.5mm insulation between busbar and mounting plate	6	11.0		01 369 06

E-CU busbar

Type	Length	Cross section	Pack size	Weight		Part no.
				kg/100 u.		
TCC section busbars, tin-plated	492	1600	1	696.7		01 377 06
	692	1600	1	980.0		01 378 06
	2400	1600	1	3416.0		01 610 06

Special connection screws, with nut and spring washer for TCC section busbars

Type	For lengths	Thread	Pack size	Weight		Part no.
				kg/100 u.		
connection screw for TCC sections, can be retrofitted	10-25	M10 x 45	12	5.1		01 379 07
connection screw for TCC sections, cannot be retrofitted	10-40	M12 x 60	12	9.1		01 380 07

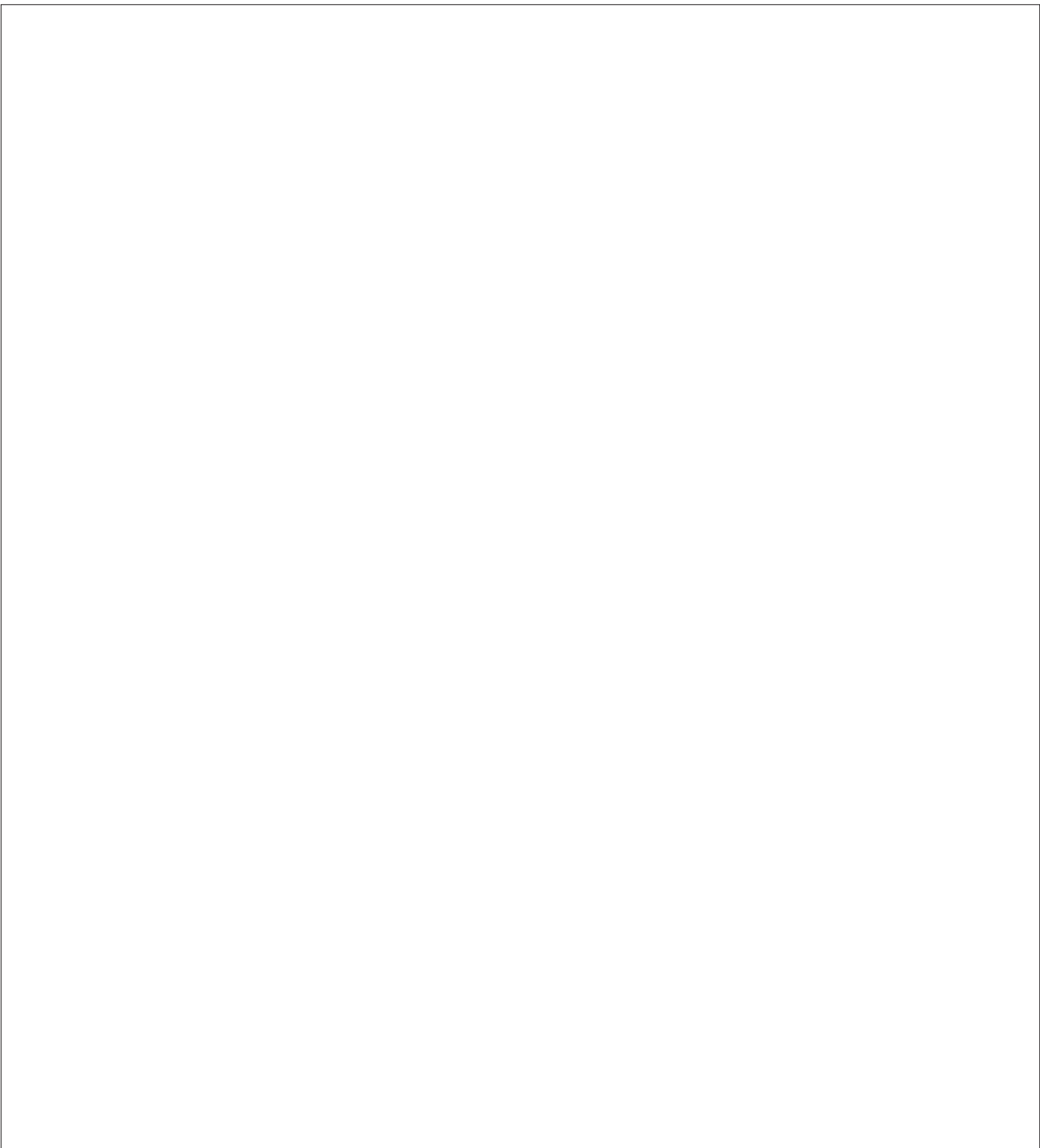
CRITO®, brace terminals for round conductor

Connection	For use	Pack size	Weight		Part no.
	up to max.		kg/100 u.		
Cu and Al 95 - 185mm ² , rm, sm; Cu or f	500A	6	31.2		01 318 07
Cu and Al 120 - 300mm ² , rm, sm; Cu or f	600A	3	42.5		01 760 07

01 318 and 01 760: Not maintenance-free if aluminium conductors are used

CRITO®, brace terminals for flat conductor

Terminal space	Side	Centre	Pack size	Weight		Part no.
W x H	supply	supply		kg/100 u.		
30 x 20	630A	750A	6	30.3		01 319 07
32 x 20	630A	800A	3	34.7		01 759 07
55 x 10 - 28	1600A	2000A	3	50.0		01 069 07
68 x 10 - 28	1600A	2000A	3	63.0		01 070 07
105 x 10 - 28	1600A	2800A	3	84.0		01 071 07



PANEL PANEL MOUNTING COMPONENTS





For conventional wiring, Wöhner offers a comprehensive range of panel components for fastening to a DIN rail or mounting plate. The fuses and associated connection technology satisfy the exacting safety and quality requirements of international standards.

CUSTO®Panel

Space-saving D01 and D02 fuse bases for fitting in the 45mm standard field recess. Handling is facilitated by the extensive terminal area, favourable connection conditions for outgoing feeder leads and the possibility of directly connecting all lead types in the double function terminal. High level of safety with installation, operation and maintenance thanks to the integrated cover and all-round comprehensive shock protection.

AMBUS®Panel

With a width of only 18mm, the 10x38 fuse holders for cylindrical fuses are suitable for amperages up to 32A. Given a short-circuit withstand capacity up to 100kA and a VDE 0106-based contact protector, circuits up to 690V can be fused at up to 80A (22 x 58, at 400V up to 125A). Various models are available to accommodate neutral conductors, provide open-fuse LED indication, to accommodate semiconductor fuse protection, for DC voltages up to 1000Vdc and to provide micro-switch signaling. UL approved.

SECUR®Panel

Versions for photovoltaic applications:

For 10 x 38 fuses up to 1000V DC. 18 mm installation width, extendible to 22.5 with side spacer for improved ventilation. Variant with LED available.

For 10/14 x 85 fuses up to 1500V DC. 22.5mm wide, max. power loss up to 6W. Removable fuse carrier, the contacts in the holder remain covered and thus are not exposed.

All PV fuse holders are UL approved.

Types for Class CC fuses in acc. with UL 248-4 up to 30A. In keeping with the US standard with a short-circuit withstand capacity up to 200kA. Variants with LED for fuse monitoring are available.

Types for Class J fuses to 30 and up to 60A in acc. with UL 248-8. In keeping with the US fuses standard with a short-circuit resistance up to 200 kA. All of the UL Class holders satisfy the IP20 touch-safe standard for shock protection.

QUADRON®Panel

Fuse bases for Class J from 70 to 400A. In acc. with US standard and constructed in a shock-proof manner.

Types for NH fuses, the 1 and 3-pole NH bases can be used for fusing up to 630A / 690V. Matching neutral conductors of an optimised design are also available.



CUSTO®Panel

Fuse base for D01 and D02

1 and 3-pole

Integrated cover

Double function terminal



SECUR®Panel

Holder for 10 x 85 and 14 x 85

Design for photovoltaic applications up to 1500V DC

All-in shock protection, easy fuse changing

QUADRON®Panel
Switch disconnecter with fuses
Safe, independent-operator switching by means spring-operated mechanism and double interruption
Variants with door coupling rotary handle and shaft extension for operation when door is closed



QUADRON®Panel

The QUADRON®Panel NH fuse switch disconnectors of sizes 000 to 4a safeguard and isolate currents up to 1600A. Sizes 000 to 2 can be mounted on DIN rails. In sizes 00 to 3 versions with electronic or electro-mechanical fuse monitoring can be selected. Various accessories are available for connecting copper and aluminium conductors.

QUADRON®Panel switch disconnecter version with spring-operated mechanism for frequent switching in keeping with utilisation category "A". With FLAG indicating the switch position; lockable with up to 3 shackle locks in the OFF position. In the variant – rotary actuator for operation in front of closed door – combinable with the door coupling rotary handle.

Maximum safety is provided by the QUADRON®Panel design with NH fuses. The switch here has a switch-on preventer when the lid is opened. This makes changing NH fuses particularly easy and safe. Aside from the rotary actuator variant, versions with fuse monitoring are also available. A wide range of connection accessories supplement product selection.

SECUR®Panel

The D0 NH fuse switch disconnecter incorporates the benefits of fusible cut-outs with a high degree of safety and user convenience. The fuse can only be changed in the de-energised state. Adjustment to the fuse size is undertaken in captive fuse carriers complete with standard adaptive sleeve. No screw cap is needed. Simultaneous connection of comb-busbar and conductor or 2 conductors in the amply dimensioned double function terminal up to 35mm² is possible. An auxiliary switch for monitoring the switch position can be mounted at the side.

CAPUS®Panel

Switch disconnecter and change-over switch as 125A - 3150A emergency stop and mains switches, 125A - 1000A change-over switch. There are both the 3-pole version and a 3-pole + N version.



SECUR®Panel
Switch disconnecter for D0 fuses
Safe switching and ease of handling
1 to 3-pole versions and with N
Variants for shipbuilding with GL certificate



31 971	31 973	31 555	31 548
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Fuse holder for photovoltaics

IEC-compatible holder for cylindrical fuses

with box terminals, shock protection in accordance with DIN 50274

AMBUS®Panel, Fuse holder for photovoltaics

Size	Rated current	Type	Width	Connection	Pack size	Weight	Part no.	
	Rated voltage					kg/100 u.		
10x38	30A / 1000V DC	1-pole	18	0.75 - 25mm ² / AWG 18 - 4	12	5.2	31 971	17
10x38	* 30A / 1000V DC	1-pole, with LED	18	0.75 - 25mm ² / AWG 18 - 4	12	5.7	31 973	17
10x38	30A / 1000V DC	2-pole	36	0.75 - 25mm ² / AWG 18 - 4	6	10.3	31 974	17

for fuse links, see page 6/2

* LED indicates blown fuse, operating range 400-1000V

SECUR®Panel, Fuse holder for photovoltaics

10x85	* 32A / 1500V DC	1-pole	22.5	0.75 - 25mm ² / AWG 18 - 4	5	9.2	31 555	17
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for fuse links, see page 6/2

* also suitable for 14 x 85 fuses

Comb-type busbar, 1000V DC, length 1m

Type	Centre supply	Side supply	Cross section	Pack size	Weight	Part no.	
					kg/100 u.		
1-pole, insulated, bridge for 31 971 and 31 973 pitch 18mm	130A	80A	16	25	21.8	31 101	06
	200A	100A	25	10	47.5	31 548	06
1-pole, insulated, bridge for 31 971, 31 973 and 31 555 pitch 27mm	130A	80A	16	25	19.0	31 014	06
	220A	130A	35	10	50.0	31 057	06

Connecting terminal, for comb-type busbars

Type	Rated current	Pack size	Weight	Part no.	
			kg/100 u.		
for 31 014, side connection up to 50mm ²	125A	25	2.5	31 028	07
for 31 057, side connection up to 95mm ²	225A	3	9.0	01 198	07
for 31 101, side connection up to 25mm ²	80A	50	1.2	31 103	07
for 31 101, front connection up to 25mm ²	80A	50	1.2	31 157	07
for 31 548, front connection up to 35mm ²	115A	10	3.0	31 039	07

End cap, for comb-type busbars

Type	Pack size	Weight	Part no.	
		kg/100 u.		
for 31 548	20	0.1	31 042	06

4.5mm spacer, set for 50 fuse holders

for 31 971 and 31 973, permits arrangement in 22.5mm pitch	1	1.2	31 563	17
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01 601	01 602	31 570	31 956
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AMBUS®60Classic, Photovoltaics

for busbar mounting

AMBUS®60Classic, Bus-mounting fuse holder, 1000V DC, for fuses 10x38 IEC 60269-6

Type	Rated current	Width	Pack size	Weight kg/100 u.	Part no.
1-pole, for busbars 20 x 5/10	30A	22.5	12	5.0	31 572 01
1-pole, for busbars 30 x 5/10	30A	22.5	12	5.0	31 570 01
2-pole, for busbars 12, 15, 20, 25 and 30 x 5 or 10	20A	27	6	12.2	31 956 01
2-pole, for busbars 12, 15, 20, 25 and 30 x 5 or 10, with LED	20A	27	6	12.2	31 960 01

Universal busbar supports

Type	Busbars	Pack size	Weight kg/100 u.	Part no.
1-pole, indiv. mountable	12, 20, 30 x 5, 10	1	5.9	01 601 06
2-pole with internal screw holes	12, 20, 30 x 5, 10	1	8.3	01 602 06

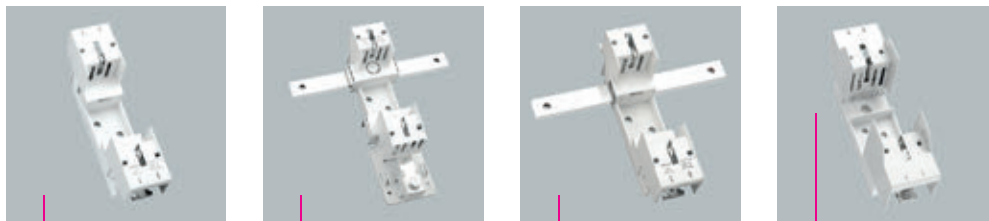
for terminals for busbars see pages 2/7 to 2/9

Cover cap

Type	Pack size	Weight kg/100 u.	Part no.
end cover for fastening to busbar support 01 356 and 01 601	10	0.7	01 325 06
end cover for fastening to busbar support 01 602	1	1.5	01 363 06

Fuse link gPV, as per IEC/EN 60 269-6, for photovoltaic applications

Size	Rated current	Rated voltage	Power output	Pack size	Weight kg/100 u.	Part no.
10x38	8A	1000V	1.6W	10	0.6	31 543 17
	10A	1000V	2.0W	10	0.6	31 544 17
	12A	1000V	2.4W	10	0.6	31 545 17
	16A	1000V	2.1W	10	0.6	31 546 17
	20A	1000V	2.5W	10	0.6	31 547 17
14x85	16A	1100V	3.8W	20	2.7	31 560 17
	20A	1100V	4.7W	20	2.7	31 559 17
	25A	1000V	5.9W	20	2.7	31 558 17



03 290	03 288	03 289	03 294
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QUADRON®Panel, photovoltaics

QUADRON®Panel, NH fuse base, 1-pole, with contact protection, **screw on both sides**, 1000V AC / 1500V DC

Type	Rated current	Rated voltage	Size	Pack size	Weight kg/100 u.	Part no.	
screw M10 on both sides	250A	1500 V	NH 1XL	3	51.0	03 290	10
screw M12 on both sides *	600A	1500 V	NH 2XL / 3L	3	106.0	03 294	10

* for fuse link NH 2XL or NH 3L as per IEC 60269-6 with max. 100W power dissipation

QUADRON®Panel, NH fuse base, 1-pole, with contact protection, **for busbar**, 1000V AC / 1500V DC

in connection M10 screw, out connection busbar 2x30x10	250A	1500 V	NH 1XL	3	58.0	03 289	10
in connection M10 screw, out connection busbar 2x30x10 for integrated current transformer mounting LEM HTA	250A	1500 V	NH 1XL	3	63.0	03 288	10
in connection M12 screw, out connection busbar 2x40x10 *	600A	1500 V	NH 2XL / 3L	3	110.0	03 293	10

* for fuse link NH 2XL or NH 3L to IEC 60269-6 with max. 100W power dissipation. Information on rated load factors concerning current carrying capacity is available on request or at www.woehner.com

Accessories

Type	Pack size	Weight kg/100 u.	Part no.	
grip lug cover, 2 units are needed for a 1-pole NH fuse base	30	1.5	79 449	10

further NH fuse bases see page 5/13



31 301

31 303

31 302

31 306

31 012

31 028

CUSTO®Panel

D0 integrated fuse base, contact protection version,
dual function terminal on both sides

CUSTO®Panel, fuse base, pitch 27mm

Thread / rated current / Rated voltage	Type	Connection	Pack size	Weight kg/100 u.	Part no.	
E 14 / 16A / 400V AC, 250V DC	1-pole	1.5 - 35	9	7.6	31 301	03
	3-pole	1.5 - 35	3	23.0	31 302	03
E 18 / 63A / 400V AC, 250V DC	1-pole	1.5 - 35	9	7.6	31 303	03
	3-pole	1.5 - 35	3	23.0	31 306	03

Comb-type busbar, pitch 27mm, length 1m

Type	Centre supply	Side supply	Cross section	Pack size	Weight kg/100 u.	Part no.	
1-pole, insulated, bridge	130A	80A	16	25	19.0	31 014	06
	220A	130A	35	10	50.0	31 057	06
3-pole, insulated, bridge, 400V	130A	80A	16	10	56.2	31 012	06
	220A	130A	35	4	125.0	31 056	06

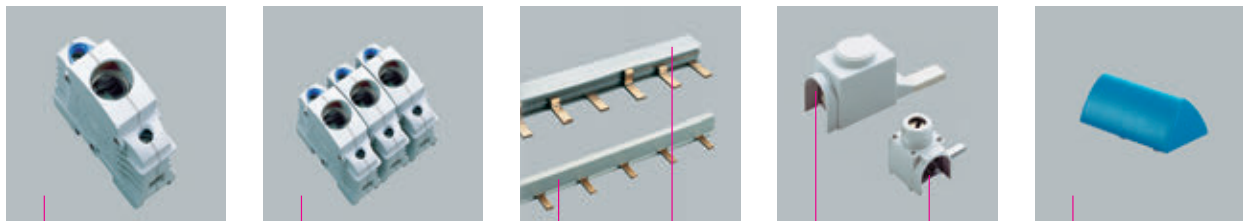
Connecting terminal, for insulated comb-type busbars as bridge version

Type	Rated current	Pack size	Weight kg/100 u.	Part no.	
for 1-pole comb-type busbars 16mm ² , side connection up to 50mm ²	125A	25	2.5	31 028	07
for 3-pole comb-type busbars 16mm ² , side connection up to 50mm ²	125A	25	2.9	31 029	07
for 3-pole comb-type busbars 16mm ² , front connection up to 50mm ²	125A	25	2.9	31 085	07
for 1-pole comb-type busbars 35mm ² , front connection up to 95mm ²	225A	3	9.0	01 198	07
for 3-pole comb-type busbars 35mm ² , front connection up to 95mm ²	225A	3	9.3	01 228	07

a connecting terminal is needed for each phase

End cap

Type	Pack size	Weight kg/100 u.	Part no.	
for 3-pole comb-type busbar 16mm ²	50	0.1	31 027	06
for 3-pole comb-type busbar 35mm ²	10	0.2	31 084	06



31 286	31 288	31 014	31 012	01 198	31 028	31 086
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TRITON® Panel

D0 panel-mounting fuse base, contact protection as per DIN EN 50274/**BGV A3** for industrial applications
with dual function terminal on supply side, box terminal on outgoing side, with clip-on mounting

TRITON® Panel, fuse base, pitch 27mm

Thread / rated current / Rated voltage	Type	Connection	Pack size	Weight kg/100 u.	Part no.
E 14 / 16A / 400V AC, 250V DC	1-pole	1.5 - 35	9	12.8	31 286 02
	3-pole	1.5 - 35	3	38.4	31 288 02
E 18 / 63A / 400V AC, 250V DC	1-pole	1.5 - 35	9	13.9	31 291 02
	3-pole	1.5 - 35	3	41.4	31 293 02

Comb-type busbar, pitch 27mm, length 1m

Type	Centre supply	Side supply	Cross section	Pack size	Weight kg/100 u.	Part no.
1-pole, insulated, fork	130A	80A	16	25	24.6	31 024 06
3-pole, insulated, fork, 400V	130A	80A	16	10	56.0	31 026 06
1-pole, insulated, bridge	130A	80A	16	25	19.0	31 014 06
3-pole, insulated, bridge, 400V	130A	80A	16	10	56.2	31 012 06
3-pole, insulated, bridge, 400V	220A	130A	35	4	125.0	31 056 06

End cap, for insulated comb-type busbars

Type	Pack size	Weight kg/100 u.	Part no.
for 3-pole comb-type busbar 16mm ²	50	0.1	31 027 06
for 3-pole comb-type busbar 35mm ²	10	0.2	31 084 06

Connecting terminal, for insulated comb-type busbars as bridge version

Type	Rated current	Pack size	Weight kg/100 u.	Part no.
for 1-pole comb-type busbars 16mm ² , side connection up to 50mm ²	125A	25	2.5	31 028 07
for 3-pole comb-type busbars 16mm ² , side connection up to 50mm ²	125A	25	2.9	31 029 07
for 3-pole comb-type busbars 16mm ² , front connection up to 50mm ²	125A	25	2.9	31 085 07
for 3-pole comb-type busbars 35mm ² , front connection up to 95mm ²	225A	3	9.3	01 228 07

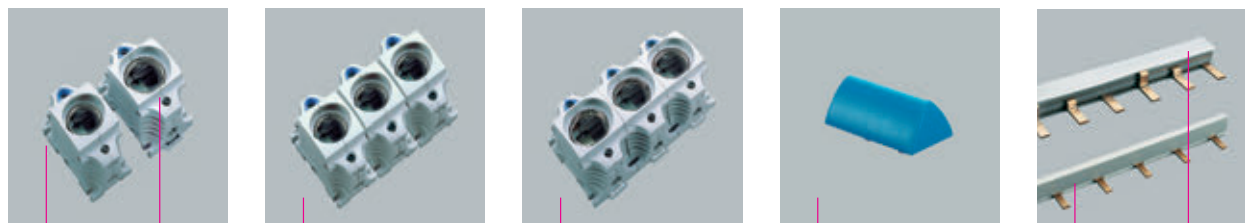
a connecting terminal is needed for each phase

Label holder

Type	Pack size	Weight kg/100 u.	Part no.
for clipping on to all Triton fuse bases	100	0.1	31 086 02
for label 31 004 and clip-on tag (for example, Siemens)			

Label

Type	Pack size	Weight kg/100 u.	Part no.
clip, 20 x 9mm	100	0.1	31 004 03



31 173

31 175

31 174

31 176

31 086

31 309

TRITON®Panel

D panel-mounting fuse base, contact protection in accordance with DIN EN 50274/**BGV A3** for industrial applications with dual function terminal on supply side, box terminal on outgoing side, with clip-on and screw-on mounting

TRITON®Panel, D panel-mounting fuse base, for gauge screws

Thread / rated current / Rated voltage	Type	Connection	Pack size	Weight kg/100 u.	Part no.	
E 27 / 25A / 500V AC, DC	1-pole	1.5 - 35	9	15.2	31 173	02
E 27 / 25A / 500V AC, DC	3-pole	1.5 - 35	3	45.7	31 174	02
E 33 / 63A / 500V AC, DC	* 1-pole	1.5 - 35	9	18.6	31 175	02
E 33 / 63A / 500V AC, DC	* 3-pole	1.5 - 35	3	53.8	31 176	02

* as per DIN VDE 0636-3011 also 690V AC/600V DC

Comb-type busbar, insulated, length 1m

Type	Centre supply	Side supply	Cross section	Pack size	Weight kg/100 u.	Part no.	
1-pole, bridge, for 31 173	130A	80A	16	25	21.5	31 309	06
3-pole, bridge, for 31 174, 500V	130A	80A	16	10	51.4	31 310	06
1-pole, bridge, for 31 175	130A	80A	16	25	21.0	31 311	06
3-pole, bridge, for 31 176, 690V	130A	80A	16	10	50.5	31 312	06

End cap, for insulated comb-type busbars

Type	Pack size	Weight kg/100 u.	Part no.	
for 3-pole comb-type busbar 16mm ²	50	0.1	31 027	06

Connecting terminal, for insulated comb-type busbars

Type	Rated current	Pack size	Weight kg/100 u.	Part no.	
for 1-pole comb-type busbars 16mm ² , side connection up to 50mm ²	125A	25	2.5	31 028	07
for 3-pole comb-type busbars 16mm ² , side connection up to 50mm ²	125A	25	2.9	31 029	07
for 3-pole comb-type busbars 16mm ² , front connection up to 50mm ²	125A	25	2.9	31 085	07

a connecting terminal is needed for each phase

Label holder

Type	Pack size	Weight kg/100 u.	Part no.	
for clipping on to all Triton fuse bases	100	0.1	31 086	02
for label 31 004 and clip-on tag (for example, Siemens)				

Label

clip, 20 x 9mm	100	0.1	31 004	03
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31 110

31 123

31 273

31 274

AMBUS® Panel

IEC-compatible holder for cylindrical fuses

with box terminals, clip-on mounting, contact protection in accordance with DIN 50274

AMBUS® Panel, holder for cylindrical fuses, standard model, without neutral conductor

Size	Rated current	Type	Width	Connection	Pack size	Weight kg/100 u.	Part no.	
10x38	32A	1-pole	18	0.75 - 25mm ² / AWG 18 - 4	12	5.2	31 110	17
		2-pole	36	0.75 - 25mm ² / AWG 18 - 4	6	10.3	31 112	17
		3-pole	54	0.75 - 25mm ² / AWG 18 - 4	4	15.5	31 113	17
14x51	50A	1-pole	27	1.5 - 35mm ² / AWG 14 - 2	6	9.7	31 115	17
		2-pole	54	1.5 - 35mm ² / AWG 14 - 2	3	20.2	31 117	17
		3-pole	81	1.5 - 35mm ² / AWG 14 - 2	2	30.4	31 118	17
22x58	100A	1-pole	36	4 - 50mm ² / AWG 10 - 1/0	6	15.8	31 120	17
		2-pole	72	4 - 50mm ² / AWG 10 - 1/0	3	32.2	31 122	17
		3-pole	108	4 - 50mm ² / AWG 10 - 1/0	2	48.6	31 123	17

AMBUS® Panel, holder for cylindrical fuses, standard model, neutral conductor on the right

10x38	32A	1-pole+N	36	0.75 - 25mm ² / AWG 18 - 4	6	11.3	31 111	17
		3-pole+N	72	0.75 - 25mm ² / AWG 18 - 4	3	21.7	31 114	17
14x51	50A	1-pole+N	54	1.5 - 35mm ² / AWG 14 - 2	3	21.8	31 116	17
		3-pole+N	108	1.5 - 35mm ² / AWG 14 - 2	1	42.7	31 119	17
22x58	100A	1-pole+N	72	4 - 50mm ² / AWG 10 - 1/0	3	35.8	31 121	17
		3-pole+N	144	4 - 50mm ² / AWG 10 - 1/0	1	67.5	31 124	17

AMBUS® Panel, holder for cylindrical fuses, standard model, neutral conductor on the left

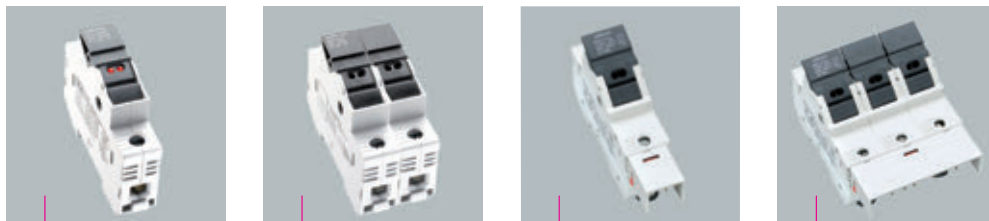
14x51	50A	3-pole+N	108	1.5 - 35mm ² / AWG 14 - 2	1	42.7	31 168	17
22x58	100A	3-pole+N	144	4 - 50mm ² / AWG 10 - 1/0	1	67.5	31 171	17

AMBUS® Panel, holder for cylindrical fuses, N-module

10x38	32A	N	18	0.75 - 25mm ² / AWG 18 - 4	12	6.2	31 258	17
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AMBUS® Panel, holder for cylindrical fuses, standard model, with integrated neutral conductor (on the left)

10x38	32A	1-pole+N	18	1.5 - 10mm ²	12	9.0	31 273	17
		3-pole+N	54	1.5 - 10mm ²	4	22.0	31 274	17



31 130	31 276	31 940	31 941
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AMBUS® Panel

IEC-compatible holder for cylindrical fuses

with box terminals, clip-on mounting, contact protection in accordance with DIN 50274

AMBUS® Panel, holder for cylindrical fuses, model for semiconductor fuses

Size	Rated current	Type	Width	Connection	Pack size	Weight kg/100 u.	Part no.	
10x38	32A	1-pole	18	0.75 - 25mm ² / AWG 18 - 4	12	5.2	31 275	17
		2-pole	36	0.75 - 25mm ² / AWG 18 - 4	6	10.3	31 276	17
		3-pole	54	0.75 - 25mm ² / AWG 18 - 4	4	15.5	31 277	17
14x51	50A	1-pole	27	1.5 - 35mm ² / AWG 14 - 2	6	9.7	31 278	17
		2-pole	54	1.5 - 35mm ² / AWG 14 - 2	3	20.2	31 279	17
		3-pole	81	1.5 - 35mm ² / AWG 14 - 2	2	30.4	31 280	17
22x58	100A	1-pole	36	4 - 50mm ² / AWG 10 - 1/0	6	15.8	31 281	17
		2-pole	72	4 - 50mm ² / AWG 10 - 1/0	3	32.2	31 282	17
		3-pole	108	4 - 50mm ² / AWG 10 - 1/0	2	48.6	31 283	17

AMBUS® Panel, holder for cylindrical fuses, model with LED 110-690V AC/DC

10x38	32A	1-pole	18	0.75 - 25mm ² / AWG 18 - 4	12	5.7	31 130	17
		2-pole	36	0.75 - 25mm ² / AWG 18 - 4	6	11.3	31 132	17
		3-pole	54	0.75 - 25mm ² / AWG 18 - 4	4	17.0	31 133	17
14x51	50A	1-pole	27	1.5 - 35mm ² / AWG 14 - 2	6	9.8	31 135	17
		3-pole	81	1.5 - 35mm ² / AWG 14 - 2	2	30.5	31 138	17
22x58	100A	1-pole	36	4 - 50mm ² / AWG 10 - 1/0	6	15.9	31 140	17
		3-pole	108	4 - 50mm ² / AWG 10 - 1/0	2	48.7	31 143	17

LED indicates blown fuse

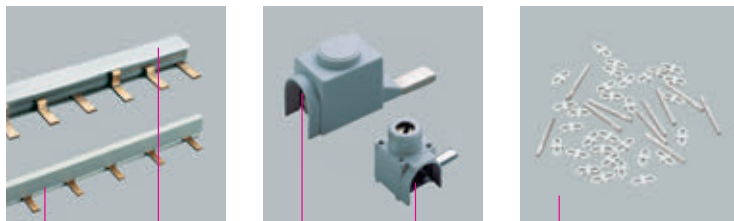
AMBUS® Panel, holder for cylindrical fuses, model with LED 12-72V AC/DC

10x38	32A	1-pole	18	0.75 - 25mm ² / AWG 18 - 4	12	5.7	31 930	17
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LED indicates blown fuse

AMBUS® Panel, holder for cylindrical fuses, also for semiconductor fuses, with pilot switch pilot switch indicates if no fuse is inserted, a holder is open or a fuse (with striker) has been tripped

14x51	50A	1-pole	27	1.5 - 35mm ² / AWG 14 - 2	6	11.6	31 940	17
		2-pole	54	1.5 - 35mm ² / AWG 14 - 2	3	23.5	31 972	17
		3-pole	81	1.5 - 35mm ² / AWG 14 - 2	2	34.6	31 941	17
22x58	100A	1-pole	36	4 - 50mm ² / AWG 10 - 1/0	6	18.1	31 942	17
		2-pole	72	4 - 50mm ² / AWG 10 - 1/0	3	36.6	31 957	17
		3-pole	108	4 - 50mm ² / AWG 10 - 1/0	2	54.1	31 943	17



31 014

31 012

01 198

31 028

31 564

Accessories

for AMBUS®Panel, holder for cylindrical fuses

Connection sets, for customised combinations of multi-pole units

Type	Pack size	Weight kg/100 u.	Part no.	
10 x 38, 2-pole	1	2.5	31 564	17
10 x 38, 3-pole	1	3.6	31 565	17
14 x 51, 2-pole	1	3.6	31 269	17

each set allows you to create ten 2 or 3-pole combinations, depending on the version.

Comb-type busbar, insulated, bridge, length 1m

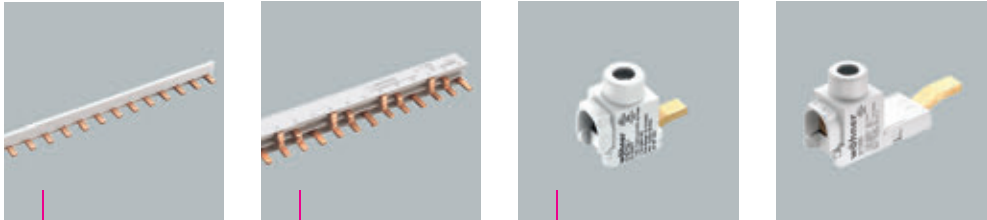
Type	Centre supply	Side supply	Cross section	Pack size	Weight kg/100 u.	Part no.	
1-pole, pitch 18mm	130A	80A	16	25	21.8	31 101	06
3-pole, pitch 18mm	130A	80A	16	10	59.4	31 102	06
1-pole, pitch 27mm	130A	80A	16	25	19.0	31 014	06
3-pole, pitch 27mm	130A	80A	16	10	56.2	31 012	06
1-pole, pitch 27mm	220A	130A	35	10	50.0	31 057	06
3-pole, pitch 27mm	220A	130A	35	4	125.0	31 056	06

Connecting terminal, for comb-type busbars

Type	Rated current	Pack size	Weight kg/100 u.	Part no.	
for 31 101 and 31 102, side connection up to 25mm ²	80A	50	1.2	31 103	07
for 31 101 and 31 102, front connection up to 25mm ²	80A	50	1.2	31 157	07
for 1-pole comb-type busbars 16mm ² , side connection up to 50mm ²	125A	25	2.5	31 028	07
for 3-pole comb-type busbars 16mm ² , side connection up to 50mm ²	125A	25	2.9	31 029	07
for 3-pole comb-type busbars 16mm ² , front connection up to 50mm ²	125A	25	2.9	31 085	07
for 1-pole comb-type busbars 35mm ² , front connection up to 95mm ²	225A	3	9.0	01 198	07
for 3-pole comb-type busbars 35mm ² , front connection up to 95mm ²	225A	3	9.3	01 228	07

End cap, for comb-type busbars

Type	Pack size	Weight kg/100 u.	Part no.	
for 3-pole comb-type busbar 16mm ²	50	0.1	31 027	06
for 3-pole comb-type busbar 35mm ²	10	0.2	31 084	06



31 548	31 549	31 039	31 550
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Accessories

for AMBUS®Panel, holder for cylindrical fuses

Comb-type busbar, insulated, bridge, length 1m

Type	Centre supply	Side supply	Cross section	Pack size	Weight kg/100 u.	Part no.	
1-pole, pitch 18mm	200A	100A	25	10	47.5	31 548	06
2-pole, pitch 18mm	200A	100A	25	10	81.0	31 561	06
3-pole, pitch 18mm	200A	100A	25	10	113.3	31 549	06

Connecting terminal, for comb-type busbars

Type	Connection	Rated current	Pack size	Weight kg/100 u.	Part no.	
for 31 548	6 - 35	115A	10	3.0	31 039	07
for 31 549 and 31 561	6 - 35	115A	10	3.5	31 550	07

End cap, for comb-type busbars

Type	Pack size	Weight kg/100 u.	Part no.	
for 31 548	20	0.1	31 042	06
for 31 549 and 31 561	20	0.2	31 552	06



31 295	31 296	31 297	31 298
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AMBUS® Panel, class CC

Fuse holder class CC, contact protection, clip-on mounting
for fuses as per UL 248-4

AMBUS® Panel, class CC, holder for cylindrical fuses, standard model

Rated current / Rated voltage	Type	Width	Connection	Pack size	Weight kg/100 u.	Part no.	
30A / 600V	1-pole	18	0.75 - 25mm ² / AWG 18 - 4	12	5.5	31 295	17
	2-pole	36		6	11.3	31 296	17
	3-pole	54		4	17.0	31 297	17

AMBUS® Panel, class CC, holder for cylindrical fuses, model with LED 110-600V AC/DC

30A / 600V	1-pole	18	0.75 - 25mm ² / AWG 18 - 4	12	6.2	31 298	17
	2-pole	36		6	12.3	31 299	17
	3-pole	54		4	18.5	31 300	17

AMBUS® Panel, class CC, holder for cylindrical fuses, model with LED 12-72V AC/DC

30A / 12 - 72V	1-pole	18	0.75 - 25mm ² / AWG 18 - 4	12	6.2	31 929	17
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Accessories

for AMBUS® Panel, holder for cylindrical fuses

Comb-type busbar, insulated, bridge, length 1m

Type	Side supply	Centre supply	Cross section	Pack size	Weight kg/100 u.	Part no.	
1-pole, pitch 18mm	100A	200A	25	10	47.5	31 548	06
2-pole, pitch 18mm	100A	200A	25	10	81.0	31 561	06
3-pole, pitch 18mm	100A	200A	25	10	113.3	31 549	06

Connecting terminal, for comb-type busbars

Type	Connection	Pack size	Weight kg/100 u.	Part no.	
for 31 548	6 - 35	10	3.0	31 039	07
for 31 549 and 31 561	6 - 35	10	3.5	31 550	07

End cap, for comb-type busbars

Type	Pack size	Weight kg/100 u.	Part no.	
for 31 548	20	0.1	31 042	06
for 31 549 and 31 561	20	0.2	31 552	06



31 284	31 287	33 408	33 308
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AMBUS®Panel / QUADRON®Panel, class J

class J fuse holders, contact protection model

for fuses as per UL 248-4

AMBUS®Panel, class J-fuse holder, clip-on mounting, standard model

Rated current / Rated voltage	Type	Width	Connection	Pack size	Weight kg/100 u.	Part no.	
30A / 600V (21 x 57)	1-pole	36	0.75 - 50mm ² / AWG 18 - 1	6	15.8	31 284	16
	2-pole	72		3	32.2	31 285	16
	3-pole	108		2	48.6	31 287	16
60A / 600V (27 x 60)	1-pole	40	2.5 - 50mm ² / AWG 14 - 1	6	18.2	31 920	16
	2-pole	80		3	37.0	31 921	16
	3-pole	120		2	55.9	31 922	16

AMBUS®Panel, class J-fuse holder, clip-on mounting, model with LED 110-600V AC/DC

30A / 600V (21 x 57)	1-pole	36	0.75 - 50mm ² / AWG 18 - 1	6	15.8	31 932	16
	2-pole	72		3	32.2	31 933	16
	3-pole	108		2	48.6	31 934	16
60A / 600V (27 x 60)	1-pole	40	2.5 - 50mm ² / AWG 14 - 1	6	18.2	31 923	16
	2-pole	80		3	37.0	31 924	16
	3-pole	120		2	55.9	31 925	16

QUADRON®Panel, class J-fuse holder, for screw-on mounting

100A / 600V (29 x 117)	*	3-pole	106	4 - 35mm ² / AWG 10 - 2/0	1	107.0	33 408	16
200A / 600V (41 x 146)	*	3-pole	184	35 - 120mm ² / AWG 2 - MCM300	1	203.0	33 409	16
400A / 600V (54 x 181)		3-pole	256	16 - 300mm ² / AWG 4 - MCM600	1	672.0	33 308	16

* do not use any fuse links with sharp-edged contact blades



03 351	03 760	79 449	79 448
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QUADRON®Panel

690V AC / 440V DC

QUADRON®Panel, NH fuse base size 00, barrier model

Type	Rated current	Size	Poles	Connection	Pack size	Weight kg/100 u.	Part no.	
screw M8 on both sides	160A	NH00	1	70	10	12.6	03 350	10
	160A	NH00	3	70	4	45.7	03 351	10
clamp on both sides	160A	NH00	1	70	10	13.0	03 354	10
	160A	NH00	3	70	4	45.5	03 355	10

QUADRON®Panel, NH fuse base sizes 00 - 1 - 2 - 3, contact protection model

screw M8 on both sides	160A	NH00	1	70	12	15.2	03 758	10
	160A	NH00	3	70	4	48.4	03 759	10
clamp on both sides	160A	NH00	1	70	12	15.5	03 760	10
	160A	NH00	3	70	4	49.4	03 761	10
screw M10 on both sides	250A	NH1	1	150	3	48.6	03 762	10
	250A	NH1	3	150	1	158.3	03 763	10
clamp on both sides	250A	NH1	3	150	1	161.6	03 765	10
screw M10 on both sides	400A	NH2	1	240	3	93.1	03 766	10
	400A	NH2	3	240	1	288.3	03 767	10
screw M12 on both sides	630A	NH3	1	240	3	110.8	03 768	10
	630A	NH3	3	240	1	340.0	03 769	10

Grip lug cover, suitable for NH bases with contact protection

Type	Size	Pack size	Weight kg/100 u.	Part no.	
grip lug cover, 1 unit required for each fuse	00	30	1.2	79 448	10
2 units required to cover a fuse	1-3	30	1.5	79 449	10

Barrier and barrier support, suitable for NH bases 03 350 / 03 351 / 03 354 / 03 355

Type	Pack size	Weight kg/100 u.	Part no.	
barrier	100	2.2	03 377	10
barrier support, for external barrier	10	0.8	03 359	10



03 620

03 668

03 213

03 193

03 198

Accessories

for NH fuse bases

Neutral conductor, screw-on mounting

Rated current	Connection	Type	Pack size	Weight		Part no.	
				kg/100 u.			
160A	70	clamp on both sides	10	14.1		03 620	10
160A	70	screw M8 on both sides	10	14.2		03 519	10

Neutral conductor, separable, disconnectable, for screw-on or clip-on mounting to mounting rail DIN EN 60715

Rated current	Connection	Pack size	Weight		Part no.	
			kg/100 u.			
63A	10	50	2.6		05 188	10

Neutral conductor, separable screw-on mounting

Rated current	Connection	Type	Pack size	Weight		Part no.	
				kg/100 u.			
160A	70mm ² (clamp on both sides)	120mm	10	19.2		03 668	10
250A	70mm ² (screw M8 on both sides)	120mm	10	19.5		03 657	10
400A	120mm ² (screw M10 on both sides)	200mm	3	58.9		03 757	10
630A	240mm ² (screw M12 on both sides)	200mm	3	58.9		03 213	10

Connecting terminal

160A	70mm ² (clamp on both sides)	60mm	10	9.1		03 193	10
		125mm	10	14.6		03 173	10
250A	120mm ² (screw M10 on both sides)	100mm	10	16.8		03 195	10
		200mm	10	30.6		03 196	10
630A	240mm ² (screw M12 on both sides)	100mm	10	25.6		03 197	10
		200mm	10	42.0		03 198	10

combination options for 3-pole NH fuse bases and neutral conductor

(neutral conductor can be attached to the NH base)

03 355 + 03 620 (clamp on both sides)

03 351 + 03 519 (screw M8 on both sides)

further combinations possible, if neutral conductors fixed separately



36 209
36 106
36 103
36 100
36 112

MOTUS® Panel

MOTUS® Panel, hybrid motor starter with reversing function and CrossLink® Technology, 22.5mm wide for mounting onto DIN rail as per DIN EN 60715

Type	Pack size	Weight kg/100 u.	Part no.	
0.075 - 0.6A direct/reversing starter	1	64.3	36 100	21
0.18 - 2.4A direct/reversing starter	1	64.3	36 103	21
1.5 - 9A direct/reversing starter	1	64.3	36 106	21

Module for connection to SmartWire-DT®

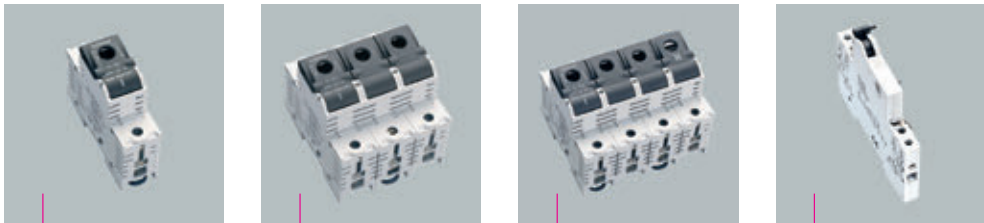
for all MOTUS®	1	6.5	36 209	21
further components for SmartWire-DT on page 7/2				

MOTUS® accessories

plug connector with cable connection, 2 devices	1	7.6	36 902	21
plug connector with cable connection, 3 devices	1	9.0	36 903	21
plug connector with cable connection, 4 devices	1	10.9	36 904	21

MOTUS® replacement components

16A fuse for 0.6A and 2.4A versions	3	2.8	31 567	21
20A fuse for 9A version	3	2.8	31 568	21
30A fuse for 9A version for motors with heavy starting	3	2.8	31 569	21
0.075 - 0.6A electronics module for direct/reversing starters	1	57.1	36 109	21
0.18 - 2.4A electronics module for direct/reversing starters	1	57.1	36 110	21
1.5 - 9A electronics module for direct/reversing starters	1	57.1	36 111	21
adapter for DIN-rail	1	12.8	36 112	21



31 307	31 314	31 315	31 316
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SECUR® Panel

Switch disconnector for D0 fuses up to 63A, dual function terminal on both sides
Contact protection to DIN EN 50274/BGV A3, 400V AC / 130V DC for 2-pole design.

SECUR® Panel, D0 switch disconnector with fuses

Type	Rated current	Connection	Pack size	Weight kg/100 u.	Part no.
1-pole	63A	1.5 - 35	3	14.0	31 307 03
1-pole + N	63A	1.5 - 35	2	26.2	31 308 03
2-pole	63A	1.5 - 35	2	27.8	31 313 03
3-pole	63A	1.5 - 35	1	42.0	31 314 03
3-pole + N	63A	1.5 - 35	1	54.0	31 315 03

SECUR® Panel, D0-switch disconnector with fuses, **with LED**

1-pole	63A	1.5 - 35	3	14.2	31 556 03
3-pole	63A	1.5 - 35	1	42.6	31 557 03

Accessories

for AMBUS® Panel

Reducer

Type	Pack size	Weight kg/100 u.	Part no.
D02 reducer for D01 fuses 2-16A	20	0.1	31 902 01

Pilot switch, for monitoring the switch setting, 9mm wide

1 changeover switch: 400V AC / 2A; 24V DC / 6A	1	5.4	31 316 03
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Comb-type busbar, pitch 27mm, length 1m

Type	Centre supply	Side supply	Cross section	Pack size	Weight kg/100 u.	Part no.
1-pole, insulated, bridge	130A	80A	16	25	19.0	31 014 06
1-pole, insulated, bridge	220A	130A	35	10	50.0	31 057 06
3-pole, insulated, bridge, 400V	130A	80A	16	10	56.2	31 012 06
3-pole, insulated, bridge, 400V	220A	130A	35	4	125.0	31 056 06

End cap, for insulated comb-type busbars

for 3-pole comb-type busbar 16mm ²	50	0.1	31 027 06
for 3-pole comb-type busbar 35mm ²	10	0.2	31 084 06

Connecting terminal, for insulated comb-type busbars as bridge version

for 1-pole comb-type busbars 16mm ² , side connection up to 50mm ²	25	2.5	31 028 07
for 3-pole comb-type busbars 16mm ² , side connection up to 50mm ²	25	2.9	31 029 07
for 3-pole comb-type busbars 16mm ² , front connection up to 50mm ²	25	2.9	31 085 07
for 1-pole comb-type busbars 35mm ² , front connection up to 95mm ²	3	9.0	01 198 07
for 3-pole comb-type busbars 35mm ² , front connection up to 95mm ²	3	9.3	01 228 07
a connecting terminal is needed for each phase			



33 552
33 910
33 545
33 542

QUADRON®Panel

QUADRON®Panel, switch disconnecter, 3-pole, **with multifunctional handle** (spring-controlled switch mechanism)

Type	Rated current	Width	Pack size	Weight kg/100 u.	Part no.	
box terminal *	160A	106	1	203.0	33 542	14
screw M10 *	320A	184	1	539.0	33 552	14

* as master switch or emergency off switch only with the following maximum operating currents:
160A Variant: 125A/690V AC; 320A variant: 280A/400V AC, 250A/690V AC

QUADRON®Panel, switch disconnecter, 3-pole **for door coupling twist handle** (spring-controlled switch mechanism)

box terminal, for door coupling twist handle *	160A	106	1	203.0	33 545	14
screw M10, for door coupling twist handle *	320A	184	1	516.0	33 555	14

additional extension shaft and door coupling twist handle required

* as master switch or emergency off switch only with the following maximum operating currents:
160A Variant: 125A/690V AC; 320A variant: 280A/400V AC, 250A/690V AC

Accessories

for QUADRON®Panel

Type	Can be used for	Pack size	Weight kg/100 u.	Part no.	
aux. conductor connection for box term.	160A	3	0.6	33 915	09
connection terminal 120mm ²	160A	3	12.1	33 914	14
box terminal for Cu conductors 70-185mm ² f, 35-150mm ² rm, Cu 35-120mm ² f +AE, la. Cu 15.5-24mm wide	320A	3	10.0	33 909	09
wedge clamp terminal, single, for Cu conductor 35 - 150mm ² , rm, sm, f, f + AE, for Al conductor 35 - 150mm ² rm, sm	320A	1	11.6	33 166	09
wedge terminal, double, for Cu conductors 2 x 35-70mm ² rm, sm, f +AE	320A	1	16.6	33 145	09

terminal power rating, see page 8/32

* not maintenance-free if aluminium conductors are used (see page 8/2)



33 512
33 911
33 505
33 502

QUADRON®Panel

QUADRON®Panel, NH switch disconnector with fuses, 3-pole, **with multi-functional handle** (spring-operated mechanism)

Type	Rated current	Size	Width	Pack size	Weight kg/100 u.	Part no.	
box terminal	125A	NH00	106	1	208.0	33 502	15
box terminal, with electronic fuse monitoring	125A	NH00	106	1	208.0	33 507	15
screw M10	250A	NH1	184	1	540.0	33 512	15
fuse monitoring on request							

QUADRON®Panel, NH switch disconnector with fuses, 3-pole, **for door coupling rotary handle** (spring-operated mechanism)

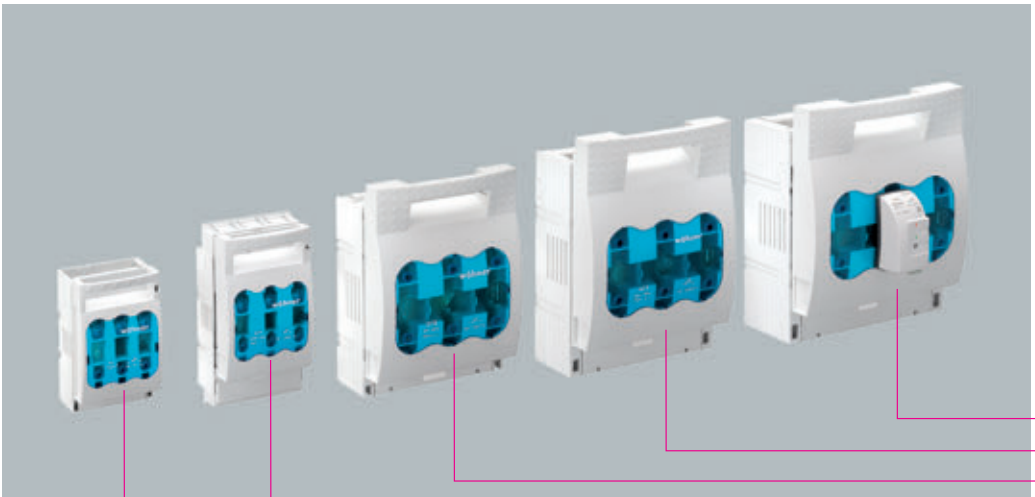
box terminal, front drive	125A	NH00	106	1	201.6	33 505	15
connection screw M10, front drive	250A	NH1	184	1	528.0	33 515	15
additional extension shaft and door coupling twist handle required							

Accessories

for QUADRON®Panel

Type	Can be used with	Pack size	Weight kg/100 u.	Part no.	
cover, for cable lugs, can be clipped on top/bottom	1	2	10.7	33 142	09
pilot switch, for monitoring the switch position	00-1	1	1.1	33 908	14
door coupling twist handle, black, IP 66, lockable in 'off' position, with up to 3 padlocks, door locking can be activated, no extension shaft	* 00-1	1	57.0	33 910	14
door coupling twist handle, red-yellow, IP 66, lockable in 'off' position, with up to 3 padlocks, door locking can be activated, no extension shaft	* 00-1	1	57.0	33 911	14
ext. shaft 290mm long	00-1	1	13.0	33 912	14
ext. shaft 490mm long	00-1	1	22.0	33 913	14
* switch can also be installed at a 90° angle to left/right, with the handle in the same position					

fuse links are not included in the scope of delivery



- 33 332
- 33 202
- 33 201
- 33 199
- 33 217

QUADRON®Panel

NH fuse switch disconnecter for panelmounting

QUADRON®Panel, NH fuse switch disconnecter Sizes 000 to 3

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
box terminal	125A	NH000	1	57.2	33 217	09
clamp	160A	NH00	1	78.0	33 199	09
screw M8	160A	NH00	1	77.7	33 200	09
box terminal	250A	NH1	1	191.0	33 393	09
screw M10	250A	NH1	1	171.0	33 201	09
screw M10	400A	NH2	1	362.0	33 202	09
screw M12	630A	NH3	1	490.0	33 203	09

QUADRON®Panel, NH fuse switch disconnecter Size 4a

2 x screw M12	1600A	NH4a	1	1534.0	33 204	09
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QUADRON®Panel, NH fuse switch disconnecter Size 00, shortened contact protection

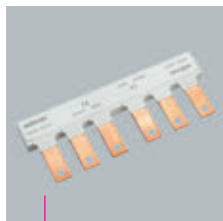
clamp 70mm ²	160A	NH00	1	71.6	33 221	09
screw M8	160A	NH00	1	71.9	33 222	09

QUADRON®Panel, NH fuse switch disconnecter Sizes 000 to 3, with electronic fuse monitoring

clamp 70mm ²	160A	NH00	1	93.0	33 328	09
screw M8	160A	NH00	1	92.0	33 329	09
screw M10	250A	NH1	1	229.0	33 330	09
screw M10	400A	NH2	1	380.0	33 331	09
screw M12	630A	NH3	1	524.0	33 332	09

QUADRON®Panel, NH fuse switch disconnecter Sizes 000 to 3, with electro-mechanical fuse monitoring

clamp 70mm ²	160A	NH00	1	127.0	33 207	09
screw M8	160A	NH00	1	126.0	33 208	09
screw M10	250A	NH1	1	255.0	33 149	09
screw M10	400A	NH2	1	412.0	33 150	09
screw M12	630A	NH3	1	556.0	33 151	09



33 376	33 378	33 166	33 145	01 182
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Accessories

for QUADRON®Panel, NH fuse switch disconnecter

Comb-type busbars, closed version with end caps

Type	Cross section	Can be used with	Pack size	Weight kg/100 u.	Part no.	
for two NH-LTS	35	33 217	4	23.0	33 906	09
	35	33 200	4	27.1	33 376	09
for three NH-LTS	35	33 200	4	44.7	33 377	09
for four NH-LTS	35	33 200	4	62.3	33 392	09

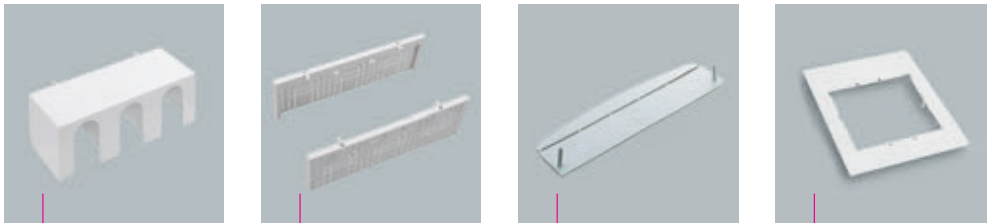
Connecting terminal, for comb-type busbars

Type	Connection	Pack size	Weight kg/100 u.	Part no.	
for 3-pole comb-type busbar 35mm ² , suitable for NH 000 with box terminal	4 - 35	3	4.0	33 907	09
for 3-pole comb-type busbar 35mm ² , suitable for NH 00 with screw connection	25 - 95	3	12.1	33 378	09

Connection accessories

Type	Cross section	Can be used with	Pack size	Weight kg/100 u.	Part no.	
box terminal for Cu conductors	70 - 185mm ² f, 35 - 150mm ² rm, Cu 35 - 120mm ² f+AE, la. Cu 15.5 - 24mm wide	1	3	10.0	33 909	09
clamp connection for Cu conductor rm, f + AE, la. Cu	1.5 - 70 / 12 x 1 - 10	00	3	1.5	03 727	09
	70 - 150 / 18 x 2 - 14	1	1	6.3	33 163	09
	120 - 240 / 21 x 1 - 14	2	1	10.6	33 164	09
	150 - 300 / 25 x 1 - 13	3	1	12.5	33 165	09
M8 screw connector	70	00	3	1.4	30 894	09
wedge clamp terminal, single, for Cu conductor, rm, sm, f, f + AE, for Al conductor rm, sm	16 - 70	00	3	3.0	33 224	09
	35 - 150	1	1	11.6	33 166	09
	50 - 240	1-3	1	19.9	33 167	09
	150 - 300	3	1	24.7	33 168	09
wedge terminal, double, for Cu conductors, rm, sm, f + AE	2 x 35 - 70	1	1	16.6	33 145	09
	2 x 70 - 120	2	1	27.8	33 146	09
	2 x 150	3	1	36.8	33 147	09
	2 x 185	3	1	36.8	33 385	09
tunnel terminal	3 x 1.5 - 16	00	3	6.4	01 182	09

* not maintenance-free if aluminium conductors are used (see page 8/2)



33 142	33 418	33 155	33 154
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Accessories

for QUADRON®Panel, NH fuse switch disconnecter

Cover, for cable lugs, can be clipped on top and bottom

Type	Size	Pack size	Weight kg/100 u.	Part no.	
for 33 200, 33 208, 33 329, 33 394, 33 398, 33 420	00	1	2.8	79 811	09
for 33 221, 33 222	00	2	4.8	33 223	09
for NH fuse switch disconnecter size 1	1	2	10.7	33 142	09
for NH fuse switch disconnecter size 2	2	2	10.9	33 143	09
for NH fuse switch disconnecter size 3	3	2	15.6	33 144	09

Cover, for connection area

can be clipped on top/bottom	2	2	4.0	33 418	09
can be clipped on top/bottom	3	2	5.4	33 419	09

Barrier for handle

barrier for handle for closing of handle area from rear	1-3	10	2.2	33 155	09
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Trim frame, for cover with front plate assembly

Type	W x L	Size	Pack size	Weight kg/100 u.	Part no.	
trim frame, single	130 x 210 x 2	000	10	3.1	33 219	09
trim frame, double	199 x 166 x 2	000	10	3.9	33 220	09
trim frame, single	130 x 210 x 2	00	10	1.9	78 893	09
trim frame, double	232 x 210 x 2	00	10	2.9	78 105	09
trim frame, triple	340 x 210 x 2	00	10	3.8	78 139	09
trim frame, single *	143 x 210 x 2	00	10	3.3	33 225	09
trim frame, double *	250 x 210 x 2	00	10	5.6	33 226	09
trim frame	215 x 330 x 2	1	1	11.7	33 152	09
trim frame	248 x 330 x 2	2	1	9.4	33 153	09
trim frame	290 x 330 x 2	3	1	13.2	33 154	09

* for 33 221, 33 222



33 156	33 918	33 051
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Accessories

for QUADRON®Panel, NH fuse switch disconnecter

Pilot switch, for monitoring disconnecter lid position

Type	Size	Pack size	Weight kg/100 u.	Part no.	
pilot switch, 1 reversing switch: 250V AC / 5A; 30V DC / 4A	000, 00, 2, 3	1	1.1	33 156	09
	1	1	1.3	33 917	09
flat push-on connector DIN 46 244-A, 2.8 x 0.5mm					

Disconnecter lid interlock, to seal the disconnecter lid

for sealing wire	000	10	0.1	33 051	09
	00	10	0.2	03 849	09
for 3 locks with shackle diameter 4-7mm / sealing wire	1-3	10	0.5	33 157	09

Rapid mounting set, for mounting rails DIN EN 50 022 (35 x 7.5mm)

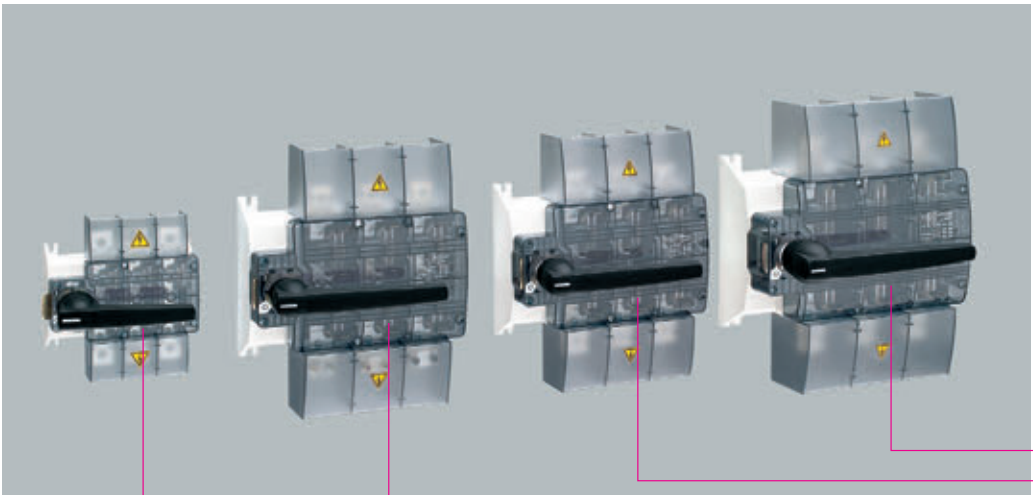
for 1 mounting rail	000	1	0.6	33 247	09
for 2 mounting rails, with centre distance 125mm or 150mm	00	1	18.5	33 193	09
	1-2	1	51.0	33 158	09

Arc chamber

arc chamber, retrofit package for higher utilisation category	1	3	10.7	33 918	09
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Label

clip, 30 x 10mm	1-3	100	0.1	33 159	09
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33 336
33 335
33 334
33 333

CAPUS®Panel

Type LTS

CAPUS®Panel, switch disconnecter 3-pole, 500V AC, with handle

Type	Rated current	Pack size	Weight kg/100 u.	Part no.	
screw M10, graphite-grey handle	250A	1	194.0	33 333	14
	400A	1	538.0	33 334	14
	630A	1	546.0	33 335	14
screw M12, graphite-grey handle	800A	1	944.0	33 336	14
screw M10, red handle	250A	1	194.0	33 355	14
	400A	1	546.0	33 356	14
	630A	1	544.0	33 357	14
screw M12, red handle	800A	1	940.0	33 358	14

fuses and terminal compartment covers are not included in the scope of delivery.



33 342

33 346

33 348

33 246

33 365

Accessories

for switch disconnectors type LTS

Terminal space cover, can be clipped on top/bottom

Type	Can be used with	Pack size	Weight kg/100 u.	Part no.	
for covering all connections, graphite grey	33 333, 33 355	2	4.0	33 350	14
	33 334 - 33 335, 33 556 - 33 557	2	12.0	33 351	14
	33 336, 33 358	2	20.0	33 352	14

Pilot switch, for monitoring the switch setting

1 changeover switch; 6.3 x 0.8 plug connections	33 333 - 33 336, 33 355 - 33 358	1	2.5	33 347	14
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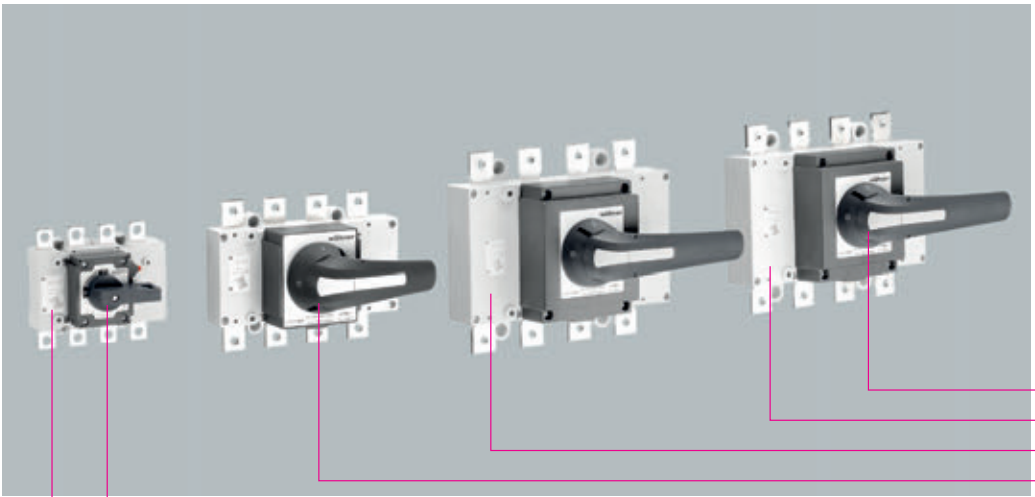
Door coupling drive

graphite-grey cover without door lock, incl. assembly accessories	33 336, 33 358	1	23.5	33 342	14
	33 333 - 33 335, 33 355 - 33 357	1	44.0	33 343	14
graphite-grey cover, door interlocked lockable with padlock, incl. assembly accessories	33 333 - 33 335, 33 355 - 33 357	1	38.0	33 345	14
	33 336, 33 358	1	67.0	33 346	14
yellow cover, door interlocked lockable with padlock, incl. assembly accessories	33 333 - 33 335, 33 355 - 33 357	1	38.0	33 348	14
	33 336, 33 358	1	56.0	33 349	14
extension shaft, 300mm long	33 333 - 33 335, 33 355 - 33 357	1	30.0	33 246	14
	33 336, 33 358	1	57.3	33 283	14
extension shaft, 550mm long	33 333 - 33 335, 33 355 - 33 357	1	29.0	33 380	14
	33 336, 33 358	1	38.0	33 381	14

Connection accessories

Type	Can be used with	Connection mm ²	Pack size	Weight kg/100 u.	Part no.	
clamp connection for Cu conductor rm, f + AE, la. Cu	33 333, 33 355	14 x 9	3	3.5	33 364	14
	33 334, 33 356	18 x 10	1	6.3	33 163	09
	33 335, 33 357	21 x 13	1	10.6	33 164	09
	33 336, 33 358	22 x 58	1	12.5	33 165	09
wedge clamp terminal, single, for Cu conductor, rm, sm, f, f + AE, for Al conductor rm, sm	* 33 333, 33 355	70 - 120	3	6.7	33 365	14
	33 334, 33 356	70 - 150	3	11.6	33 366	14
	33 335, 33 357	120 - 240	3	20.0	33 367	14

* not maintenance-free if aluminium conductors are used (see page 8/2)



- 33 928
- 33 449
- 33 448
- 33 447
- 33 296
- 33 441

CAPUS®Panel

Type LTS-T

CAPUS®Panel, switch disconnecter 3-pole, without handle

Type	Rated current	Pack size	Weight kg/100 u.	Part no.	
box terminal 95mm ²	125A	1	80.0	33 424	14
screw M8	125A	1	80.0	33 425	14
box terminal 95mm ²	160A	1	80.0	33 426	14
screw M8	160A	1	80.0	33 427	14
screw M10	200A	1	80.0	33 428	14
screw M10	250A	1	90.0	33 429	14
screw M10	315A	1	170.0	33 430	14
screw M10	400A	1	170.0	33 431	14
screw M10	630A	1	420.0	33 432	14
screw M10	800A	1	420.0	33 433	14
screw M14 *	1250A	1	700.0	33 434	14
screw M14 *	1600A	1	1850.0	33 435	14
screw M14 *	1800A	1	1850.0	33 436	14
screw M12 *	2000A	1	5500.0	33 437	14
screw M12 *	2500A	1	5500.0	33 438	14
screw M12 *	3150A	1	5600.0	33 439	14
rated current at 400V AC					
* lead time on request					

CAPUS®Panel, switch disconnecter 3-pole + N, without handle

box terminal 95mm ²	125A	1	90.0	33 440	14
screw M8	125A	1	90.0	33 441	14
box terminal 95mm ²	160A	1	90.0	33 442	14
screw M8	160A	1	90.0	33 443	14
screw M10	200A	1	90.0	33 444	14
screw M10	250A	1	100.0	33 445	14
screw M10	315A	1	190.0	33 446	14
screw M10	400A	1	190.0	33 447	14
screw M10	630A	1	450.0	33 448	14
screw M10	800A	1	450.0	33 449	14
screw M14 *	1250A	1	760.0	33 450	14
screw M14 *	1600A	1	2100.0	33 451	14
screw M12 *	2000A	1	7500.0	33 452	14
screw M12 *	2500A	1	7500.0	33 453	14
screw M12 *	3150A	1	7600.0	33 454	14
* lead time on request					



33 926

33 927

33 930

33 939

33 944

Handles and accessories

for switch disconnecter type LTS-T

Handles

Type	Can be used with	Pack size	Weight kg/100 u.	Part no.	
door drive, graphite grey, with ext. shaft	33 424 - 33 429, 33 440 - 33 445	1	25.0	33 921	14
	33 430 - 33 431, 33 446 - 33 447	1	35.0	33 922	14
	33 432 - 33 433, 33 448 - 33 449	1	50.0	33 923	14
	33 434, 33 450	1	80.0	33 924	14
	33 435 - 33 439, 33 451 - 33 454	1	80.0	33 925	14
door drive, red-yellow, with ext. shaft	33 424 - 33 429, 33 440 - 33 445	1	25.0	33 970	14
	33 430 - 33 431, 33 446 - 33 447	1	35.0	33 971	14
	33 432 - 33 433, 33 448 - 33 449	1	50.0	33 972	14
	33 434, 33 450	1	80.0	33 973	14
	33 435 - 33 439, 33 451 - 33 454	1	80.0	33 974	14
direct drive, graphite grey	33 424 - 33 429, 33 440 - 33 445	1	5.0	33 926	14
	33 430 - 33 431, 33 446 - 33 447	1	20.0	33 927	14
	33 432 - 33 433, 33 448 - 33 449	1	25.0	33 928	14
	33 434, 33 450	1	30.0	33 929	14
	33 435 - 33 439, 33 451 - 33 454	1	30.0	33 930	14

Terminal cover

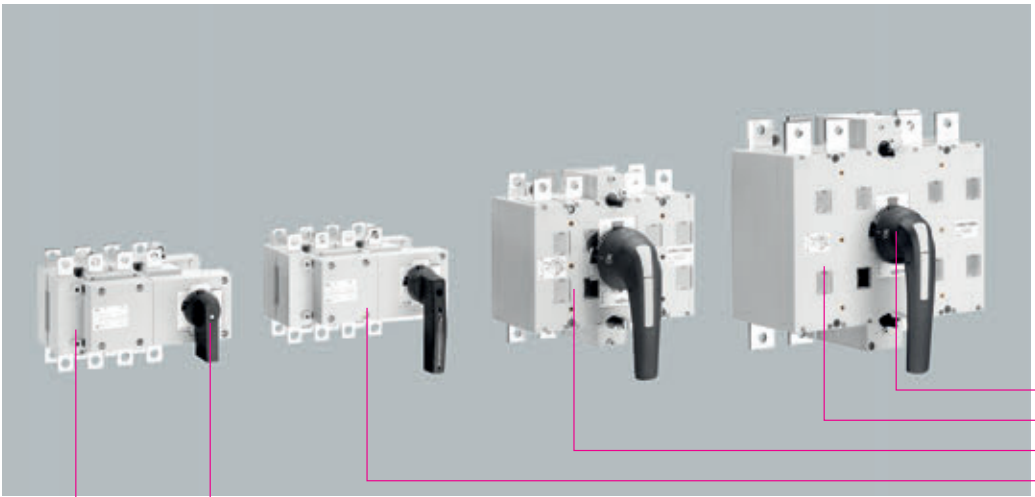
for covering all terminals on one side of the switch, transparent	33 430, 33 446	1	10.0	33 939	14
	33 432 - 33 433, 33 448 - 33 449	1	15.0	33 940	14
	33 434, 33 450	1	20.0	33 941	14
	33 435 - 33 436, 33 451	1	45.0	33 942	14

Terminal space cover

for covering all connections on one side of the switch, transparent	33 424 - 33 429, 33 440 - 33 445	1	10.0	33 943	14
	33 430 - 33 431, 33 446 - 33 447	1	15.0	33 944	14
	33 432 - 33 433, 33 448 - 33 449	1	20.0	33 945	14

Pilot switch

1 make + 1 break contact	33 424 - 33 439, 33 440 - 33 454	1	5.0	33 946	14
2 make + 2 break contacts	33 424 - 33 439, 33 440 - 33 454	1	10.0	33 947	14



- 33 937
- 33 470
- 33 467
- 33 465
- 33 935
- 33 464

CAPUS®Panel

Type LTSU-T

CAPUS®Panel, changeover switches 3-pole, without handle

Type	Rated current	Pack size	Weight kg/100 u.	Part no.	
screw M8 *	125A	1	180.0	33 455	14
screw M8 *	160A	1	180.0	33 456	14
screw M10 *	200A	1	190.0	33 457	14
screw M10	250A	1	550.0	33 458	14
screw M10	315A	1	550.0	33 459	14
screw M10	400A	1	550.0	33 460	14
screw M12	630A	1	1260.0	33 461	14
screw M12	800A	1	1260.0	33 462	14
screw M14	1000A	1	2430.0	33 463	14
rated current at 400V AC					
* bridge cable required; 6 or 8 connections available					

CAPUS®Panel, changeover switches 3-pole + N, without handle

screw M8 *	125A	1	210.0	33 464	14
screw M8 *	16A	1	210.0	33 465	14
screw M10 *	200A	1	220.0	33 466	14
screw M10	250A	1	590.0	33 467	14
screw M10	315A	1	590.0	33 468	14
screw M10	400A	1	590.0	33 469	14
screw M12	630A	1	1370.0	33 470	14
screw M12	800A	1	1370.0	33 471	14
screw M14	1000A	1	2680.0	33 472	14
* bridge cable required; 6 or 8 connections available					



33 935	33 936	33 938	33 933	33 946
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Handles and accessories

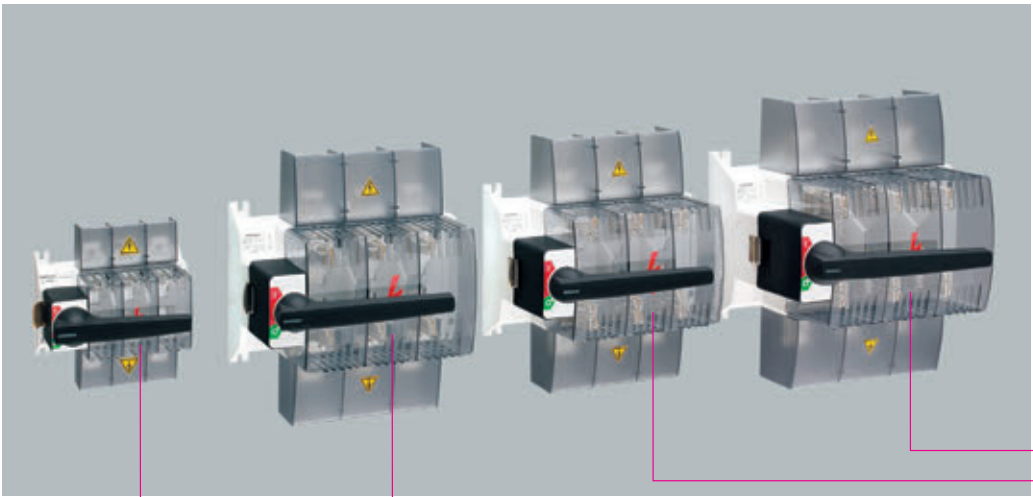
for switch disconnector type LTSU-T

Handles

Type	Can be used with	Pack size	Weight kg/100 u.	Part no.	
door drive, graphite grey, with ext. shaft	33 455 - 33 457, 33 464 - 33 466	1	25.0	33 931	14
	33 458 - 33 460, 33 467 - 33 469	1	50.0	33 932	14
	33 461 - 33 462, 33 470 - 33 471	1	70.0	33 933	14
	33 463, 33 472	1	80.0	33 934	14
direct drive, graphite grey	33 455 - 33 457, 33 464 - 33 466	1	5.0	33 935	14
	33 458 - 33 460, 33 467 - 33 469	1	5.0	33 936	14
	33 461 - 33 462, 33 470 - 33 471	1	30.0	33 937	14
	33 463, 33 472	1	30.0	33 938	14

Pilot switch

1 make + 1 break contact	33 455 - 33 472	1	5.0	33 946	14
2 make + 2 break contacts	33 455 - 33 472	1	10.0	33 947	14



33 340
33 339
33 338
33 337

CAPUS®Panel

Type LTS-F

CAPUS®Panel, NH switch disconnecter with fuses 3-pole, 690V AC, with handle

Type	Rated current	Size	Pack size	Weight kg/100 u.	Part no.	
screw M8, graphite-grey handle	160A	NH00	1	230.0	33 337	15
screw M10, graphite-grey handle	250A	NH1	1	726.0	33 338	15
screw M10, graphite-grey handle	400A	NH2	1	760.0	33 339	15
screw M12, graphite-grey handle	630A	NH3	1	1310.0	33 340	15
screw M8, red handle	160A	NH00	1	230.0	33 359	15
screw M10, red handle	250A	NH1	1	724.0	33 360	15
screw M10, red handle	400A	NH2	1	768.0	33 361	15
screw M12, red handle	630A	NH3	1	1280.0	33 362	15

fuses and terminal compartment covers are not included in the scope of delivery.



33 342	33 346	33 348	33 246
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Handles and accessories

for switch disconnectors with fuses type LTS-F

Terminal space cover, can be clipped on top/bottom

Type	Can be used with	Pack size	Weight kg/100 u.	Part no.	
for covering all connections, graphite grey	33 337, 33 359	2	4.0	33 350	14
	33 338 - 33 339, 33 360 - 33 361	2	12.0	33 351	14
	33 340, 33 362	2	20.0	33 352	14

Pilot switch, for monitoring the switch setting

1 changeover switch; 6.3 x 0.8 plug connections	33 337 - 33 340, 33 359 - 33 362	1	2.5	33 347	14
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Door coupling drive

graphite-grey cover without door lock, incl. assembly accessories	33 340, 33 362	1	23.5	33 342	14
	33 337 - 33 339, 33 359 - 33 361	1	44.0	33 343	14
graphite-grey cover, door interlocked lockable with padlock, incl. assembly accessories	33 337 - 33 339, 33 359 - 33 361	1	38.0	33 345	14
	33 340, 33 362	1	67.0	33 346	14
yellow cover, door interlocked lockable with padlock, incl. assembly accessories	33 337 - 33 339, 33 359 - 33 361	1	38.0	33 348	14
	33 340, 33 362	1	56.0	33 349	14
extension shaft, 300mm long	33 337 - 33 339, 33 359 - 33 361	1	30.0	33 246	14
	33 340, 33 362	1	57.3	33 283	14
extension shaft, 550mm long	33 337 - 33 339, 33 359 - 33 361	1	29.0	33 380	14
	33 340, 33 362	1	38.0	33 381	14

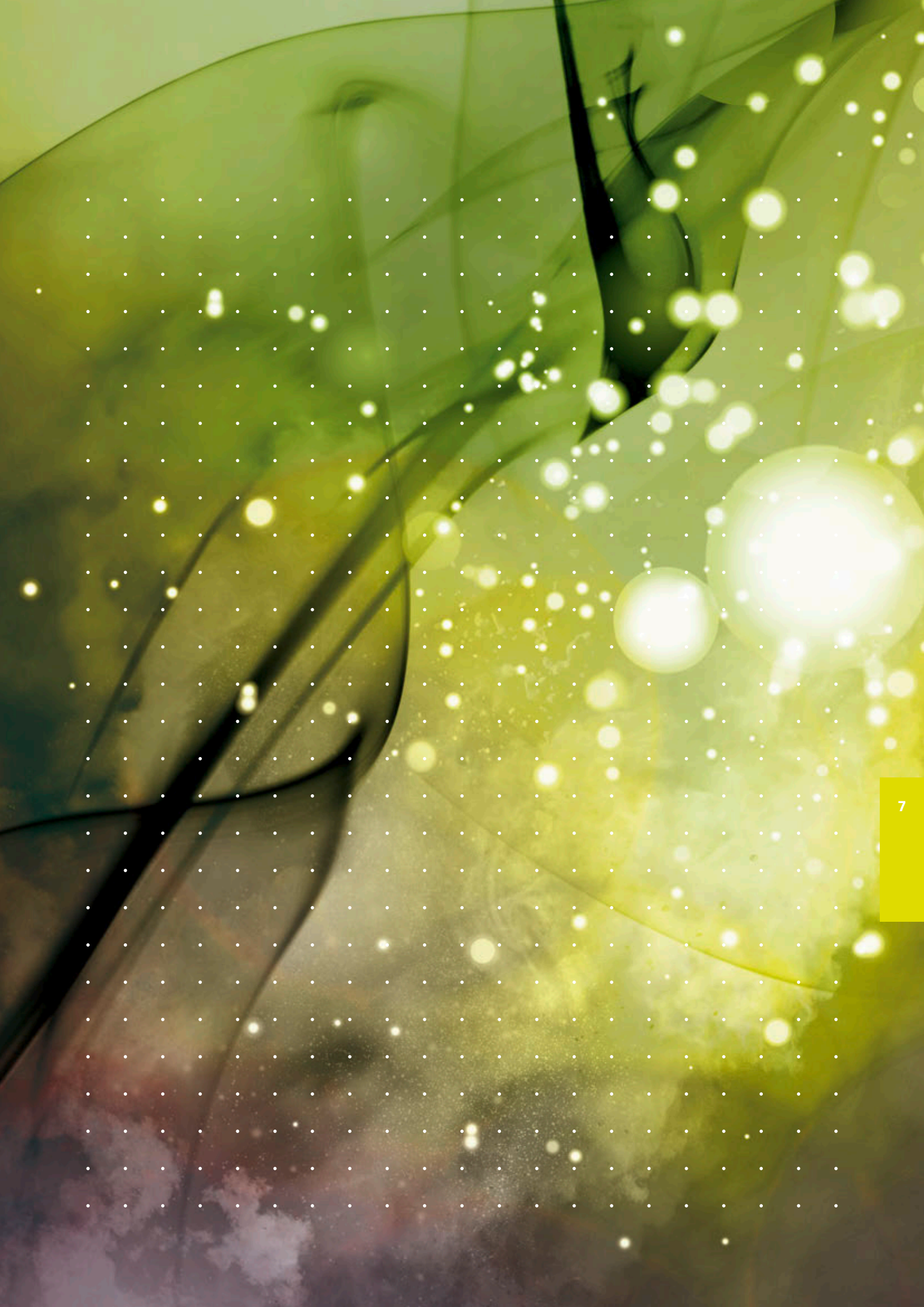
Connection accessories

Type	Can be used with	Connection mm ²	Pack size	Weight kg/100 u.	Part no.	
clamp connection for Cu conductor, rm, f + AE, la., Cu	33 337, 33 359	2.5 - 70 / 12 x 10	3	2.9	33 363	14
clamp connection for Cu conductor, rm, f + AE, la. Cu	33 338, 33 360	18 x 10	1	6.3	33 163	09
	33 339, 33 361	21 x 13	1	10.6	33 164	09
	33 340, 33 362	22 x 58	1	12.5	33 165	09
wedge clamp terminal, single, for Cu conductor, rm, sm, f, f + AE, for Al conductor rm, sm	* 33 338, 33 360	70 - 150	3	11.6	33 366	14
	33 339, 33 361	120 - 240	3	20.0	33 367	14

* not maintenance-free if aluminium conductors are used (see page 8/2)

ACCESSORIES







- 36 111
- 36 112
- 36 110
- 36 114
- 36 109
- 36 113

MOTUS®

Spare components MOTUS®

Type	Pack size	Weight kg/100 u.		Part no.	
16A fuse for 0.6A and 2.4A versions	3	2.8		31 567	21
20A fuse for 9A version	3	2.8		31 568	21
30A fuse for 9A version for motors with heavy starting	3	2.8		31 569	21
0.075 - 0.6A electronics module for direct/reversing starters	1	57.1		36 109	21
0.18 - 2.4A electronics module for direct/reversing starters	1	57.1		36 110	21
1.5 - 9A electronics module for direct/reversing starters	1	57.1		36 111	21
adapter for MOTUS®30Compact	1	9.3		36 113	21
adapter for MOTUS®60Classic	1	11.0		36 114	21
adapter für DIN-Tragschiene	1	12.8		36 112	21
Accessories, for DIN rail model					
plug connector with cable connection, 2 devices	1	7.6		36 902	21
plug connector with cable connection, 3 devices	1	9.0		36 903	21
plug connector with cable connection, 4 devices	1	10.9		36 904	21



36 209	36 230	36 216	36 909	36 906
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SmartWire-DT® components

Module for connection to SmartWire-DT®

Type	Pack size	Weight kg/100 u.	Part no.	
for all MOTUS®	1	6.5	36 209	21
for all EQUES® adapters in 60Classic up to 80A, 3 inputs, 2 outputs	1	8.0	36 230	21

Gateway and Powerfeed

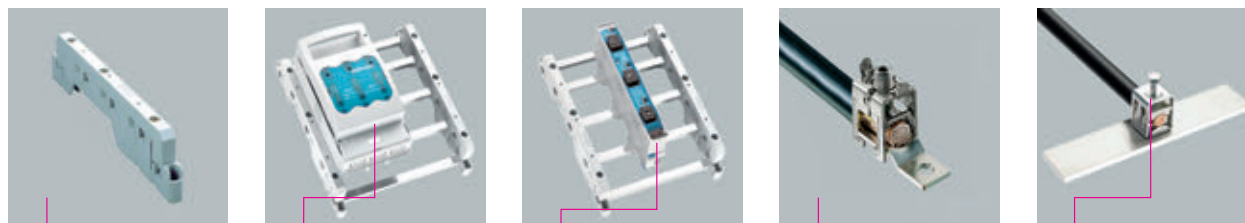
gateway Profibus DP to SmartWire-DT	1	16.0	36 216	21
gateway CANopen to SmartWire-DT	1	16.0	36 218	21
gateway EtherNet/IP to SmartWire-DT	1	16.0	36 219	21
gateway Profinet to SmartWire-DT	1	16.0	36 220	21
power feed 24V for SmartWire-DT	1	17.0	36 215	21

Bus line and plug

ribbon cable, 8-pole, 3m long with 2 flat plugs	1	5.5	36 905	21
device plug	10	5.5	36 906	21
flat plug	10	0.5	36 907	21
network termination	1	1.0	36 908	21
bridge for bridging open sections of device plugs	1	1.0	36 912	21
coupling for flat plug	1	1.0	36 913	21
USB cable for connecting gateway to PC	1	1.0	36 911	21

Crimping tools

pliers for device plug	1	62.0	36 909	21
pliers for flat plug (bus termination, gateway)	1	62.0	36 910	21



01 138	33 075	31 578	01 890	01 429
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Busbar system special solutions

Busbar support, 60mm-System, 3, 4, 5-pole, for VMS (GE) and AKi (Spelsberg) enclosure range

Type	Pack size	Weight	Part no.
for 3x (12, 20, 30 x 10) and 2x (12, 20, 25 x 5, 10) busbars	30	kg/100 u. 16.7	01 138 06

Reducer, for 5mm busbars

for part no. 01 138 (3 pcs needed for a busbar support)	100	0.1	01 170 06
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Busbar support, suitable for Striebel & John system

Type	For busbars	Pack size	Weight	Part no.
3-pole with internal screw holes	12, 20, 30 x 5, 10	10	kg/100 u. 10.0	01 603 06
1-pole, for connection to 01 603 and for mounting individually; with integrated end cover		1	4.1	01 355 06

End cover

for busbar support 01 603	10	2.0	01 573 06
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QUADRON®60Classic, NH bus-mounting fuse switch disconnecter, top/bottom connection, 3-pole with short connection module for 5-pole busbar systems and distribution boards

Type	Rated current	Size	Pack size	Weight	Part no.
box terminal	160A	NH00	1	kg/100 u. 100.0	33 075 09
connection screw M8	160A	NH00	1	100.0	33 079 09
connection screw M10	250A	NH1	1	357.0	33 194 09

Cover frame

Type	Pack size	Weight	Part no.
for ISO enclosure type VMS	10	kg/100 u. 16.6	01 139 06

Reserve section cover, for use with cover frame 01 139 only

54mm wide, pitch 3 x 18mm	10	4.5	79 738 06
variable 36 - 64mm with 2 pieces	10	3.2	79 859 06

Connector latch with brace terminal, for connecting equipment

Busbars	For use	Pack size	Weight	Part no.
	up to max.		kg/100 u.	
for flat busbars up to 30 x 20	630A	3	32.3	01 888 07
for Cu and Al conductors 150 - 300mm ² , rm, sm, f	600A	3	36.6	01 890 07

* not maintenance-free if aluminium conductors are used (see page 8/2)

FIBUS®, universal conductor terminal for drilled flat busbars

16 - 240mm ²	630A	3	44.0	01 429 07
max. 350A current carrying capacity of the terminal point with aluminium conductor				



05 800

05 873

Insulators

Insulator, with female thread

Total height mm	Female thread both sides	Length across flats	Rated voltage	Pack size	Weight kg/100 u.	Part no.
20	M6	17	600V	100	1.2	05 779 06
30	M6	30	1500V	20	5.4	05 780 06
30	M8	30	1500V	20	5.3	05 792 06
35	M6	32	1500V	20	7.0	05 781 06
35	M8	32	1500V	20	7.2	05 782 06
40	M8	40	2000V	20	10.2	05 783 06
40	M10	40	2000V	20	10.8	05 784 06
40	M12	40	2000V	20	11.8	05 791 06
45	M8	46	2000V	20	14.8	05 786 06
45	M10	46	2000V	20	15.3	05 787 06
50	M8	36	2000V	20	10.9	05 790 06
50	M10	36	2000V	20	12.2	05 788 06
60	M10	40	3000V	20	16.2	05 789 06

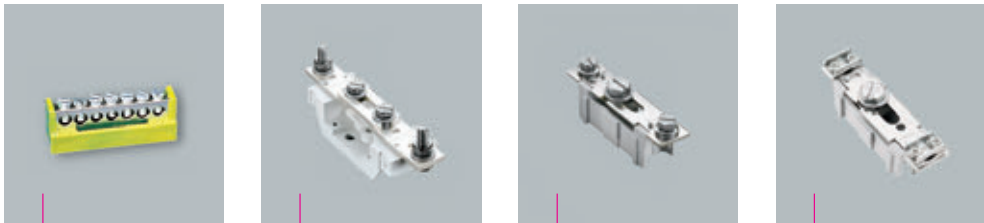
Insulator, with stud bolt and female thread

30	M6	30	1500V	20	5.3	05 800 06
35	M6	32	1500V	20	6.0	05 801 06
35	M8	32	1500V	20	8.2	05 802 06



01 127	01 114	01 928	08 824	08 825	01 120	01 119
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PE and N busbar, rating 63A, self-locking						
Connection mm ²	Number of contact positions	Dimensions L x W x D	Pack size	Weight kg/100 u.		Part no.
10	8	52 x 9 x 6.5	100	2.2		01 126 06
	12	78 x 9 x 6.5	100	3.2		01 127 06
	16	104 x 9 x 6.5	100	4.3		01 128 06
	24	156 x 9 x 6.5	50	6.7		01 129 06
	151	1000 x 9 x 6.5	1	43.0		01 130 06
Terminal						
35	suitable for PE and N busbars 01 126 - 01 130		100	1.4		01 114 07
PE and N busbar, with terminal clamps, rating 63A, self-locking						
Number of terminal clamps incoming 10mm ²	Number of contact points outgoing 10mm ²	Dimensions L x W x D	Pack size	Weight kg/100 u.		Part no.
without terminal clamp	6	62 x 9 x 6.5	100	2.5		01 926 06
1 terminal clamp	12	124 x 9 x 6.5	50	5.5		01 927 06
4 terminal clamps	18	187 x 9 x 6.5	60	9.6		01 928 06
3 terminal clamps	24	249 x 9 x 6.5	50	11.5		01 929 06
4 terminal clamps	30	312 x 9 x 6.5	50	16.7		01 930 06
5 terminal clamps	36	374 x 9 x 6.5	100	17.6		01 931 06
15 terminal clamps	96	1000 x 9 x 6.5	1	48.0		01 932 06
for a 10mm ² incoming connection, the terminal clamp must be rotated						
Terminal clamp						
Connection mm ²	Type		Pack size	Weight kg/100 u.		Part no.
25	suitable for PE and N busbar 01 932		100	0.3		08 824 06
Clip-on mounting, for 35mm mounting rail DIN EN 60 715						
Type			Pack size	Weight kg/100 u.		Part no.
suitable for PE and N busbars 01 126 - 01 129 and 01 926 - 01 932			100	0.2		08 825 06
Terminal support, for PE and N busbars						
for screw mounting			50	1.4		01 120 06
for clip-on mounting			50	1.6		01 121 06
for screw mounting			50	0.1		01 119 06



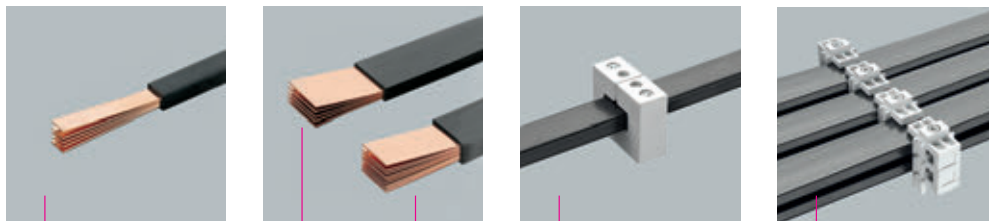
01 144

03 213

03 657

03 668

Insulated PE and N terminal						
Rated current	Connection	Type	Pack size	Weight		Part no.
				kg/100 u.		
63A	*	7 x 10mm ²	neutral (blue)	50	2.7	01 143 06
63A	*	7 x 10mm ²	earth (green/yellow)	50	2.7	01 144 06
63A	**	7 x 10mm ²	neutral (blue)	50	2.9	01 257 06
63A	**	7 x 10mm ²	earth (green/yellow)	50	2.9	01 258 06
* for fixing to flat busbars 12 x 2mm						
** for clip-on mounting						
Connecting terminal						
160A	70mm ² (clamp on both sides)	60mm	10	9.1		03 193 10
		125mm	10	14.6		03 173 10
250A	120mm ² (screw M10 on both sides)	100mm	10	16.8		03 195 10
		200mm	10	30.6		03 196 10
630A	240mm ² (screw M12 on both sides)	100mm	10	25.6		03 197 10
		200mm	10	42.0		03 198 10
Neutral conductor, disconnectable, screw-on and clip-on mounting						
63A	tunnel terminal		50	2.6		05 188 10
Neutral conductor, disconnectable, screw-on mounting						
160A	clamp on both sides	120mm	10	19.2		03 668 10
250A	screw on both sides	120mm	10	19.5		03 657 10
400A	screw on both sides	200mm	3	58.9		03 757 10
630A	screw on both sides	200mm	3	58.9		03 213 10
Label, self-adhesive, Ø 15mm						
PE	Colour: green-yellow		200	0.1		78 442 06
N	Colour: blue		200	0.1		78 443 06
PEN	Colour: green-yellow / blue		200	0.1		78 447 06



01 196

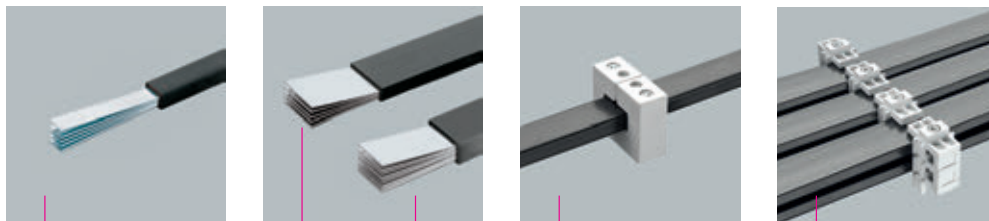
01 612

01 613

01 298

01 299

Laminated copper busbars, plain, insulated (105°C), length 2m						
Dimensions	Rated current	Cross section	Pack size	Weight *		Part no.
	50K	mm ²		kg/100 u.		
3 x 9 x 0.8	162A	21.6	1	40.4		01 054
6 x 9 x 0.8	240A	43.2	1	80.6		01 194
4 x 15.5 x 0.8	279A	49.6	1	92.8		01 196
6 x 15.5 x 0.8	350A	74.4	1	139.2		01 035
10 x 15.5 x 0.8	470A	124	1	232.0		01 583
3 x 20 x 1	326A	60	1	112.4		01 027
6 x 20 x 1	477A	120	1	225.0		01 028
10 x 20 x 1	640A	200	1	375.0		01 029
4 x 24 x 1	438A	96	1	180.0		01 253
5 x 24 x 1	495A	120	1	225.0		01 611
6 x 24 x 1	547A	144	1	270.0		01 255
8 x 24 x 1	641A	192	1	360.0		01 323
10 x 24 x 1	727A	240	1	450.0		01 184
5 x 32 x 1	617A	160	1	299.0		01 612
10 x 32 x 1	894A	320	1	598.0		01 613
5 x 40 x 1	736A	200	1	373.0		01 614
6 x 40 x 1	809A	240	1	447.6		01 256
10 x 40 x 1	1053A	400	1	746.0		01 615
5 x 50 x 1	880A	250	1	466.0		01 060
8 x 50 x 1	1114A	400	1	746.0		01 343
10 x 50 x 1	1244A	500	1	932.0		01 509
5 x 63 x 1	1061A	315	1	590.0		01 324
10 x 63 x 1	1481A	630	1	1180.0		01 510
10 x 80 x 1	1777A	800	1	1490.0		01 061
10 x 100 x 1	2110A	1000	1	1870.0		01 273
* the weight specified is the pure copper weight, it does not include the weight of the insulation.						
Holder, for laminated busbars						
Type	Pack size	Weight		Part no.		
		kg/100 u.				
for 1x lam. Cu of 6 x 15.5 x 0.8 to 10 x 63 x 1	3	11.3		01 298		06
for multiple fastening for lam. Cu of 5 x 40 x 1 to 10 x 63 x 1 mounting on standard C-rail	4	16.6		01 299		06

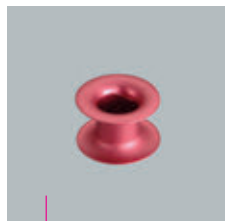


01 089	01 095	01 096	01 298	01 299
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Laminated copper busbars, tin-plated, insulated (105°C), length 2m						
Dimensions	Rated current	Cross section	Pack size	Weight *		Part no.
	50K	mm ²		kg/100 u.		
6 x 9 x 0.8	240A	43.2	1	80.6		01 084
4 x 15.5 x 0.8	279A	49.6	1	92.8		01 089
6 x 15.5 x 0.8	350A	74.4	1	139.2		01 090
10 x 15.5 x 0.8	470A	124	1	232.0		01 091
6 x 20 x 1	477A	120	1	225.0		01 063
10 x 20 x 1	640A	200	1	375.0		01 064
5 x 24 x 1	494A	120	1	225.0		01 075
10 x 24 x 1	727A	240	1	450.0		01 076
5 x 32 x 1	617A	160	1	299.0		01 095
10 x 32 x 1	894A	320	1	598.0		01 096
5 x 40 x 1	736A	200	1	373.0		01 097
10 x 40 x 1	1053A	400	1	746.0		01 099
5 x 50 x 1	880A	250	1	466.0		01 112
10 x 50 x 1	1244A	500	1	932.0		01 113
10 x 63 x 1	1481A	630	1	1180.0		01 123

* the weight specified is the pure copper weight, it does not include the weight of the insulation.

Holder, for laminated busbars						
Type	Pack size	Weight		Part no.		
		kg/100 u.				
for 1x lam. Cu of 6 x 15.5 x 0.8 to 10 x 63 x 1	3	11.3		01 298		06
for multiple fastening for lam. Cu of 5 x 40 x 1 to 10 x 63 x 1	4	16.6		01 299		06
mounting on standard C-rail						



01 694 01 718 01 727

D0 fuses

to DIN VDE 0636-3 / IEC / EN 60269-3

gG (gL) fuse link

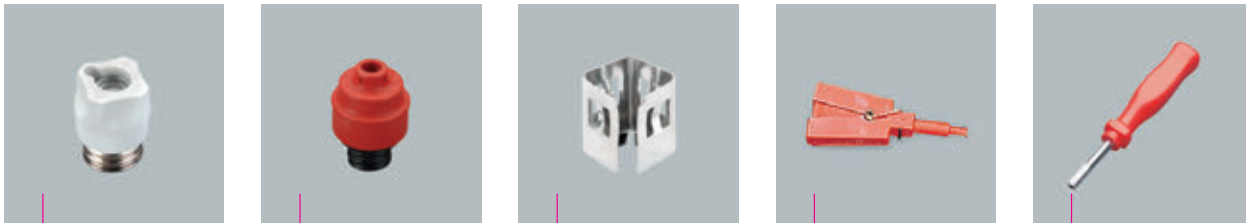
Size	Rated current	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.	Part no.	
D01	2A	400V AC / 250V DC	50kA AC / 8kA DC	10	0.6	01 685	03
	4A			10	0.6	01 686	03
	6A			10	0.6	01 687	03
	10A			10	0.6	01 688	03
	16A			10	0.7	01 689	03
D02	20A	400V AC / 250V DC	50kA AC / 8kA DC	10	1.2	01 690	03
	25A			10	1.3	01 691	03
	35A			10	1.3	01 692	03
	50A			10	1.5	01 693	03
	63A			10	1.5	01 694	03

Ferrule gauge ring for E14

Size	Rated current	Pack size	Weight kg/100 u.	Part no.	
D01	2A	50	0.1	01 715	03
	4A	50	0.1	01 716	03
	6A	50	0.1	01 717	03
	10A	50	0.1	01 718	03

Ferrule gauge piece for E18

D01	2A	50	0.1	01 724	03
	4A	50	0.1	01 725	03
	6A	50	0.1	01 726	03
	10A	50	0.1	01 727	03
	16A	50	0.1	01 728	03
D02	20A	50	0.1	01 719	03
	25A	50	0.1	01 720	03
	35A	50	0.1	01 721	03
	50A	50	0.1	01 722	03



31 006

31 909

01 729

01 730

31 913

D0 fuses

to DIN VDE 0636-3 / IEC / EN 60269-3

Screw cap, 400V AC / 250V DC

Size	Type	Pack size	Weight kg/100 u.	Part no.	
D01 / E14	porcelain	20	1.9	01 103	03
D01 / E14	plastic	20	1.2	31 005	03
D02 / E18	porcelain	20	1.8	01 104	03
D02 / E18	plastic	20	1.3	31 006	03
D01 / E18	*	20	1.4	31 104	03

* with reducing piece for D01

Retaining cap

D01 / E14	industrial	36	1.1	31 909	03
	utility	36	1.1	31 908	03
D02 / E18	industrial	36	1.1	31 910	03
	utility	36	1.1	31 904	03

Special retaining spring

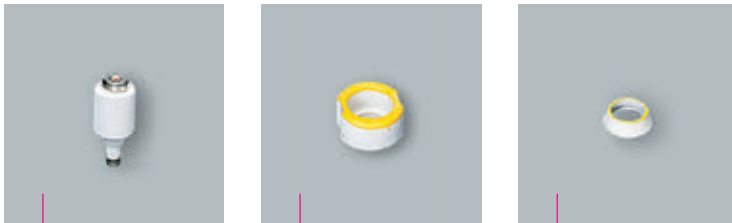
Size	Rated current	Pack size	Weight kg/100 u.	Part no.	
D01 / E18	2 - 16A	50	0.1	01 729	03

Gauge ring tool

Size	Pack size	Weight kg/100 u.	Part no.	
D01 - D03	1	2.8	01 730	03

Special key for retaining cap

Size	Type	Pack size	Weight kg/100 u.	Part no.	
D / D0	industrial	1	3.6	31 913	03



01 676 01 706 01 547

D fuses

to DIN VDE 0636-3 / IEC / EN 60269-3

gG (gL) fuse link

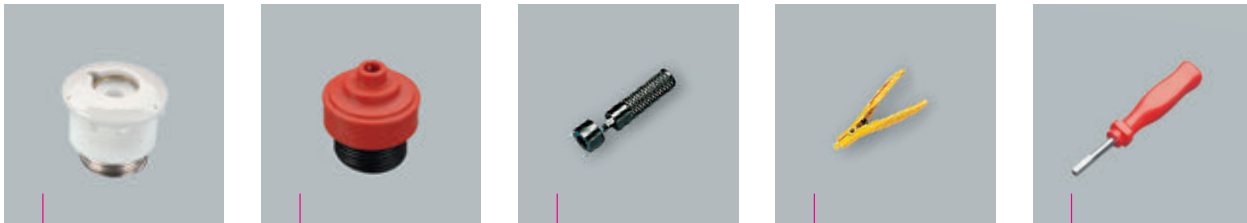
Size	Rated current	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.	Part no.	
E27	2A	500V AC / DC	50kA	5	2.7	01 670	03
	4A			5	2.8	01 671	03
	6A			5	2.8	01 672	03
	10A			5	2.8	01 673	03
	16A			5	2.9	01 674	03
	20A			5	3.1	01 675	03
	25A			5	3.2	01 676	03
E33	35A	500V AC / DC	50kA	5	4.8	01 677	03
	50A			5	5.0	01 678	03
	63A			5	5.2	01 679	03

Screw-in gauge ring

Size	Rated current	Pack size	Weight kg/100 u.	Part no.	
E27 / E33	2A	25	1.3	01 741	03
	4A	25	1.2	01 701	03
	6A	25	1.2	01 702	03
	10A	25	1.2	01 703	03
	16A	25	1.2	01 704	03
	20A	25	1.2	01 705	03
	25A	25	1.2	01 706	03
E33	35A	25	2.0	01 707	03
	50A	25	2.0	01 708	03
	63A	25	2.0	01 709	03

Gauge ring

E27	2A	50	0.4	01 541	03
	4A	50	0.4	01 542	03
	6A	50	0.4	01 543	03
	10A	50	0.4	01 544	03
	16A	50	0.4	01 545	03
	20A	50	0.4	01 546	03
	25A	50	0.4	01 547	03
E33	35A	50	0.4	01 548	03
	50A	50	0.4	01 549	03
	63A	50	0.4	01 550	03



01 098	31 911	01 998	01 059	31 913
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D fuses
to DIN VDE 0636-3 / IEC / EN 60269-3

Screw cap, 500V AC / DC

Size	Type	Pack size	Weight kg/100 u.	Part no.	
E27	porcelain	20	4.8	01 098	03
	plastic	20	2.8	31 098	03
E33	porcelain	20	7.9	01 100	03
	plastic	20	4.8	31 100	03

Retaining cap

E27	industrial	20	1.7	31 911	03
	utility	20	1.7	31 905	03
E33	industrial	10	2.6	31 912	03
	utility	10	2.6	31 906	03

Gauge screw key

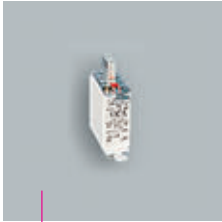
Size	Pack size	Weight kg/100 u.	Part no.	
E27 / E33	1	4.7	01 998	03

Gauge ring key

E27 / E33	1	3.7	01 059	03
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Special key for retaining cap

Size	Type	Pack size	Weight kg/100 u.	Part no.	
D / D0	industrial	1	3.6	31 913	03



03 530

03 162

NH fuses

to DIN VDE 0636-2 / IEC / EN 60269-2

gG (gL) fuse link

Size	Rated voltage AC	Rated voltage DC	Rated current	Pack size	Weight kg/100 u.	Part no.	
NH000	400V	250V	125A	3	12.2	03 243	10
			6A	3	12.2	03 523	10
	10A		3	12.2	03 524	10	
	16A		3	12.2	03 525	10	
	20A		3	12.2	03 526	10	
	25A		3	12.2	03 527	10	
	35A		3	12.2	03 528	10	
	50A		3	12.2	03 529	10	
	63A		3	12.2	03 530	10	
	80A		3	12.2	03 531	10	
	100A		3	12.2	03 532	10	
NH00	400V	440V	125A	3	18.3	03 533	10
			160A	3	18.3	03 534	10
	690V	250V	6A	3	12.7	03 908	10
			10A	3	12.7	03 909	10
			16A	3	12.7	03 910	10
			20A	3	12.7	03 911	10
			25A	3	12.7	03 912	10
			32A	3	12.7	03 913	10
			35A	3	12.7	03 914	10
			40A	3	12.7	03 915	10
			50A	3	12.7	03 916	10
			63A	3	12.7	03 917	10
			80A	3	19.0	03 918	10
			100A	3	20.5	03 919	10

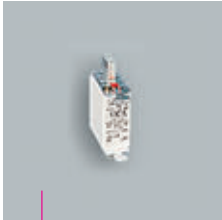
Cutting blade

Size	Rated current	Pack size	Weight kg/100 u.	Part no.	
NH00	160A	3	7.0	03 161	10
NH1	250A	3	14.9	03 162	10
NH2	400A	3	20.7	03 163	10
NH3	630A	3	28.0	03 164	10
NH4a	1600A	3	85.0	03 185	10

NH universal slip-on handle

Size	Type	Pack size	Weight kg/100 u.	Part no.	
size 000 - 3	open	1	28.4	03 502	10

Size 000 NH fuses to DIN VDE 0636-2 can be used in size 00 NH fuses bases and NH switch fuse units.



03 571

NH fuses

to DIN VDE 0636-2 / IEC / EN 60269-2

gG / gL fuse link, 500V AC / 440V DC

Size	Rated voltage AC	Rated voltage DC	Rated current	Pack size	Weight kg/100 u.	Part no.		
NH1	500V	440V	20A	3	26.3	03 550	10	
			35A	3	26.3	03 552	10	
			50A	3	26.3	03 553	10	
			80A	3	26.3	03 555	10	
			100A	3	26.3	03 556	10	
			125A	3	26.3	03 557	10	
			160A	3	26.3	03 558	10	
			200A	3	26.3	03 559	10	
			224A	3	26.3	03 560	10	
			250A	3	26.3	03 561	10	
	690V	250V	160A	3	35.0	03 929	10	
			200A	3	35.0	03 930	10	
			250A	3	35.0	03 924	10	
NH2	500V	440V	50A	3	47.8	03 563	10	
			100A	3	47.8	03 566	10	
			160A	3	47.8	03 568	10	
			200A	3	47.8	03 569	10	
			224A	3	47.8	03 570	10	
			250A	3	47.8	03 571	10	
			300A	3	47.8	03 572	10	
			315A	3	47.8	03 573	10	
			250V	355A	3	47.8	03 574	10
				400A	3	47.8	03 575	10
	690V	250A		3	62.6	03 942	10	
		315A	3	62.6	03 943	10		
	NH3	500V	440V	315A	3	65.4	03 577	10
400A				3	65.4	03 579	10	
500A				3	65.4	03 581	10	
630A				3	65.4	03 582	10	
690V				400A	3	96.0	03 946	10
		500A		3	105.0	03 947	10	
NH4a		500V		440V	800A	1	260.0	03 181
	1000A		1		260.0	03 182	10	
	1250A		1		266.0	03 183	10	

Size 000 NH fuses to DIN VDE 0636-2 can be used in size 00 NH fuses bases and NH switch fuse units.



31 185

Cylindrical gG fuses

Fuse link gG (gL)
as per IEC 60269-2

Size	Rated current	Rated voltage	Rated breaking capacity	Power output	Pack size	Weight kg/100 u.	Part no.	
10 x 38	1A	500V	120kA	0.5W	10	0.6	31 008	17
	2A	500V	120kA	0.7W	10	0.6	31 182	17
	4A	500V	120kA	0.8W	10	0.6	31 183	17
	6A	500V	120kA	0.9W	10	0.6	31 184	17
	8A	500V	120kA	0.9W	10	0.6	31 009	17
	10A	500V	120kA	1.3W	10	0.6	31 185	17
	12A	500V	120kA	1.3W	10	0.6	31 010	17
	16A	500V	120kA	1.9W	10	0.6	31 186	17
	20A	500V	120kA	2.3W	10	0.6	31 187	17
	25A	500V	120kA	2.8W	10	0.6	31 188	17
	32A	400V	120kA	3.0W	10	0.6	31 189	17
14 x 51	2A	690V	80kA	0.8W	10	1.9	31 011	17
	6A	690V	80kA	1.0W	10	1.9	31 017	17
	10A	690V	120kA	1.8W	10	1.9	31 190	17
	16A	690V	80kA	2.5W	10	1.9	31 191	17
	20A	690V	80kA	3.0W	10	1.9	31 192	17
	25A	690V	80kA	3.5W	10	1.9	31 193	17
	32A	500V	80kA	3.8W	10	1.9	31 194	17
	40A	500V	80kA	4.4W	10	1.9	31 195	17
	50A	400V	120kA	4.7W	10	1.9	31 196	17
22 x 58	32A	690V	80kA	4.3W	10	5.0	31 198	17
	40A	690V	80kA	5.1W	10	5.0	31 199	17
	50A	690V	80kA	5.5W	10	5.0	31 200	17
	63A	690V	80kA	6.7W	10	5.0	31 201	17
	80A	500V	120kA	8.0W	10	5.0	31 202	17
	100A	500V	120kA	9.0W	10	5.0	31 203	17
	125A	400V	120kA	12.5W	10	5.0	31 204	17



31 366

Cylindrical gG fuses

Fuse link gG (gL), with striker
as per IEC 60269-2

Size	Rated current	Rated voltage	Rated breaking capacity	Power output	Pack size	Weight kg/100 u.	Part no.	
14 x 51	6A	500V	80kA	1.1W	10	2.0	31 366	17
	10A	500V	80kA	1.3W	10	2.0	31 368	17
	16A	500V	80kA	2.0W	10	2.0	31 370	17
	20A	500V	80kA	2.5W	10	2.0	31 371	17
	25A	500V	80kA	3.3W	10	2.0	31 372	17
	32A	500V	120kA	3.5W	10	2.0	31 373	17
	40A	500V	120kA	4.8W	10	2.0	31 374	17
22 x 58	50A	690V	80kA	5.2W	10	5.2	31 385	17
	63A	500V	80kA	6.9W	10	5.2	31 386	17
	80A	500V	80kA	7.8W	10	5.2	31 387	17



31 209

Cylindrical gR fuses

Fuse link gR as per IEC 60269-4

Size	Rated current	Rated voltage	Rated breaking capacity	Power output	Pack size	Weight kg/100 u.	Part no.	
10 x 38	1A	690V	200kA	0.9W	10	0.6	31 205	17
	2A	690V	200kA	1.0W	10	0.6	31 206	17
	4A	690V	200kA	1.1W	10	0.6	31 207	17
	6A	690V	200kA	1.6W	10	0.6	31 208	17
	10A	690V	200kA	2.1W	10	0.6	31 209	17
	12A	690V	200kA	3.1W	10	0.6	31 210	17
	16A	690V	200kA	4.4W	10	0.6	31 211	17
	20A	690V	200kA	5.8W	10	0.6	31 212	17
	25A	690V	200kA	6.8W	10	0.6	31 213	17
14 x 51	30A	690V	200kA	8.2W	10	0.6	31 214	17
	10A	690V	200kA	2.6W	10	1.9	31 215	17
	1A	690V	200kA	4.7W	10	1.9	31 216	17
	20A	690V	200kA	6.0W	10	1.9	31 217	17
	32A	690V	200kA	9.5W	10	1.9	31 219	17
	40A	690V	200kA	10.0W	10	1.9	31 220	17
22 x 58	50A	690V	200kA	12.0W	10	1.9	31 221	17
	40A	690V	200kA	12.0W	10	5.0	31 225	17
	50A	690V	200kA	15.0W	10	5.0	31 226	17
	63A	690V	200kA	16.0W	10	5.0	31 227	17
	80A	690V	200kA	18.0W	10	5.0	31 228	17
	100A	690V	200kA	19.0W	10	5.0	31 229	17



31 544

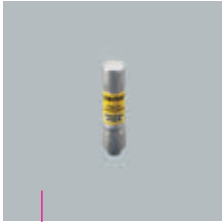
31 558

Cylindrical gPV fuses

Fuse link gPV,
as per IEC/EN 60 269-6, for photovoltaic applications

Size	Rated current	Rated voltage DC	Rated breaking capacity	Power output	Pack size	kg/100 u.	PG		
10 x 38	8A	1000V	30kA	1.6W	10	0.6		31 543	17
	10A	1000V	30kA	2.0W	10	0.6		31 544	17
	12A	1000V	30kA	2.4W	10	0.6		31 545	17
	16A	1000V	30kA	2.1W	10	0.6		31 546	17
	20A	1000V	30kA	2.5W	10	0.6		31 547	17
14 x 85	16A	1100V	30kA	3.8W	20	2.7		31 560	17
	20A	1100V	30kA	4.7W	20	2.7		31 559	17
	25A	1000V	30kA	5.9W	20	2.7		31 558	17

delivery on request

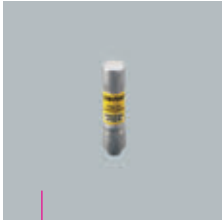


31 252

Cylindrical class CC fuses

Fuse link class CC time delay as per UL 248-4

Size	Rated current	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.		Part no.	
class CC	0.5A	600V	200kA	10	0.8		31 394	17
	1A	600V	200kA	10	0.8		31 244	17
	1.5A	600V	200kA	10	0.8		31 395	17
	2A	600V	200kA	10	0.8		31 245	17
	2.5A	600V	200kA	10	0.8		31 396	17
	3A	600V	200kA	10	0.8		31 397	17
	4A	600V	200kA	10	0.8		31 246	17
	5A	600V	200kA	10	0.8		31 398	17
	6A	600V	200kA	10	0.8		31 247	17
	8A	600V	200kA	10	0.8		31 399	17
	10A	600V	200kA	10	0.8		31 248	17
	12A	600V	200kA	10	0.8		31 400	17
	15A	600V	200kA	10	0.8		31 249	17
	20A	600V	200kA	10	0.8		31 250	17
	25A	600V	200kA	10	0.8		31 251	17
30A	600V	200kA	10	0.8		31 252	17	



31 241

Cylindrical class CC fuses

**Fuse link class CC
fast acting
as per UL 248-4**

Size	Rated current	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.	Part no.	
class CC	0.5A	600V	200kA	10	0.8	31 401	17
	1A	600V	200kA	10	0.8	31 235	17
	2A	600V	200kA	10	0.8	31 236	17
	3A	600V	200kA	10	0.8	31 404	17
	4A	600V	200kA	10	0.8	31 237	17
	5A	600V	200kA	10	0.8	31 405	17
	6A	600V	200kA	10	0.8	31 238	17
	8A	600V	200kA	10	0.8	31 406	17
	10A	600V	200kA	10	0.8	31 239	17
	12A	600V	200kA	10	0.8	31 407	17
	15A	600V	200kA	10	0.8	31 240	17
	20A	600V	200kA	10	0.8	31 241	17
	25A	600V	200kA	10	0.8	31 242	17
	30A	600V	200kA	10	0.8	31 243	17



31 353	31 363	03 231	03 236
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Cylindrical class J fuses

Fuse link class J time delay as per UL 248-8

Size	Rated current	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.	Part no.	
class J, 21 x 57	1A	600V	200kA	10	5.0	31 333	16
	2A	600V	200kA	10	5.0	31 338	16
	3A	600V	200kA	10	5.0	31 342	16
	4A	600V	200kA	10	5.0	31 345	16
	6A	600V	200kA	10	5.0	31 349	16
	8A	600V	200kA	10	5.0	31 351	16
	10A	600V	200kA	10	5.0	31 353	16
	12A	600V	200kA	10	5.0	31 354	16
	1A	600V	200kA	10	5.0	31 355	16
	20A	600V	200kA	10	5.0	31 357	16
	25A	600V	200kA	10	5.0	31 358	16
	30A	600V	200kA	10	5.0	31 359	16
	class J, 27 x 60	35A	600V	200kA	10	8.5	31 360
40A		600V	200kA	10	8.5	31 361	16
45A		600V	200kA	10	8.5	31 362	16
50A		600V	200kA	10	8.5	31 363	16
60A		600V	200kA	10	8.5	31 364	16
class J, 29 x 118	70A	600V	200kA	1	14.5	03 228	16
	80A	600V	200kA	1	14.5	03 229	16
	90A	600V	200kA	1	14.5	03 230	16
	100A	600V	200kA	1	14.5	03 231	16
class J, 41 x 146	125A	600V	200kA	1	35.5	03 233	16
	150A	600V	200kA	1	35.5	03 234	16
	175A	600V	200kA	1	35.5	03 235	16
	200A	600V	200kA	1	35.5	03 236	16
class J, 54 x 181	250A	600V	200kA	1	67.0	03 238	16
	300A	600V	200kA	1	67.0	03 239	16
	350A	600V	200kA	1	67.0	03 240	16
	400A	600V	200kA	1	67.0	03 241	16



31 323	31 514	03 215	03 220
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Cylindrical class J fuses

Fuse link class J fast acting as per UL 248-8

Size	Rated current	Rated voltage	Rated breaking capacity	Pack size	Weight kg/100 u.	Part no.	
class J, 21 x 57	10A	600V	200kA	10	5.0	31 323	16
	15A	600V	200kA	10	5.0	31 324	16
	20A	600V	200kA	10	5.0	31 325	16
	25A	600V	200kA	10	5.0	31 326	16
	30A	600V	200kA	10	5.0	31 327	16
class J, 27 x 60	35A	600V	200kA	10	8.5	31 511	16
	40A	600V	200kA	10	8.5	31 512	16
	50A	600V	200kA	10	8.5	31 514	16
	60A	600V	200kA	10	8.5	31 515	16
class J, 29 x 118	70A	600V	200kA	1	14.5	03 214	16
	80A	600V	200kA	1	14.5	03 215	16
	100A	600V	200kA	1	14.5	03 217	16
class J, 41 x 146	125A	600V	200kA	1	35.0	03 219	16
	150A	600V	200kA	1	35.5	03 220	16
	175A	600V	200kA	1	38.2	03 221	16
	200A	600V	200kA	1	35.5	03 222	16
class J, 54 x 181	250A	600V	200kA	1	67.0	03 224	16
	300A	600V	200kA	1	67.0	03 225	16
	350A	600V	200kA	1	67.0	03 226	16
	400A	600V	200kA	1	67.0	03 227	16



General notes

Wöhner busbar systems and components are the result of expert development based on many years of experience. They have been exhaustively tested and hold many approvals. The correct selection of busbars and components is the responsibility of a system's planner.

Planning, construction requirements and the required test certifications are prescribed in the parts of the IEC or DIN EN 61439 standard "Low-voltage switchgear and control-gear assemblies".

To avoid hazards to people and materials which can arise when working with electricity, these systems and components should only be used by suitably trained personnel, and relevant regulations must be observed.

In particular, installation, maintenance, modifications and additions must only be carried out by qualified personnel in accordance with the general construction and safety regulations applicable to high-current electrical systems. Modern technological developments and the way in which

Provide further separation of this line from the paragraph above.

Detailed technical information is available on the internet at: www.woehner.com

the components of the system interact must be taken into account. It is essential that all accessible parts are electrically isolated during installation and maintenance.

All connections must be correctly tightened with the specified torque (Md), correct gauges must be used and components that provide protection against accidental contact with live parts must be fitted. After transportation, all connections must be checked and, if necessary, re-tightened.

Products are to be used and operated correctly in the manner intended.

The technical information contained in the product manual and the installation instructions should be observed and retained for future modifications, maintenance or additions to the installation. Wöhner reserves the right to make modifications to its components, as the result of developments and technical advances.

Operating conditions

Unless special instructions are given, the information contained in the documentation applies for the recommended mounting position and the ambient conditions of indoor installation (contamination level 3; 2 in exceptional cases) according to IEC 61439-1/2/3.

Plant-specific reduction factors must be considered, depending on the exact conditions of use.

The rated loading factors listed below represent guide values and refer to a maximum +35°C temperature of the air directly surrounding the products.

Number of main circuits	Rated diversity factor	
	to IEC/EN 61439-2	to IEC/EN 61439-2
2 and 3	0.9	0.8
4 and 5	0.8	0.7
6 to 9 inclusive	0.7	0.6
10 and more	0.6	0.5

IEC 61439

Part 2: Power switchgear and controlgear assemblies

Part 3: Installation distributor for operation by lay people

In products intended to hold fuse links, please observe the requirements governing connected cross-sections from the relevant product standards. Comply with the stated temperature specifications of all plastics used. Some of the material properties described here refers to several products.

In isolated cases, values may exceed the levels stated.

See www.woehner.com for further information.

We recommend vertically mounting the device on a horizontal busbar system. The fixing handle must be placed on top for switchgears mounted vertically. For this mounting position, the rated diversity factors contained in Table 1 or Table 101 apply to components with permitted dissipation in the worst-case scenario and with ambient conditions in conformity with IEC/EN 61439-2/3, section 7.1.1.1.

In case of deviating mounting positions and conditions, all influencing factors are on maximum temperature such as:

- Power output per fuse and the device in operation,
 - Simultaneous full and partial load cycles,
 - Alignment in the system, devices affecting each other,
 - Busbar cross-section, conductor cross-section,
 - Ambient temperature, current conditions, require the observation of additional correction factors
- by additional correction factors.

Mounting positions are prohibited where gravity and the contact direction of motion are opposed.

Air and creepage distances must be calculated in compliance with EN 60664-1 (VDE 0110 part 1). For values of 12mm and greater, these requirements are automatically satisfied up to 690V AC in compliance with IEC. Additional specifications, such as the minimum distance to earthed parts, must be observed. This is especially relevant for applications in compliance with UL.

Detrimental effects from chemical substances during storage, processing and operation must be prevented.

In order to ease the locking of the busbar components and the insertion of the NH fuse units, the spring clips will be lubricated with special grease during manufacturing.

On other parts, especially on screw threads, it must be ensured that no supplementary change of the friction coefficient takes place.

Conductor connections

Specifications regarding conductor terminals are only valid for copper conductors. The maintenance-free resistance to ageing for selected connections has been verified by testing.

If the standards-compliant connection of aluminium conductors has been confirmed for connection terminals, this is stated expressly.

Before connecting aluminium conductors, any oxide deposits must be removed from the conductor surfaces and further oxidation prevented.

After removal of the oxide deposit, chips and abrasives cannot be permitted to damage the contacting.

Multiwire conductors should be shortened and exposed to the bare metallic conductor section.

The contact points are to be sealed (e.g. using acid-free contact grease) so that they airtight to protect them against further oxidation.

The terminal points need to be checked, taking operating conditions into account.

For normal ambient conditions and loads, we recommend inspections at 6-month intervals. In case of unfavourable operating conditions or frequent temperature fluctuations at the terminal points, a shorter interval may be necessary. It is possible to place temperature measuring strips and a record of the maximum values in the immediate vicinity of the terminal points, which may be useful for an objective assessment during regular tests.

All contact positions are suitable for connecting one conductor, unless expressly otherwise indicated. Double-function terminals are characterised by 2 contact positions.

In principle, the tightening torques specified on the device, the installation instructions or on the Internet are to be applied. Where no limits are specified, the tolerance on the tightening torque M_d of screw and clamp connections may be a maximum of +/-20% of the nominal value.

The relationship between conductor cross-sections in mm² and AWG / MCM sizes are subsequently listed:

0.75mm ²	18 AWG	(0.82mm ²)
1.5mm ²	16 AWG	(1.3mm ²)
2.5mm ²	14 AWG	(2.1mm ²)
4mm ²	12 AWG	(3.3mm ²)
6mm ²	10 AWG	(5.3mm ²)
10mm ²	8 AWG	(8.4mm ²)
16mm ²	6 AWG	(13.3mm ²)
25mm ²	4 AWG	(21.2mm ²)
35mm ²	2 AWG	(33.6mm ²)
50mm ²	0 AWG	(53.5mm ²)
70mm ²	2/0 AWG	(67.4mm ²)
95mm ²	3/0 AWG	(85.0mm ²)
120mm ²	250 MCM	(127mm ²)
150mm ²	300 MCM	(152mm ²)
185mm ²	350 MCM	(177mm ²)
240mm ²	500 MCM	(253mm ²)
300mm ²	600 MCM	(304mm ²)

Conductor types are designated as follows:

	Abbreviation	Standard name
solid round	sol(r)	Class 1 (IEC/EN 60228)
stranded round	s(r)	Class 2 (IEC/EN 60228)
solid sectored	sol(s)	Class 1 (IEC/EN 60228)
stranded sectored	s(s)	Class 2 (IEC/EN 60228)
flexible	f	Class 5 (IEC/EN 60228)
stranded	str	Class B (UL 486E)

The following abbreviations are also used:

laminated flexible	
copper busbar	fl. Cu
wire-end ferrules	AE

Wire-end ferrules are only permitted for applications in compliance with IEC/EN standards. Wöhner has tested the use of wire end ferrules. This does not result in a general approval for different ferrules and crimping methods. The maximum conductor cross-sections may need to be reduced.

Lead connections are to be set up with consideration given to the requirements as per IEC/EN 60999-1 or -2.

Lead connections set-up is to be such that no tension load and – with respect to the application – no alternating bending load develop.

Notes for the dimensioning of AC string collectors

When AC string collectors are used, a few strings supply one inverter. The power of several string inverters is pooled on the alternating current side, e.g. via a 60mm busbar system.

When dimensioning components for a busbar system of this kind, the direction of the energy – which is inverted to that of industrial applications – is unimportant. The same types of fuse (gG) are also used. It is the cables and leads going to the inverter that have to be protected from overload and short circuit. However, the rated diversity factor of the switchgear and the simultaneity factor of this application (= 1) do not match.

If, for example, a SECUR® 60Classic, PowerLiner is equipped with 35A-D02 fuses in a power distribution unit, the switchgear device will be able to carry its nominal current of 35A continuously on its own. However, this value must be reduced through thermal interaction with neighbouring devices.

The standard takes account of this situation by means of a switchgear assembly's rated diversity factor (RDF). This states the factor of the rated current to which all power circuits of a power distribution unit in a switchgear assembly can be permanently and simultaneously subjected. Here, the values from the table on page 8/1 apply, in accordance with IEC 61439-2:2011 and IEC 61439-3:2011.

At any rate, care must be taken to ensure that the rated diversity factor is always based on the fuse that is used, not the rated current of the switch disconnecter or fuse holder. Furthermore, the use of fuse links with silver-plated contacts is recommended. The size of the copper conductors is determined on the basis of the applicable product standard, e.g. IEC/EN 60947-3 for SECUR® 60Classic, PowerLiner.

For the above example, this means that from 10 devices or more, the SECUR® 60Classic, PowerLiner (rated current 63A) with side-mounted module and 35A fuse links may be operated at 21A maximum. Here, the rated current of the fuse is reduced to 60%. If the maximum current of the inverter does not exceed this value, and if fuse protection at 35A is permitted by the wiring and the inverter datasheet, the dimensions are correct.

If higher power ratings with correspondingly higher currents need to be pooled, there are two choices for adaptation:

With the right lead dimensions, the nominal current of the fuse links can be increased. However, this must fit in with the requirements for inverter fuse protection. Thus, in this example the use of a 50A fuse permits a maximum current of 30A.

Alternatively, the thermal influence of the switchgear is reduced by modifying the layout. With the SECUR® 60Classic, PowerLiner fuse switch disconnecter, in a test with 6 power circuits, a distance equal to the width of two devices (54mm) between the switchgear devices increased the rated diversity factor from 0.7 to 0.9. This is only possible because the distance considerably reduces the thermal influence of the fuse links. Based on the example with the 35A fuse, the new arrangement would enable an inverter current of 31A.

The rated diversity factors must always be selected in conformity with the application of the switch fuse unit, in accordance with IEC 61439-2 or IEC 61439-3. See table on page 8/1. Non-compliance with these reduction factors leads to unacceptably high temperatures in switchgear assemblies. This may in turn result in damaged or incorrectly triggered switchgear devices. Both fuse links and cable insulation age when exposed to high temperatures. In all cases, failures in photovoltaic systems can be expected.

For the correct design and layout of cables and leads, accumulation – as well as the ambient temperature – need to be taken into consideration. Here too, mutual thermal influence leads to raised temperatures and so to lower permitted currents. It is important to consider size and the corresponding factors. If the leads to the inverters in the AC string collector are routed in a cable duct (routing method F), and ambient temperatures of 50°C are anticipated there, when 6 conductors are used the permitted current capacity slashed to less than 50% of the nominal current.

When cables and fuses have the correct dimensions, they also produce less dissipation, and therefore less waste heat. This in turn facilitates cabinet selection or thermal management.

Note on operating NH fuse switch disconnectors and NH in-line fuse switch disconnectors

NH fuses are only intended for use by authorized electricians or trained electrical personnel, see IEC 60269-2. When switching devices observe the following instructions:

- Operation (release, switching on, switching off and fuse replacement) only permitted for authorized electricians or trained electrical personnel in accordance with VDE 0105-100.

- Quick activation of fuse cover using the relevant operating handle.
- Before switching on, care must be taken that the fuse cover is mounted or guided exactly into the open position.
- If the cover is only partially open, the fuse links may still be energized. Only open and close the cover using the handle.

Using busbars

To ensure that single and multi-pole busbar components are securely mounted and contacts are firmly connected, the busbars in question must comply with the required tolerances shown here.

- Tensile strength: min. 300N/mm²
- Permitted tolerances:
- Radius R 0.3 ... 0.7
- Width: + 0.1 / - 0.5
- Thickness: + 0.1 / - 0.1
- Centre distance:
- + 0.5 / - 0.5 (60mm system)
- + 1.0 / - 1.0 (100mm system, 185mm system)
- Deviation in the contact level: 0.4

Using comb-type busbars

A range of Wöhner fuse holders and switches are suitable for use with comb-type busbars. We recommend that you used the comb-type busbars listed on the corresponding pages in the current Wöhner catalogue (IEC/EN 61439-1/2, level of soiling: 2).

Ensure that the required air and creepage distances left in standard installation positions are observed (comb-type busbars are angled towards the operator). Power must be supplied via the connection terminals sold separately by Wöhner. The additional connection terminal is not required for Wöhner products with double-function terminals. Connect terminals using the maximum torque stated on the fuse holder.

Processing and using plastic profiles

The mechanical, thermal and electric properties of the profiles, which are listed in the Wöhner catalogue, are optimised for covering busbars or busbar systems and bottom troughs. Take particular care when mechanically processing the profiles to avoid the formation of cracks (narrow saw blade, high speed of cutting, low tooth advance and strong saw guiding).

The cutting of profiles with a cap circular saw and an AKE circular saw blade for plastics is reliable with the following specific values:
D = 300mm, B = 2.2mm, Z = 120W
with 5° negative tooth change (w),
cutting speed of 50 - 65m/s,
tooth feed 0.05 - 0.1mm.
The plastic parts must be fixed in order to exclude vibrations.

When processing and using plastic profiles, contact with oil, grease and other chemicals must be avoided.

Dimensions

All lengths are given in millimetres, unless otherwise stated.

Mounting rails of adapters and clip-on fixings generally comply with EN 60715.

CE marking

In association with the 2006/95/ EG low voltage directive, Wöhner products are subject to the CE marking commitment.

The CE mark is applied to the individual packing units. Even some of the products are marked accordingly. In doing so, Wöhner confirms that the products comply with the valid regulations.

Wöhner holds the corresponding conformity declarations.

Additional requirements for compliance with UL



Components that have also been tested for feeder circuits up to 600V AC in compliance with UL 508A are labelled in the approval overview.

ROHS, WEEE and REACH

Currently, Wöhner products do not come under the scope of ROHS Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment, or WEEE Directive 2002/96/EG governing waste electrical and electronic equipment.

Irrespective of these directives, measures have been initiated, which ensure that the use of pollutant-free plastics complies with the ROHS Directive.

The metallic surface coatings shall correspond to the substance ban in accordance with the ROHS Directive.

Fuse links may contain function-specific components which do not comply with the ROHS Directive.

According to current knowledge, there are no substances in our products or their packaging with a concentration above 0.1 percent by mass, in accordance with the candidate list (as of 16.06.2014), article 59 (1, 10) of Regulation (EC) no. 1907/2006 ("REACH").

We are in constant contact with our suppliers as regards substances subject to registration and information relevant to REACH is forwarded without delay to our customers.

You will find further information in the download area under Service at www.woehner.com

Busbar supports

System 30Compact

for 60mm busbar systems in acc. with IEC and UL

3-pole for busbars 12x5 and 12x10 as per IEC/UL
4-pole, 5-pole for busbars 12x5 as per IEC
With end cover, can also be used as a centre support



System 60Classic

for 60mm busbar systems in acc. with IEC

1-pole for busbars 12 x 5 - 30 x 10, double-T busbars
2-pole for busbars 12 x 5 - 30 x 10
3-pole for busbars 12 x 5 - 30 x 10 and 12/20/30 x 5/10
4-pole for busbars 12 x 5 - 30 x 10
3-pole for double-T and triple-T busbars



System 60Classic

for 60mm busbar systems in acc. with UL

3-pole for busbars 12/20/30 x 5/10
3-pole for double-T and triple-T busbars



System 100Energy

for 100mm busbar systems in acc. with IEC

3-pole for busbars 30 x 10 - 60 x 10



System 185Power

for 185mm busbar systems in acc. with IEC

3-pole for flat busbars up to 120mm wide
3-pole for undrilled flat busbars 30-120 x 10,
double-T and triple-T section busbars



Typical arrangements of busbars have been tested in recognised laboratories for short-circuit strength.

The results are summarised on page 8/43 and 8/44.

Busbars, in compliance with EN 13601

Flat busbars

Tin-plated copper busbars make contact position preparation much easier.

Cu busbars are effectively protected against corrosive substances.

The current capacities of flat busbars with components fitted in the table below were calculated by testing at an ambient temperature of 35°C under optimal conditions (IEC and UL).

Current carrying capacities higher than those specified in DIN 43 671 were obtained under operating conditions. The busbar temperature is normally positively influenced by mounting components on the busbar and by air circulation within the installation.

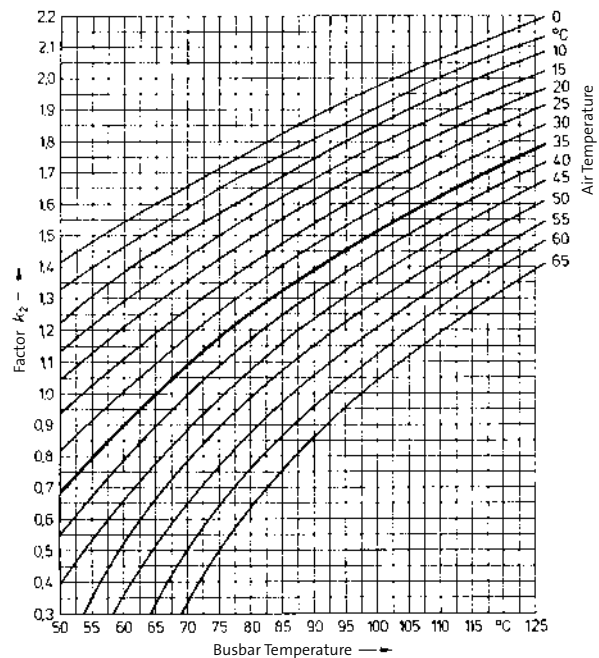
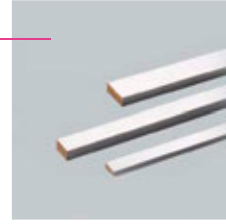
A correction factor k_2 that complies with DIN 43 671 can be determined for flat busbars using the diagram on the right. The factor is dependent on the relevant ambient temperature. This correction factor should be taken into account when conditions change and loading is continuous.

Alternatively a higher load can be applied if the components have a higher thermal endurance level.

A 30x10 galvanised busbar can, under normal operating conditions, be loaded with 630A. A correction factor k_2 of 1.3, for example, is required if a load of 800A is applied. This diagram demonstrates that the busbar heats up to approx. 85°C if this correction factor and an air temperature of 35°C apply.

Dimensions	Cross sections	Current carrying capacities at busbar temperature of	
		65°C	85°C
12x5	60mm ²	200A	250A
15x5	75mm ²	250A	320A
20x5	100mm ²	320A	400A
25x5	125mm ²	400A	500A
30x5	150mm ²	450A	550A
12x10	120mm ²	360A	450A
20x10	200mm ²	520A	630A
30x10	300mm ²	630A	800A
40x10	400mm ²	850A	1000A
50x10	500mm ²	1000A	1200A
60x10	600mm ²	1250A	1500A
80x10	800mm ²	1500A	1800A
100x10	1000mm ²	1800A	2100A
120x10	1200mm ²	2100A	2500A

Tensile strength: min. 300N/mm²
 Permissible tolerance:
 Radius R 0.3 ... 0.7
 Width: +0.1 / - 0.5
 Thickness: +0.1 / - 0.1
 Centre spacing:
 + 0.5 / - 0.5 (60mm system)
 + 1.0 / - 1.0 (100mm system / 185mm system)
 Deviation in the contact levels: 0.4



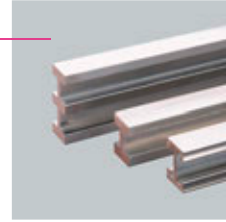
Busbars, in compliance with EN 13601

Section busbars

Tin-plated copper busbars make contact position preparation far easier.
Cu busbars are effectively protected against corrosive substances.

The following current capacities of flat busbars with components fitted were calculated by testing at an ambient temperature of 30°C under optimal conditions (IEC).

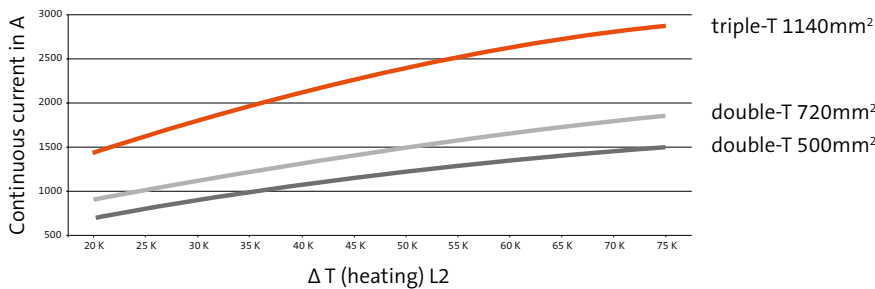
Tensile strength: min. 300N/mm²
Permissible tolerance:
Radius R 0.3 ... 0.7
Width: + 0.1 / - 0.5
Thickness: + 0.1 / - 0.1
Centre spacing:
+ 0.5 / - 0.5 (60mm system)
+ 1.0 / - 1.0 (100mm system / 185mm system)
Deviation in the contact levels: 0.4



Dimensions	Cross sections	Current carrying capacities at busbar temperature of 85°C in compliance with IEC	Current carrying in compliance with UL508 (UL-File E123577)
double-T	500mm ²	1250A	1200A
double-T	720mm ²	1600A	1400A
triple-T	1140mm ²	2500A	1800A/2000A*

* staggered load

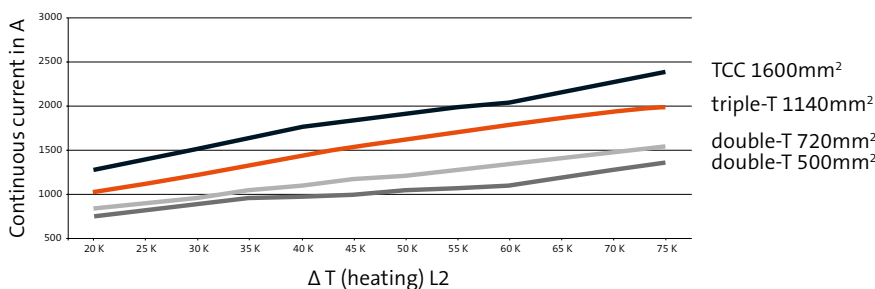
Current capacities of section busbars with components fitted



For the type verification corresponding to IEC/EN 61439-1, the maximum heating of the busbars must be taken into account.

Current capacities of section busbars without components fitted

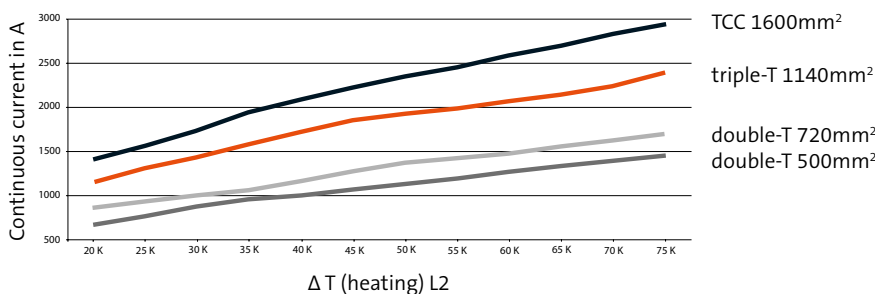
Under unfavourable conditions with constant continuous current over the entire length and with self-convection only, the heating of busbars without components fitted is as follows:



Busbar arrangement in 60mm-system:



one above the other



side by side

CRITO® Universal conductor connection terminals, brace terminals

Universal conductor terminals are used to connect conductors with cross-sections extending from 1.5 - 120mm² to busbars with a thickness of 5 or 10mm. Installation is simplified by integrated retaining springs, open terminals and captive screws.

Brace terminals for connecting 95 - 300mm² round conductors and lamellated flexible copper busbars. The jaw-type clamping method allows the busbar to be encompassed on both sides and for the conductors to be connected without drilling.



Conductors used	Current carrying capacity of contacts*	Terminal space WxH	Busbars WxH	Part no.
1.5 - 16mm ² Cu, sol(r), s(r), f, f+AE**, fl. Cu 8x6x0.5	180A	7.5 x 7.5	... x 5	01 284
			... x 10	01 289
4 - 35mm ² Cu, sol(r), s(r), f, f+AE**, fl. Cu 3/6x9x0.8	270A	10.5 x 11	... x 5	01 285
			... x 10	01 290
16 - 70mm ² Cu, s(r), f, f+AE**, 2xla. Cu 3/6x9x0.8, 6x13x0.5	400A	14 x 14	... x 5	01 287
			... x 10	01 292
			TT, TTT	
16 - 120mm ² Cu, s(r), f, f+AE**, fl. Cu 4/6/10x15.5x0.8	440A	17 x 15	... x 5	01 068
			... x 10	01 203
			TT, TTT	
35 - 150mm ² Cu, Al*** s(r), f, f+AE**	480A		12 - 20x5 - 10	01 135
95 - 185mm ² Cu, Al*** s(r), s(s), f	500A		20x5 - 30 x 10 TT, TTT	01 318
120 - 300mm ² Cu, Al*** s(r), s(s), f	600A		20 x 5 - 30 x 10 TT, TTT	01 760
fl. Cu 3 x 20 x 1 up to 10 x 24 x 1	750A	30 x 25	20 x 5 - 30 x 10 TT, TTT	01 319
fl. Cu 3 x 20 x 1 up to 10 x 32 x 1	800A	32 x 25	20 x 5 - 30 x 10 TT, TTT	01 759
95 - 300mm ² Cu, Al***, sol(r), sol(s), s(r), s(s), f, f+AE**	630A		30x10 TT, TTT	01 094
fl. Cu 5 x 32 x 1 up to 10 x 40 x 1	1250A	41 x 25	30 x 10 TT, TTT	01 092

* The specified ratings reflect the thermal capacity of the terminals under optimal conditions (with the largest connectable conductors).

The allocation of conductor cross-sections and current carrying capacities by national or international specifications does not affect the terminal's thermal capacity.

** Reducing the maximum conductor cross-sections may be required.

*** Connections with aluminium conductors are not maintenance-free (see page 8/2).

Explanation of abbreviations on page 8/2.

Additional terminal space details on page 9/1, 9/8 and 9/19.

CRITO®30Compact
CRITO®60Classic
Connecting terminal plates
incl. cover
Connection module, shock-protected



60mm distance between busbar centres
 3-pole, 690V~

Conductors used	Current carrying capacity of contacts*	Terminal space W x H	Busbars W x H	Part no.
1.5 - 16mm ² Cu, re, rm, f, f+AE*	80A		12 x 5, 12 x 10	01 562
1.5 - 16mm ² Cu, re, rm, f, f+AE**	80A		... x 5 - 10 TT, TTT	01 563
1.5 - 16mm ² Cu, re, rm, f+AE*	80A		... x 5 - 10	01 484
6 - 50 (70)mm ² Cu, rm, f, f+AE**, la. Cu 6 x 9 x 0.8	300A	10 x 15	... x 5 - 10 TT, TTT	01 240
6 - 50 (70)mm ² Cu, rm, f, f+AE**, la. Cu 6 x 9 x 0.8	300A	10 x 15	12 x 5 - 10	01 401
95 - 185mm ² Cu, Al***, rm, sm, f	460A		20 x 5 - 30 x 10 TT, TTT	01 199
35 - 120mm ² Cu, rm, f, f+AE**, se la. Cu 6/10 x 13/15.5 x 0.5/0.8	440A	15 x 15	... x 5 - 10 TT, TTT	01 243
35 - 150mm ² Cu, rm, f, f+AE**	480A		12 x 5 - 10	01 165
120 - 300mm ² Cu, Al***, rm, sm, f	560A		20 x 5 - 30 x 10 TT, TTT	01 754
la. Cu 3 x 20 x 1 up to 10 x 32 x 1	800A	32 x 25	20 x 5 - 30 x 10 TT, TTT	01 753

CRITO®60Classic
Connection set, 3-pole and 4-pole
without cover

1-pole, 690V~



Conductors used	Current carrying capacity of contacts*	Terminal space W x H	Busbars W x H	Part no.
10 - 120mm ² Cu, rm, f	300A	15 x 15	12 x 5 - 10	01 370 01 426
120 - 300mm ² Cu, Al***, rm, sm, f	560A		20 x 5 - 30 x 10 TT, TTT	01 537 01 147
la. Cu 3 x 20 x 1 up to 10 x 32 x 1	800A	32 x 25	20 x 5 - 30 x 10 TT, TTT	01 538 01 162

* The specified ratings reflect the thermal capacity of the terminals under optimal conditions (with the largest connectable conductors).

The allocation of conductor cross-sections and current carrying capacities by national or international specifications does not affect the terminal's thermal capacity.

** Reducing the maximum conductor cross-sections may be required.

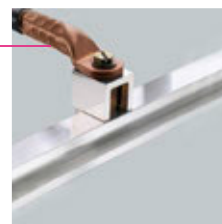
*** Connections with aluminium conductors are not maintenance-free (see page 8/2).

Explanation of abbreviations on page 8/2.

Additional terminal space details on page 9/8.

CRITO® Clip-on screw clamp connection

The clip-on screw connector is used to connect cables fitted with cable lugs as per DIN 46 234 and DIN 46 235 to busbars with a thickness of 5 or 10mm without the need for drilling.



Connection	Current carrying capacity of terminals*	Terminal space	Busbars W x H	Part no.
Cable lug, fl. Cu	360A	M5 x 8	... x 5	01 747
			... x 10	01 512
Cable lug, fl. Cu	490A	M8 x 8	... x 5	01 748
			... x 10 TT, TTT	01 514
Cable lug, fl. Cu	630A	M10 x 10	... x 5	01 749
			... x 10 TT, TTT	01 047

* The specified ratings reflect the thermal capacity of the terminals under optimum conditions. Allocating conductor cross-sections and current carrying capacities by national or international specifications does not affect the terminal's thermal capacity.

Busbar connectors

For the connection of identical busbars without drilling.

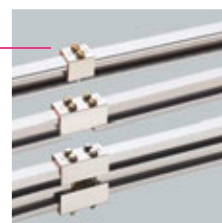
Current carrying capacity of terminals	Overall length	Permissible displacement busbar	Clamp screws	Spacing between systems	Part no.
630A	40	2mm	1xM12	13 - 20	01 823
630A	40	2mm	2xM8	9 - 20	01 990
630A	55	1mm	2xM8	5 - 10	01 166
630A	95	5mm	2xM10	50 - 60	01 141
630A	150	1mm	2xM8	100 - 110	01 193
630A	150	5mm	2xM12	100 - 110	01 886
1600A	50	2mm	2xM8	9 - 20	01 827
1600A	70	0mm	2xM16	5 - 10	01 905
1600A	95	5mm	4xM8	50 - 60	01 145
1600A	150	5mm	2xM16	5 - 30	30 322
1600A	150	5mm	4xM8	100 - 110	01 829
2500A	95	2mm	4xM8	50 - 60	01 274
2500A	150	2mm	4xM8	100 - 110	01 275
2500A	200	5mm	2xM16	5 - 30	01 295
750A	47	0mm	1 x M10	11 - 14	01 480
1000A	47	0mm	2 x M10	11 - 14	01 481

The separating bar set (part no. 01 360/01 361/01 362) is needed to comply with the air distances required by UL 508A.

At typical ambient conditions the use of flexible connectors after 5m system length has been proven.

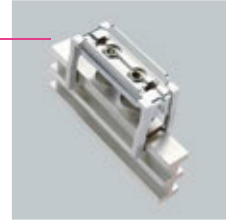
In each case the distance of flexible connectors depends on the actual conditions,

e.g. arrangement and equipment of the system, value, and speed of temperature fluctuations.



CRITO®
Brace terminals for connecting flat busbars and laminated copper

The jaw-type clamping method allows the busbar to be encompassed on both sides and for the conductors to be connected without drilling.



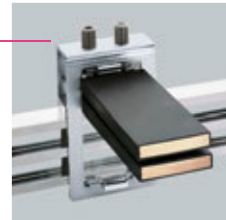
Current carrying capacity of terminals	Section	Terminal space W x H	Part no.
1600A/2000A*	30 x 10, TT, TTT, TCC	55 x 10 - 28	01 069
1600A/2000A*	30 x 10, TT, TTT, TCC	68 x 10 - 28	01 070
1600A/2800A*	30 x 10, TT, TTT, TCC	105 x 10 - 28	01 071

* current capacity for centre feeding

Use spacers provided when two flexible busbars are connected in parallel.

CRITO®
Profiles terminals for double T and triple T bars

For the connection of laminated copper busbars.



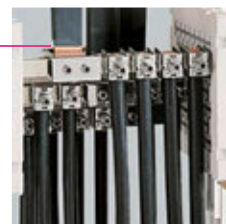
Current carrying capacity of terminals	Section	Terminal space W x H	Part no.
1600A	double-T	51 x 5 - 28	01 906
1600A	double-T	64 x 5 - 28	01 907
1600A	double-T	41 x 20 - 42	01 185
1600A (2000A)*	double-T	51 x 20 - 42	01 936
1600A (2000A)*	double-T	64 x 20 - 42	01 911
1600A (2500A)*	double-T	81 x 20 - 42	01 934
1600A (2800A)*	double-T	101 x 20 - 42	01 935
2000A (2500A)*	triple-T	64 x 23 - 45	01 008
2500A (3200A)*	triple-T	101 x 23 - 45	01 186

* centre feeding

Use spacers provided when two flexible busbars are connected in parallel.

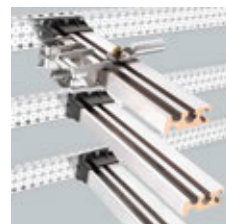
Busbar system for centre-feed unit

- Rated operating voltage 690V-
- Rated insulation voltage 1000V-
- Double-T section busbars up to 2000A, 3 and 4-pole
- Triple-T section busbars up to 3200A, 3-pole
- Special profile up to 4000A, 3-pole



The incoming conductors should be arranged in such a way that the maximum current only flows through short busbar lengths to ensure the lowest possible temperature increases.

The centre-feed unit (part no. 35 004) was tested with the following components mounted: 12 terminals (part no. 01 318) for the incoming conductors and 3 profile terminals (part no. 01 911) – each with two flexible copper busbars 10 x 63 x 1 – for the outgoing conductors to the circuit breaker.



The centre feed unit with special TCC profiles enables connection with brace terminals and special connection screws. Connection screw M10 x 45 (01 379) is suitable for retrofitting; version M12 x 60 (01 380) cannot be retrofitted! The use of Wöhner's special connection screws is absolutely necessary!

EQUES®30Compact **Busbar adapter, 1-pole up to 63A**

1-pole, 690V

For 3, 4, 5-pole 60mm busbar system

Attachable on 12 x 5mm bars.

Mounting rail firmly fixed, for snapping on automatic fuse devices.

Ultra-sonic welded copper conductor.

Current limitation of the assigned automatic devices for short-circuit protection.

Maintain contact-free conductor routing.



EQUES®30Compact **Busbar adapter, 3-pole up to 63A**

3-pole, 690V~

Attachable on 12 x 5mm and 12 x 10 bars in the 60mm system.

Combined foot ensures suitability for 5 and 10mm bar thickness.

Mounting rail EN 60715, plastic, movable in the 1.25-mm grid.

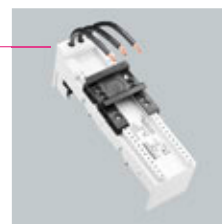
Ultra-sonic welded copper conductors.

32A: AWG 10 2.9mm x 2.9mm

63A: AWG 8 3.2mm x 3.6mm

Current limitation of the assigned switchgear ensures short-circuit protection.

Maintain contact-free conductor routing.



EQUES®60Classic
Busbar adapter, 3-pole up to 80A

3-pole, 690V~

Can be fitted on all busbars in the 60mm system.

Combined foot ensures suitability for 5 and 10mm busbar thickness.

Mounting rail EN 60715, plastic, movable in the 1.25mm grid.

Ultra-sonic welded copper conductors.

12/16A: AWG 14 1.8mm x 1.8mm

25A: AWG 12 2.3mm x 2.3mm

25A: Connection terminal (Cu 0.75 - 6mm², re, f, f+AE)

32A: Spring terminals (1.5 - 6mm², re, f, f+AE)

32A: AWG 10 2.9mm x 2.9mm

45A: AWG 8 3.2mm x 3.6mm

63A: AWG 8 3.2mm x 3.6mm

80A: Connection terminals (Cu 1.5 - 16mm², re, rm, f, f+AE)

Current limitation of the assigned switchgear for short-circuit protection.

Maintain contact-free conductor routing.



EQUES®60Classic
Busbar adapter, 3-pole up to 45A, with removable upper section

3-pole, 690V~

Can be fitted to all busbars in the 60mm system.

Combined foot ensures suitability for 5 and 10mm busbar thickness.

Mounting rail EN 60715, plastic, movable in the 1.25mm grid.

Ultra-sonic welded copper conductors.

16A: AWG 14 1.8mm x 1.8mm

25A: AWG 12 2.3mm x 2.3mm

32A: AWG 10 2.9mm x 2.9mm

45A: AWG 8 3.2mm x 3.6mm

Current limitation of the assigned switchgear ensures short-circuit protection.

Maintain contact-free conductor routing.

Up to 45A with upper section which can be removed and locked in the disconnect position.

Lower section stays contact-protected on busbar system.

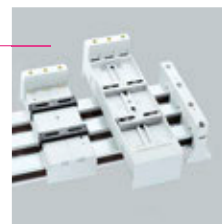
Micro-switch (change-over contact) for fusing load shedding.

Rated operating voltage (rated operating current) 250V AC (5A).



EQUES®60Classic Universal busbar adapters 200A/250A, special adapters 100A, busbar adapters 200A

for sharp-edged and rounded busbars (EN 12167/EN 13601).



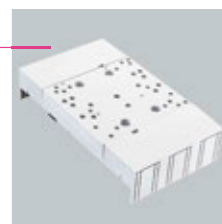
Parameter	Universal adapter 200A	Universal adapter 250A	Adapter 250A
Type	3-pole, 690V~	3-pole, 690V~	3-pole, 690V~
Busbar system	60mm	60mm	100mm
Busbar connection	claw terminals	claw terminals	claw terminals
Connecting switchgear	top or bottom	top or bottom	top
	box terminals Md 8 - 10Nm	box terminals Md 10 - 12Nm	clamps Md 3Nm
	Cu 6 - 70mm ² s(r), f, f + AE, fl. Cu 10 x 16 x 0.8	Cu 35 - 120mm ² s(r), f, f + AE, fl. Cu 10 x 20 x 0.8	Cu 6 - 70mm ² s(r), f + AE

EQUES®60Classic Universal busbar adapter 630A

3-pole, 690V~

For busbars 12 - 30mm and double-T and triple-T profiles
with screw connection M10 at bottom and top.

You can find the mounting options for the associated switchgear on the Internet at
www.woehner.com



EQUES®185Power Busbar adapter up to 1600A

3-pole, 690V~

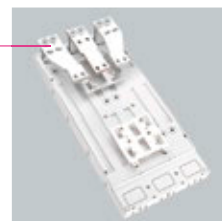
For adaptation of compact circuit-breakers up to 1600A.

For 30 – 120 x 10mm bars.

Terminal connection design for assembly without drilling and mounting on the CrossLink system
covering system.

Screw-connection design for mounting on drilled busbars.

The assigned circuit-breakers ensure short-circuit protection and current limitation.



MOTUS®30Compact
MOTUS®60Classic
MOTUS®Panel
Hybrid motor starter with reversing function



For 3-pole symmetrical loads up to 4kW.
 22.5mm wide, for 60mm busbar systems and EN 60715 mounting rail, integrated overload, short-circuit protection and safety function

EN 60947-1 / EN 60947-4, IEC 61508, ISO 13849
 ATEX approval to EX II (2) G [Exe] [Exd] [Expx] and EX II (2) D [Ext] [Exp]
 cULus-listed to UL 60947-1 and UL 60947-4-1A

The amount of wiring required is reduced to a minimum by the internal locking circuit and the load wiring.

Types	max. 0.6A	max. 2.4A	max. 9A
Main circuit			
Switching principle	Safety output stage with bypass, three-phase electrically isolated switch-off		
Rated operating voltage (U _e) to IEC 60947-1	500V AC (50/60Hz)	500V AC (50/60Hz)	500V AC (50/60Hz)
Operating voltage range to IEC 60947-1 Operating voltage range to UL 508	42 - 500V AC	42 - 500V AC	42 - 500V AC
Operating range of current monitoring at 20° C	0.075 - 0.6A	0.18 - 2.4A	1.2 - 9A
Rated operating current (I _e) to IEC 60947-1 AC-51 to IEC 60947-4-3 AC-53a to IEC 60947-4-2 To UL 508	0.6A 0.6A 0.6A	2.4A 2.4A 2.4A	9A 9A 6.5A
Nominal switching power to UL 508 Full Load (Power Factor = 0.4) Full Load (Power Factor = 0.8)	0.3kW (0.4HP) 0.5kW (0.6HP)	0.9kW (1.2HP) 1.7kW (2.2HP)	2.3kW (3.0HP) 4.6kW (6.1HP)
Short-circuit current rating SCCR to UL 508a	With Class CC fuse 30A CCMR30 suitable for use in circuits that do not supply more than 100kA _{eff} symmetrical current, max. 500V. For other values see product description.		
Leakage current (input, output)	0mA	0mA	0mA
Residual voltage at I _e	< 300mV	< 400mV	< 500mV
Surge current	100A (t = 10ms)	100A (t = 10ms)	100A (t = 10ms)
Input protective circuit	Varistors, fuses		
Assignment types to IEC60947-4	with fuse 10 x 38 16 A FR10GR69V16		with fuse 10 x 38 20 A FR10GR69V20
1	50kA (500V)	50kA (500V)	50kA (500V)
2	10kA (500V)	10kA (500V)	5kA (400V)
Assignment types to IEC60947-4	with Class CC fuse 30A CCMR30		
1	30kA (500V)	30kA (500V)	30kA (500V)
Control circuit			
Rated control supply voltage U _e to IEC 60 947-1/ UL 508	24V DC	24V DC	24V DC
Control supply voltage range	19.2 - 30V DC (32V DC, max. 1 min.)		
Control supply voltage range switching level "Safe Off"	< 5V DC	< 5V DC	< 5V DC
Rated control supply current to IEC 60974-1	≤ 40mA	≤ 40mA	≤ 40mA
Control input L, R Switching level "Low" Switching level "Safe Off" Switching level "High" Input current	3 - 9.6V DC < 0.5V DC 19.2 - 30V DC ≤ 3mA	3 - 9.6V DC < 0.5V DC 19.2 - 30V DC ≤ 3mA	3 - 9.6V DC < 0.5V DC 19.2 - 30V DC ≤ 3mA
Motor overload protection to IEC / CEI 60947	Class 10A		
Safety level to IEC/CEI 61508-1 ISO 13849-1	SIL 3 Cat. 3PLe		

SmartWire-DT® Communication system

SmartWire-DT® replaces the control wiring.

Wiring system for higher-level bus via gateways for Profibus, Profinet, CANopen and Ethernet IP/MODBUS.

SmartWire-DT-Assist project planning software is available to download at www.woehner.com.

Automatic address management.

Diagnostic LED on participants.

8-pole ribbon cable for device communication.

15V +/- for supplying the electronics.

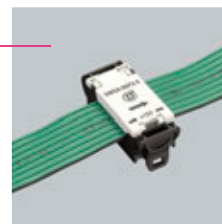
24V +/- for activating the switchgear.

3 data cables.

1 address cable.

Direction unmistakably indicated by black arrow.

Special pliers for adapting the cable connectors.



Module for connection to SmartWire-DT® for all MOTUS®

Plug-in module for the control circuit connections.

Replaces all control wiring via SmartWire-DT®.

Enable inputs 24V +/- for functional reliability.



Module for connection to SmartWire-DT® For all EQUES®60Classic

For all EQUES®60Classic adapters up to 80A.

Enables communication with switchgear devices (motor circuit breakers and contactors) via SmartWire-DT®.

3 inputs for signalling switches.

2 outputs for activating contactors.

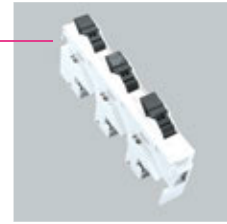
24V, 0.5A continuous current, with freewheeling diode.



AMBUS®60Classic
Holder for cylindrical fuse 10 x 38

VDE 0660 part 107/EN 60947-3/IEC 60947-3/IEC 60269-2/UL 4248-1, -18
1, 2 and 3-pole, 3-pole optionally as + N
For IEC 60269-2 cylindrical fuses.
LED: 110 - 700V AC/DC resp. 400 - 1000V DC
Suitable for mounting on 60mm systems with undrilled busbars.
Combination base accommodates busbars 5 and 10mm thick.

Screwless conductor connections
Complies with IEC: Cu 1.5 - 6mm² (f)
Complies with UL/CSA: AWG 16 - AWG 10 (str)



Size		10 x 38***	10 x 38	10 x 38***	10 x 38
Poles		1-pole	2-pole	2-pole	3-pole (3-pole + N)
Type of current		DC	AC (50/60Hz)	DC	AC (50/60Hz)
Max. rated operating voltage (U _e)	IEC/EN	1000V DC	690V AC	1000V DC	690V AC
	UL/CSA	1000V DC	-	-	600V AC
Rated insulation voltage (U _i)	IEC/EN	1000V	1000V	1000V	800V
Rated surge withstand capacity (U _{imp})	IEC/EN	6kV	6kV	6kV	6kV
Max. rated operating current (I _e)*	IEC/EN	30A	32A	20A	32A
	UL/CSA	30A	-	-	30A
Utilisation categories	IEC/EN	DC-20B	DC-20B	DC-20B	AC-22B (500V) AC-21B (690V) AC-20B (690V) 3-pole + N
	UL/CSA	only for use as a fuse holder	-	-	only for use as fuse holder
Conditional rated short circuit current	IEC/EN	-	-	-	100kA (400V, 500V, 690V)**
	UL/CSA	33kA	-	-	50kA (600V)
For fuses with power dissipation per phase up to		4W	3W	3W	3W

* When several devices are used side-by-side, the rated load factor specified according to IEC/EN 61439-2, table 101, should be observed.

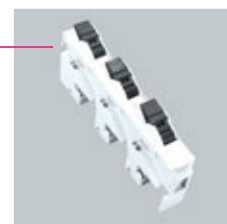
** Type tested with fuses of characteristic gL/gG.

*** Special model for photovoltaic applications

AMBUS®60Classic
Holder for Class CC fuse links

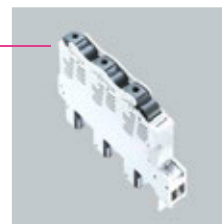
UL 4248-4
3-pole
For Class CC fuse links, in acc. with UL 248-4.
LED: 110 - 600V AC
Suitable for mounting on 60mm systems with undrilled busbars.
Combination base accommodates busbars 5 and 10mm thick.

Screwless conductor connections
Complies with IEC: Cu 1.5 - 6mm² (f)
Complies with UL/CSA: AWG 16 - AWG 10 (str)



Size	Class CC
Rated voltage	600V AC
Rated current	30A
Conditional rated short circuit current	200kA

SECUR®60Classic
PowerLiner
Bus-mounting in-line fuse switch disconnectors for
D0 and cylindrical fuse links



VDE 0660 part 107 / EN 60947-3 / IEC 60947-3

1/3-pole switching

For D0 fuse links in acc. with IEC 60269-3 and cylindrical fuse links in acc. with IEC 60269-2.

LED: 110 - 400V AC or 55 - 250V DC

Suitable for mounting on 60mm systems with undrilled busbars.

Cable connections at bottom.

Reversible combination base accommodates busbars 5 and 10mm thick.

Fuses can be inserted into associated sockets; the fuses can be fitted with gauge rings if D0 fuses are used.

Captive fuse carrier.

Fuse may only be changed if the circuit has been fully interrupted by opening the switch lever.

Operator-independent busbar, fuse and switch mechanism contact.

Safe from finger-touch even when the switch lever is open.

Box terminals for conductor connection:

Cu 1.5 - 6mm² (sol(r))

Cu 1.5 - 16mm² (f)

Cu 1.5 - 16mm² (f+AE)

Pilot switch to indicate the switch position:

1 changeover switch

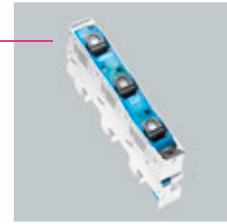
Rated operating voltage (rated operating current) 250V AC (5A).

Type	for D0 fuses	for cylindrical fuses
		10 x 38
Type of current	AC (50Hz), DC	AC (50/60Hz)
Rated operating voltage (U _e)	400V AC 110V DC (2-pole) 48V DC (1-pole)	up to 660/690V AC
Rated insulation voltage (U _i)	800V	800V
Rated surge withstand capacity (U _{imp})	6kV	6kV
Rated operating current (I _e)*	63A	up to 32A
Conditional rated short-circuit current**	50kA (AC) 8kA (DC)	50kA
Permissible power dissipation per phase for individual fuses without side modules in operation or for fuse groupings with side modules.	5.5W	3W

* When several devices are used side-by-side, the rated load factor specified according to IEC/EN 61439-2, table 101, should be observed. The distance to earthed parts must be at least 9mm.

** Type tested with fuses of characteristic gL/gG.

SECUR®60Classic
EasyLiner
Bus-mounting switch disconnecter with fuses for
D0 fuse links



VDE 0660 Part 107 / EN 60947-3 / IEC 60947-3

3-pole switching

For D0 fuse links in acc. with IEC 60269-3.

LED: 110 - 400V AC or 55 - 250V DC

For mounting on a 60mm system with undrilled busbars.

Outgoing connection at top or bottom

Combination base accommodates busbars 5 and 10mm thick.

Fuses can be inserted in the appropriate holders. D0 fuses can be equipped with adapter sleeves.

Captive fuse carrier.

Fuse replacement is only possible after the circuit has been completely disconnected.

User-independent contacting of busbars, fuses and switching mechanisms.

Shock protection assured even when drawer is open

Easy mounting thanks to spring-loaded terminals

Pilot switch for indicating the switch setting:

1 changeover switch

Rated operating voltage (rated operating current) 250V AC (5 A).

Cu 1.5 - 16mm² (rm, f)

Cu 1.5 - 10mm² (f+AE)

Cu 1.5 - 16mm² (re)

Type	for D0 fuse links
Type of current	AC (50 Hz)
Max. rated operating voltage (U _e)	400V AC
Rated insulation voltage (U _i)	500V
Rated surge withstand capacity (U _{imp})	6kV
Rated operating current (I _e)*	63A
Conditional rated short-circuit current**	50kA (AC)
Permitted power dissipation per phase for individually operating fuses without side modules, or for groups of fuses with side modules	5.5W
* When several devices are used side-by-side, the rated load factor specified in IEC/EN 61439-2, table 101, must be observed. The distance from earthed parts must be at least 9mm.	
** Type tested with fuse links of operating class gL/gG	

CUSTO®60Classic D0 bus-mounting fuse base

3-pole

60mm distance between busbar centres

Can be used with combination base for busbars 5 and 10mm thick in the 60mm system.

For D0 fuse links and sleeve fitting inserts in acc. with IEC 60269-3.

When used with special retaining springs and special gauge rings, also suitable for D01.

Box terminals:

Cu 1.5 - 2mm² (f, f+AE), Cu 1.5 - 10mm² (sol(r))

With 36mm wide version, offers enhanced lead placement and heat dissipation.



TRITON®Panel D0 mounted fuse base

1/3-pole

For D0 fuse links and sleeve fitting inserts in acc. with IEC 60269-3.

Box terminals:

Cu 1.5 - 35mm² (f, f+AE), Cu 1.5 - 10mm² (sol(r))



CUSTO®Panel D0 mounted fuse base

1/3-pole

For D0 fuse links and sleeve fitting inserts in acc. with IEC 60269-3.

Clip-on mounting for EN 60715 mounting rails

Dual-function terminal:

Cu 1.5 - 35mm² (f, f+AE)



Rated values according to IEC 60269-3

Size	D01	D02
Type of current	AC (50Hz) / DC	AC (50Hz) / DC
Rated voltage	400V AC / 250V DC	400V AC / 250V DC
Rated current	16A	63A
Conditional rated short circuit current	50kA (AC) 8kA (DC)	50kA (AC) 8kA (DC)
For fuses with power dissipation per phase up to	2.5W	5.5W

**CUSTO®60Classic
D bus-mounting fuse base**

3-pole

60mm distance between busbar centres

Can be used with combination base for 5 and 10mm thick busbars in the 60mm system.

For D fuse links, ring fitting inserts and/or screw fitting inserts in acc. with IEC 60269-3.

Both types have same external shape.

Box terminals:

DII Cu 1.5 - 25mm² (f, f+AE), Cu 1.5 - 10mm² (sol(r))

DIII Cu 1.5 - 35mm² (f, f+AE), Cu 1.5 - 10mm² (sol(r))



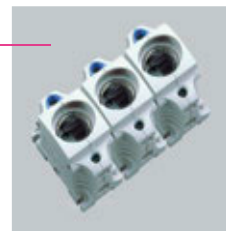
**TRITON®Panel
D0 mounted fuse base**

1-/3-pole

For D fuse links, ring fitting inserts and/or screw fitting inserts in acc. with IEC 60269-3.

Box terminals:

Cu 1.5 - 35mm² (f, f+AE), Cu 1.5 - 10mm² (sol(r))



Rated values according to IEC 60269-3

Size	DII	DIII
Type of current	AC (50Hz) / DC	AC (50Hz) / DC
Rated voltage	500V AC / DC	500V AC / DC*
Rated current	25A	63A
Conditional rated short circuit current	50kA (AC) 8kA (DC)	50kA (AC) 8kA (DC)
For fuses with power dissipation per phase up to	4.0W	7.0W
* in acc. with VDE 0636-3011 in acc. with IEC 60269-3 also 690V AC / 600V DC		

SECUR®Panel Switch disconnectors for D0 fuse links



VDE 0660 part 107/EN 60947-3/IEC 60947-3

VDE 0638

1, 2- and 3-pole / 1 and 3-pole + N as required

N-conductor leads at switch-on, trails at switch-off.

LED: 110 - 400V AC or 55 - 250V DC

Shock protection in acc. with EN 50274/BGV A3.

For D0 fuse links in acc. with IEC 60269-3.

Reducer for D01 fuses.

Clip-on mounting for EN 60715 mounting rails.

Captive fuse carrier.

Fuse may only be changed if the circuit has been fully interrupted by opening the switch lever.

Operator-independent fuse contact.

Safe from finger-touch even when switch levers are open.

Dual-function terminal:

Cu 1.5 - 35mm² (f, f+AE)

Pilot switch to indicate the switch position:

1 N/O, 1 N/C

400V AC (2A), 24V DC (6A)

Type	Standard
Size	D02
Type of current	AC (50Hz) DC
Max. rated operating voltage (U _e)	400V AC / 460V AC 130V DC
Rated insulation voltage (U _i)	500V
Rated surge withstand capacity (U _{imp})	6kV
Rated operating current (I _e)	63A / 35A 63A
Utilisation category IEC 60947-3 all pole models 1 pole, 1 pole + N 3 pole, 3 pole + N 1 pole 2 pole	AC-22B 400V 63A AC-23B 266V 35A AC-23B 460V 35A DC-22B 65V 63A DC-22B 130V 63A
Utilisation category VDE 0638	AC-22 400V 63A
Conditional rated short circuit current*	50kA (AC) 8kA (DC)
For fuses with power dissipation per phase up to	5.5W
* Type tested with fuses of characteristic gL/gG. 400V AC / 250V DC - 63A or 440V AC - 35A.	

**AMBUS®Panel
Holder for cylindrical fuses 10 x 38, 14 x 51, 22 x 58**



1, 2- and 3-pole, 1 and 3-pole + N as required
LED: 12 - 72V AC/DC resp. 110 - 690V AC/DC resp. 400 - 1000V DC

Pilot switch:
1 changeover switch 250V AC (5A), 30V DC (4A)
Flat lug 2.8x0.5mm (e.g. DIN 46 245)

Clip-on mounting on EN 60715 mounting rail

Conductor terminals:

Size	Conductor terminals according to IEC		Conductor terminals according to IEC UL / CSA	
10x38	1x Cu 0.75 - 25mm ²	f, f+AE	1x AWG 18 - AWG 4	str
	2x Cu 0.75 - 10mm ² *	f, f+AE	2x AWG 18 - AWG 6 *	str
Integrated N-pole	1x Cu 1.5 - 10mm ²	f, f+AE		
14x51	1x Cu 1.5 - 35mm ²	f, f+AE	1x AWG 14 - AWG 2	str
22x58	1x Cu 4 - 50mm ²	f, f+AE	1x AWG 10 - AWG 1/0	str

* 2 identical conductors next to each other in the contact position

Overall size		10 x 38 PV	10 x 38	14 x 51	22 x 58
According to standard	IEC/EN	IEC 60269-2	IEC 60947-3, EN 60947-3, VDE 0660 part 107		
	UL/CSA	UL 4248-1, 4248-18	UL 4248-1		
Current type		DC	AC (50/60Hz)/DC	AC (50/60Hz)/DC	AC (50/60Hz)/DC
Maximum rated operating voltage (U _e)	IEC/EN	1000V DC	690V AC	690V AC	690V AC
	UL/CSA	1000V DC	600V AC / DC	600V AC / DC	600V AC / DC
Rated insulation voltage (U _i)	IEC/EN	1000V DC	800V	800V	800V
Rated surge withstand capacity (U _{imp})	IEC/EN	6kV	6kV	6kV	6kV
Rated operating current (I _e)	IEC/EN	30A	32A	50A	100A /
	UL/CSA	30A	30A	50A / 40A	80A
Application category, version 1P, 1P+N, 2P	IEC/EN	-	AC-22B (400V)	AC-22B (400V)	AC-20B (690V)
	UL/CSA	only applicable as fuse holder			
Application category, version 3P, 3P+N	IEC/EN	-	AC-22B (690V)	AC-21B (690V)	AC-20B (690V)
	UL/CSA	only applicable as fuse holder			
Conditional rated short-circuit current (AC) version 1P, 1P+N, 2P	IEC/EN	20kA**	100kA (500V)*	100kA (400V)*	100kA (500V)*
	UL/CSA	33kA	100kA (600V)	100kA (600V)	100kA (600V)
Conditional rated short-circuit current (AC) version 3P, 3P+N	IEC/EN	-	100kA (500V)*	100kA (400V)*	100kA (500V)*
	UL/CSA	-	100kA (600V)	100kA (600V)	100kA (600V)
Allowable power dissipation for each fuse, standard version		-	3W (gG)	5W (gG)	9.5W (gG)
Allowable power dissipation for each fuse, semi-conductor protection version		4.0W (gPV)	4.3W (aR/gR) (10mm ² , 25A)	6.5W (aR/gR) (25mm ² , 40A)	11W (aR/gR) (50mm ² , 80A)

* Type tested with fuses of characteristic gL/gG (IEC 60269-2)

** Type tested with fuses of characteristic gPV (IEC 60269-6)

AMBUS®Panel Holder for Class CC fuse links

UL 4248-4
1, 2- and 3-pole
LED: 12 - 72V AC resp. 110 - 600V AC
Clip-on mounting for EN 60715 mounting rails



Conductor terminals:

Conductor terminals according to IEC		Conductor terminals according to UL / CSA	
1x Cu 0.75 - 25mm ²	f, f+AE	1x AWG 18 - AWG 4	str
2x Cu 0.75 - 10mm ² *	f, f+AE	2x AWG 18 - AWG 6*	str

* 2 identical conductors next to each other in the contact position

Size	Class CC
Rated voltage	600V AC / DC
Rated current	30A
Conditional rated short circuit current AC	200kA

AMBUS®Panel Holder for Class J fuse links

UL 4248-4
1-, 2- and 3-pole
LED: 110 - 600V AC
Clip-on mounting for EN 60715 mounting rails



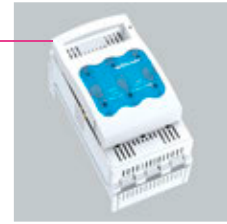
Conductor terminals:

Size	Conductor terminals according to IEC		Conductor terminals according to UL / CSA	
0–30A (21x57)	1x Cu 0.75 - 1mm ²	f, f+AE	1x AWG 18 - AWG 1	str
	1x Cu 1.5 - 50mm ²	f, f+AE		
	2x Cu 0.75 - 1mm ² *	f, f+AE	2x AWG 18 - AWG 6*	str
	2x Cu 1.5 - 10mm ² *	f, f+AE		
31–60A (27x60)	1x Cu 2.5 - 50mm ²	f, f+AE	1x AWG 14 - AWG 1	str
	2x Cu 2.5 - 16mm ² *	f, f+AE	2x AWG 14 - AWG 6*	str

* 2 identical conductors next to each other in the contact position

Size	0 - 30A	31 - 60A
Rated voltage	600V AC / DC	600V AC / DC
Rated current	30A	60A
Conditional rated short circuit current AC	200kA	200kA

**QUADRON®60Classic
Holder for Class J fuses**



UL 4248-8
Busbar-mounting
3-pole
Shock-protected
For Class J fuse links in acc. with U L248-8.

Busbar-mounting version:
For mounting on 60mm system to busbars with a thickness of 5 or 10mm, TT and TTT section bars
Screwless busbar contacting; Gentle snapping onto busbar systems.
Conversion from outgoing connection top to bottom by changing connection modules.

Panel-mounting version:
For screwing to mounting plate and fitting to 2 mounting rails EN 60715 at a distance of 125 or 150mm.

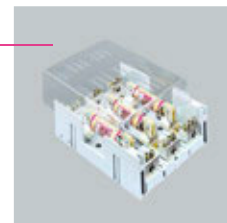
Conductor connections:

Size	Conductor connections according to IEC	Conductor connections according to UL /CSA
1 - 30A (21 x 75)	Cu 4 - 35mm ² (re/rm, f, f+AE*)	Cu AWG 12-AWG 2/0, str
31 - 60A (27 x 60)	Cu 4 - 35mm ² (re/rm, f, f+AE*)	Cu AWG 12-AWG 2/0, str
61 - 100A (29 x 117)	Cu 4 - 35mm ² (re/rm, f, f+AE*)	Cu AWG 12-AWG 2/0, str
101 - 200A (41 x 146)	Cu 35 - 150mm ² (re/rm, f, f+AE*)	Cu AWG 2-MCM 300, str

* possible reduction of the maximum conductor cross-sections necessary

Size	1 - 30A	31 - 60A	61 - 100A	101 - 200A
Rated voltage	30A	60A	100A	200A
Rated current	600V	600V	600V	600V
Conditional rated short circuit current AC	200kA	200kA	200kA	200kA

**QUADRON®60Classic
Holder for Class J fuses**



UL 4248-8
Panel-mounting and busbar-mounting
3-pole
Shock protected by clip-on covers
For Class J fuse links in acc. with U L248-8.

Panel-mounting version:
100A, 200A: mounting on 2 EN 60715 mounting rails with a spacing of 125 or 150mm using the mounting set.

Busbar-mounting version:
For mounting on 60mm system to busbars with a thickness of 10mm, TT and TTT section bars.
Screwless busbar contacting; Gentle snapping onto busbar systems.
Conversion from outgoing connection top to bottom by changing connection modules.

Conductor connections:

Size	Conductor connections according to IEC	Conductor connections according to UL /CSA
210 - 400A (54x181)	Cu 16 - 300mm ² (s(r), f, f+AE*)	Cu AWG 4-MCM 600, str

* possible reduction of the maximum conductor cross-sections necessary

Size	201 - 400A	
Rated voltage	600V AC / DC	
Rated current	400A	
Conditional rated short circuit current AC	Panel-mounting version	200kA
	Busbar-mounting version	65kA

SECUR®Panel Holder for cylindrical fuses 10 x 85

1-pole
1500V DC / 1000V AC
For fuse links IEC 60269-2 and -6, max. 6.0W.
Snap fastening onto mounting rail EN 60715.



QUADRON®60Classic NH bus-mounting fuse base

3-pole
Suitable for mounting on a 60mm system with undrilled busbars by locking it into place.
Refitting a connection for top or bottom.



Conductor connections:

Size	Screw connection	Clamp connection	Clamp space terminal box	Prism connection	Other connections
00	M8 70mm ^{2**}	Cu 1.5 - 70mm ² rm, f+AE, la. Cu 12x (1 - 10) mm	Cu 1.5 - 70mm ² f, f+AE Cu 1.5 - 70mm ² re, rm 2x10 - 25mm ² f+AE, Identical conductors, side by side, square crimping 2x10 - 35mm ² f, identical conductors, side by side la. Cu 10 - 13mm wide Clamp space 13 x 13mm	Cu, Al* 1 - 70mm ² rm, sm, f, f + AE	Tunnel terminal 3 x Cu 1.5 - 16mm ² rm, f+AE Md 3 Nm
1	M10 120mm ^{2**}	Cu 70 - 150mm ² rm, f, f+AE, la. Cu 18 x (2 - 14) mm	Cu 35 - 185mm ² f Cu 35 - 15mm ² rm Cu 35 - 120mm ² f+AE la. Cu 15.5 - 24mm wide Clamp space 24.5 x 21mm	Cu, Al* 70 - 150mm ² rm, sm, f, f + AE	Double prism Cu, 2 x 35 - 70mm ² rm, sm, f+AE 2 x 70mm ² f

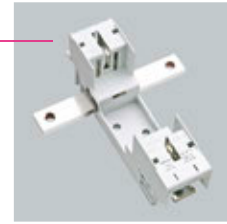
* Connections with aluminium conductors are not maintenance-free (see page 8/2).

** Copper conductor for corresponding rated currents according to IEC/EN 60947-1.

Size	00	1
Type of current	AC (50 - 60Hz) / DC	AC (50 - 60Hz) / DC
Rated operating voltage	690V AC / 440V DC	690V AC / 440V DC
Rated current*	160A	250A
For NH fuses in acc. with IEC 60269-2 with power losses per phase up to	12W	32W

* When continuously operating a number of devices next to each other, pay attention to the rated loading factor in acc. with IEC/EN 61439-2, Table 101.

**QUADRON® Panel
NH fuse bases for photovoltaic applications, 1-pole**



Design
Version with screw on both sides
Version with internal busbar connection
For NH fuse links in acc. with IEC 60269-6.

Conductor connections:

Size	Busbar outgoing connection	Screw connector
1XL	1/2 x 30 x 10	M 10
2XL/3L	1/2 x 40 x 10	M 12

Installed size	1XL	2XL/3L
Type of current	AC (50 - 60 Hz) / DC	AC (50 - 60Hz) / DC
Rated voltage	1000V AC / 1500V DC	1000V AC / 1500V DC
Rated current	250A	600A
Max. power dissipation of fuse	50W	100W

Information on current capacity and rated diversity factors is available on request or at www.woehner.com

**QUADRON®
NH bus-mounting fuse bases**



For NH fuse links in acc. with IEC 60269-2.
1/3-pole
Size 00 to 160A / size 1 to 250A / size 2 to 400A / size 3 to 630A
690V~/440V-
Max. power dissipation:
Size 00: 12W / size 1: 32W / size 2: 45W / size 3: 60W

Outgoing contacts:
– size 00 screw M8
– size 00 clamp Cu 1.5 - 70mm², s(r), f+AE, fl. Cu max. 12x10mm
– size 00 tunnel terminal 3 x Cu 16mm², each 2x M5
– size 1 screw M10
– size 2 screw M10
– size 3 screw M12

**QUADRON®
NH fuse bases**



For NH fuse links in acc. with IEC 60269-2.
1/3-pole
Size 00 to 160A / size 1 to 250A / size 2 to 400A / size 3 to 630A
690V~/440V-
Max. power dissipation:
Size 00: 12W / size 1: 32W / size 2: 45W / size 3: 60W

Outgoing contacts:
– size 00 screw M8, Md 12 - 14Nm
– size 00 clamp Cu 1.5 - 70mm², s(r), f+AE, fl. Cu max. 12x10mm, Md 3Nm
– size 1 screw M10, Md 18 - 22Nm
– size 1 clamp 2xM6, Md 8 - 10Nm, internal width 17mm
– size 2 screw M10, Md 18 - 22Nm
– size 3 screw M12, Md 28 - 32Nm

QUADRON®60Classic NH fuse switch disconnector



Panel- and busbar-mounting

3-pole switching

VDE 0660 part 107/EN 60947-3/IEC 60947-3

Shock protection with integrated positive action closure and arc chambers.

Fuses with mechanical retention in disconnecter lid.

For NH fuse links in acc. with IEC 60269-2 Size 000 – 00 – 1 – 2 – 3 – 4A.

Front-side degree of protection IP30 as per EN 60529, degree of protection near terminal depends on installation.

Test openings in disconnecter lid self-closing.

Recommended mounting position: handle at top.

Busbar-mounting version:

60mm system (sizes 000, 00, 1, 2, 3)

Screwless busbar contacting.

Locks on and makes contact easily and securely.

Refitting a connection for top or bottom is easy.

Panel-mounting version:

– size 000: Fixing on 1 EN 60715 mounting rail with 112.5 or 125mm spacing using fast fixing plate.

– size 00, 1, 2: Fixing on 2 EN 60715 mounting rails with 125 or 150mm spacing using fixing kit.

Size	000	00
Type of current	AC (50 - 60Hz)	AC (50 - 60Hz)
	DC	DC
Rated operating voltage (U _e)**	690V AC	690V AC
	440V DC	440V DC
Rated insulation voltage (U _i)**	800V	800V
Rated surge withstand capacity (U _{imp})**	6kV	6kV
Max. rated operating current (I _e)*	125A	160A
Conditional rated short-circuit current***	50kA	50kA
For NH fuse links in acc. with IEC 60269-2 with power losses per phase up to	9W	12W
* When continuously operating a number of devices next to each other, pay attention to the rated loading factor in acc. with IEC/EN 61439-2, Table 101.		
** Electromechanical fuse monitoring AC 24 - 690V, DC 24 - 250V (mains connections). DC specifications: 2 current paths (L1, L3) in series.		
*** Type tested with fuses of characteristic gL/gG.		

**QUADRON®60Classic
NH fuse switch disconnecter**



Size	1	2	3	4 a
Type of current	AC (50 - 60Hz)	AC (50 - 60Hz)	AC (50 - 60Hz)	AC (50 - 60Hz)
	DC	DC	DC	DC
Rated operating voltage (U _e)**	690V AC	690V AC	690V AC	690V AC
	440V DC	440V DC	440V DC	440V DC
Rated insulation voltage (U _i)**	800V	800V	800V	800V
Rated surge withstand capacity (U _{imp})**	6kV	6kV	6kV	8kV
Rated operating current (I _e)*	250A	400A	630A	1600A
Conditional rated short-circuit current***	80kA	50kA	50kA	50kA
For NH fuse links in acc. with IEC 60269-2 with power losses per phase up to	23W	34W	48W	140W
* When continuously operating a number of devices next to each other, pay attention to the rated loading factor in acc. with IEC/EN 61439-2, Table 101.				
** Electro-mechanical fuse monitoring AC 24 - 690V, DC 24 - 250V (mains connections). DC specifications: 2 current paths (L1, L3) in series.				
*** Type tested with fuses of characteristic gL/gG.				

NH switch disconnecter, size NH 1, arc chamber retrofit package for higher utilisation category as an accessory.

Pilot switch for lid position indicator:

Size 00: 1 (changeover) switch can be used.

Size 000, 1, 2, 3: 2 (changeover) switches can be used.

Connections by means of lugs for tabs 2.8 x 0.5mm (e.g. DIN 46245)

Rated operating voltage (rated operating current):

250V AC (5A), 30V DC (4A).

Fuse monitor (size 00, 1, 2, 3):

Use fuses with live grip lugs.

For electronic fuse monitoring see www.woehner.com

Electro-mechanical fuse monitoring:

Integrated auxiliary switch: 1 N/O + 1 N/C

Rated operating voltage (rated operating current):

Outgoing auxiliary contacts, conductor connection 4-pole plug 1.5mm² re / f/AE

Rated operating voltage (rated operating current):

24V AC (2A), 230V* AC (0.5A)

24V DC (1A), 48V DC (0.3A), 60V DC (0.15A)

Circuit diagram on page 9/49.

* Level of soiling 2, excess voltage category II

QUADRON® 60Classic NH fuse switch disconnecter



Conductor connections:

Size	Screw connection	Clamp connection	Clamp space for flat conductor	Prism connection	Other connections
000	–	–	2.5 - 50mm ² f 1.5 - 50mm ² f+AE, sol(r)/s(r) fl. Cu 6 - 9mm wide terminal space 10 x 10mm	–	
00	M8 70mm ² **	Cu 1.5 - 70mm ² s(r), f+AE, fl. Cu 12 x (1 - 10)mm	Cu 1.5 - 70mm ² , f, f+AE Cu 1.5 - 70mm ² , sol(r), s(r) 2x10 - 25mm ² f+AE, identical conductors, aligned side by side, square crimping 2x6 - 50mm ² f, identical conductors, aligned side by side, fl. Cu 10 - 13mm wide terminal space 13 x 13mm	Cu, Al* 16 - 70mm ² s(r), s(s), f, f + AE	tunnel terminal 3 x Cu 1.5 - 16mm ² s(r), f+AE Md 3 Nm
1	M10 120mm ² **	Cu 70 - 150mm ² s(r), f, f+AE, fl. Cu 18 x (2 - 14)mm	Cu 70 - 185mm ² f Cu 35 - 150mm ² rm Cu 35 - 120mm ² f+AE la. Cu 15.5 - 24mm wide Clamp space 24.5 x 12mm min. clamp space height 3mm	Cu, Al* 35 - 150mm ² rm, sm, f, f + AE	double prism Cu, 2 x 35 - 70mm ² s(r), s(s), f+AE 2 x 70mm ² f
2	M10 240mm ² **	Cu 120 - 240mm ² s(r), f+AE, fl. Cu 21 x (1 - 14)mm	–	Cu, Al* 50 - 150/ 120 - 240mm ² s(r), s(s), f, f + AE	double prism Cu, 2 x 70 - 120mm ² s(r), s(s), f+AE
3	M12 2x 185mm ² **	Cu 150 - 300mm ² s(r), f+AE, fl. Cu 25 x (1 - 13)mm	–	Cu, Al* 150 - 300mm ² s(r), s(s), f, f + AE	double prism Cu, 2x150/185mm ² s(r), s(s), f+AE
4a	2xM12	–	–	–	–

* Connections with aluminium conductors are not maintenance-free (see page 8/2).

** Copper conductor for appropriate rated currents according to IEC/EN 60947-1.

Comb-type busbars and connection terminals for QUADRON®60Classic NH, size 000/00:



Recommended assembly situation: Feed with the comb-type busbar in case of NH-LTS from below:

In case of differing fitting positions, reductions must be regarded.

Protection type: IP 20 frontally in connection with NH-LTS, comb-type busbars and connections terminals possible.

Protection type depends on assembly in the connection area.

Shock protection: According to EN 50274/BGV A3.

Rated operating voltage: 690V AC /440V DC.

Rated insulation voltage: 800V at contamination level 2; 690V at contamination level 3.

Rated surge withstand capacity: 6kV.

Rated surge withstand capacity: 25kA/400V.

Rated short-time withstand capacity: 12.5kA - 100ms/400V.

Size 000: connection terminal: Cu 6 - 35mm² sol(r), s(r); Cu 4 - 25 f, f+AE (max. connection diameter 11mm).

Comb-type busbar cross-section: 35mm².

Size 00: Connection terminal: Cu 25 - 95mm² sol(r), s(r); Cu 35 - 95mm² s(s) ; Cu 25 - 70mm² f+AE (quadratic or trapezoid pressed, max. connection diameter 14mm).

Rated current: supply centre 1 x 260A / 2 x 260A; supply side 1 x 130A (see table).

Rated current according to test assembly EN 60947-3 at an environment temperature of 25°C:

Assembly	Position	Ingoing feeder Comb-type busbar	Operating current	NH-fuse gL/gG	Outgoing feeder NH-LTS
Double centre feed with 95mm ² , 4 NH-LTS size 00, 2 x 260A with connection terminals	Exterior	–	140A	160A	70mm ²
	Interior	95mm ²	120A	125A/160A	70mm ²
	Interior	95mm ²	120A	125A/160A	70mm ²
	Exterior	–	140A	160A	70mm ²
Centre feed with 95mm ² , 3 NH-LTS size 00, 1 x 260A with connection terminals	Exterior	–	50A	63A	16mm ²
	Interior	95mm ²	160A	160A	70mm ²
	Exterior	–	50A	63A	16mm ²

The allocation of conductor cross-sections and current capacities according to national and international specifications as well as installation conditions must be regarded.

QUADRON® 60Classic NH bus-mounting switch disconnecter with fuses



Panel-mounting and busbar-mounting

VDE 0660 part 107 / EN 60947-3 / IEC 60947-3

3-pole switching, double-breaking main contacts.

For NH fuse links in acc. with IEC 60269-2.

Safe, operator-independent switching, lockable in neutral position, with up to 3 padlocks.

Can be used as a mains disconnecter as per IEC/EN 60204-1 (main switch).

Also as an emergency switch in combination with the red-yellow door coupling twist handle.

Additional air gap can be seen by removing the lid, including fuses.

Shock protection complies with EN 50274.

Fuse links are mechanically locked in the lid.

Front-side degree of protection IP20 as per EN 60529, degree of protection near terminal depends on installation.

Test openings in lid are self-closing.

Recommended mounting position: handle at top.

Busbar-mounting version:

Mounting on a 60mm system (size 00/1).

Screwless busbar contacting.

Gentle snapping onto busbar systems.

Panel-mounting version:

– size 00/1: to be screwed on to mounting plate

Conductor connections:

Size	Screw connection	Clamp connection	Clamp space for flat conductor	Prism connection	other connections
NH00	–	–	Cu 1.5 - 70mm ² , f, f+AE Cu 1.5 - 70mm ² , sol(r), s(r) 2 x (10 - 25)mm ² f+AE, identical conductors, aligned side by side, square crimping, 2 x (6 - 50) mm ² f, identical conductors, aligned side by side, fl. Cu 10 - 13mm wide terminal space 13 x 13mm	–	connection terminal Cu, 35 - 95mm ² sm Cu, 25 - 70mm ² f+AE Cu, 25 - 120mm ² s(r)
NH1	M10 120mm ² **	Cu 70 - 150mm ² s(r), f, f+AE, fl. Cu 18 x (2 - 14) mm	Cu 70 - 185mm ² , s(r), Cu 35 - 150mm ² rm Cu 35 - 120mm ² f+AE la. Cu 15.5 - 24mm wide terminal space 24.5 x 21mm min. clamp space height 3mm	Cu, Al* 35 - 150mm ² rm, sm, f, f+AE	double prism Cu, 2 x 35 - 70mm ² rm, sm, f+AE 2 x 70mm ² f

* Connections with aluminium conductors are not maintenance-free (see page 8/2).

** Copper conductor for appropriate rated currents according to IEC/EN 60947-1

**QUADRON® 60Classic
NH bus-mounting switch disconnecter with fuses**



Size	00	1
Type of current	AC (50 - 60Hz)	AC (50 - 60Hz)
	DC	
Max. rated operating voltage (U _e) **	690V AC, 440V DC	690V AC
Rated insulation voltage (U _i) **	800V	800V
Rated surge withstand capacity (U _{imp}) **	6kV	6kV
Max. rated operating current (I _e)*	125A	250A
Conditional rated short-circuit current with fuses gG	50kA size 00; 125A - 690V	50kA size 1; 250A - 690V
For NH fuse links in acc. with IEC 60269-2 with power losses per phase up to	10W	23W
* When continuously operating a number of devices next to each other, pay attention to the rated loading factor in acc. with IEC/EN 61439-2, Table 101.		
** Electronic fuse monitoring 2/3 x AC 65 - 690V, DC 65 - 250V (L1, L3) (mains connections, U _{imp} 6 kV, level of soiling 3).		

Pilot switch for lid position indication
 1 (changeover) switch can be used
 Connections by means of receptacles for tabs 2.8 x 0.5mm (e.g. DIN 46245)
 Rated operating voltage (rated operating current)
 250V AC (5A), 30V DC (4A)

Electronic fuse monitoring:
 – No auxiliary power required, mains voltage (L1 and L3) must be present
 – Test button to simulate fuse failure
 – Automatic reset after fuse replacement
 Green LED on: ready
 Red LED on: Fuse has blown in at least one phase, no display if mains voltage not present
 Output (auxiliary contacts):
 – N/O / N/C, isolated, a.c. 3A/250V*, d.c. 5A/30V, d.c. 0.2A/250V*
 – Conductor connection 4-pole plug up to 1.5mm² sol(r)/f/AE
 Circuit diagram on page 9/25
 * Level of soiling 2, excess voltage category II

Door coupling twist handle IP 66, lockable in off position, with up to 3 padlocks, with door interlock that can be defeated.

QUADRON®60Classic Bus-mounting switch disconnecter



Panel-mounting and busbar-mounting

VDE 0660 part 107 / EN 60947-3 / IEC 60947-3

3-pole switching, double-breaking main contacts.

Operator-independent, Safe switching, lockable with 3 padlocks in OFF position.

Shock protection complies with EN 50274.

Can be used as a mains disconnecter as per IEC/EN 60204-1 (main switch).

Also as an emergency switch in combination with the red-yellow door coupling twist handle.

As main switch or emergency stop switch only with the following maximum operating currents:

Design 160A: 125A/690V AC; design 320A: 280A/400 AC, 250A/690V AC.

Front-side degree of protection IP20 as per EN 60529, degree of protection near terminal depends on installation.

Recommended mounting position: handle at top.

Busbar-mounting version:

Mounting on a 60mm system (160A, 320A).

Screwless busbar contacting.

Gentle snapping onto busbar systems.

Panel-mounting version:

– (160A, 320A): to be screwed on to mounting plate.

Size	160A	320A
Type of current	AC (50 - 60Hz)	AC (50 - 60Hz)
Max. rated operating voltage (U_e)	690V AC	690V AC
Rated insulation voltage (U_i)	800V	800V
Rated surge withstand capacity (U_{imp})	8kV	8kV
Max. rated operating current (I_e)*	200A	320A
Rated short-circuit making capacity (I_{cm})	7kA (690V AC)	12kA (690V AC)
Short-circuit withstand capacity	4.5kA-1s (690V AC)	7kA (690V AC)
Conditional rated short-circuit current with series fuses gG	50kA size 00; 125A - 690V	50kA size 1; 250A - 690V

* When continuously operating a number of devices next to each other, pay attention to the rated loading factor in acc. with IEC/EN 61439-2, Table 101.

Pilot switch for lid position indication

1 (changeover) switch can be used

Connections by means of receptacles for tabs 2.8 x 0.5mm (e.g. DIN 46245)

Rated operating voltage (rated operating current)

250V AC (5A), 30V DC (4A)

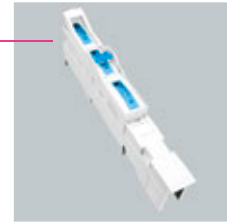
Door coupling twist handle IP 66, lockable in off position, with up to 3 padlocks, with door interlock that can be defeated.

Conductor connections:

Size	Screw connection	Clamp connection	Clamp space for flat conductor	Prism connection	Other connections
160A	–	–	Cu 1.5 - 70mm ² , f, f+AE Cu 1.5 - 70mm ² , sol(r), s(r) 2 x (10 - 25)mm ² f+AE, identical conductors, side by side, square crimping, 2 x (6 - 50)mm ² f, identical conductors, side by side fl. Cu 10 - 13mm wide terminal space 13 x 13mm	–	connection terminal Cu, 35 - 95mm ² s(s) Cu, 25 - 70mm ² f+AE Cu, 25 - 120mm ² s(r)
320A	M10 185mm ² 320A	Cu 70 - 150mm ² s(r), f, f+AE, fl. Cu 18 x (2 - 14)mm 250A	Cu 70 - 185mm ² f / 300A Cu 35 - 150mm ² rm / 275A Cu 35 - 120mm ² f+AE / 250A la. Cu 15.5 - 24mm wide / 300A Clamp space 24.5 x 21mm min. clamp space height 3mm	Cu, Al* 70 - 150mm ² rm, sm, f, f+AE 250A	double prism Cu, 2 x 35 - 70mm ² rm, sm, f+AE 2 x 70mm ² f 250A

* Connections with aluminium conductors are not maintenance-free (see page 8/2).

QUADRON®60Classic
QUADRON®100Energy
NH in-line fuse switch disconnecter



VDE 0660 part 107 / EN 60 947-3 / IEC 60 947-3

3-pole switching

Outgoing connection top and bottom.

Arc chamber.

For NH fuse links in acc. with IEC 60269-2 Size NH00.

Shock-protected even with lid open and in park position.

Mechanical fuse retention.

Degree of protection IP30 (front side), degree of protection near terminal depends on installation.

Connection contacts:

- M8 screw; 2x M5 clamp, 12mm clear width
- Prism clamp terminal Cu, Al* 16 - 70mm² s(r), s(s), f +AE

(* Connections with aluminium conductors are not maintenance-free (see page 8/2)

For 60mm distance between busbar centres:

- screwless busbar connection

For 100mm distance between busbar centres:

- screw-on connection to drilled busbars, screw M8
- mounting without drilling using a terminal clamp

Type	3-pole switching
Type of current	AC (50 - 60Hz)
Rated operating voltage (U _e)**	690V AC
Rated insulation voltage (U _i)**	1000V
Rated surge withstand capacity (U _{imp}) without fuse monitoring**	8kV
Rated operating current (I _e)*	160A
Utilisation categories without fuse monitoring**	AC-22B (690V) AC-23B (400V) AC-23B (500V 125A)
Conditional rated short-circuit current***	50kA
For NH fuse links in acc. with IEC 60269-2 with power losses per phase up to	12W
* When continuously operating a number of devices next to each other, pay attention to the rated loading factor in acc. with IEC/EN 61439-2, Table 101.	
** Fuse monitoring U _e , U _i 400V AC, U _{imp} 4kV, level of soiling: 2 (mains connections)	
*** Type tested with fuses of characteristic gL/gG.	

for screwing onto drilled busbars, screw M12

Pilot switch for lid position indication:

2 (changeover) switches can be used

Rated operating voltage (rated operating current) 250V AC (5A), 30V DC (4A)

Electronic fuse monitoring:

2 LEDs

with latching properties or remote reset, programmable using

2 changeover switches

2 x Cu 2.5mm² solid conductors, DIN 46 288 or

2 x Cu 1.5mm² stranded conductors with sleeves, DIN 46 228-1/-2/-3

The internal resistance of the measuring needle lies above the MOhm level and thereby meets

VDE requirements regarding contact voltage (>1000 Ohm/V.)

To release turn off the upstream main switch.

Circuit diagram on page 9/25

QUADRON®100Energy NH fuse block

100mm-System

3-pole

Up to 160A

Connection below and above.

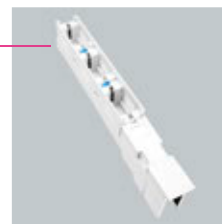
Busbar contact:

- for fixing to drilled busbars, M8 screw
- undrilled assembly clamp locks

Connection contacts:

- prism connection terminals Cu, Al* 16 - 70mm² s(r), s(s), f +AE

* Connections with aluminium conductors are not maintenance-free (see page 8/2).



QUADRON®185Power NH fuse block

185mm-System power

3-pole

For NH fuse links in acc. with IEC 60269-2 Size NH 00, 1,2,3.

For screwing onto drilled busbars.

Optional mounting on undrilled busbars.

Cable connections at bottom.

Shock protection.

Connection space covers.

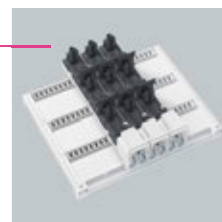
Busbar contact with screws:

Screw M12.

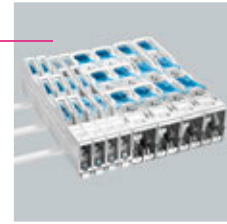
drill – less contact with clamp bracket.

busbars (10mm thick), profile bars.

Short-circuit capability up to 50kA with fuse links gL/gG.



**QUADRON®185Power
NH in-line fuse disconnectors**



VDE 0660 Part 107 / EN 60947-3 / IEC 60947-3

1 and 3-pole switching

For NH fuse links in acc. with IEC 60269-2 Size NH 00, 1, 2, 3.

Mounting onto a 185mm system by screwing down onto drilled busbars, M 8 screw with Size 00 or M12 screw Sizes 1 - 3.

Optionally drill-free with clamp for busbars (10mm thick) and section busbars.

Turning the strip base for top or bottom cable connections.

Touch safe covers with fuse insertion guide.

Touch-safe protection even with the switch covers opened and in the parking position.

Fuse links mechanically locked in switch covers.

Degree of protection (front) IP 20, the fitting determines the protection degree at the connection.

Inspection openings in the switch covers of the self-closing type.

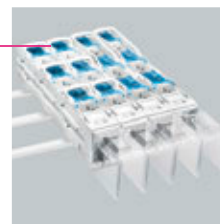
Terminal space cover (accessory) for additional shock protection.

Conductor terminals:

Size	Screw terminal	Direct connection terminals Cu and Al*	V-direct connection terminals Cu and Al*	Box terminal	Clamp resp. prism connection	Clamp/prism clamping space for flat copper conductor Cu
00	M8 70mm ² **	–	–	1 x 1.5 - 70mm ²	1 x 10 - 70mm ² rm, sm, f, f+AE 1 x 95mm ² rm, sm, f	12 x (1 - 10)mm
1	M12 2 x 185mm ² - 240mm ² **	1 x 35 - 150mm ² sm 1 x 50 - 185mm ² se 1 x 35 - 70mm ² rm 1 x 50mm ² re Md 32 - 40Nm 2 x 35 - 150mm ² sm 2 x 50 - 185mm ² se 2 x 35 - 70mm ² rm 2 x 35 - 50mm ² re Md 18 - 24Nm	1 x 70 - 240mm ² sm 1 x 95 - 240mm ² se	–	–	–
2	M12 2 x 185mm ² - 240mm ² **	1 x 35 - 150mm ² sm 1 x 50 - 185mm ² se 1 x 35 - 70mm ² rm 1 x 50mm ² re Md 32 - 40Nm 2 x 35 - 150mm ² sm 2 x 50 - 185mm ² se 2 x 35 - 70mm ² rm 2 x 35 - 50mm ² re Md 18 - 24Nm	1 x 70 - 240mm ² sm 1 x 95 - 240mm ² se	–	–	–
3	M12 2 x 185mm ² - 240mm ² **	1 x 35 - 150mm ² sm 1 x 50 - 185mm ² se 1 x 35 - 70mm ² rm 1 x 50mm ² re Md 32 - 40Nm 2 x 35 - 150mm ² sm 2 x 50 - 185mm ² se 2 x 35 - 70mm ² rm 2 x 35 - 50mm ² re Md 18 - 24Nm	1 x 120 - 400mm ² rm 1 x 185 - 240mm ² sm 1 x 185 - 300mm ² se	–	–	–

* not maintenance-free when aluminium conductors are used (see page 8/2)

** copper conductor for associated rated currents in compliance with IEC/EN 60947-1

QUADRON®185Power
NH in-line fuse switch disconnectors


Size	00	1	2	3
Type of current	AC (50Hz)	AC (50Hz)	AC (50Hz)	AC (50Hz)
Rated operating voltage (U_e)**	690V AC	690V AC	690V AC	690V AC
Rated insulation voltage (U_i)**	1000V	1000V	1000V	1000V
Rated surge withstand capacity (U_{imp}) without fuse monitoring**	8kV	8kV	8kV	8kV
Rated operating current (I_e)*	160A	250A	400A	630A
Utilisation categories without fuse monitoring**	AC-22B (160A/500V) AC-21B (125A/690V)	AC-23B (250A/400V) AC-22B (250A/690V) AC-21B (250A/690V)	AC-23B (400A/400V) AC-22B (400A/690V) AC-21B (400A/690V)	AC-23B (630A/400V) AC-22B (630A/400V) AC-21B (630A/400V)
Conditional rated short-circuit current, 3-pole switching***	100kA/500V 100kA/690V	120kA/500V 100kA/690V	120kA/500V 100kA/690V	80kA/500V 80kA/690V
Conditional rated short-circuit current, 1-pole switching***	100kA/500V 100kA/690V	120kA/500V 100kA/690V	120kA/500V 100kA/690V	80kA/500V 80kA/690V
For NH fuse links VDE 0636-2**** with power losses per phase up to	12W	23W	34 W	48W

* When continuously operating a number of devices next to each other, pay attention to the rated loading factor in acc. with IEC/EN 61439-2, Table 101.
Keep 50mm away from the earthed parts at the top and 25mm at the side.

** Fuse monitoring U_e , U_i 400V AC, U_{imp} 4kV, VG 2 (grid connections)

*** Type verification test with fuse links Operating Class gL/gG

**** Size 1 NH fuse links deployable in Size 2 QUADRON®185Power

Size 3 as double NH-fuse breaker 1250A.

3-pole, 690V AC, 2 x 630A, 3-pole switching, rated conditional short-circuit current up to 80kA.

With fuses gL/gG, Utilisation Categories AC20B (690V).

Conductor connections: four M12 screw clamp connections each up to 240mm².

Electronic fuse monitoring:

2 LED displays

Storage property and remote reset, programmable.

2 change-over contacts.

2 x Cu 2.5mm² solid, DIN 46288 or 2 x Cu 1.5mm² flexes with sleeve, DIN 46228-1/-2/-3.

Internal resistance of the measurement paths in the MOhm range, VDE provisions in respect of contact voltage (>1000 Ohm/V) are complied with.

To isolate, switch off upstream mains switch!

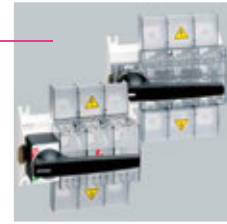
Circuit diagram on page 9/25.

Signalling switch for lid positioning indication:

3 switches (change-over contacts) can be used with sizes 00, 1, 2, 3.

Rated operating voltage (rated operating current) 250V AC (5A), 30V DC (4A).

CAPUS® Panel
Switch disconnecter up to 800A
Switch disconnecter for NH fuse up to 630A



VDE 0660 part 107 / EN 60947-3 / IEC 60947-3
 screwing onto mounting plate
 For NH fuse links in acc. with IEC 60269-2 Size NH 00, 1,2,3.
 3-pole switching, double-breaking main contacts
 operator-independent switching; visible air gap
 Front shock protection with terminal cover

Switch disconnecter up to 800A IP40 degree of protection (front).
 Switch disconnecter for NH fuse 630A IP20 degree of protection (front).
 Degree of protection near terminal depends on installation
 voltage-free fuse replacement

Conductor terminals:

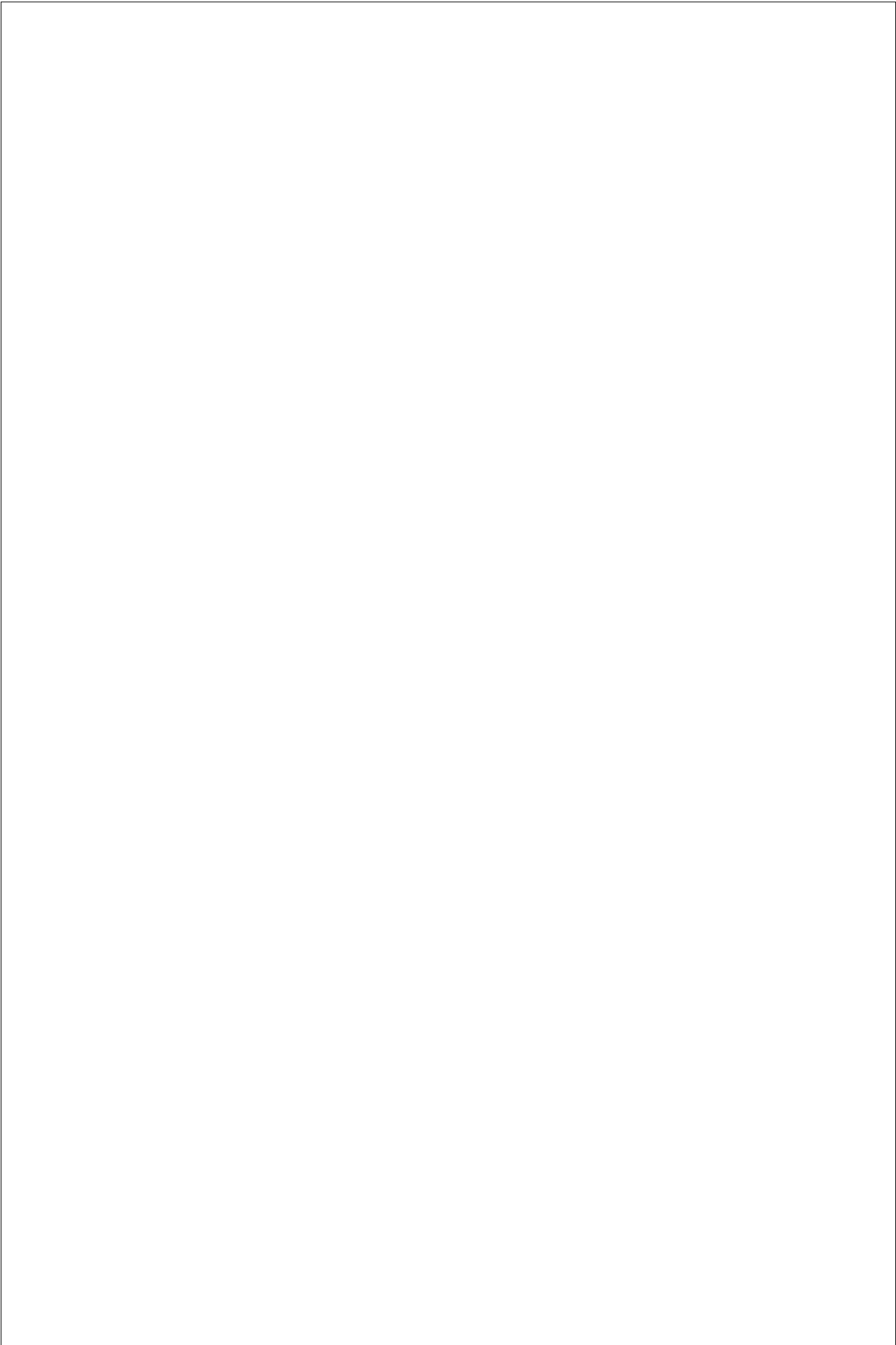
Size	Screw terminal	Clamp-type terminal	Terminal space	Wedge-type terminal Cu and Al*
LTS-250	M10	fl. Cu	14 x 1 - 9	70 - 120mm ² s(r), f, f + AE**
LTS-400	M10	fl. Cu	18 x 1 - 10	70 - 150mm ² s(r), f, f + AE** Md 6 - 8Nm
LTS-630	M10	fl. Cu	21 x 1 - 13	120 - 240mm ² s(r), f, f + AE**
LTS-800	M12	fl. Cu	25 x 1 - 13	
LTS-F160	M8 Md 14Nm +/- 10%	Cu 2.5 - 70mm ² s(r), f, fl. Cu Md 3Nm	12 x 1 - 10	
LTS-F250	M10	fl. Cu	18 x 1 - 10	70 - 150mm ² s(r), f, f + AE**
LTS-F400	M10	fl. Cu	21 x 1 - 13	120 - 240mm ² s(r), f, f + AE**
LTS-F630	M12	fl. Cu	25 x 1 - 13	

* Not maintenance-free when aluminium conductors are used (see page 8/2).
 ** Reducing the maximum conductor cross-sections may be required

Covers for door and permanent mounting
 not lockable, IP 64 degree of protection.
 Triple lockable, degree of protection IP54.

Pilot switch for switch position indicator
 Rated operating voltage (rated operating current) 250V AC (4A), 400V AC (3A)

CAPUS®Panel Switch disconnecter up to 800A				
Size	250A	400A	630A	800A
Type of current	AC (50 - 60Hz)	AC (50 - 60Hz)	AC (50 - 60Hz)	AC (50 - 60Hz)
Max. rated voltage (U_e)	500V AC	500V AC	500V AC	500V AC
Rated insulation voltage (U_i)	1000V	1000V	1000V	1000V
Rated surge withstand capacity (U_{imp})	12kV	12kV	12kV	12kV
Conv. therm. current in the case (I_{the}) horizontal installation (side-by-side pole)* vertical installation (vertical pole)**	250A 250A	400A 400A	630A 630A	800A 800A
Max. rated operating current (I_e)*	250A	400A	630A	800A
Utilisation categories	AC-23B (250A/415V) AC-23A (200A/500V) AC-22B (250A/500V)	AC-23B (400A/500V)	AC-23B (630A/500V)	AC-23B (800A/500V)
Mechanical durability (switch clearance)	7000	7000	7000	2500
Rated short circuit making capacity (I_{cm})	20kA	30kA	30kA	40kA
Short-circuit withstand capacity (I_{cw})	7kA - 1s	15kA - 1s	15kA - 1s	20kA - 1s
Conditional rated short-circuit current with gG fuses	80/50kA size 1 - 200/250A - 500V	80kA size 3 - 630A - 500V	80kA size 3 - 630A - 500V	50kA size 4 - 800A - 500V
* Metal casing, interior dimensions HxWxD [mm]: LTS-250 (encapsulated) 252 x 378 x 302, LTS-400 (encapsulated) 504 x 378 x 302, LTS-630 (ventilated) 504 x 378 x 302, LTS-800 (ventilated) 756 x 378 x 428				
** Metal casing, dimensions [mm]: LTS-250 (encapsulated) 300 x 400 x 200, LTS-400 (encapsulated) 500 x 500 x 300, LTS-630 (encapsulated) 500 x 500 x 300, LTS-800 (encapsulated) 600 x 600 x 400				
*** When continuously operating a number of devices, pay attention to the rated loading factor in acc. with IEC/EN 61439-2, Table 101.				
CAPUS®Panel Switch disconnecter for NH fuse up to 630A				
Size	160A	250A	400A	630A
Fuse size	NH 00	NH 1	NH 2	NH 3
Type of current	AC (50 - 60Hz)	AC (50 - 60Hz)	AC (50 - 60Hz)	AC (50 - 60Hz)
Max. rated voltage (U_e)	690V AC	690V AC	690V AC	690V AC
Rated insulation voltage (U_i)	1000V	1000V	1000V	1000V
Rated surge withstand capacity (U_{imp})	8kV	8kV	8kV	12kV
Conv. therm. current in the case (I_{the}) horizontal installation (side-by-side pole)* vertical installation (vertical pole)**	160A 145A	250A 250A	400A 315A	630A 470A
Max. rated operating current (I_e)*	160A	250A	400A	630A
Utilisation categories	AC-23A (160A/500V) AC-23A (125A/690V) AC-22A (160A/690V)	AC-23B (250A/690V)	AC-23B (400A/690V)	AC-23B (630A/690V)
Mechanical durability (switch clearance)	7000	7000	7000	4000
Conditional rated short-circuit current with gG fuses	80kA size 00 - 160A - 690V	80kA size 1 - 250A - 690V	80kA size 2 - 400A - 690V	80kA size 3 - 630A - 690V
For NH fuse links in acc. with IEC 60269-2 with power losses per phase up to	12W	23W	34W	48W
* Metal casing, interior dimensions HxWxD [mm]: LTS-F160 (encapsulated) 252 x 378 x 302, LTS-F250 (encapsulated) 504 x 378 x 302, LTS-F400 (ventilated) 504 x 378 x 302, LTS-F630 (ventilated) 756 x 378 x 428				
** Metal casing, dimensions [mm]: LTS-F160 (encapsulated) 500 x 500 x 300, LTS-F250 (encapsulated) 500 x 500 x 300, LTS-F400 (encapsulated) 500 x 500 x 300, LTS-F630 (encapsulated) 600 x 600 x 400				
*** When continuously operating a number of devices, pay attention to the rated loading factor in acc. with IEC/EN 61439-2, Table 101.				



CAPUS® Panel
Switch disconnecter 3-pole up to 3150A ,
Switch disconnecter 3-pole + N up to 3150A

To IEC/EN 60947-3		125A	160A	200A	250A	315A	400A	630A
Thermal current (I _{th}) [A]	40°C	125	160	200	250	315	400	630
	50°C	125	160	200	250	315	400	630
	65°C	90	110	140	175	220	280	440
Rated insulation voltage (U _i) [V]		1000	1000	1000	1000	1000	1000	1000
Electric strength (50Hz, 1min) [V]		4000	4000	4000	5000	5000	5000	8000
Rated surge withstand capacity (U _{imp}) [kV]		8	8	8	8	8	8	12
Nominal operating current AC (I _e) [A]	AC-23A (U _e 400V)	125	160	160	160	315	400	630
	AC-23A (U _e 500V)	100	125	125	125	250	315	500
	AC-23A (U _e 690V)	80	80	80	80	160	160	315
	AC-20A (U _e 800V)	125	160	200	250	315	400	630
	AC-20A (U _e 1000V)	125	160	200	250	315	400	630
Working capacity AC ¹ (P _e) [kW]	AC-23A (3 x 230V)	39.8	50.9	50.9	50.9	100.3	127.4	200.7
	AC-23A (3 x 400V)	69.2	88.6	88.6	88.6	174.5	221.7	349.1
	AC-23A (3 x 500V)	69.2	86.6	86.6	86.6	173.2	218.2	346.4
	AC-23A (3 x 690V)	76.4	76.4	76.4	76.4	152.9	152.9	301.1
Reactive power [kVAR]	400V, sin φ = 0.65	56.2	72.0	72.0	72.0	141.8	180.1	283.7
Rated breaking capacity [A]	400V, cos φ = 0.35 - 0.45	1000	1280	1280	1280	2520	3200	5000
Rated making capacity [A]	400V, cos φ = 0.45	1250	1600	1600	1600	3150	4000	6300
Short-circuit behaviour		125A	160A	200A	250A	315A	400A	630A
Conditional short-circuit current (peak value) ² (I _{cm}) [kA]		13	13	13	13	20	20	26
Rated short-time withstand current (1s) (I _{cw}) [kA] rms		7	7	7	7	12	12	16
Rated current in the event of short-circuit (rms value) ³ [kA] rms		100	100	100	100	100	100	100
Max. limited rated peak current [kA]		17	20	20	20	33	33	39
Max. power dissipation (I ² t) [A ² s] (x10 ³)		55	198	198	198	1000	1000	1600
Mechanical service life without load ⁴ [switching operations]		30000	30000	30000	30000	20000	20000	10000
Mechanical service life with load ⁵ AC-23 (400V) [switching cycles]		1000	1000	1000	1000	1000	1000	1000
Weight (3-pole) [kg]		0.85	0.85	0.9	0.9	1.7	1.9	4.2
Weight (3-pole+N) [kg]		1.0	1.0	1.0	1.0	1.9	2.1	4.5
Types of connection		125A	160A	200A	250A	315A	400A	630A
Cable (Cu) [mm ²]		95	95	120	120	185	240	2x240
Laminated copper busbars (thickness/width) [mm]		5/25	5/25	5/30	5/30	7/25	7/40	2x5/40
Tightening torque [Nm]		4/13 ⁵	4/13 ⁵	13/18	13/18	18	24	24

¹ Values for guidance only. The respective current depends on the motor manufacturer.

² Without limiting protective device (short-circuit duration: 50 ... 100ms).

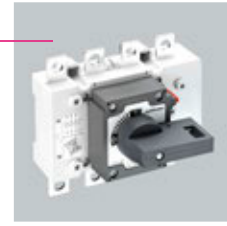
³ With protective device, which limits the peak current and power dissipation to the stated values.

⁴ AC-22B.

⁵ Terminal/blade-type connection.

You can find further voltages and switchgear characteristics at www.woehner.com

CAPUS® Panel
Switch disconnecter 3-pole up to 3150A ,
Switch disconnecter 3-pole + N up to 3150A



To IEC/EN 60947-3		800A	1250A	1600A	1800A	2000A	2500A	3150A
Thermal current (I_{th}) [A]	40°C	800	1250	1600	1800	2000	2500	3150
	50°C	800	1250	1600	1800	2000	2500	3150
	65°C	560	875	1600	1600	2000	2000	2200
Rated insulation voltage (U_i) [V]		1000	1000	1000	1000	1000	1000	1000
Electric strength (50Hz, 1min) [V]		8000	8000	10000	10000	10000	10000	10000
Rated surge withstand capacity (U_{imp}) [kV]		12	12	12	12	8	8	8
Nominal operating current AC (I_e) [A]	AC-23A (U_e 400V)	630	800	1000	1250 ⁴	1600	1800	2000 ⁴
	AC-23A (U_e 500V)	500	800	900	1000 ⁴	1250	1600 ⁴	1600 ⁴
	AC-23A (U_e 690V)	315	500	630	800 ⁴	1000	1000	1000
	AC-20A (U_e 800V)	800	1250	1600	1800	2000	2500	3150
	AC-20A (U_e 1000V)	800	1250	1600	1800	2000	2500	3150
Working capacity AC ¹ (P_e) [kW]	AC-23A (3 x 230V)	200.7	254.9	318.6	398.3	509.9	573.6	637.3
	AC-23A (3 x 400V)	349.1	443.4	554.2	692.8	886.8	997.6	1108.5
	AC-23A (3 x 500V)	346.4	554.2	623.5	692.8	866.0	1108.5	1108.5
	AC-23A (3 x 690V)	301.1	478.0	602.3	764.8	956.0	956.0	956.0
Reactive power [kVAR]	400V, $\sin \phi = 0.65$	283.7	360.2	450.3	562.9	720.5	810.5	900.6
Rated breaking capacity [A]	400V, $\cos \phi = 0.35 - 0.45$	5000	6400	8000	10000	12800	14400	16000
Rated making capacity [A]	400V, $\cos \phi = 0.45$	6300	8000	10000	12500	16000	18000	20000
Short-circuit behaviour		800A	1250A	1600A	1800A	2000A	2500A	3150A
Conditional short-circuit current (peak value) ² (I_{cm}) [kA]		26	60	75	75	100	100	100
Rated short-time withstand current (1s) (I_{cw}) [kA] rms		16	25	50	50	50	50	50
Rated current in the event of short-circuit (rms value) ³ [kA] rms		100	72	–	–	–	–	–
Max. limited rated peak current [kA]		39	55	–	–	–	–	–
Max. power dissipation (I^2t) [A ² s] ($\times 10^3$)		1600	4900	–	–	–	–	–
Mechanical service life without load ⁵ [switching operations]		10000	10000	10000	10000	–	2500	2500
Mechanical service life with load ⁵ AC-23 (400V) [switching cycles]		500	500	500	500	–	500	500
Weight (3-pole) [kg]		4.2	7.0	18.5	18.5	–	50.0	50.0
Weight (3-pole+N) [kg]		4.5	7.6	20.8	20.8	–	58.0	58.0
Types of connection		800A	1250A	1600A	1800A	2000A	2500A	3150A
Cable (Cu) [mm ²]		2x240	2x300	–	–	–	–	–
Laminated copper busbars (thickness/width) [mm]		2x5/40	2x10/50	2x7/80	2x7/80	–	3x12/80	3x12/100
Tightening torque [Nm]		24	45	55	55	–	45	45

¹ Values for guidance only. The respective current depends on the motor manufacturer.

² Without limiting protective device (short-circuit duration: 50 ... 100ms).

³ With protective device, which limits the peak current and power dissipation to the stated values.

⁴ AC-22B.

⁵ Terminal/blade-type connection.

You can find further voltages and switchgear characteristics at www.woehner.com

CAPUS®Panel
Change-over switch 3-pole up to 1000A,
Change-over switch 3-pole + N up to 1000A



To IEC/EN 60947-3		125A	160A	200A	250A	315A	400A	630A	800A	1000A
Thermal current (I _{th}) [A]	40°C	125	160	200	250	315	400	630	800	1000
	in control cabinet	–	–	–	250	315	400	630	800	1000
Rated insulation voltage (U _i) [V]		1000	1000	1000	1000	1000	1000	1000	1000	1000
Electric strength (50Hz, 1min) [V]		4000	4000	4000	6000	6000	6000	8000	8000	8000
Rated surge withstand capacity (U _{imp}) [kV]		8	8	8	8	8	8	12	12	12
Nominal operating current AC (I _e) [A]	AC-23A (U _e 400V)	125	160	160	–	–	–	–	–	–
	AC-23B (U _e 400V)	–	–	–	180	200	250	500	630	1000
	AC-23A (U _e 500V)	100	125	125	–	–	–	–	–	–
	AC-23B (U _e 500V)	–	–	–	150	160	200	315	400	800
	AC-22A (U _e 690V)	100	125	160	200	250	315 ⁴	500	630 ⁴	800
	AC-23A (U _e 690V)	80	80	–	–	–	–	–	–	–
	AC-23B (U _e 690V)	–	–	–	100	125	160	250	315	630
	AC-20A (U _e 800V)	125	160	200	250	315	400	630	800	1000
Working capacity AC ¹ (P _e) [kW]	AC-23A (3 x 400V)	69.2	88.6	88.6	90.0	100.0	125.0	250.0	315.0	501.0
	AC-23A (3 x 500V)	69.2	86.6	86.6	94.0	100.0	125.0	197.0	250.0	501.0
	AC-23A (3 x 690V)	76.4	76.4	76.4	86.0	108.0	138.0	216.0	272.0	544.0
Reactive power [kVAR]	400V	–	–	–	1040	131.0	166.0	261.0	333.0	416.0
Rated breaking capacity [A]	AC-23 400V	–	–	–	1440	1600	2000	4000	4000	8000
Rated making capacity [A]	AC-23 400V	–	–	–	1800	2000	2500	5000	5000	10000
Short-circuit behaviour										
Short-circuit behaviour		125A	160A	200A	250A	315A	400A	630A	800A	1000A
Conditional short-circuit current (peak value) ² (I _{cm}) [kA]		13	13	13	12	12	12	20	20	32
Rated short-time withstand current (1s) ² (I _{cw}) [kA] rms		7	7	7	8	8	8	13	13	25
Mechanical service life without load [switching operations]		30000	30000	30000	10000	10000	10000	10000	10000	10000
Mechanical service life with load AC-22A (400V) [switching cycles]		–	–	1000	1000	1000	200	1000	100	500
Operating frequency [cycles per hour]		–	–	–	120	120	60	60	20	20
Tightening torque ³ [Nm]		–	–	–	11/13	11/13	11/13	25/30	25/40	50/62
Weight (3-pole) [kg]		1.8	1.8	1.9	4.8	5	5	11.5	11.9	22.5
Weight (3-pole+N) [kg]		2.1	2.1	2.2	5.3	5.5	5.5	12.6	13.2	25
Types of connection										
Types of connection		125A	160A	200A	250A	315A	400A	630A	800A	1000A
Cable (Cu) [mm ²]		95	95	120	240	240	240	2x240	2x240	–
Laminated copper busbars (thickness/width) [mm]		5/25	5/25	5/30	2x5/30	2x5/30	2x5/30	2x6/45	2x6/45	2x10/60
Tightening torque [Nm]		4/12	4/13	13/18	24	24	24	45	45	55

¹ Values for guidance only. The respective current depends on the motor manufacturer

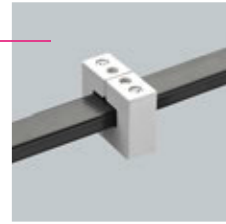
² Without limiting protective device (short-circuit duration: 50 ... 100ms).

³ Typical value for switches that work with continuous current in an uninterrupted state.

⁴ AC-22B.

You can find further voltages and switchgear characteristics at www.woehner.com

Short-circuit withstand capacity diagrams in acc. with IEC/EN 61439-1 for laminated flexible copper busbars

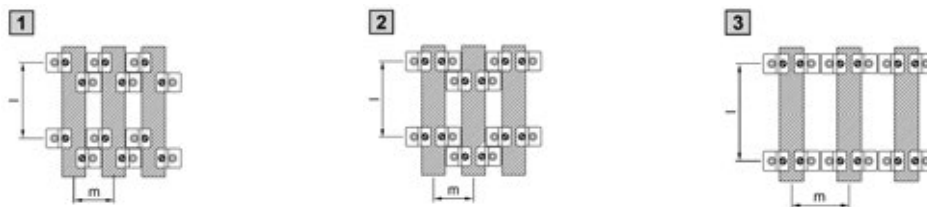


Dimensions	Characteristic curve (short-circuit withstand capacity)	Type of installation*	Part no. Tin-plated	Part no. plain
6 x 15.5 x 0.8	a	1	01 900	01 035
10 x 15.5 x 0.8	a	1	01 091	01 583
5 x 24 x 1	a	1	01 075	01 611
10 x 24 x 1	b	1	01 076	01 184
5 x 32 x 1	b	2/3	01 095	01 612
10 x 32 x 1	c	2/3	01 096	01 613
5 x 40 x 1	b	2/3	01 097	01 614
10 x 40 x 1	c	2/3	01 099	01 615
5 x 50 x 1	b	2/3	01 112	01 060
10 x 50 x 1	c	2/3	01 113	01 509
10 x 63 x 1	d	2/3	01 123	01 510

* Mounting on commercially available standard C-rail

Characteristic curve	Distance between supports (l) mm		Centre distance (m) mm	
	min.	max.	min.	max.
a	150	300	34	60
b	150	350	42	85
c	200	400	51	85
d	200	450	81	100

Type of installation with universal holder



Short-circuit withstand capacity diagram

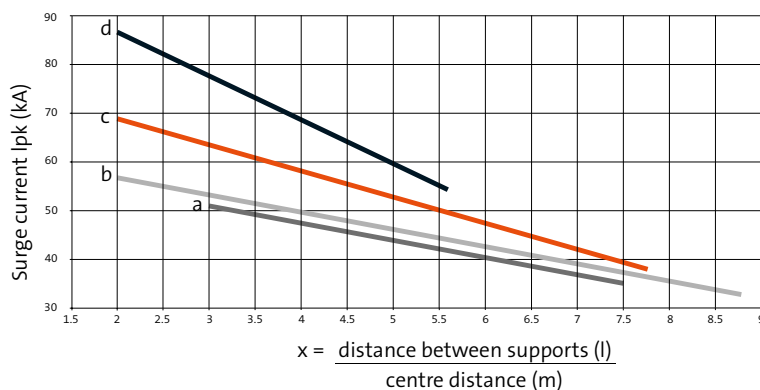
Basis of testing: IEC/EN 61439-1

Implemented test: Dynamic short-circuit resistance in acc. with IEC/EN 61439-1.

The dimensions for the distance between supports (m) and the centre distance (a) must be within the stated min./max. limits. Using curves a to d and quotients

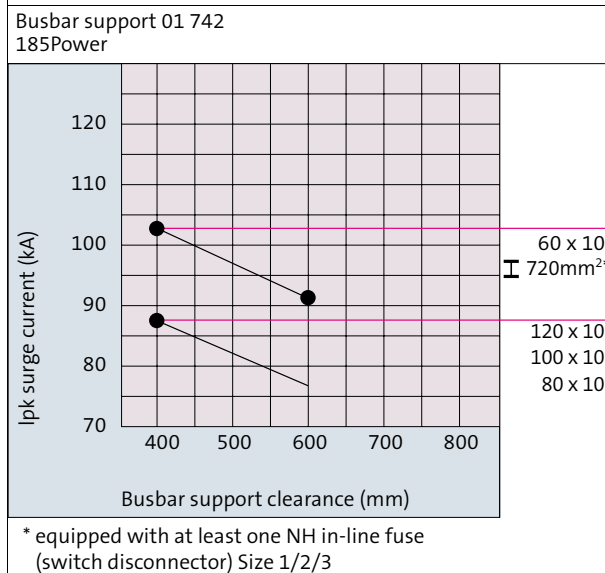
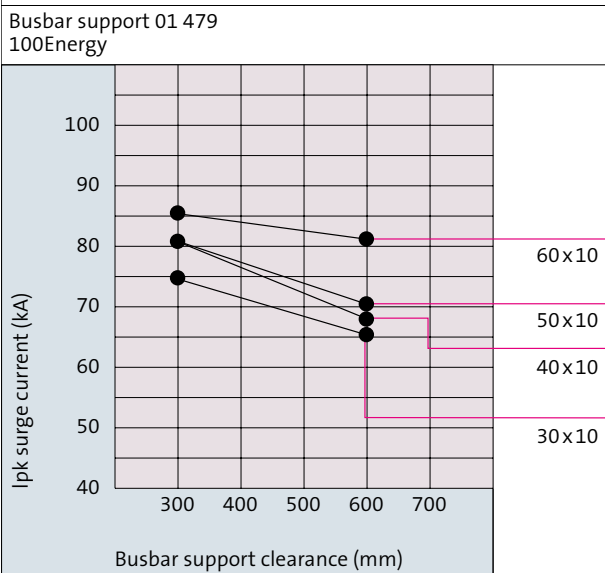
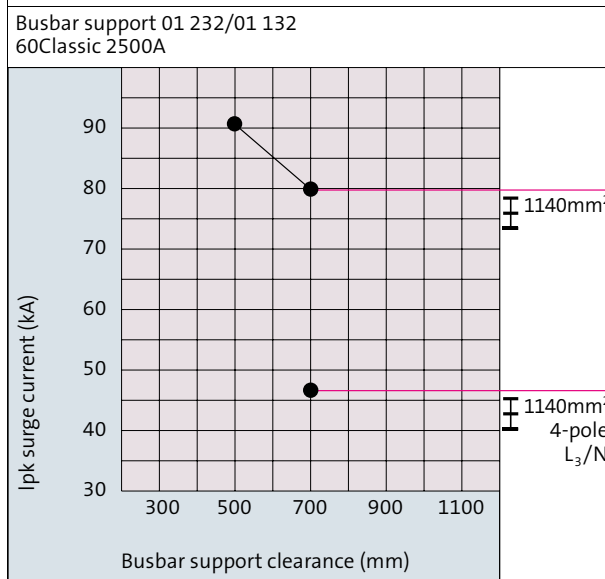
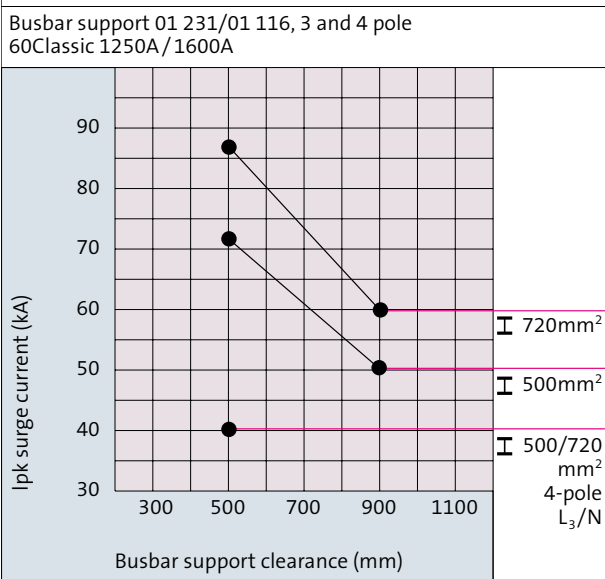
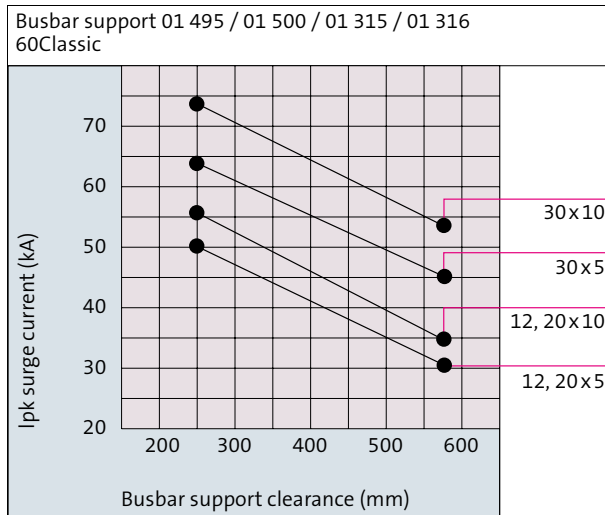
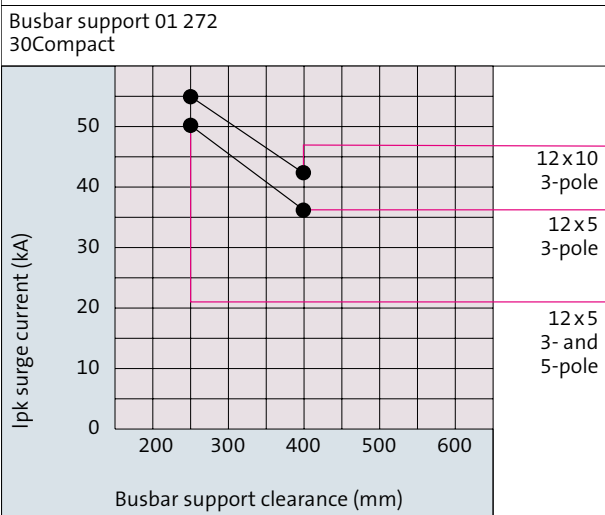
from l/m the permitted surge current I_{pk} can be determined.

The specified installation method must be adhered to.



Short-circuit withstand capacity diagrams in acc. with IEC/EN 61439-1 for 60, 100 and 185mm busbar systems

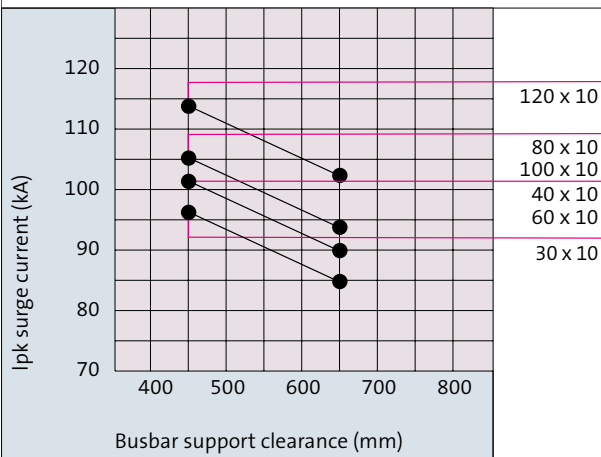
(●) Measured values from type tests



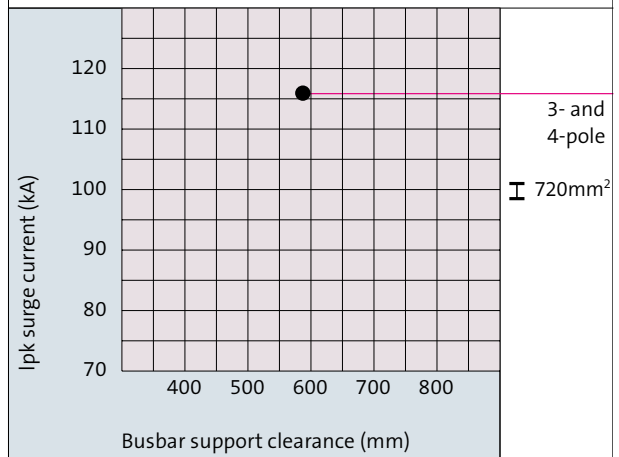
Short-circuit withstand capacity diagrams in acc. with IEC/EN 61439-1 for 85mm busbar systems and central in-feed

(●) Measured values from type tests

Busbar support 01 430
185Power



Centre-feed unit
Current flow through 80% of busbar length



Assignment of surge current to effective figure of the short-circuit current IEC/EN 61439-1

Values of factor *n*

Effective value of the short-circuit current	cos φ	<i>n</i>
/ ≤ 5	0.7	1.5
5 < / ≤ 10	0.5	1.7
10 < / ≤ 20	0.3	2
20 < / ≤ 50	0.25	2.1
50 < /	0.2	2.2

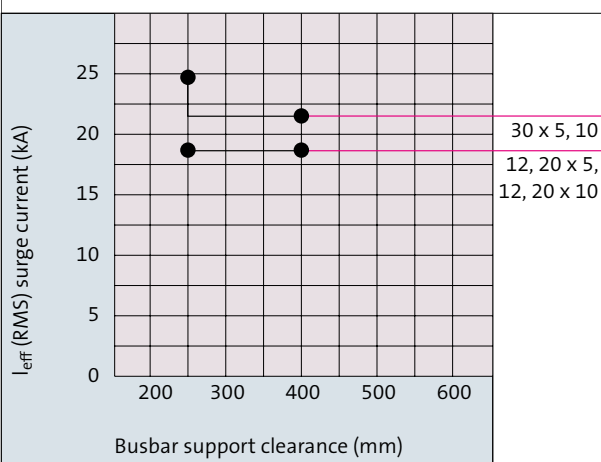
According to Table 7 as per IEC/EN 61439-1 or Table 4 according to IEC/EN 61439-1, the factor *n* is used to determine the ratio between surge current *I_{pk}* and the effective value of the short-circuit current by taking the power factor into account.

See IEC/EN 61439-1 for deviations.

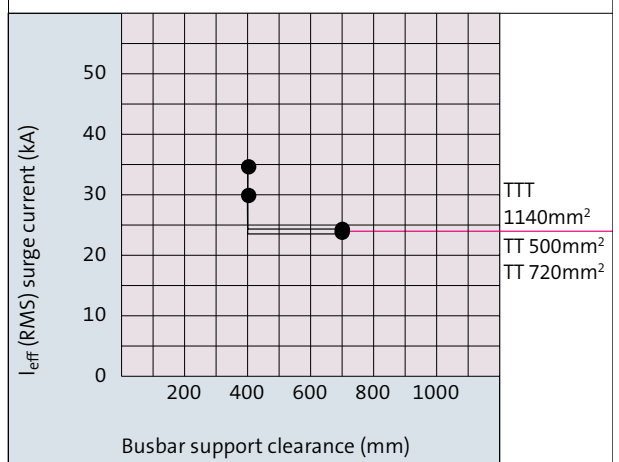
Short-circuit strength diagrams according to UL 845 for 60mm busbar systems

(●) Measured values from type tests

Busbar support 01 508



Busbar support 01 231 / 01 232



Additional SCCR values in installation instructions 94717
e.g. SCCR 100kA: —□— 500A, 30 x 10, 800mm centre distance

Overview of the applicability of Wöhner products in terms of operating voltage

(only the conditions according to IEC standards are taken into consideration)

All specifications apply for overvoltage category III in accordance with IEC 60439-1 or IEC 61439-1

The applicability for other overvoltage categories can be derived from the rated surge withstand capacity U_{imp} .

The following clearances must be maintained:

Rated surge withstand capacity U_{imp}	Minimum clearance
4kV	3.0mm
6kV	5.5mm
8kV	8.0mm
12kV	14mm

All specifications apply for level of soiling 3 in accordance with IEC 60439-1 or IEC 61439-1

(Wöhner uses insulating parts made from materials in material class IIIa).

The following creepage distances must be maintained:

Rated insulation voltage U_i	Creepage distance
400V AC / DC	6.3mm
500V AC / DC	8.0mm
690V AC / DC	10.0mm
800V AC / DC	12.5mm
1000V AC / DC	16.0mm
1250V DC	20.0mm
1500V DC	25.0mm

The values shown in the table below apply for the Wöhner items themselves.

The user is responsible for maintaining the proper clearances and creepage distances, taking the installation conditions into account.

The maximum permitted power dissipation of the fuse links must be taken into account with components having fuses.

Short circuit data for DC applications is available upon request.

Values for selected items with regard to insulation coordination

Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
01 008	690			2000	800	800	2)
01 047	690				1000	1500	2)
01 068	690				1000	1500	2)
01 069	690			1600	800	800	2)
01 070	690			1600	800	800	2)
01 071	690			1600	800	800	2)
01 092	690				1000	1500	2)
01 094	690			630	1000	1500	2)
01 116	690		8		1000	1500	2)
01 132	690		6		1000	1500	2)
01 135	690				1000	1500	2)
01 141	690				1000	1000	2)
01 145	690				1000	1000	2)
01 147	690		6		800	800	
01 162	690		6		800	800	
01 165	690		6		800	800	
01 166	690				1000	1000	2)
01 185	690			1600	800	800	2)
01 186	690			2500	800	800	2)
01 193	690				1000	1000	2)
01 198	690	1000	4	225	1000	1000	

1) The value for the maximum permitted operating voltage of fuse combination units in accordance with IEC 60947-3 is only valid when the device is used as a fuse holder **without a load-switching function**.

2) Due to the insulating characteristics, the use of single-pole devices is determined exclusively by the installation conditions.

Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
01 199	690		6		800	800	
01 203	690				1000	1500	2)
01 230	690		8		1000	1500	
01 231	690		8		1000	1500	
01 232	690		8		1000	1500	
01 240	690		6		800	800	
01 243	690		6		800	800	
01 272	690		6		1000	1500	
01 274	690				800	800	2)
01 275	690				800	800	2)
01 284	690				1000	1500	2)
01 285	690				1000	1500	2)
01 287	690				1000	1500	2)
01 289	690				1000	1500	2)
01 290	690				1000	1500	2)
01 292	690				1000	1500	2)
01 295	690				800	800	
01 318	690				1000	1500	2)
01 319	690				1000	1500	2)
01 355	690		6		1000	1500	2)
01 356	690		6		1000	1500	
01 357	690		8		1000	1500	
01 360	690		6		690		
01 361	690		6		690		
01 362	690		6		690		
01 401	690		6		800	800	
01 422	690		8		1000	1500	
01 430	690		8		1000		
01 441	690			1000	1000		
01 442	690			1600	1000		
01 443	690			1600	1000		
01 479	690		6		1000	1500	
01 480	690		8		1000		2)
01 481	690		8		1000		2)
01 484	690		6		1000	1500	
01 485	690		8		1000	1500	
01 495	690		8		1000	1500	
01 498	400	250	6	63	500	250	
01 500	690		8		1000	1500	
01 508	690		8		1000	1500	
01 512	690				1000	1500	2)
01 513	690			1600	800	800	2)
01 514	690				1000	1500	2)
01 537	690		6		800	800	
01 538	690		6		800	800	
01 562	690		6	80	1000	1000	
01 563	690		6	80	1000	1000	
01 601	690		6		1000	1500	2)
01 602	690	1000	6		1000	1500	
01 603	690		8		1000	1500	
01 647	400	250	6	63	500	250	
01 747	690				1000	1500	2)
01 748	690				1000	1500	2)
01 749	690				1000	1500	2)
01 753	690		6		800	800	

- 1) The value for the maximum permitted operating voltage of fuse combination units in accordance with IEC 60947-3 is only valid when the device is used as a fuse holder **without a load-switching function**.
- 2) Due to the insulating characteristics, the use of single-pole devices is determined exclusively by the installation conditions.

Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
01 754	690		6		800	800	
01 759	690				1000	1500	2)
01 760	690			600	1000	1500	2)
01 823	690				1000	1000	2)
01 827	690				1000	1000	2)
01 829	690				1000	1000	2)
01 886	690				1000	1000	2)
01 905	690				1000	1000	2)
01 906	690			1600	800	800	2)
01 907	690			1600	800	800	2)
01 911	690			1600	800	800	2)
01 934	690			1600	800	800	2)
01 935	690			1600	800	800	2)
01 936	690			1600	800	800	2)
01 990	690				1000	1000	2)
03 173	690			160	800	800	2)
03 193	690			160	800	800	2)
03 195	690			250	800	800	2)
03 196	690			250	800	800	2)
03 197	690			630	800	800	2)
03 198	690			630	800	800	2)
03 199	690	440	6	160	800	800	
03 213	690			630	800	800	2)
03 214	600			70	600		
03 215	600			80	600		
03 217	600			100	600		
03 219	600			125	600		
03 220	600			150	600		
03 221	600			175	600		
03 222	600			200	600		
03 224	600			250	600		
03 225	600			300	600		
03 226	600			350	600		
03 227	600			400	600		
03 228	600	300		70	600	300	
03 229	600	300		80	600	300	
03 230	600	300		90	600	300	
03 231	600	300		100	600	300	
03 233	600	300		125	600	300	
03 234	600	300		150	600	300	
03 235	600	300		175	600	300	
03 236	600	300		200	600	300	
03 238	600	300		250	600	300	
03 239	600	300		300	600	300	
03 240	600	300		350	600	300	
03 241	600	300		400	600	300	
03 288	1000	1500	6	250	1000	1500	
03 289	1000	1500	6	250	1000	1500	
03 290	1000	1500	6	250	1000	1500	
03 293	1000	1500	6	600	1000	1500	
03 294	1000	1500	6	600	1000	1500	
03 299	690	440	6	160	800	800	
03 300	690	440	6	250	800	800	
03 301	690	440	6	250	800	800	
03 316	690	440	6	125	800	800	

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Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
03 350	690	440	6	160	1000	1000	2)
03 351	690	440	6	160	800	800	
03 354	690	440	6	160	1000	1000	2)
03 355	690	440	6	160	800	800	
03 369	690	440	6	160	1000	1000	
03 370	690	440	6	160	1000	1000	
03 384	690	440	6	250	800	800	
03 518	690	440	6	400	800	800	
03 519	690			160	800	800	2)
03 520	690	440	6	160	800	800	
03 587	690	440	6	160	800	800	
03 599	690	440	6	400	800	800	
03 601	690	440	6	250	800	800	
03 620	690			160	800	800	2)
03 654	690	440	6	160	800	800	
03 656	690	440	6	160	800	800	
03 657	690			250	800	800	2)
03 668	690			160	800	800	2)
03 693	690	440	6	400	800	800	
03 757	690			400	800	800	2)
03 758	690	440	6	160	1000	1000	2)
03 759	690	440	6	160	800	800	
03 760	690	440	6	160	1000	1000	2)
03 761	690	440	6	160	800	800	
03 762	690	440	6	250	1000	1000	2)
03 763	690	440	6	250	800	800	
03 765	690	440	6	250	800	800	
03 766	690	440	6	400	1000	1000	2)
03 767	690	440	6	400	800	800	
03 768	690	440	6	630	1000	1000	2)
03 769	690	440	6	630	800	800	
03 790	690	440	6	630	800	800	
03 795	690	440	6	400	800	800	
05 188	690			63	800	800	2)
05 779	600	600			600	600	2)
05 780	1500	1500			1500	1500	2)
05 781	1500	1500			1500	1500	2)
05 782	1500	1500			1500	1500	2)
05 783	2000	2000			2000	2000	2)
05 784	2000	2000			2000	2000	2)
05 786	2000	2000			2000	2000	2)
05 787	2000	2000			2000	2000	2)
05 788	2000	2000			2000	2000	2)
05 789	3000	3000			3000	3000	2)
05 790	2000	2000			2000	2000	2)
05 791	2000	2000			2000	2000	2)
05 792	1500	1500			1500	1500	2)
05 800	1500	1500			1500	1500	2)
05 801	1500	1500			1500	1500	2)
05 802	1500	1500			1500	1500	2)
30 322	690				800	800	
30 473	690				800	800	
31 008	500			1		250	
31 009	500			8		250	
31 010	500			12		250	

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Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
31 011	690			2		250	
31 012	400			80	500		
31 014	690	1000	4	80	1000	1000	2)
31 017	690			6		250	
31 024	400		4	80	1000	1000	2)
31 039	690		4	115	1000	1000	
31 057	690	1000	4	130	1000	1000	2)
31 101	690	1000	4	80	1000	1000	2)
31 110	690		6	32	800		1)
31 111	690		6	32	800		1)
31 112	690		6	32	800		1)
31 113	690		6	32	800		1)
31 114	690		6	32	800		1)
31 115	690		6	50	800		1)
31 116	690		6	50	800		1)
31 117	690		6	50	800		1)
31 118	690		6	50	800		1)
31 119	690		6	50	800		1)
31 120	690		6	100	800		1)
31 121	690		6	100	800		1)
31 122	690		6	100	800		1)
31 123	690		6	100	800		1)
31 124	690		6	100	800		1)
31 130	690		6	32	690		1)
31 132	690		6	32	690		1)
31 133	690		6	32	690		1)
31 135	690		6	50	690		1)
31 138	690		6	50	690		1)
31 140	690		6	100	690		1)
31 143	690		6	100	690		1)
31 158	400	110	6	63	800	110	1)
31 168	690		6	50	800		1)
31 171	690		6	100	800		1)
31 173	500		6	25	500	500	
31 174	500	500	6	25	500	500	
31 175	500	500	6	63	690	600	
31 176	500	500	6	63	690	600	
31 182	500			2		250	
31 183	500			4		250	
31 184	500			6		250	
31 185	500			10		250	
31 186	500			16		250	
31 187	500			20		250	
31 188	500			25		250	
31 189	400			32		200	
31 190	690			10		250	
31 191	690			16		250	
31 192	690			20		250	
31 193	690			25		250	
31 194	500			32		250	
31 195	500			40		250	
31 196	400			50		200	
31 198	690			32		250	
31 199	690			40		250	
31 200	690			50		250	

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Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
31 201	690			63		250	
31 202	500			80		250	
31 203	500			100		250	
31 204	400			125		200	
31 232	690	110	6	32	800	110	1)
31 275	690		6	32	800		1)
31 276	690		6	32	800		1)
31 277	690		6	32	800		1)
31 278	690		6	50	800		1)
31 279	690		6	50	800		1)
31 280	690		6	50	800		1)
31 281	690		6	100	800		1)
31 282	690		6	100	800		1)
31 283	690		6	100	800		1)
31 284	600	600		30	600	600	
31 285	600	600		30	600	600	
31 286	400	250	6	16	400	250	
31 287	600	600		30	600	600	
31 288	400	250	6	16	400	250	
31 291	400	250	6	63	400	250	
31 293	400	250	6	63	400	250	
31 295	600	600		30	600	600	
31 296	600	600		30	600	600	
31 297	600	600		30	600	600	
31 298	600	600		30	600	600	
31 299	600	600		30	600	600	
31 300	600	600		30	600	600	
31 301	400	250	6	16	400	250	
31 302	400	250	6	16	400	250	
31 303	400	250	6	63	400	250	
31 306	400	250	6	63	400	250	
31 307	400	65	6	63	500	250	1)
31 308	400	65	6	63	500		1)
31 309	400		4	80	1000	1000	2)
31 311	400		4	80	1000	1000	2)
31 313	400	130	6	63	500	250	1)
31 314	400	130	6	63	500		1)
31 315	400	130	6	63	500		1)
31 323	600			10	600		
31 324	600	200		15	600	200	
31 325	600	200		20	600	200	
31 326	600	200		25	600	200	
31 327	600	200		30	600	200	
31 333	600	300		1	600	300	
31 338	600	300		2	600	300	
31 342	600	300		3	600	300	
31 345	600	300		4	600	300	
31 349	600	300		6	600	300	
31 351	600	300		8	600	300	
31 353	600	300		10	600	300	
31 354	600	300		12	600	300	
31 355	600	300		15	600	300	
31 357	600	300		20	600	300	
31 358	600	300		25	600	300	
31 359	600	300		30	600	300	

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- 2) Due to the insulating characteristics, the use of single-pole devices is determined exclusively by the installation conditions.

Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
31 360	600	300		35	600	300	
31 361	600	300		40	600	300	
31 362	600	300		45	600	300	
31 363	600			50	600		
31 364	600			60	600		
31 366	500			6		250	
31 368	500			10		250	
31 370	500			16		250	
31 371	500			20		250	
31 372	500			25		250	
31 373	500			32		250	
31 374	500			40		250	
31 385	690			50		250	
31 386	500			63		250	
31 387	500			80		250	
31 441	500	500	6	25	690	500	
31 442	500	500	6	63	690	600	
31 511	600	175		35	600	175	
31 512	600	175		40	600	175	
31 514	600	175		50	600	175	
31 515	600	175		60	600	175	
31 525	400	110	6	63	700	110	1)
31 548	690	1000	4	100	1000	1500	2)
31 549	690		4	100	690		
31 550	690		4	115	1000	1000	
31 554	400	250	6	63	500	250	
31 555	1000	1500	6	32	1000	1500	
31 556	400	65	6	63	500	250	1)
31 557	400	130	6	63	500		1)
31 561	690	600	4	100	690	690	
31 570		1000		30		1000	
31 572		1000		30		1000	
31 574	400		6	63	800		1)
31 575	400		6	63	800		1)
31 578	400		6	63	800		1)
31 579	400		6	63	800		1)
31 588	400		6	63	800		1)
31 918	500	500	6	25	690	500	
31 919	500	500	6	63	690	600	
31 920	600	600		60	600	600	
31 921	600	600		60	600	600	
31 922	600	600		60	600	600	
31 923	600	600		60	600	600	
31 924	600	600		60	600	600	
31 925	600	600		60	600	600	
31 929	72	72		30	72	72	
31 930	72		6	32	72		1)
31 932	600	600		30	600	600	
31 933	600	600		30	600	600	
31 934	600	600		30	600	600	
31 935	400	250	6	63	500	250	
31 936	400	250	6	63	500	250	
31 940	690		6	50	800		1)
31 941	690		6	50	800		1)
31 942	690		6	100	800		1)

- 1) The value for the maximum permitted operating voltage of fuse combination units in accordance with IEC 60947-3 is only valid when the device is used as a fuse holder **without a load-switching function**.
- 2) Due to the insulating characteristics, the use of single-pole devices is determined exclusively by the installation conditions.

Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
31 943	690		6	100	800		1)
31 946	500	500	6	25	690	500	
31 947	500	500	6	63	690	600	
31 950	500	500	6	25	690	500	
31 951	500	500	6	63	690	600	
31 954	690	600	6	32	800	800	1)
31 955	690	600	6	32	700	700	1)
31 956	1000	1000	6	20	1000	1000	1)
31 957	690		6	100	800		1)
31 958	600		6	30	600		
31 959	600		6	30	600		
31 960	1000	1000	6	20	1000	1000	1)
31 961	690	600	6	32	800	800	1)
31 963	690	600	6	32	800	800	1)
31 964	690	600	6	32	700	700	1)
31 968	600	600		30	600	600	
31 970	600	600		60	600	600	
31 971		1000	6	30		1000	
31 972	690		6	50	800		1)
31 973		1000	6	30		1000	
31 974		1000	6	30		1000	1)
32 004	690		6	630	800	800	
32 017	690		6	250	800	800	
32 018	690		6	160	800	800	
32 020	690		6	160	800	800	
32 023	690		6	250	800	800	
32 137	690		6	250	800	800	
32 138	690		6	600	800	800	
32 140	690		6	250	800	800	
32 156	690		6	250	800	800	
32 157	690		6	570	800	800	
32 168	690		6	250	800	800	
32 214	690		6	200	800	800	
32 215	690		6	200	800	800	
32 216	690		6	250	800	800	
32 400	690		6	25	800	800	
32 401	690		6	16	800	800	
32 402	690		6	25	800	800	
32 404	690		6	32	800	800	
32 408	690		6	32	800	800	
32 412	690		6	45	800	800	
32 416	690		6	45	800	800	
32 420	690		6		800	800	
32 421	690		6		800	800	
32 425	690		6		800	800	
32 426	690		6		800	800	
32 427	690		6	32	800	800	
32 428	690		6	32	800	800	
32 429	690		6	16	800	800	
32 430	690		6	25	800	800	
32 431	690		6	25	800	800	
32 432	690		6	25	800	800	
32 433	690		6	25	800	800	
32 434	690		6	32	800	800	
32 436	690		6	25	800	800	

- 1) The value for the maximum permitted operating voltage of fuse combination units in accordance with IEC 60947-3 is only valid when the device is used as a fuse holder **without a load-switching function**.
- 2) Due to the insulating characteristics, the use of single-pole devices is determined exclusively by the installation conditions.

Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
32 438	690		6	32	800	800	
32 439	690		6	25	800	800	
32 440	690		6	16	800	800	
32 441	690		6	32	800	800	
32 442	690		6	32	800	800	
32 443	690		6	32	800	800	
32 444	690		6	32	800	800	
32 445	690		6	25	800	800	
32 446	690		6	32	800	800	
32 448	690		6	25	800	800	
32 449	690		6	32	800	800	
32 450	690		6	25	800	800	
32 451	690		6	32	800	800	
32 452	690		6	25	800	800	
32 453	690		6	32	800	800	
32 454	690		6	63	800	800	
32 455	690		6	63	800	800	
32 456	690		6	63	800	800	
32 457	690		6	63	800	800	
32 459	690		6	63	800	800	
32 460	690		6	63	800	800	
32 461	690		6	63	800	800	
32 463	690		6	63	800	800	
32 464	690		6	80	800	800	
32 465	690		6	80	800	800	
32 466	690		6	80	800	800	
32 467	690		6	80	800	800	
32 469	690		6	80	800	800	
32 472	690		6	80	800	800	
32 477	690		6		800	800	
32 478	690		6		800	800	
32 484	690		6		800	800	
32 485	690		6		800	800	
32 498	690		6	32	800	800	
32 533	690		6	25	800	800	
32 534	690		6	25	800	800	
32 535	690		6	63	800	800	
32 549	690		6	160	800	800	
32 570	690		6	160	800	800	
32 575	690		6	160	800	800	
32 577	690		6	160	800	800	
32 578	690		6	250	800	800	
32 579	690		6	400	800	800	
32 580	690		6	250	800	800	
32 581	690		6	500	800	800	
32 582	690		6	250	800	800	
32 583	690		6	500	800	800	
32 584	690		6	250	800	800	
32 585	690		6	500	800	800	
32 588	690		6	32	800	800	
32 590	690		6	32	800	800	
32 591	690		6	63	800	800	
32 592	690		6	250	800	800	
32 593	690		6	580	800	800	
32 594	690	440		200	800	800	

- 1) The value for the maximum permitted operating voltage of fuse combination units in accordance with IEC 60947-3 is only valid when the device is used as a fuse holder **without a load-switching function**.
- 2) Due to the insulating characteristics, the use of single-pole devices is determined exclusively by the installation conditions.

Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
32 601	690		6	290	800	800	
32 637	690		6	25	800	800	
32 638	690		6	32	800	800	
32 639	690		6	32	800	800	
32 641	690		6	600	800	800	
32 651	690		6	250	800	800	
32 655	690		6	32	800	800	
32 659	690		6	32	800	800	
32 660	690		6	160	800	800	
32 661	690		6	160	800	800	
32 662	690		6	80	800	800	
32 663	690		6	80	800	800	
32 664	690		6	80	800	800	
32 752	690		8	1000	800		
32 753	690		8	1000	800		
32 754	690		8	1000	800		
32 755	690		8	1000	800		
32 756	690		8	1450	800		
32 757	690		8	1250	800		
32 758	690		8	1250	800		
32 759	690		8	1250	800		
32 760	690		8	1000	800		
32 761	690		8	1440	800		
32 762	690		8	1440	800		
32 763	690		8	1440	800		
32 764	690		8	1250	800		
32 765	690		8	1250	800		
32 766	690		8	1000	800		
32 767	690		8	800	800		
32 768	690		8	1440	800		
32 771	690		8	1000	800		
32 772	690		8	1000	800		
32 773	690		8	1000	800		
32 774	690		8	1000	800		
32 775	690		8	1450	800		
32 776	690		8	1250	800		
32 777	690		8	1250	800		
32 778	690		8	1250	800		
32 779	690		8	1440	800		
32 780	690		8	1440	800		
32 781	690		8	1440	800		
32 782	690		8	1440	800		
32 784	690		8	1250	800		
32 785	690		8	1000	800		
32 786	690		8	1000	800		
32 975	690		6	400	800	800	
32 976	690		6	160	800	800	
32 977	690		6	250	800	800	
32 978	690		6	630	800	800	
32 980	690		6	580	800	800	
32 981	690		6	100	800	800	
33 075	690	440	6	160	800	800	1)
33 079	690	440	6	160	800	800	1)
33 087	690		6	250	1000	1000	
33 088	690		6	400	1000	1000	

1) The value for the maximum permitted operating voltage of fuse combination units in accordance with IEC 60947-3 is only valid when the device is used as a fuse holder **without a load-switching function**.

2) Due to the insulating characteristics, the use of single-pole devices is determined exclusively by the installation conditions.

Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
33 089	690		6	630	1000	1000	
33 093	690		8	250	1000	1000	1)
33 094	690		8	400	1000	1000	1)
33 095	690		8	630	1000	1000	1)
33 097	690		8	250	1000	1000	1)
33 098	690		8	400	1000	1000	1)
33 099	690		8	630	1000	1000	1)
33 149	690	250	6	250	690	250	1)
33 150	690	250	6	400	690	250	1)
33 151	690	250	6	630	690	250	1)
33 160	690	250	6	250	690	250	1)
33 161	690	250	6	400	690	250	1)
33 162	690	250	6	630	690	250	1)
33 194	690	440	6	250	800	800	1)
33 198	690	440	6	160	800	800	1)
33 199	690	440	6	160	800	800	1)
33 200	690	440	6	160	800	800	1)
33 201	690	440	6	250	800	800	1)
33 202	690	440	6	400	800	800	1)
33 203	690	440	6	630	800	800	1)
33 206	690	250	2	160	690	250	1)
33 207	690	250	6	160	690	250	1)
33 208	690	250	6	160	690	250	1)
33 216	690	440	6	125	800	800	1)
33 217	690	440	6	125	800	800	1)
33 221	690	440	6	160	800	800	1)
33 222	690	440	6	160	800	800	1)
33 234	690		8	160	800	800	1)
33 235	690		8	160	800	800	1)
33 243	690		8	250	1000	1000	1)
33 244	690		8	400	1000	1000	1)
33 245	690		8	630	1000	1000	1)
33 285	690		4	160	800	250	1)
33 286	690		4	160	800	250	1)
33 308	600	600		400	600	600	
33 311	600	600		400	600	600	
33 321	690		8	1250	1000	1000	1)
33 324	690	250	6	160	690	250	1)
33 325	690	250	2	250	690	250	1)
33 326	690	250	2	400	690	250	1)
33 327	690	250	2	630	690	250	1)
33 328	690	250	2	160	690	250	1)
33 329	690	250	2	160	690	250	1)
33 330	690	250	2	250	690	250	1)
33 331	690	250	2	400	690	250	1)
33 332	690	250	2	630	690	250	1)
33 384	690		6	160	800	800	
33 393	690	440	6	250	800	800	1)
33 394	690	250	6	160	690	250	1)
33 398	690	440	6	160	800	800	1)
33 402	600			100	600	600	
33 403	600			200	600	600	
33 408	600			100	600	600	
33 409	600	600		200	600	600	
33 416	690	440	6	125	800	800	1)

- 1) The value for the maximum permitted operating voltage of fuse combination units in accordance with IEC 60947-3 is only valid when the device is used as a fuse holder **without a load-switching function**.
- 2) Due to the insulating characteristics, the use of single-pole devices is determined exclusively by the installation conditions.

Part no.	Rated operating Voltage U_e (V)		Rated surge capacity U_{imp} (kV)	Rated operating current I_e (A)	Maximum permitted operating voltage (V)		Note
	AC	DC			AC	DC	
33 420	690	250	2	160	690	250	1)
33 421	600			30	600	600	
33 422	600	600		60	600	600	
33 600	690	440	6	250	800	800	1)
33 601	690	440	6	250	800	800	1)
33 602	690	440	6	400	800	800	1)
33 603	690	440	6	630	800	800	1)
33 700	690		8	160	1000		1)
33 701	690		8	250	1000		1)
33 702	690		8	400	1000		1)
33 703	690		8	630	1000		1)
33 704	690		8	160	1000		1)
33 705	690		6	160	1000	1000	
33 706	690		6	250	1000	1000	
33 707	690		6	400	1000	1000	
33 708	690		6	630	1000	1000	
33 715	690		8	160	1000		1)
33 716	690		8	250	1000		1)
33 717	690		8	400	1000		1)
33 718	690		8	630	1000		1)
33 719	690		8	160	1000		1)
33 720	690		4	160	800	250	1)
33 721	690		4	250	800	250	1)
33 722	690		4	400	800	250	1)
33 723	690		4	630	800	250	1)
33 724	690		4	160	800	250	1)
33 730	690		8	910	1000		1)
33 731	690		8	1250	1000		1)
33 770	690		8	160	1000		1)
33 771	690		4	160	800	250	1)
33 772	690		8	160	1000		1)
33 773	690		8	160	1000		1)
33 774	690		4	160	800	250	1)
33 775	690		8	160	1000		1)
36 100	500		6	0.6	500		
36 101	500		6	0.6	500		
36 102	500		6	0.6	500		
36 103	500		6	2.4	500		
36 104	500		6	2.4	500		
36 105	500		6	2.4	500		
36 106	500		6	9	500		
36 107	500		6	9	500		
36 108	500		6	9	500		
36 109	500		6	0.6	500		
36 110	500		6	2.4	500		
36 111	500		6	9	500		

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- 2) Due to the insulating characteristics, the use of single-pole devices is determined exclusively by the installation conditions.

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
01 008	HH64.2	UL*	●				○
01 025	C025-L	●*	●	●			○
01 026	C026-L	●*	●	●			○
01 027	3x20x1	UL*		●			○
01 028	6x20x1	UL*		●			○
01 029	10x20x1	UL*		●			○
01 035	6x15,5x0,8	UL*		●			○
01 047	520			●			○
01 054	3x9x0,8	UL*		●			○
01 060	5x50x1	UL*		●			○
01 061	10x80x1	UL*		●			○
01 063	6x20x1	UL*		●			○
01 064	10x20x1	UL*		●			○
01 068	524	UL	●	●			○
01 069	CPC50-L	●*					○
01 070	CPC63-L	●*					○
01 071	CPC100-L	●*					○
01 075	5x24x1	UL*		●			○
01 076	10x24x1	UL*		●			○
01 084	6x9x0,8	UL*		●			○
01 089	4x15,5x0,8	UL*		●			○
01 090	6x15,5x0,8	UL*		●			○
01 091	10x15,5x0,8	UL*		●			○
01 092				●			○
01 094				●			○
01 095	5x32x1	UL*		●			○
01 096	10x32x1	UL*		●			○
01 097	5x40x1	UL*		●			○
01 099	10x40x1	UL*		●			○
01 112	5x50x1	UL*		●			○
01 113	10x50x1	UL*		●			○
01 114							○
01 116	S635-L	●*		●			○
01 119							○
01 120							○
01 121							○
01 123	10x63x1	UL*		●			○
01 126							○
01 127							○
01 128							○
01 129							○
01 130							○
01 131	511	UL	●	●			○
01 132	S645-L	●*		●			○
01 135	515-L	●*					○
01 136	TC60-L	●*	●	●			○
01 137	TC60-L	●*	●	●			○
01 138							○
01 139							○
01 140	20x10-L	●*	●	●			○
01 141	LV30-L	●*		●			○
01 143							○
01 144							○
01 145	LVH-L	●*					○
01 147	M300-L	●*		●			○
01 162				●			○
01 165	M150-L	●*					○
01 166				●			○
01 170							○
01 184	10x24x1	UL*		●			○
01 185	H41.2	UL*	●	●			○
01 186	HH101.2	UL*	●				○
01 187	HH1140-L	●*	●	●			○
01 188	HH1140-L	●*	●	●			○
01 189	HH1140-L	●*	●	●			○
01 190	H720-L	●*	●	●			○
01 193				●			○
01 194	6x9x0,8	UL*		●			○
01 196	4x15,5x0,8	UL*		●			○
01 198							○
01 199							○
01 201							○
01 202							○
01 203	528	UL	●	●			○
01 204	30x10-L	●*	●	●			○
01 206							○
01 207							○
01 218							○
01 222							○
01 223	H500-L	●*	●	●			○
01 224	H500-L	●*	●	●			○
01 225	H500-L	●*	●	●			○
01 226	H500-L	●*	●	●			○
01 227	HH1140-L	●*	●	●			○
01 228							○
01 229	H720-L	●*	●	●			○
01 230							○
01 231	S630-L	●*	●	●			○
01 232	S640-L	●*	●				○
01 234	234-L	●*	●	●			○

- approved
- UL Recognized
- * for feeder circuits approved according to UL 508A up to 600V
- waiting approval at editorial deadline
- no certification required

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
01 236							○
01 237							○
01 238							○
01 240	240-L	●*	●	●			○
01 243	243-L	●*	●	●			○
01 244	C30x5-L	●*	●	●			○
01 245	C30x10-L	●*	●	●			○
01 249	H720-L	●*	●	●			○
01 250	H500-L	●*	●	●			○
01 251							○
01 252	CHH-L	●*	●	●			○
01 253	4x24x1			●			○
01 254							○
01 255	6x24x1			●			○
01 256	6x40x1			●			○
01 257							○
01 258							○
01 272	S612-L	●*					○
01 273	10x100x1			●			○
01 274	LVHH-L	●*					○
01 275	LVHH-L	●*					○
01 284	521		●	●			○
01 285	522		●	●			○
01 287	523		●	●			○
01 289	525		●	●			○
01 290	526		●	●			○
01 292	527		●	●			○
01 295							○
01 298							○
01 299							○
01 300	240		●	●			○
01 301	243		●	●			○
01 303							○
01 314	C314-L	●*					○
01 317	C317-L	●*					○
01 318	518		●	●			○
01 319	519		●	●			○
01 320	C026-L	●*					○
01 323	8x24x1			●			○
01 324	5x63x1			●			○
01 325							○
01 343	8x50x1			●			○
01 355							○
01 356	S356-L	●*					○
01 357	S62015-L	●*		●			○

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
01 358	D620-L	●*					○
01 359	D620-L	●*					○
01 360	P620-L	●*					○
01 361	P620-L	●*					○
01 362	P620-L	●*					○
01 363							○
01 364							○
01 367							○
01 369							○
01 370	M120-L	●*					○
01 371							○
01 373							○
01 374	D612-L	●*					○
01 376							○
01 377							○
01 378							○
01 379							○
01 380							○
01 381	12x5-L	●*	●	●			○
01 382	12x5-L	●*	●	●			○
01 383	20x5-L	●*	●	●			○
01 384	20x5-L	●*	●	●			○
01 387	30x5-L	●*	●	●			○
01 388	30x5-L	●*	●	●			○
01 389	12x10-L	●*	●	●			○
01 390	12x10-L	●*	●	●			○
01 391	20x10-L	●*	●	●			○
01 392	20x10-L	●*	●	●			○
01 393	30x10-L	●*	●	●			○
01 394	30x10-L	●*	●	●			○
01 395	H500-L	●*	●	●			○
01 396	H500-L	●*	●	●			○
01 397	H720-L	●*	●	●			○
01 398	H720-L	●*	●	●			○
01 399	HH1140-L	●*	●	●			○
01 400	HH1140-L	●*	●	●			○
01 401	240-L	●*	●	●			○
01 413	412		●	●			○
01 417	C60.2-L	●*					○
01 420							○
01 421							○
01 422							○
01 424				●			○
01 425							○
01 426							○

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Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
01 427							○
01 430							○
01 431							○
01 432							○
01 433							○
01 434							○
01 436							○
01 437							○
01 438							○
01 439							○
01 440							○
01 441							○
01 442							○
01 443							○
01 444							○
01 479							○
01 480							○
01 481							○
01 482							○
01 484							○
01 485	485		●	●			○
01 495	S610		●	●			○
01 498	5683			●	●		
01 500	S610		●	●			○
01 508	S620-L	●*	●	●			○
01 509	10x50x1			●			○
01 510	10x63x1			●			○
01 512				●			○
01 513	HH41.2		●				○
01 514				●			○
01 515	B620-L	●*	●	●			○
01 518	B620-L	●*	●	●			○
01 537	M300-L	●*	●	●			○
01 538	M3210-L	●*	●	●			○
01 539	CTC60-L	●*	●	●			○
01 540	CTC60-L	●*	●	●			○
01 554	C60.1-L	●*	●	●			○
01 555	C60.2-L	●*	●	●			○
01 562		●*					
01 563	CPL16-L	●*					○
01 573	511-L	●*	●	●			○
01 583	10x15,5x0,8			●			○
01 586							○
01 587							○
01 590	502		●	●			○

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
01 596	CTC60-L	●*	●	●			○
01 597	CTC60-L	●*	●	●			○
01 599	C60.1-L	●*	●	●			○
01 601	S489-L	●*		●			○
01 602							○
01 603							○
01 608	H720-L	●*	●	●			○
01 609	H500-L	●*	●	●			○
01 610							○
01 611	5x24x1			●			○
01 612	5x32x1			●			○
01 613	10x32x1			●			○
01 614	5x40x1			●			○
01 615	10x40x1			●			○
01 616							○
01 617							○
01 618	12x5-L	●*	●	●			○
01 619	15x5			●			○
01 620	20x5-L	●*	●	●			○
01 621	25x5			●			○
01 622	30x5-L	●*	●	●			○
01 623	12x10-L	●*	●	●			○
01 624	20x10-L	●*	●	●			○
01 625	30x10-L	●*	●	●			○
01 626							○
01 627							○
01 628							○
01 647	5683			●	●		
01 742							○
01 747				●			○
01 748				●			○
01 749				●			○
01 753				●			○
01 754	413		●	●			○
01 756	512-L	●*	●	●			○
01 757	513-L	●*	●	●			○
01 759	530-L	●	●	●			○
01 760	529		●	●			○
01 765							○
01 766							○
01 767							○
01 823	LV30-L	●*		●			○
01 827	LVH-L	●*					○
01 829	LVH-L	●*					○
01 831	H720-L	●*	●	●			○

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01 838	H720-L	●*	●	●			○
01 886	LV30-L	●*		●			○
01 888							○
01 890							○
01 905							○
01 906	H51.1	RU*	●	●			○
01 907	H64.1	RU*	●	●			○
01 911	H64.2	RU*	●	●			○
01 926							○
01 927							○
01 928							○
01 929							○
01 930							○
01 931							○
01 932							○
01 934	H81.2	RU*	●	●			○
01 935	H101.2	RU*	●	●			○
01 936	H51.2	RU*	●	●			○
01 980				●			
01 981				●			
01 990	LV30-L	●*		●			○
01 996							○
01 997							○
03 173							○
03 193							○
03 195							○
03 196							○
03 197							○
03 198							○
03 199	NH-00				●		
03 213							○
03 214		●					
03 215		●					
03 217		●					
03 219		●					
03 220		●					
03 221		●					
03 222		●					
03 224		●					
03 225		●					
03 226		●					
03 227		●					
03 228		●					
03 229		●					
03 230		●					

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
03 231		●					
03 233		●					
03 234		●					
03 235		●					
03 236		●					
03 238		●					
03 239		●					
03 240		●					
03 241		●					
03 289	PVH-NH1XL-30	RU					
03 290	PVH-NH1XL	RU					
03 293	PVH-NH2XL/3L	RU					
03 294	PVH-NH2XL/3L-40	RU					
03 299					●		
03 350	NH-00			●			
03 351	NH-00			●			
03 354	NH-00			●			
03 355	NH-00			●			●
03 369				●			
03 370				●			
03 519							○
03 620							○
03 654				●			
03 656				●			
03 657							○
03 668							○
03 692							○
03 693				●			
03 757							○
03 758	NH-00			●			
03 759	NH-00			●			
03 760	NH-00			●			
03 761	NH-00			●			
03 762				●			
03 763				●			
03 765				●			
03 766				●			
03 767				●			
03 768				●			
03 769				●			
03 835							○
05 188							○
05 779							○
05 780							○
05 781							○

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Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
05 782							○
05 783							○
05 784							○
05 786							○
05 787							○
05 788							○
05 789							○
05 790							○
05 791							○
05 792							○
05 800							○
05 801							○
05 802							○
08 824							○
08 825							○
30 322							○
30 473							○
31 012							○
31 014							○
31 024							○
31 026							○
31 027							○
31 028							○
31 029							○
31 039	CTB-T35.1	●*					○
31 042	CTB-C1.1	●*					○
31 056							○
31 057							○
31 070				●			
31 071				●			
31 072				●			
31 073				●			
31 084							○
31 085							○
31 101							○
31 102							○
31 103							○
31 110	AES10x38	●	●				●
31 111	AES10x38	●	●				●
31 112	AES10x38	●	●				●
31 113	AES10x38	●	●			●	●
31 114	AES10x38	●	●			●	●
31 115	AES14x51	●	●				●
31 116	AES14x51	●	●				●
31 117	AES14x51	●	●				●

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
31 118	AES14x51	●	●				●
31 119	AES14x51	●	●				●
31 120	AES22x58	●	●				●
31 121	AES22x58	●	●				●
31 122	AES22x58	●	●				●
31 123	AES22x58	●	●				●
31 124	AES22x58	●	●				●
31 130	AES10x38	●	●				●
31 132	AES10x38	●	●				●
31 133	AES10x38	●	●				●
31 135	AES14x51	●	●				●
31 138	AES14x51	●	●				●
31 140	AES22x58	●	●				●
31 143	AES22x58	●	●				●
31 157							○
31 158	SPL-D0			●	●		
31 168	AES14x51	●	●				●
31 171	AES22x58	●	●				●
31 173				●			
31 174				●			
31 175				●			
31 176				●			
31 205		RU					
31 206		RU					
31 207		RU					
31 208		RU					
31 209		RU					
31 210		RU					
31 211		RU					
31 212		RU					
31 213		RU					
31 214		RU					
31 215		RU					
31 216		RU					
31 217		RU					
31 219		RU					
31 220		RU					
31 221		RU					
31 225		RU					
31 226		RU					
31 227		RU					
31 228		RU					
31 229		RU					
31 232	SPL-10x38			●			
31 235		●					

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Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
31 236		●					
31 237		●					
31 238		●					
31 239		●					
31 240		●					
31 241		●					
31 242		●					
31 243		●					
31 244		●					
31 245		●					
31 246		●					
31 247		●					
31 248		●					
31 249		●					
31 250		●					
31 251		●					
31 252		●					
31 275	AES10x38	●	●				●
31 276	AES10x38	●	●				●
31 277	AES10x38	●	●				●
31 278	AES14x51	●	●				●
31 279	AES14x51	●	●				●
31 280	AES14x51	●	●				●
31 281	AES22x58	●	●				●
31 282	AES22x58	●	●				●
31 283	AES22x58	●	●				●
31 284	AJC 30	●	●				
31 285	AJC 30	●	●				
31 286				●			
31 287	AJC 30	●	●				
31 288				●			
31 291				●			
31 293				●			
31 295	AES CC	●	●				
31 296	AES CC	●	●				
31 297	AES CC	●	●				
31 298	AES CC	●	●				
31 299	AES CC	●	●				
31 300	AES CC	●	●				
31 301	CEB14			●	●		
31 302	CEB14			●	●		
31 303	CEB18			●	●		
31 306	CEB18			●	●		
31 307	APS-D0			●	●		
31 308	APS-D0			●	●		

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
31 309							○
31 310							○
31 311							○
31 312							○
31 313	APS-D0			●	●		
31 314	APS-D0			●	●		
31 315	APS-D0			●	●		
31 323		●					
31 324		●					
31 325		●					
31 326		●					
31 327		●					
31 333		●					
31 338		●					
31 342		●					
31 345		●					
31 349		●					
31 351		●					
31 353		●					
31 354		●					
31 355		●					
31 357		●					
31 358		●					
31 359		●					
31 360		●					
31 361		●					
31 362		●					
31 363		●					
31 364		●					
31 390							○
31 394		●					
31 395		●					
31 396		●					
31 397		●					
31 398		●					
31 399		●					
31 400		●					
31 401		●					
31 404		●					
31 405		●					
31 406		●					
31 407		●					
31 441				●			
31 442				●			
31 511		●					

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Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
31 512		●					
31 514		●					
31 515		●					
31 525	SPL-D0			●	●		
31 548	CTB25-118	●*					○
31 549	CTB25-318	●*					○
31 550	CTB-T35	●*					○
31 552	CTB-C3	●*					○
31 555	AES10x85	●					
31 557				●	●		
31 561	CTB25-318	●*					○
31 570	AEL10x38/PV-30						●
31 572	AEL10x38/PV-20						●
31 574	SEL				●		●
31 575	SEL				●		●
31 578	SEL				●		●
31 579	SEL				●		●
31 588	SEL				●		●
31 918				●			
31 919				●			
31 920	AJC 60	●	●				
31 921	AJC 60	●	●				
31 922	AJC 60	●	●				
31 923	AJC 60	●	●				
31 924	AJC 60	●	●				
31 925	AJC 60	●	●				
31 929	AES CC	●	●				
31 930	AES10x38	●	●				●
31 932	AJC 30	●	●				
31 933	AJC 30	●	●				
31 934	AJC 30	●	●				
31 935	CEL18			●	●		
31 936	CEL18			●	●		
31 940	AES14x51	●	●				●
31 941	AES14x51	●	●				●
31 942	AES22x58	●	●				●
31 943	AES22x58	●	●				●
31 946				●			
31 947				●			
31 950				●			
31 951				●			
31 954	AEL10x38		●		●		
31 955	AEL10x38		●		●		
31 956	AEL10x38				●		
31 957	AES22x58	●	●				●

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
31 958	AELCC	●	●				
31 959	AELCC	●	●				
31 960	AEL10x38				●		
31 961	AEL10x38				●		
31 963	AEL10x38				●		
31 964	AEL10x38				●		
31 968	EEC6032AJC30		●				
31 970	EEC6080AJC60		●				
31 971	AES10x38/PV	●	●				●
31 972	AES14x51	●	●				●
31 973	AES10x38/PV	●	●				
31 974	AES10x38/PV	●	●				●
32 001							○
32 004							○
32 017	EPC60250-L	●*		●			○
32 018	EPC60160-L	●*	●				○
32 020	EPC60160		●				○
32 023	60250.1-L	●*		●			○
32 137	60250.1-L	●*	●	●			○
32 138	60630.1-L	●*	●	●			○
32 140	60250.1-L	●*	●	●			○
32 146		●*					○
32 156	60250.1-L	●*	●	●			○
32 157	60630.1-L	●*	●	●			○
32 168	60250		●	●			○
32 214	60200		●	●			○
32 215	60200		●	●			○
32 216	60250		●	●			○
32 400	EMC6025-L	●*	●	●			○
32 401	EMC6025-L	●*	●	●			○
32 402	EMC6025-L	●*	●	●			○
32 404	EMC6032-L	●*	●	●			○
32 408	EMC6032-L	●*	●	●			○
32 412	EMC6045-L	●*	●	●			○
32 416	EMC6045-L	●*	●	●			○
32 420	EMC6000-L	●*	●	●			○
32 421	EMC6000-L	●*	●	●			○
32 425	EMC6000-L	●*	●	●			○
32 426	EMC6000-L	●*	●	●			○
32 427	EEC6025-L	●*	●	●			○
32 428	EEC6025-L	●*	●	●			○
32 429	EEC6025		●	●			○
32 430	EEC6025-L	●*	●	●			○
32 431	EEC6025-L	●*	●	●			○
32 432	EEC6025-L	●*	●	●			○

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Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
32 433	EEC6025-L	●*	●	●			○
32 434	EEC6025-L	●*	●	●			○
32 436	EEC6025-L	●*	●	●			○
32 438	EEC6025-L	●*	●	●			○
32 439	EEC6025-L	●*	●	●			○
32 440	EEC6025		●	●			○
32 441	EEC6032-L	●*	●	●			○
32 442	EEC6032-L	●*	●	●			○
32 443	EEC6032-L	●*	●	●			○
32 444	EEC6032-L	●*	●	●			○
32 445	EEC6025-L	●*	●	●			○
32 446	EEC6032-L	●*	●	●			○
32 448	EEC6025-L	●*	●	●			○
32 449	EEC6032-L	●*	●	●			○
32 450	EEC6025-L	●*	●	●			○
32 451	EEC6025-L	●*	●	●			○
32 452	EEC6025-L	●*	●	●			○
32 453	EEC6025-L	●*	●	●			○
32 454	EEC6063-L	●*	●	●			○
32 455	EEC6063-L	●*	●	●			○
32 456	EEC6063-L	●*	●	●			○
32 457	EEC6063-L	●*	●	●			○
32 459	EEC6063-L	●*	●	●			○
32 460	EEC6063-L	●*	●	●			○
32 461	EEC6063-L	●*	●	●			○
32 463	EEC6063-L	●*	●	●			○
32 464	EEC6080		●	●			○
32 465	EEC6080		●	●			○
32 466	EEC6080-L	●*	●	●			○
32 467	EEC6080-L	●*	●	●			○
32 469	EEC6080-L	●*	●	●			○
32 472	EEC6080-L	●*	●	●			○
32 477	EEC6000-L	●*	●	●			○
32 478	EEC6000-L	●*	●	●			○
32 484	EEC6000-L	●*	●	●			○
32 485	EEC6000-L	●*	●	●			○
32 486							○
32 487							○
32 498	EEC6025-L	●*	●	●			○
32 511							○
32 513							○
32 533	EEC6025-L	●*	●	●			○
32 534	EEC6025-L	●*	●	●			○
32 535	EEC6063-L	●*	●	●			○
32 549	EPC60160-L	●*	●				○

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
32 570	ECL60160-L	●*					○
32 575	EPC60160-L	●*	●				○
32 577	EPC60160-L	●*	●				○
32 578	EPC60250-L	●*		●			○
32 579	EPC60630-L	●*					○
32 580	EPC60250-L	●*		●			○
32 581	EPC60630-L	●*					○
32 582	EPC60250-L	●*		●			○
32 583	EPC60630-L	●*					○
32 584	EPC60250-L	●*		●			○
32 585	EPC60630-L	●*		●			○
32 588	EEC6025-L	●*					○
32 590	EEC6025-L	●*	●	●			○
32 591	ECC6063-L	●*	●	●			○
32 592	EPC60250-L	●*		●			○
32 593	EPC60630-L	●*		●			○
32 601	EPC60250-L	●*		●			○
32 628							○
32 629							○
32 630							○
32 631							○
32 632							○
32 633							○
32 634							○
32 637	EEC6025-L	●*	●	●			○
32 638	EEC6025-L	●*	●	●			○
32 639	EEC6025-L	●*	●	●			○
32 640							○
32 641	EPC60630-L	●*		●			○
32 651	EPC60250-L						○
32 655	EEC6025-L	●*	●	●			○
32 659	EEC6025-L	●*	●	●			○
32 660							○
32 661	EPC60160-L						○
32 662							○
32 663	EEC6080-L	●*					○
32 664	EEC6080-L	●*					○
32 750							○
32 751							○
32 752	EPC1851600						○
32 753	EPC1851600						○
32 754	EPC1851600						○
32 755	EPC1851600						○
32 756	EPC1851600						○
32 757	EPC1851600						○

- approved
- UL Recognized
- * for feeder circuits approved according to UL 508A up to 600V
- waiting approval at editorial deadline
- no certification required

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
32 758	EPC1851600						○
32 759	EPC1851600						○
32 760	EPC1851600						○
32 761	EPC1851600						○
32 762	EPC1851600						○
32 763	EPC1851600						○
32 764	EPC1851600						○
32 765	EPC1851600						○
32 766	EPC1851600						○
32 767	EPC1851600						○
32 768	EPC1851600						○
32 771	EPC1851600						○
32 772	EPC1851600						○
32 773	EPC1851600						○
32 774	EPC1851600						○
32 775	EPC1851600						○
32 776	EPC1851600						○
32 777	EPC1851600						○
32 778	EPC1851600						○
32 779	EPC1851600						○
32 780	EPC1851600						○
32 781	EPC1851600						○
32 782	EPC1851600						○
32 784	EPC1851600						○
32 785	EPC1851600						○
32 786	EPC1851600						○
32 907							○
32 912							○
32 914							○
32 915							○
32 921							○
32 937							○
32 947	TS35-L	●*	●	●			○
32 948	TS35-L	●*	●	●			○
32 949	TS35-L	●*	●	●			○
32 950	TS35-L	●*	●	●			○
32 951	TS35-L	●*	●	●			○
32 954	X-L	●*	●	●			○
32 956							○
32 963				●			○
32 964				●			○
32 969							○
32 973	EEC25-L	●*	●	●			○
32 974	EEC80-L	●*	●	●			○
32 975	60630.1-L	●*	●	●			○
32 976	60250.1-L	●*	●	●			○
32 977	60250.1-L	●*	●	●			○
32 978	EPC60630-L	●*		●			○
32 980							○
32 981	EEC6080-L	●*					○
32 982							○
32 983							○
32 984							○
32 985							○
32 986							○
32 987							○
33 075	QCB-NH 00			●	●		●
33 079	QCB-NH 00			●	●		●
33 093	SLS1						●
33 094	SLS2						●
33 095	SLS3						●
33 097	SLS1						●
33 098	SLS2						●
33 099	SLS3						●
33 126							○
33 127							○
33 128							○
33 149	QCB-NH1				●		
33 150	LTS2			●		●	●
33 151	LTS3			●		●	●
33 160	QCB-NH1				●		●
33 161	LTS2			●		●	●
33 162	LTS3			●		●	●
33 173							○
33 174							○
33 179							○
33 180							○
33 198	QCB-NH 00			●	●		●
33 199	LTS00			●			●
33 200	LTS00			●			●
33 201	QCB-NH1				●		●
33 202	LTS2			●		●	●
33 203	LTS3			●		●	●
33 206	QCB-NH 00			●			●
33 207	LTS00						●
33 208	LTS00						●
33 216	LTS000			●			●
33 217	LTS000			●			●
33 221	LTS00			●			●
33 222	LTS00			●			●

● approved

UL Recognized

* for feeder circuits approved according to UL 508A up to 600V

waiting approval at editorial deadline

○ no certification required

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
33 234	SLS00						●
33 235	SLS00						●
33 243	SLS1						●
33 244	SLS2						●
33 245	SLS3						●
33 285	SLS00						●
33 286	SLS00						●
33 287	SLS1						●
33 288	SLS2						●
33 289	SLS3						●
33 292							○
33 293							○
33 294							○
33 295							○
33 296							○
33 297							○
33 298							○
33 299							○
33 308	JC400	●	●				
33 311	JC400B	RU	●				
33 321	SLS3						●
33 324	QCB-NH00			●			●
33 325	QCB-NH1				●		●
33 326	LTS2			●		●	●
33 327	LTS3			●		●	●
33 328	LTS00						●
33 329	LTS00						●
33 330	QCB-NH1				●		
33 331	LTS2			●		●	●
33 332	LTS3			●		●	●
33 333	LTS-250					●	
33 334	LTS-400					●	
33 335	LTS-630					●	
33 336	LTS-800					●	
33 337	LTS-F160					●	
33 338	LTS-F250					●	
33 339	LTS-F400					●	
33 340	LTS-F630					●	
33 341							○
33 355	LTS-250					●	
33 356	LTS-400					●	
33 357	LTS-630					●	
33 358	LTS-800					●	
33 359	LTS-F160					●	
33 360	LTS-F250					●	

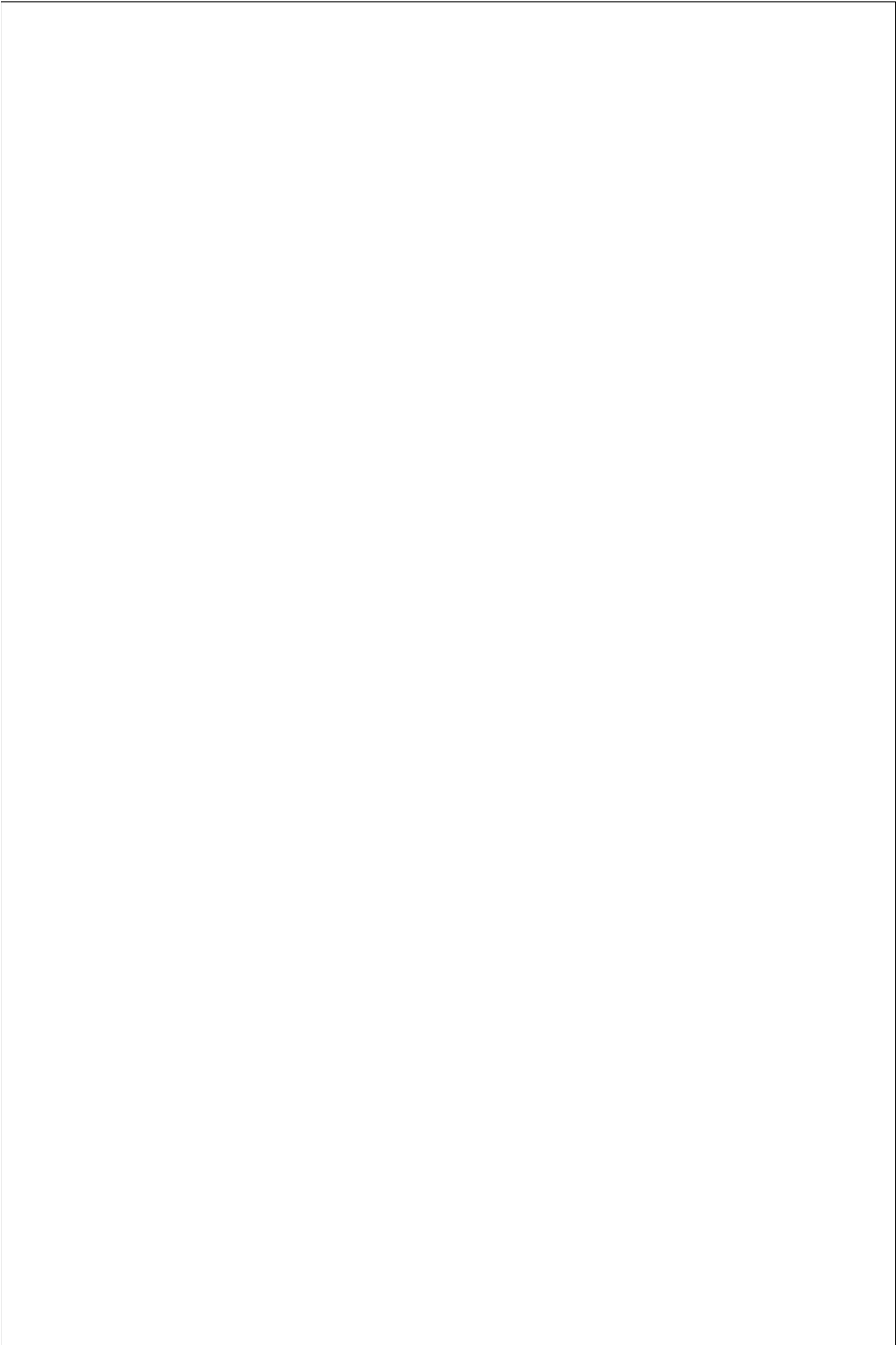
Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
33 361	LTS-F400						●
33 362	LTS-F630						●
33 394	QCB-NH00			●	●		●
33 398	QCB-NH 00			●	●		●
33 402	QCC-Class J 100A	RU					
33 403	QCC Class J 200A	RU					
33 408	QCC Class J 100A	RU					
33 409	QCC Class J 200A	RU					
33 416	QCB-NH00			●	●		●
33 420	QCB-NH 00			●			●
33 421	QCC-Class J 30A	RU					
33 422	QCC-Class J 60A	RU					
33 500	QCS-NH 00			●	●		●
33 501	QCS-NH 00			●	●		●
33 502	QCS-NH 00			●	●		●
33 503	QCS-NH 00			●	●		●
33 504	QCS-NH 00			●	●		●
33 505	QCS-NH 00			●	●		●
33 506	QCS-NH 00			●	●		●
33 507	QCS-NH 00			●	●		●
33 510	QCS-NH1				●		
33 511	QCB-NH1				●		
33 512	QCB-NH1				●		
33 513	QCB-NH1				●		
33 514	QCB-NH1				●		
33 515	QCB-NH1				●		
33 516	QCB-NH1				●		
33 544	QCS-200						●
33 600	QCB-NH1				●		●
33 601	QCB-NH1				●		●
33 602	LTS2			●		●	●
33 603	LTS3			●		●	●
33 700	QU185-00						
33 701	QU185-1						
33 702	QU185-2						
33 703	QU185-3						
33 704	QU185-00						
33 715	QU185-00						
33 716	QU185-1						
33 717	QU185-2						
33 718	QU185-3						
33 719	QU185-00						
33 720	QU185-00						
33 721	QU185-1						
33 722	QU185-2						

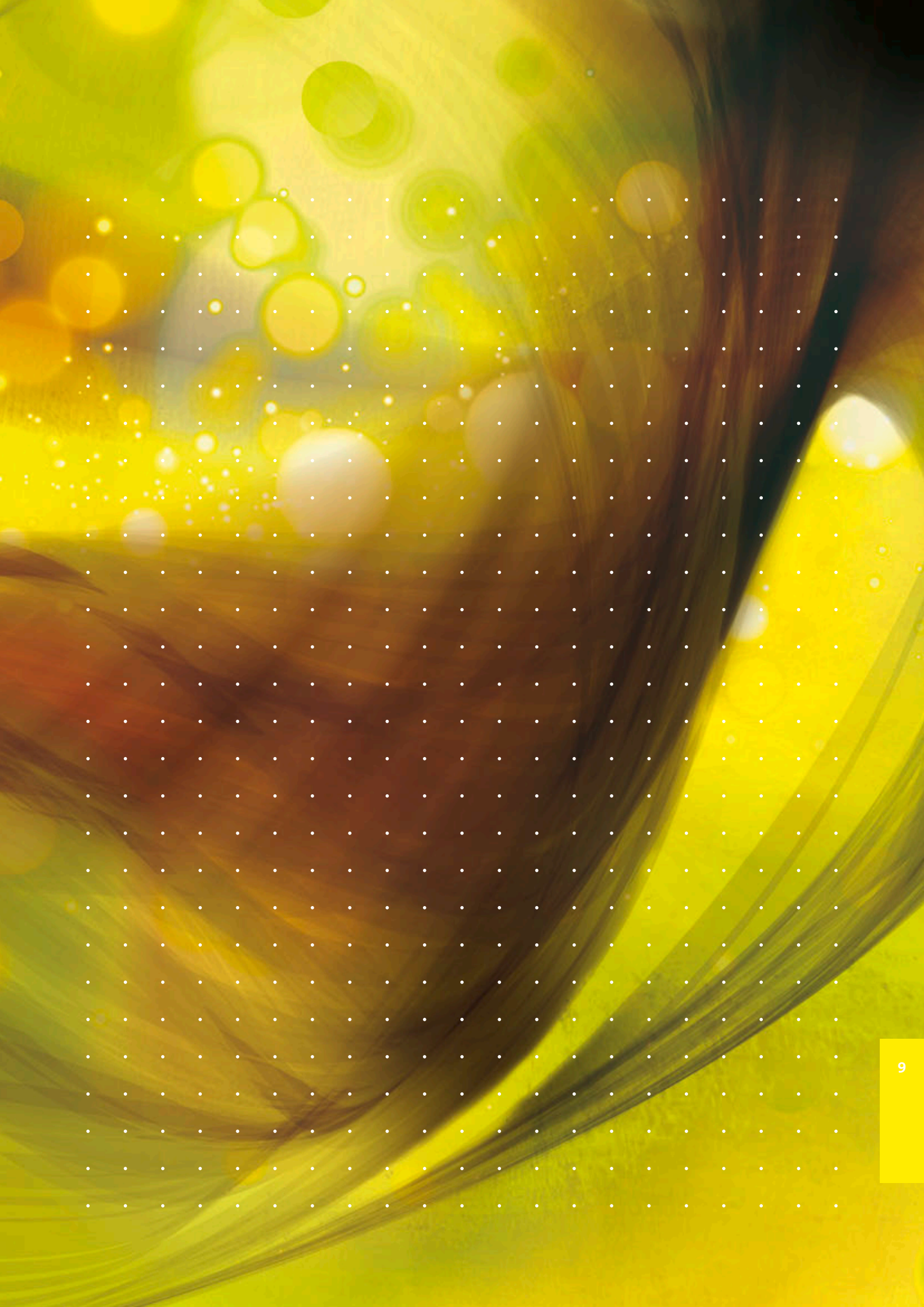
- approved
- RU UL Recognized
- * for feeder circuits approved according to UL 508A up to 600V
- waiting approval at editorial deadline
- no certification required

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
33 723	QU185-3						
33 724	QU185-00						
33 730	QU185-3						
33 741							
33 742							
33 744							
33 745							
33 746							
33 747							
33 748							
33 749							
33 750							
33 751							
33 752							
33 753							
33 754							
33 772	QU185-00						
33 775	QU185-00						
35 001	Z1140-L	●*					
35 004	Centre Feed Unit	●*					
35 005	Centre Feed Unit	●*					
35 006	Centre Feed Unit	●*					
35 007	Centre Feed Unit	●*					
35 008	Z1140-L	●*					
35 009	Z1140-L	●*					
35 015	Centre Feed Unit	●*					
35 016	Centre Feed Unit	●*					
35 017							
36 100	MCC 36100	●					
36 101	MCC 36101	●					
36 102	MCC 36102	●					
36 103	MCC 36103	●					
36 104	MCC 36104	●					
36 105	MCC 36105	●					
36 106	MCC 36106	●					
36 107	MCC 36107	●					
36 108	MCC 36108	●					
36 109	36109	●					
36 110	36110	●					
36 111	36111	●					
36 112	36112	●					
36 113	36113	●					
36 114	36114	●					
36 209	SWD 36209	●					
36 215	EU5C-SWD-PF2-1	●	●				

Part no.	Type no.	USA	Canada	Germ. Lloyd	Germany	Netherlands	China
36 216	EU5C-SWD-DP	●	●				
36 218	EU5C-SWD-CAN	●	●				
36 219	EU5C-SWD-EIP-MODTCP	●	●				
36 220		●	●				
36 905	SWD4-3LF8-24-2S	●	●				
36 906	SWD4-8SF2-5	●	●				
36 907	SWD4-8MF2	●	●				
36 908	SWD4-RC8-10	●	●				
36 911		●	●				
36 912		●	●				
36 913		●	●				

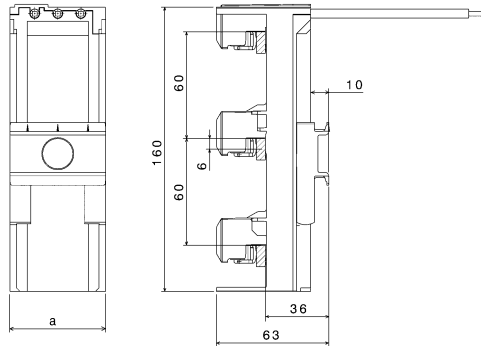
- approved
- UL Recognized
- * for feeder circuits approved according to UL 508A up to 600V
- waiting approval at editorial deadline
- no certification required





	a
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32 590	45
32 591	54



31 554

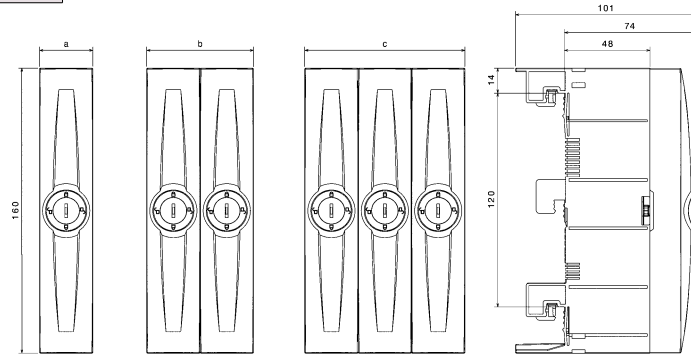
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33 416

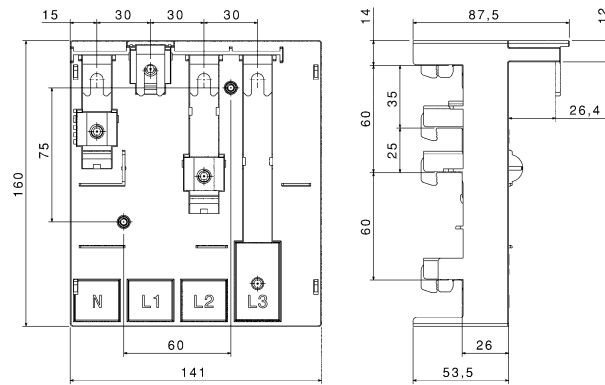
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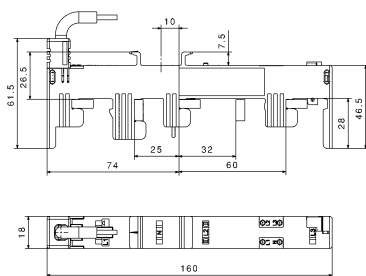
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01 367	30		
01 370			90
01 426		60	
01 427	30		



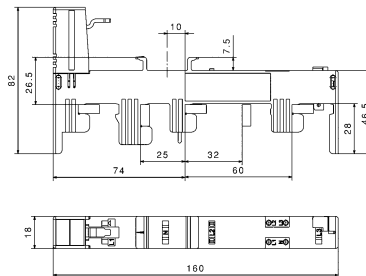
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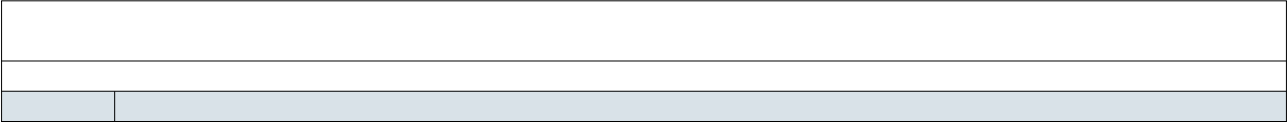


32 629
32 630

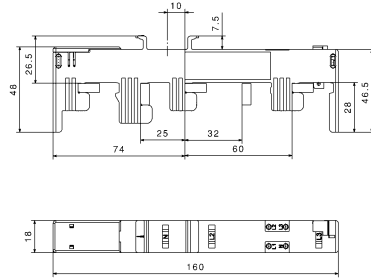


32 628

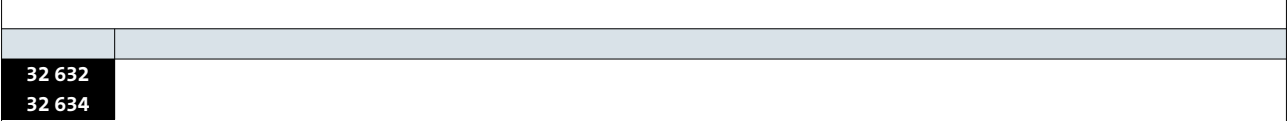
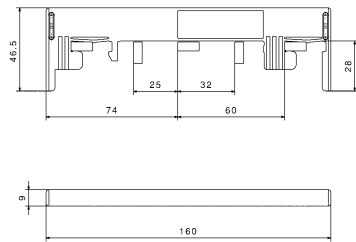




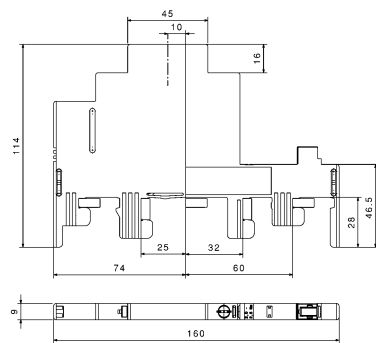
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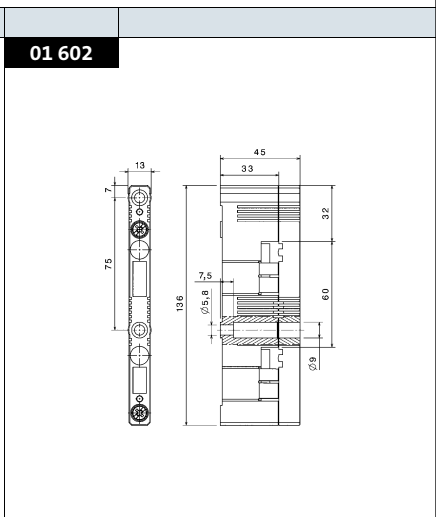
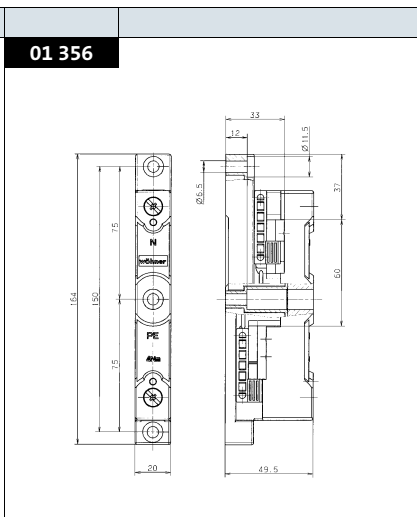
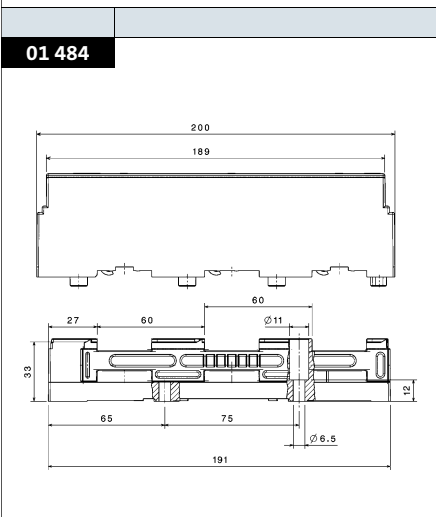
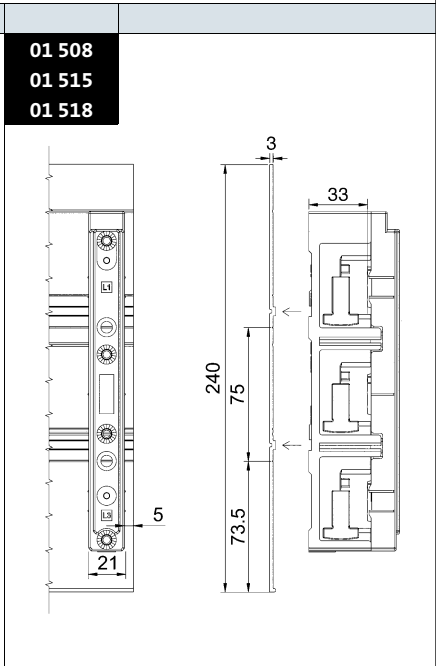
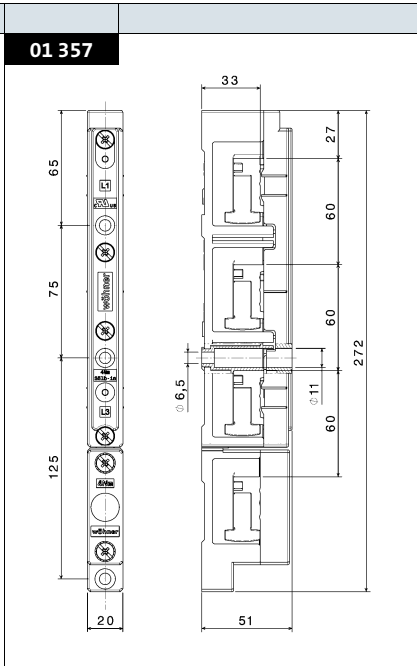
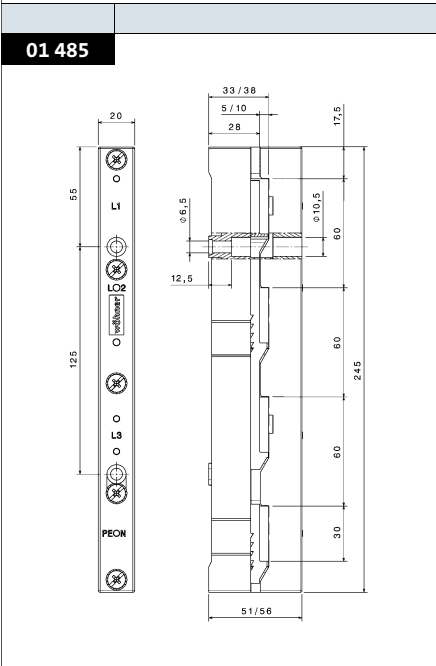
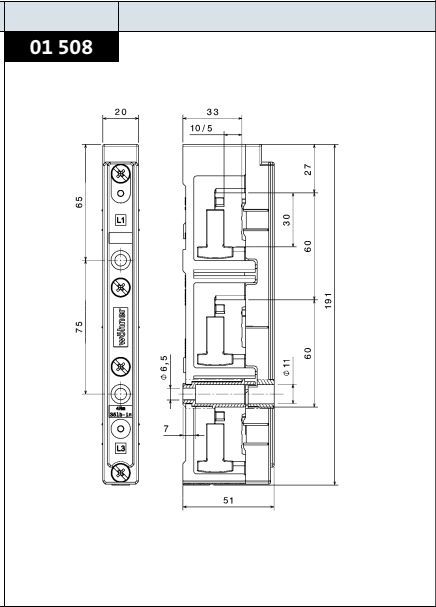
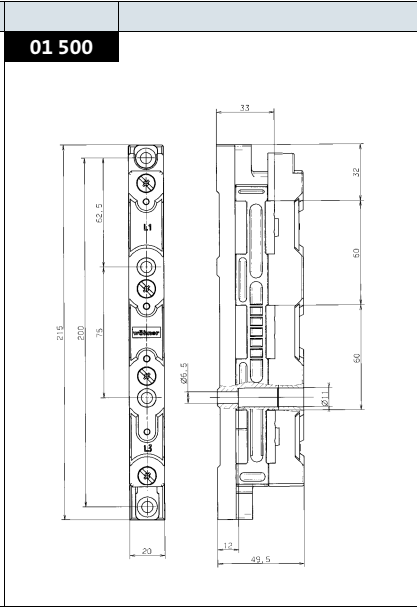
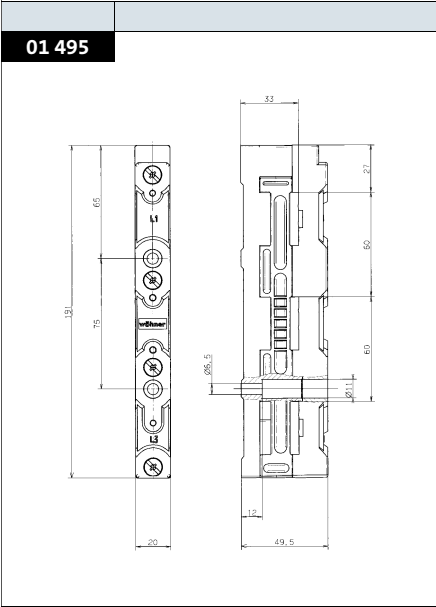


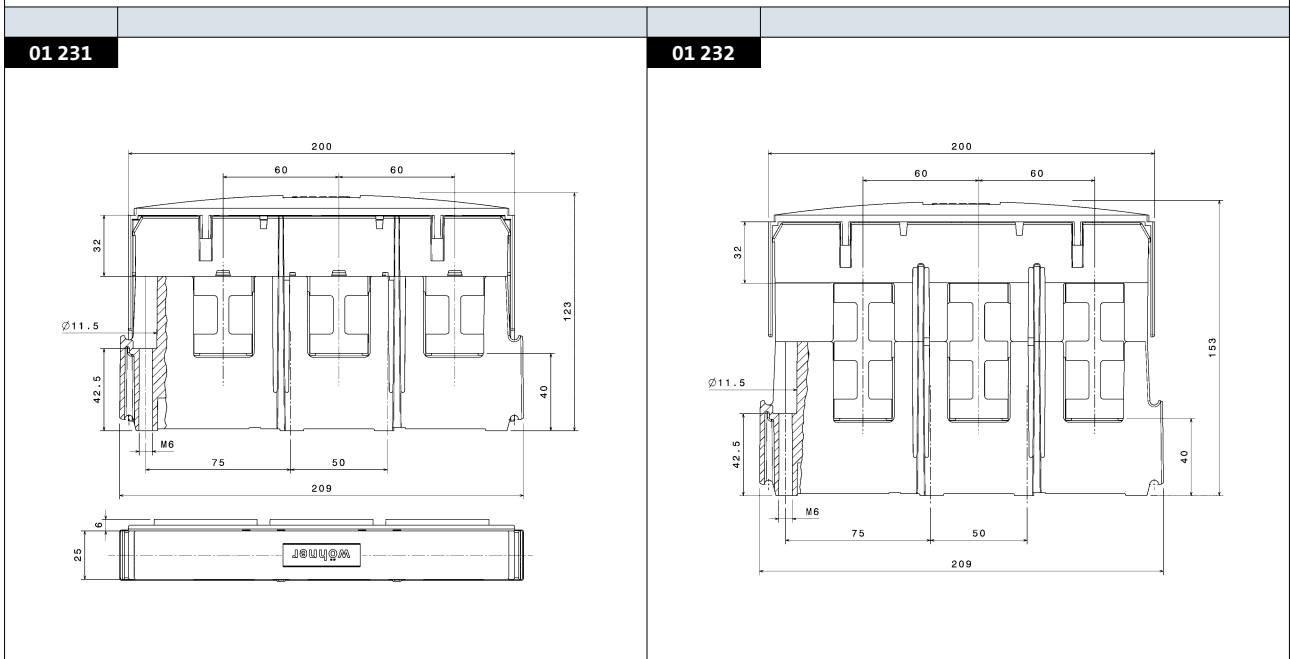
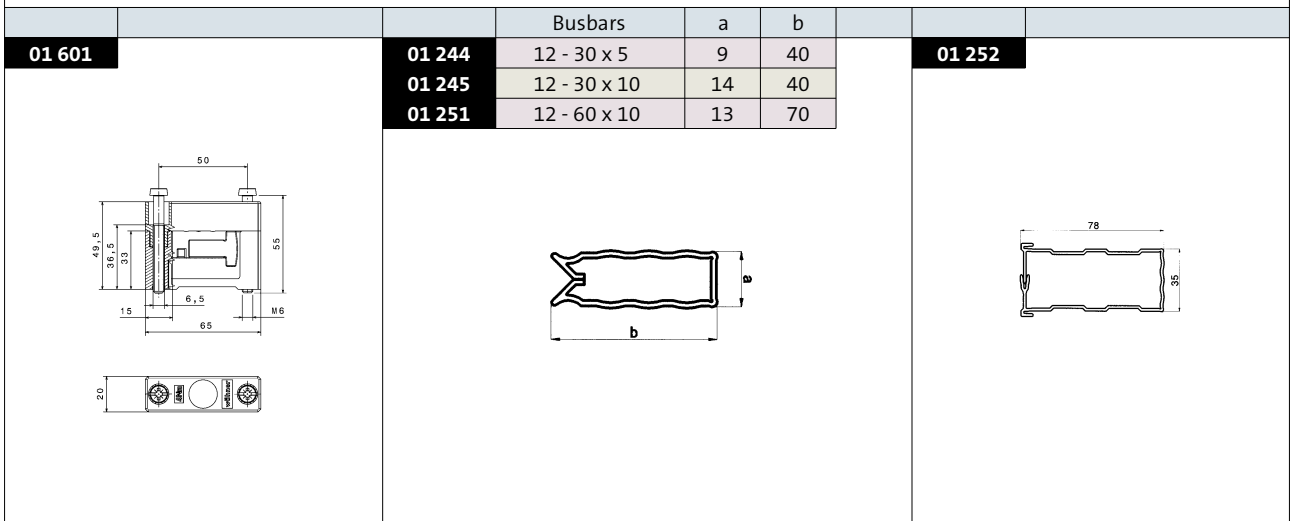
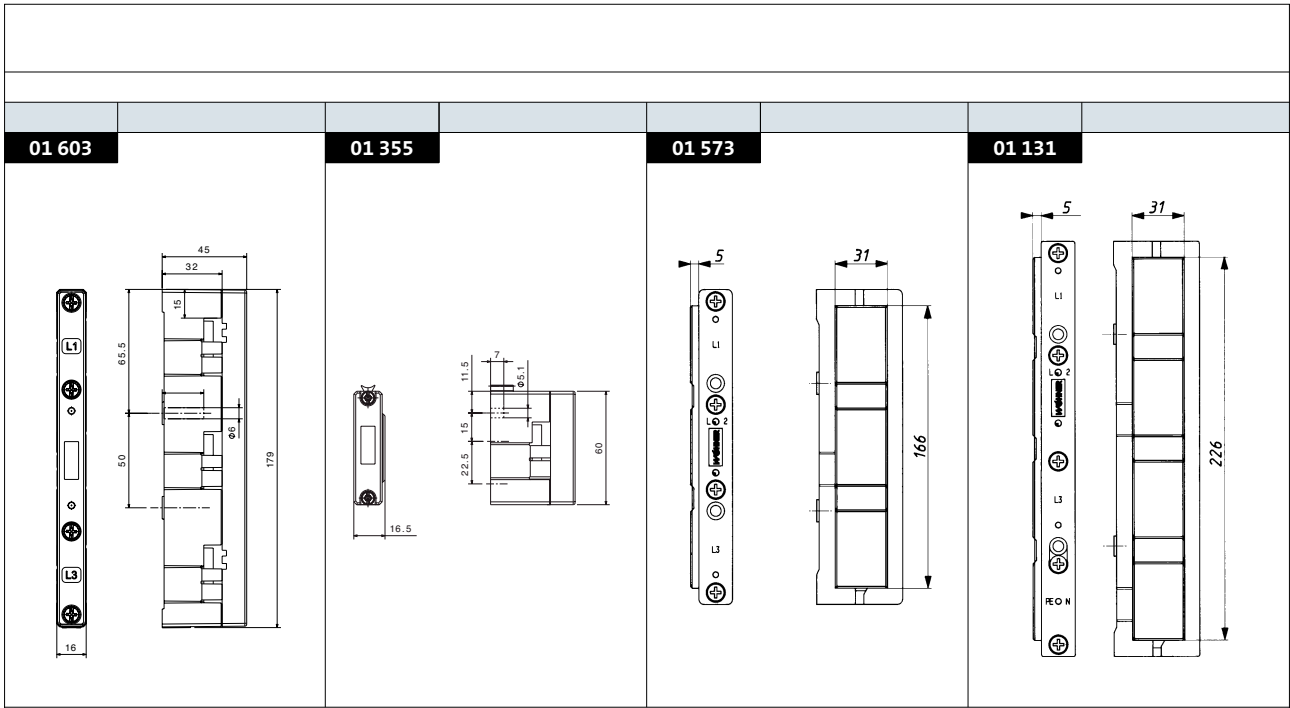
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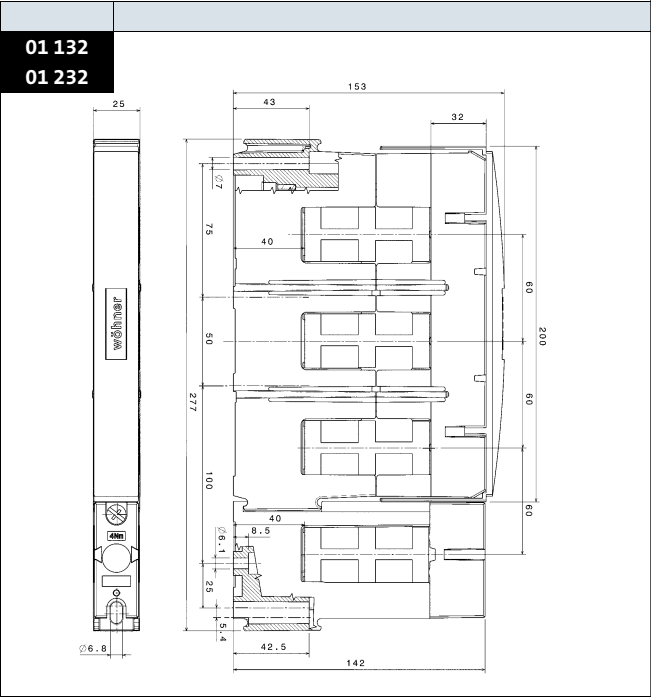
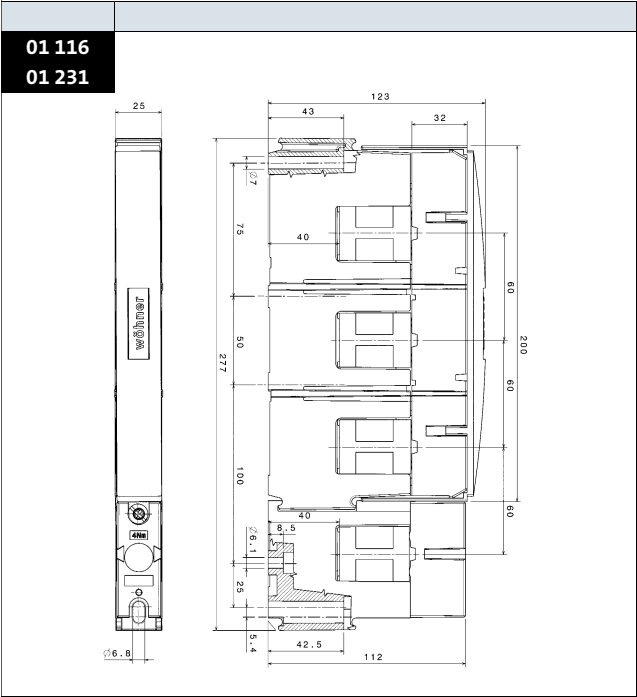


**32 632
32 634**

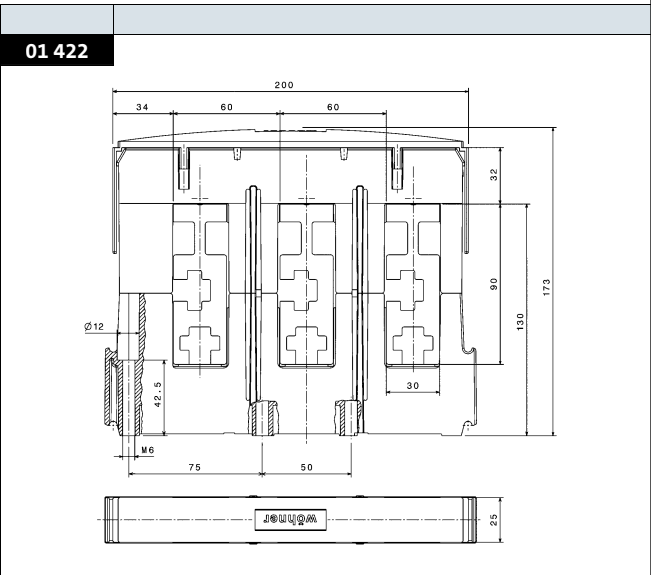
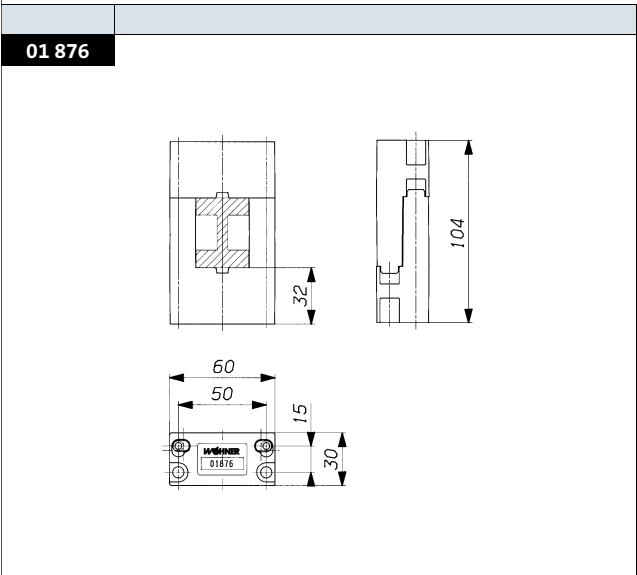
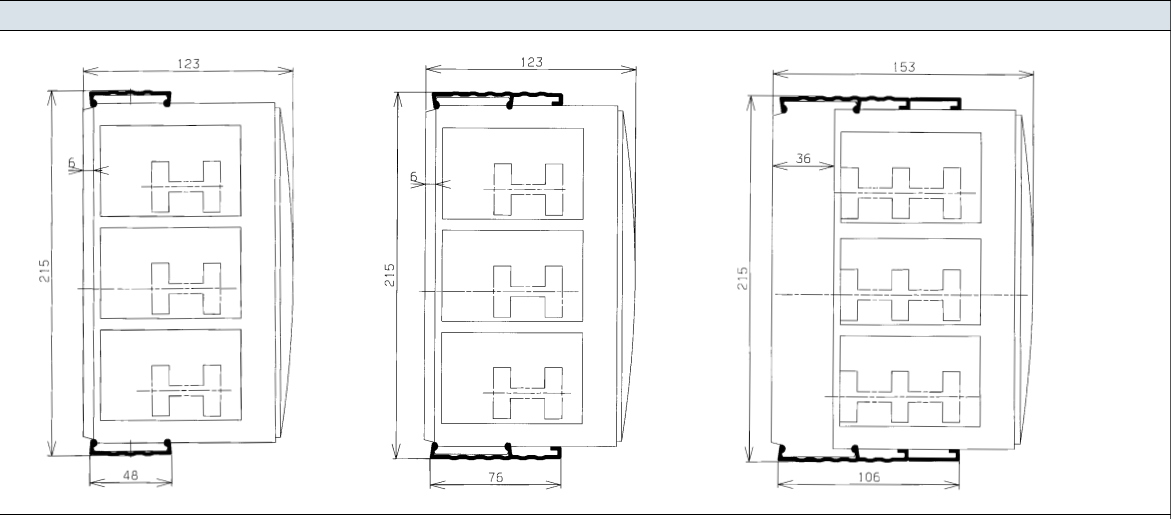








01 236
01 237
01 238



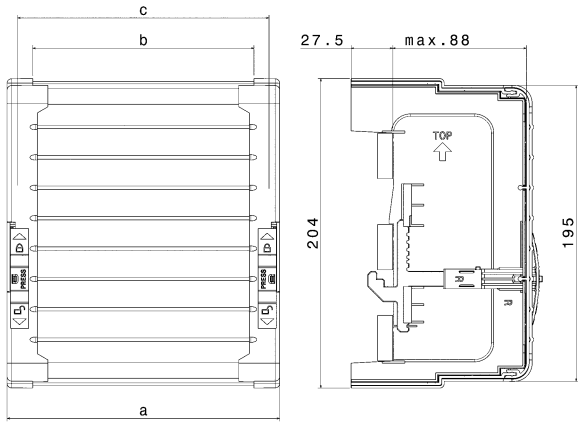
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01 232
01 515

01 025
01 026

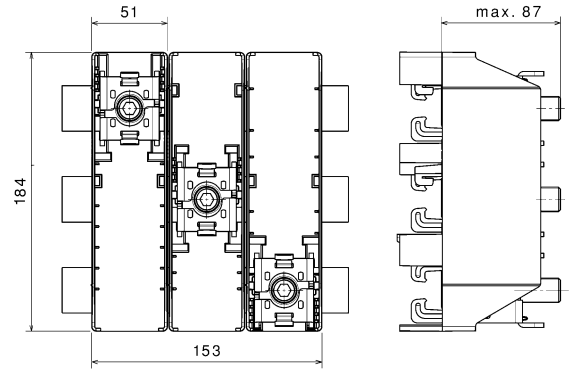
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01 756	135
01 757	270

	a	b	c	d
01 413	84	55	35	189
01 590	54	55	35	189

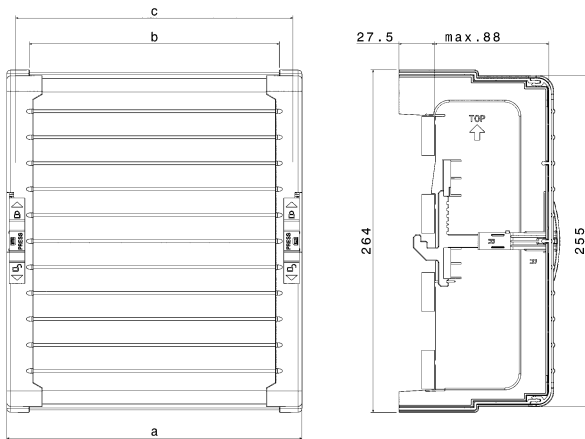
	a	b	c
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01 540	250	216	236
01 596	228	194	214



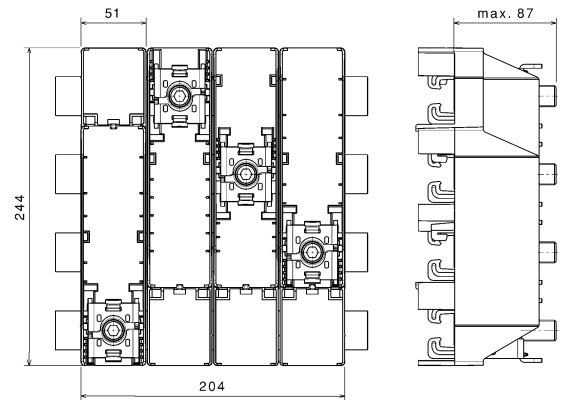
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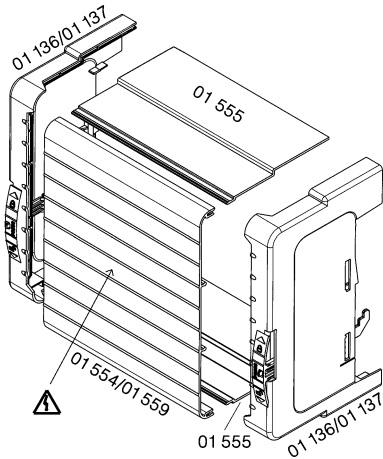
	a	b	c
01 597	228	194	214



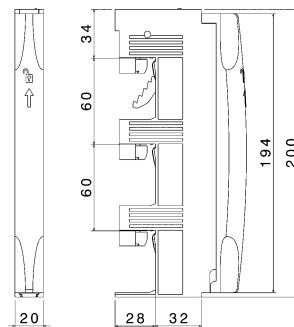
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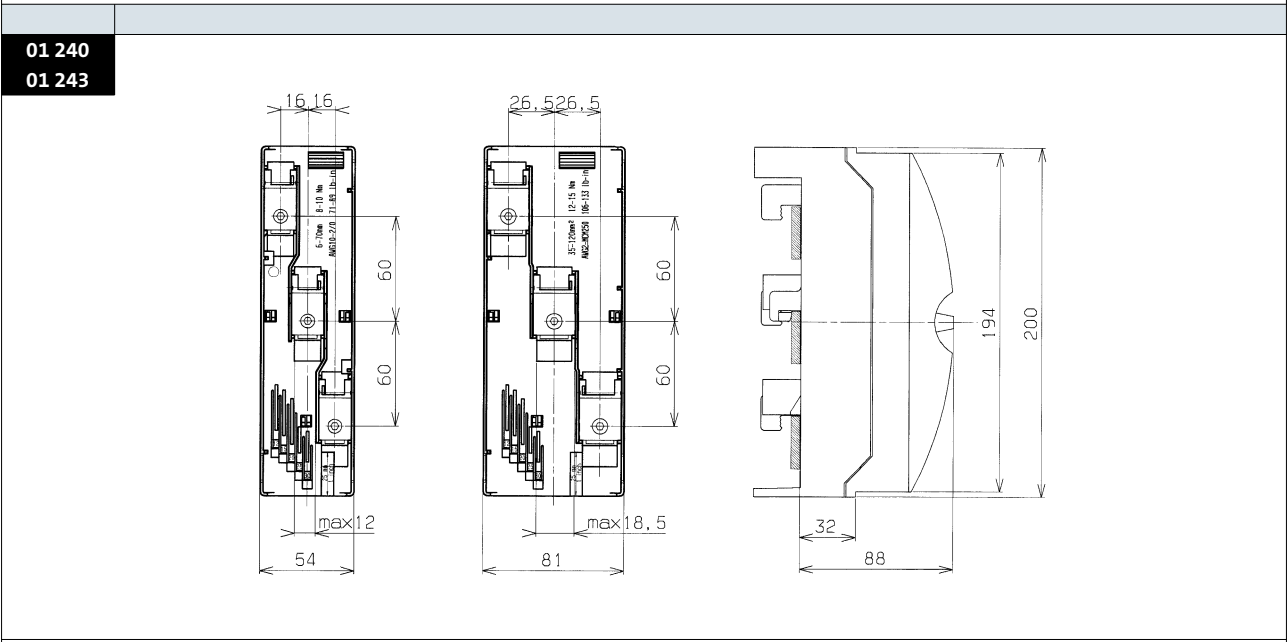


System cover, 3-pole, 4-pole

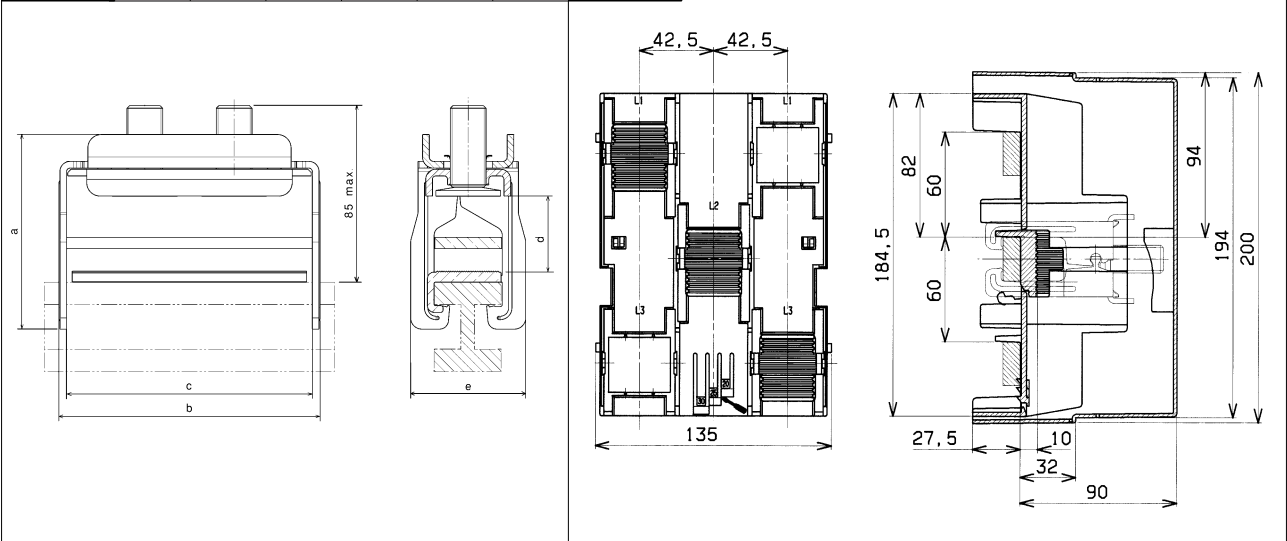


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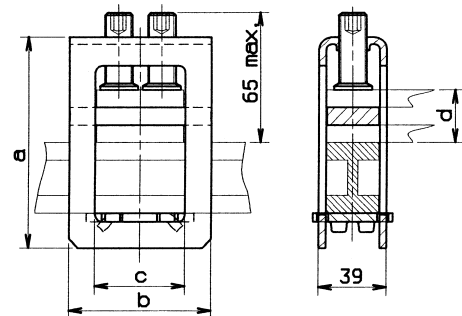




	a	b	c	d	d	e	
				min.	max.		
01 069	90	72	55	10	28	56	01 199
01 070	90	85	68	10	28	56	01 753
01 071	90	122	105	10	28	56	01 754



	a	b	c	d	d	
				min.	max.	
01 008	154	94	64	23	45	
01 185	118	72	41	20	42	
01 186	154	132	101	23	45	
01 513	154	72	41	23	45	
01 906	103	82	51	5	28	
01 907	103	94	64	5	28	
01 911	118	94	64	20	42	
01 934	118	112	81	20	42	
01 935	118	132	101	20	42	
01 936	118	82	51	20	42	



	a	b	c	d	e		
01 068	17	23.5	36	55	5		01 429
01 203	17	23.5	36	55	10		
01 284	7.5	11.5	22.5	25	5		
01 285	10.5	15.5	29	36	5		
01 287	14.5	20.5	32	42	5		
01 289	7.5	11.5	22.5	25	10		
01 290	10.5	15.5	29	35	10		
01 292	14.5	20.5	32	42	10		

	a	b	c	d	e	f	g	max. h	l	
01 047	42	38	37	47	23.5	15	27.5	55	10	
01 512	24	17.5	19.5	24.5	11.5	9	23	30	10	
01 514	32	29.5	29	36	20.5	12	24	42	10	
01 747	24	17.5	19.5	24.5	11.5	9	23	30	5	
01 748	32	29.5	29	36	20.5	12	24	42	5	
01 749	42	38	37	47	23.5	15	27.5	55	5	

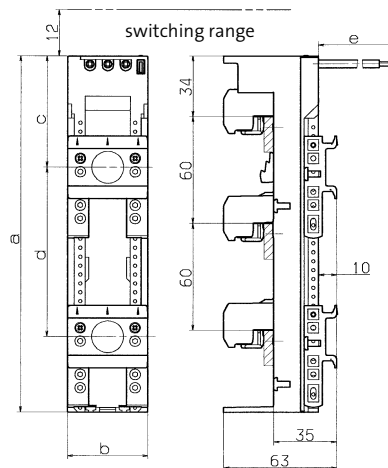
01 319	01 318	01 759

	a	b	h	c	d		a + b	A	c		
01 206	20	40	20	40	60		01 201	10 - 26	120 - 240	21	
01 586	30	30	20	50	50		01 202	10 - 26	150 - 300	25	
01 587	30	35	20	50	55						
01 996	20	25	20	40	45						
01 997	20	30	20	40	50						

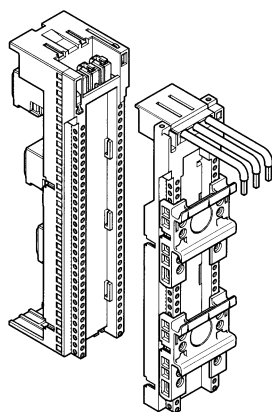
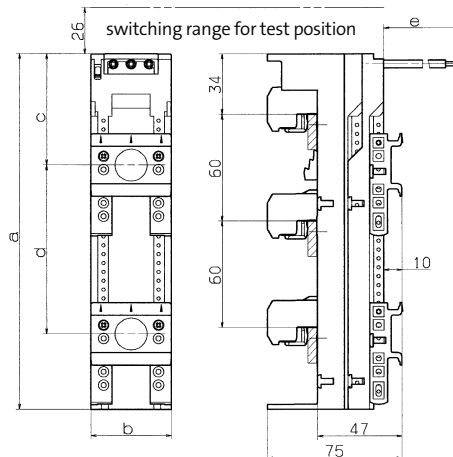
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01 823	40	—		01 193	55	43			
01 886	150	85		01 193	150	138			
01 145	a	b	30 473			01 905			
01 829	95	40							
	150	90							
01 274			01 275			30 322			
						01 295			

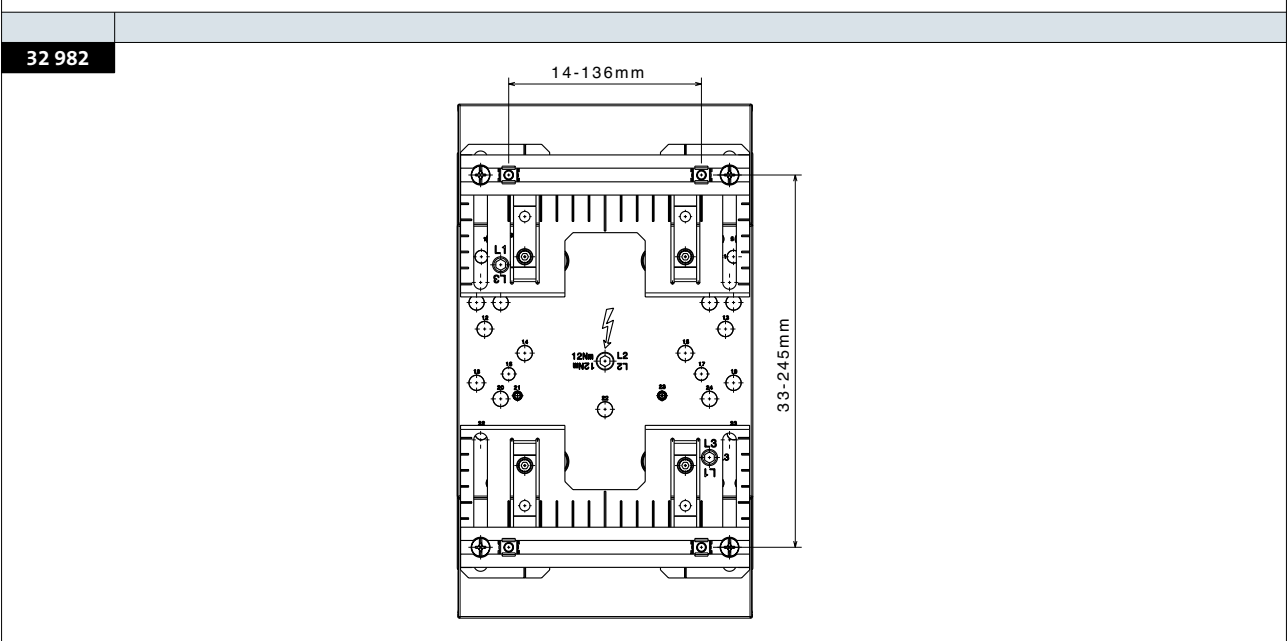
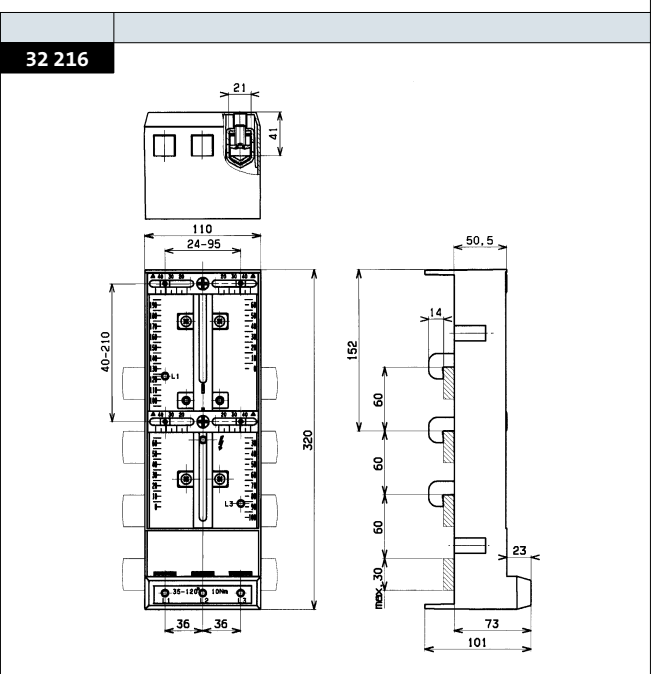
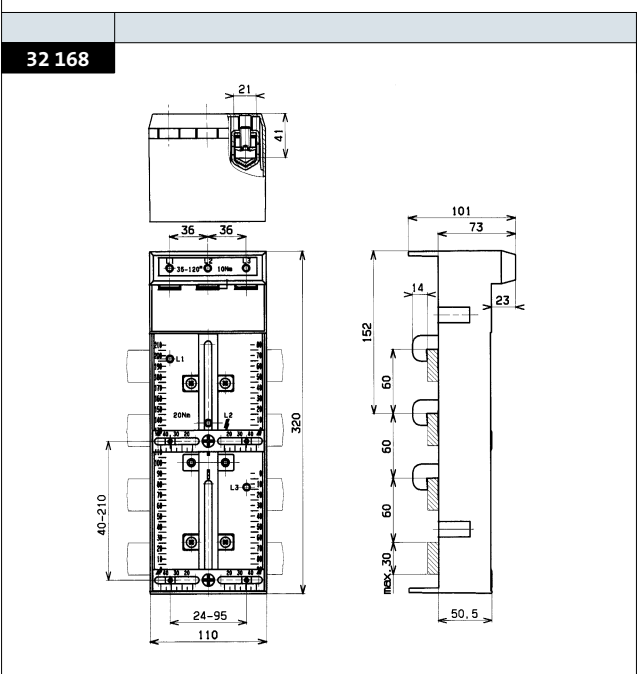
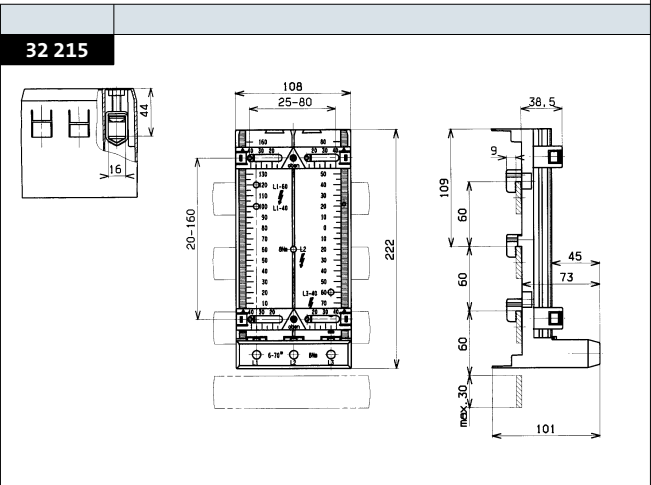
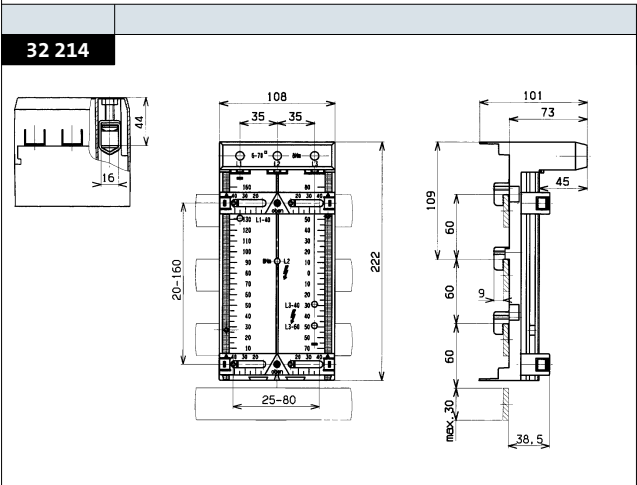


	a	b	c	d	e
32 429	200	45	63	95	125
32 430	200	45	63	—	93
32 431	200	45	63	95	93
32 432	200	90	63	95	93
32 433	260	45	63	95	93
32 436	200	45	63	95	Kl. 6 mm ²
32 439	260	45	63	95	Kl. 6 mm ²
32 441	200	54	63	—	93
32 442	200	54	63	95	93
32 443	200	63	63	—	93
32 444	200	72	63	—	93
32 446	200	81	63	95	93
32 449	260	54	63	95	93
32 454	200	54	63	—	115
32 455	200	54	63	95	115
32 456	200	63	103	—	115
32 457	200	72	103	—	115
32 459	200	81	63	95	115
32 461	260	54	63	95	115
32 466	200	54	63	—	Kl. 16 mm ²
32 467	200	54	63	95	Kl. 16 mm ²
32 469	200	72	63	—	Kl. 16 mm ²
32 472	260	54	63	95	Kl. 16 mm ²
32 477	200	45	63	95	—
32 478	200	54	63	95	—
32 484	260	45	63	95	—
32 485	260	54	63	95	—



	a	b	c	d	e
32 400	200	45	63	95	93
32 401	200	45	63	95	125
32 402	260	45	63	95	93
32 404	200	54	63	95	93
32 408	260	54	63	95	93
32 412	200	54	63	95	115
32 416	260	54	63	95	115
32 420	200	45	63	95	—
32 421	200	54	63	95	—
32 425	260	45	63	95	—
32 426	260	54	63	95	—
32 662	200	54	63	150	80
32 663	260	54	63	150	80
32 664	260	117	63	150	80

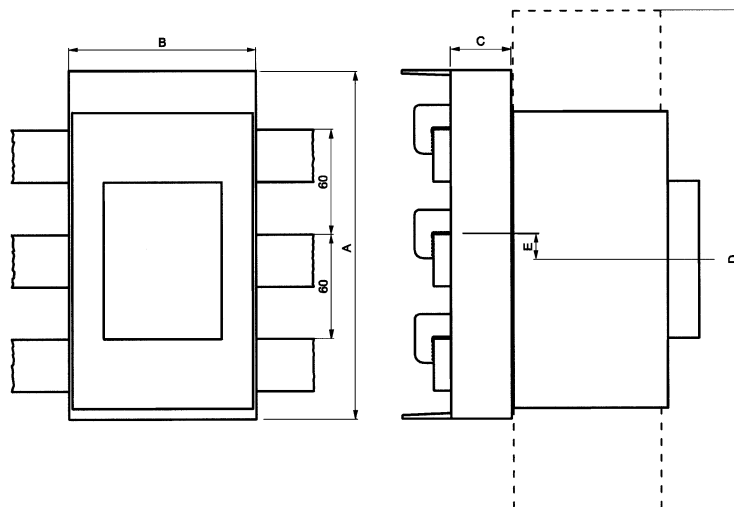


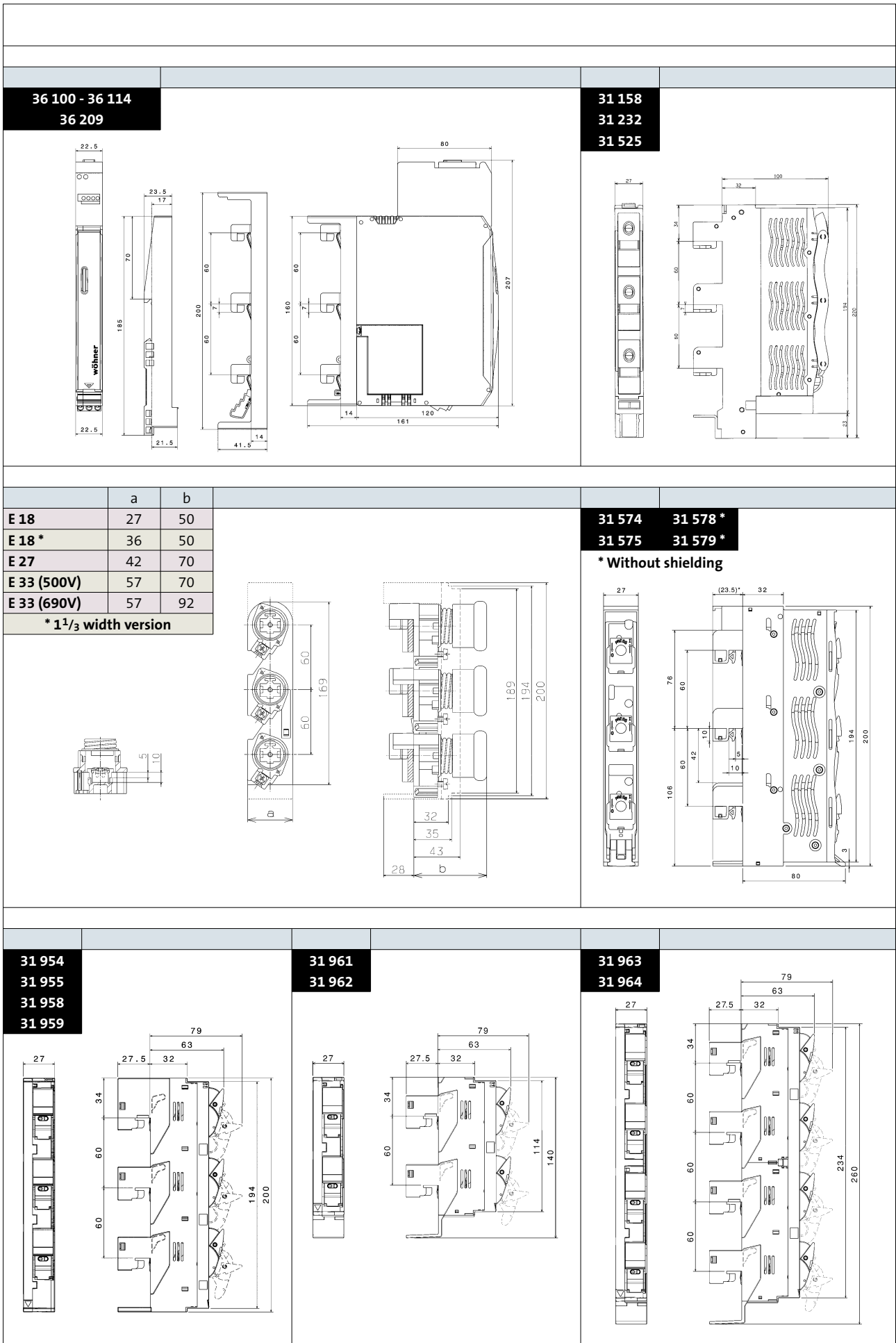


	Switchgear	A	B	C	D	E _o *	E _u **
32 137	AB 140U-J	190	106	35	–	18	10
32 138	AB 140U-L	270	140	35	–	11	12
32 140	Eaton NZM2-XKR4	190	106	35	–	22	2
32 156	SE NSX250, GE FD 250	190	106	35	–	12	12
32 157	SE NSX630	270	140	35	–	12	12
32 549	AB 140-CMN	200	90	50	–	11	–
32 570	Eaton NZM1	200	90	38	–	17	–
32 575	ABB T-max1, T-max2, GE FD 160, SE NS 80	200	90	26	–	10 - 20	–
32 578	Siemens 3VL2, 3VL3, 4 pole	240	140	35	–	16	–
32 579	Siemens 3VL4, 4 pole	300	185	35	–	15	–
32 580	Eaton NZM2-XKR4, 4 pole	240	140	35	–	2	–
32 581	Eaton NZM3-XKR13O, 4 pole	300	185	35	–	15	–
32 582	SE NSX250, 4 pole	270	140	35	–	- 8	–
32 583	SE NSX630, 4 pole	300	185	35	–	15	–
32 584	ABB T-max4, 4 pole	240	140	35	–	7	–
32 585	ABB T-max5, 4 pole	300	185	35	325	15	–
32 593	ABB Tmax T5	300	140	35	–	- 20	50
32 601	ABB Tmax T4	240	105	35	–	- 6	11
32 641	Siemens 3VT630	300	140	35	–	12	18
32 651	Siemens 3VT250	240	105	35	–	20	6
32 975	Siemens 3VL4	295	140	55	–	6	19
32 976	Siemens 3VL1 UL	190	106	53	–	8	15
32 977	Siemens 3VL2, 3VL3 UL	190	106	53	–	16	7
32 978	Eaton NZM3-XKR13O	300	140	35	–	15	15
32 980	Siemens 3VL5	325	184	55	–	- 7	–
32 981	Siemens S3	200	72	27	–	20	–
32 661	Siemens 3VA1	160	76	35	–	12	–
32 660	Siemens 3VA1	200	76	35	–	12	–
32 018	ABB Tmax XT1, XT2	200	106	35	–	9	–
32 020	ABB Tmax XT1, XT2	200	106	35	–	–	7
32 023	ABB Tmax XT4	190	106	35	–	12	12
32 017	Siemens 3VA2	240	105	35	–	12	0

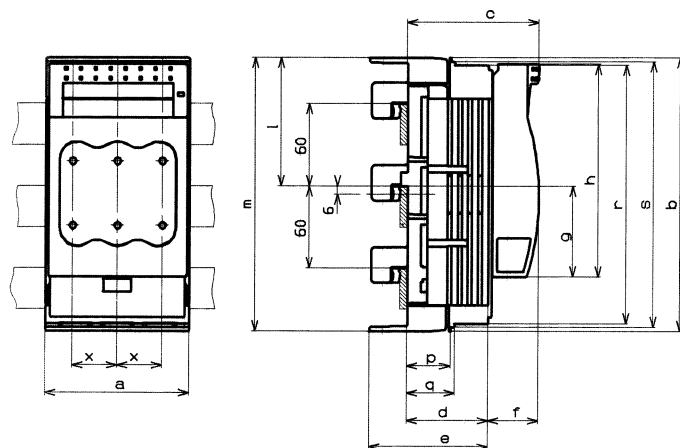
* E_o Switch centre displacement in case of upper connection

** E_u Switch centre displacement in case of lower connection

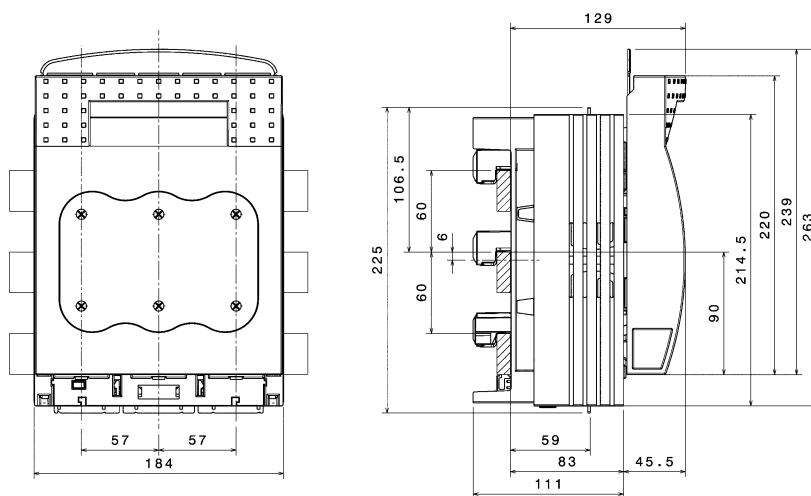




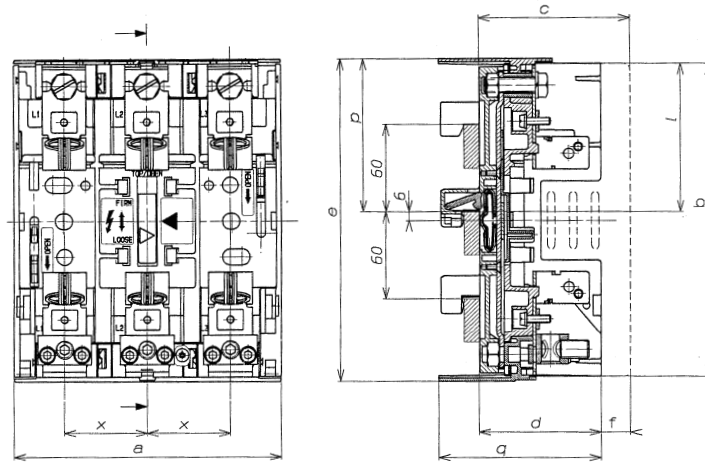
	a	b	c	d	e	g	h	l	m	p	q	r	s	x	
33 402	100A	106	200	104.5	67.5	95	66	155	94	200	32	35	189	194	33
33 421															
33 422															



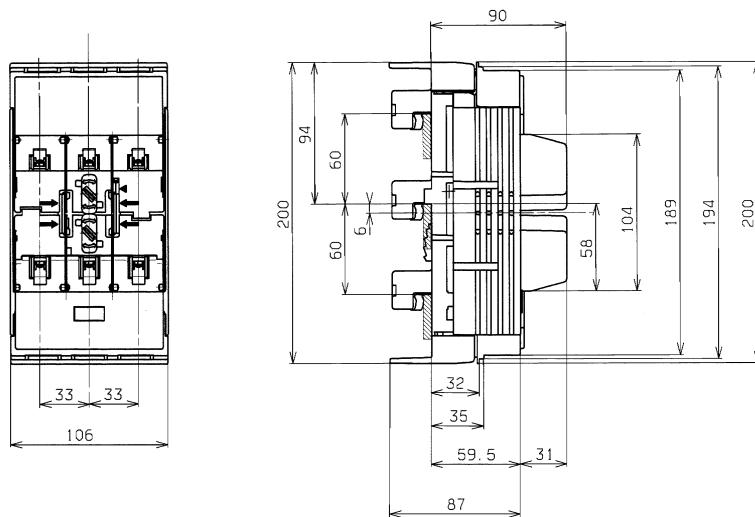
33 403



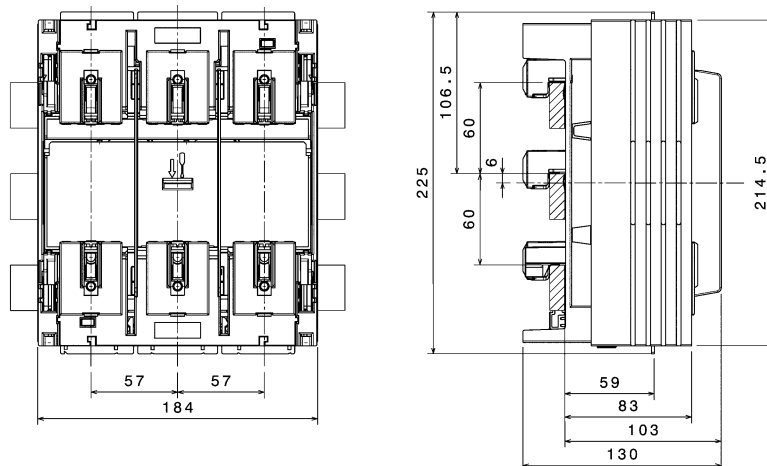
	a	b	c	d	e	f	l	p	q	x
33 311	256	267	132.5	112.5	285	20	121.5	136.5	139	81



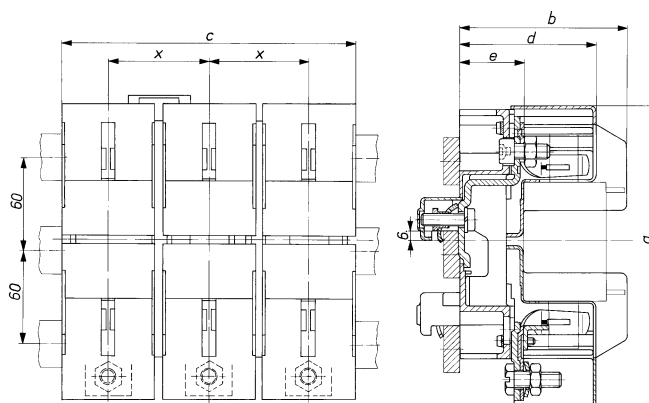
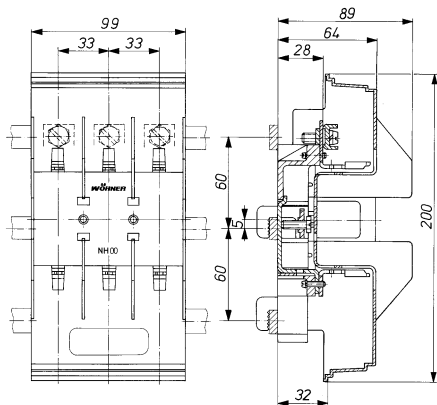
03 199
03 299



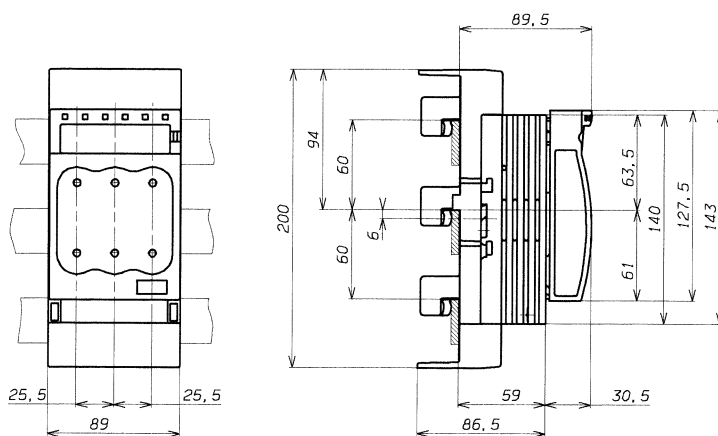
03 300
03 301



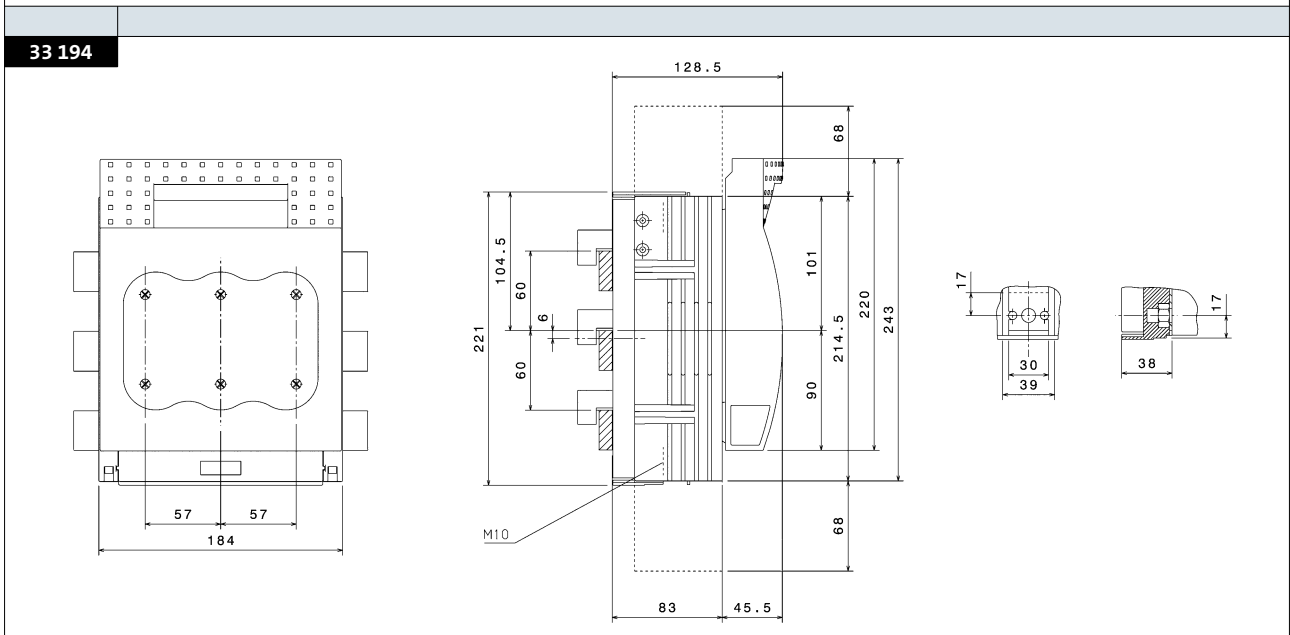
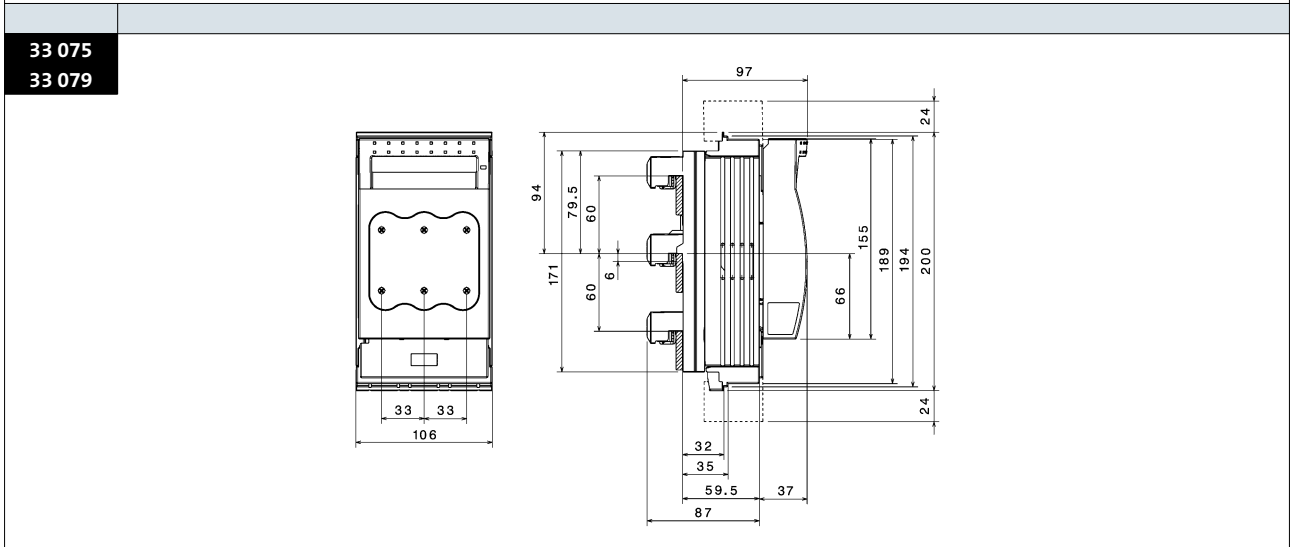
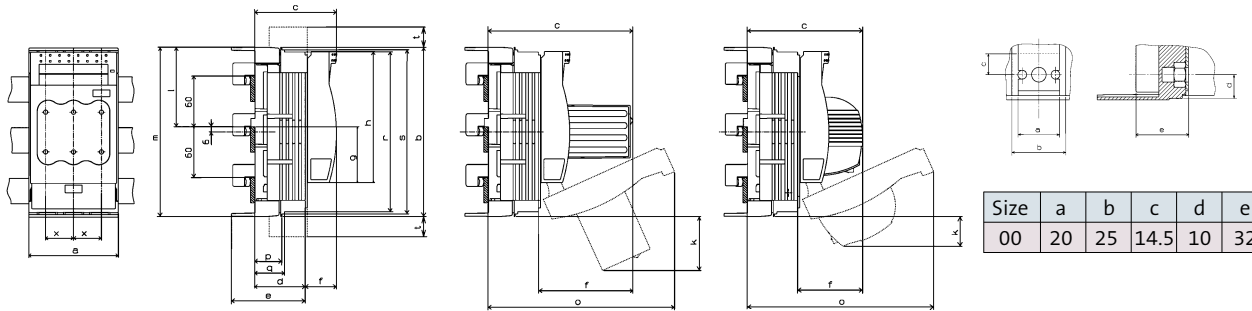
03 654 03 656	03 693	a	b	c	d	e	x
		206	121	195	104	40	65



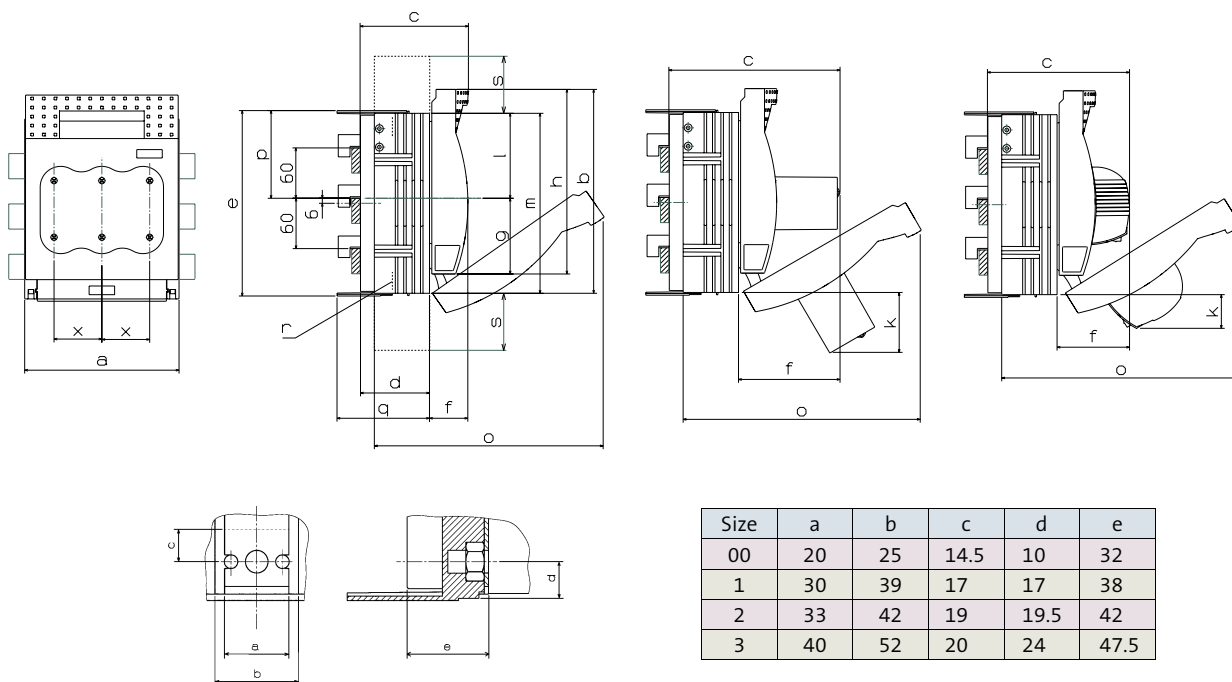
33 216



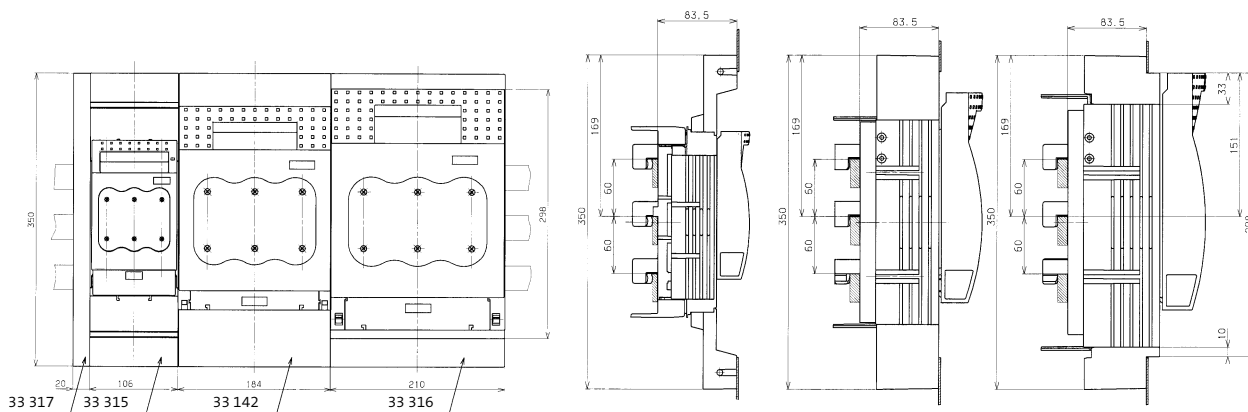
	Size	a	b	c	d	e	f	g	h	k	l	m	o	p	q	r	s	t	x
33 198	00	106	200	97	59.5	87	37	66	155	—	94	200	220.5	32	35	189	194	24	33
33 206	00	106	200	171.5	59.5	87	112	66	155	64	94	200	220.5	32	35	189	194	24	33
33 324	00	106	200	136.5	59.5	87	77	66	155	36	94	200	220.5	32	35	189	194	24	33
33 394	00	106	200	136.5	59.5	87	77	66	155	36	94	200	220.5	32	35	189	194	24	33
33 398	00	106	200	97	59.5	87	37	66	155	—	94	200	220.5	32	35	189	194	24	33
33 420	00	106	200	171.5	59.5	87	112	66	155	64	94	200	220.5	32	35	189	194	24	33



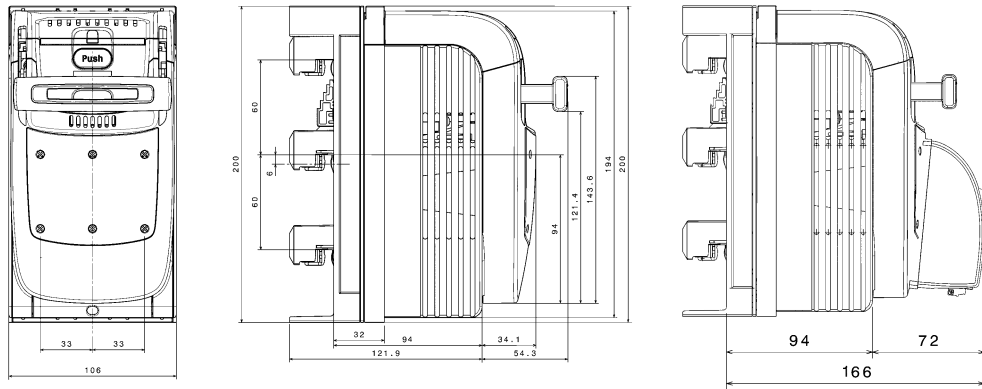
	Size	a	b	c	d	e	f	g	h	l	m	p	q	r	s	x
33 160	1	184	243	203.5	83	221	120.5	90	220	101	214.5	104.5	110.5	M10	68	57
33 161	2	210	288	220	97	268	123	98	249	118	255	128	124.5	M10	52	65
33 162	3	256	300	234.5	111.5	285	123	104.5	259	121.5	267	136.5	139	M12	48	81
33 325	1	184	243	171	83	221	80	90	220	101	214.5	104.5	110.5	M10	68	57
33 326	2	210	288	187.5	97	268	90.5	98	249	118	255	128	124.5	M10	52	65
33 327	3	256	300	202	111.5	285	90.5	104.5	259	121.5	267	136.5	139	M12	48	81
33 600	1	184	243	128.5	83	221	45.5	90	220	101	214.5	104.5	110.5		68	57
33 601	1	184	243	128.5	83	221	45.5	90	220	101	214.5	104.5	110.5	M10	68	57
33 602	2	210	288	145	97	268	48	98	249	118	255	128	124.5	M10	52	65
33 603	3	256	300	159.5	111.5	285	48	104.5	259	121.5	267	136.5	139	M12	48	81



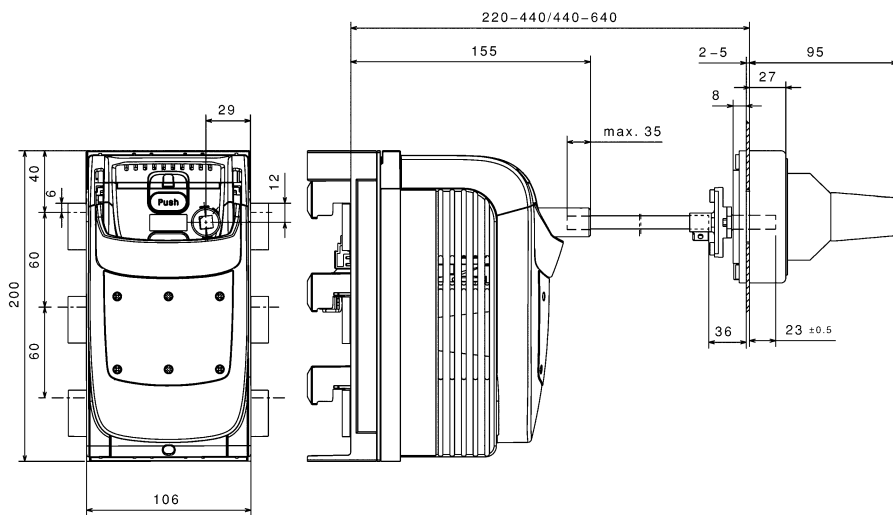
33 142	Size 00
33 315	Size 00
33 316	Size 1
33 317	Size 2



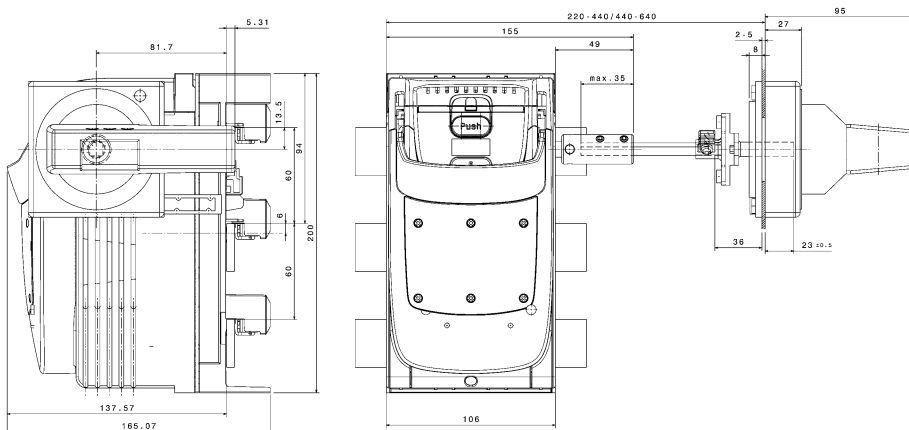
33 500
33 501
33 506
33 540
33 541



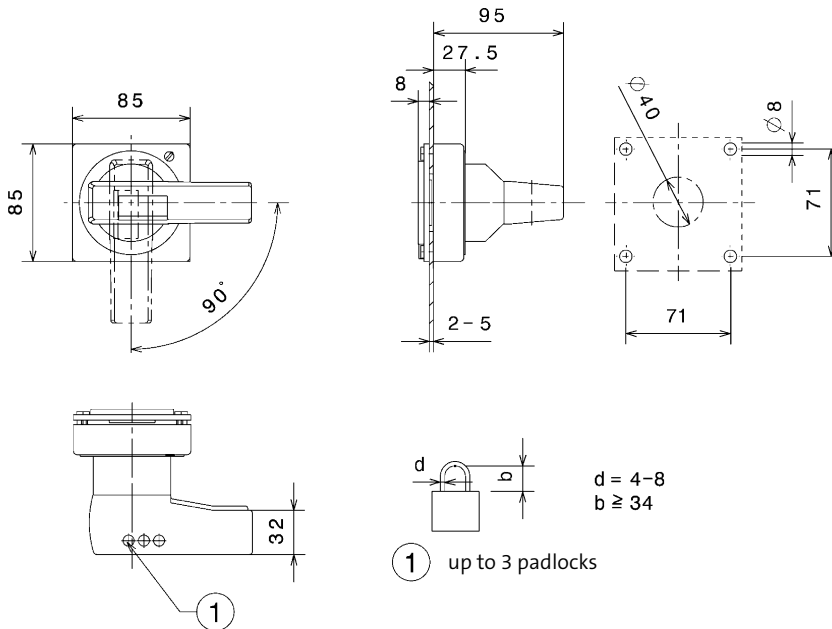
33 503
33 504
33 543
33 544
33 910
33 911



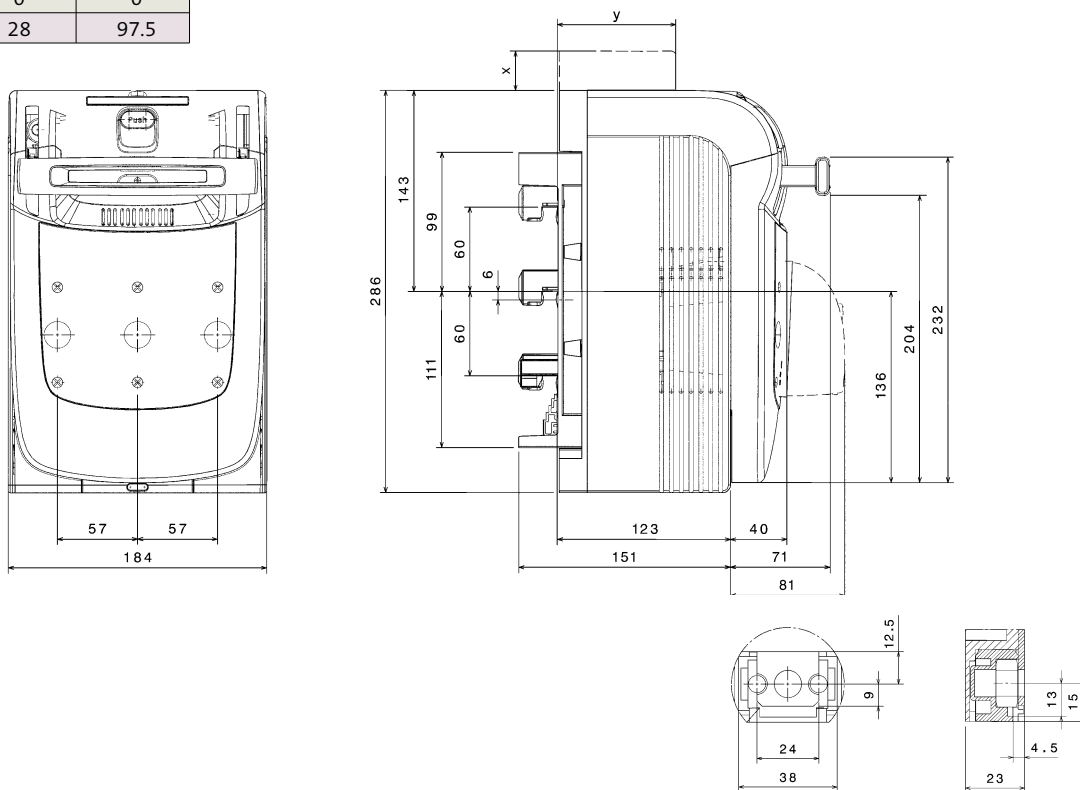
33 580



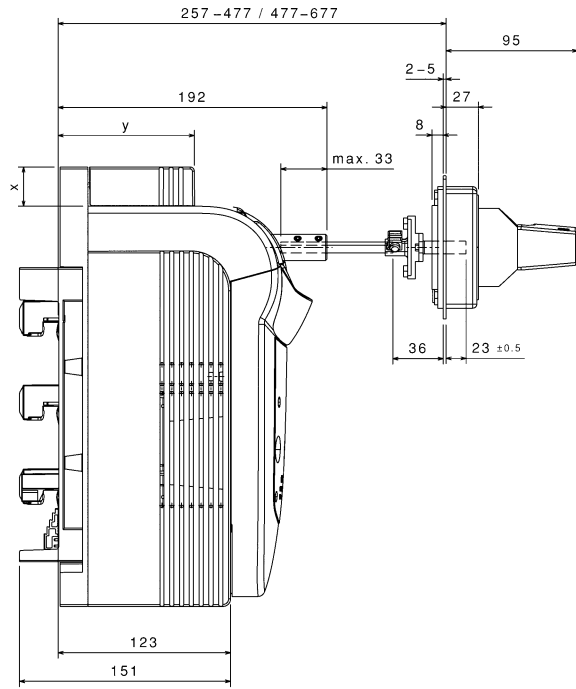
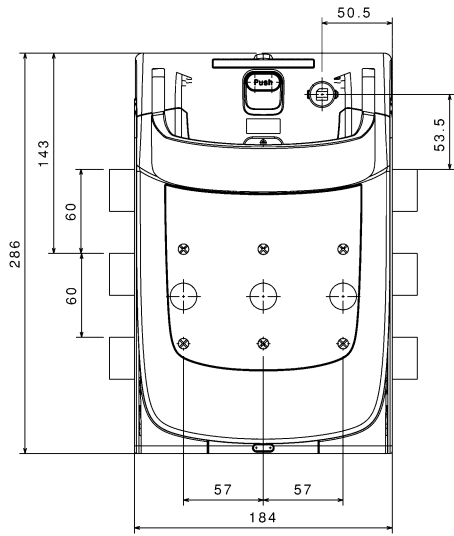
33 910
33 911



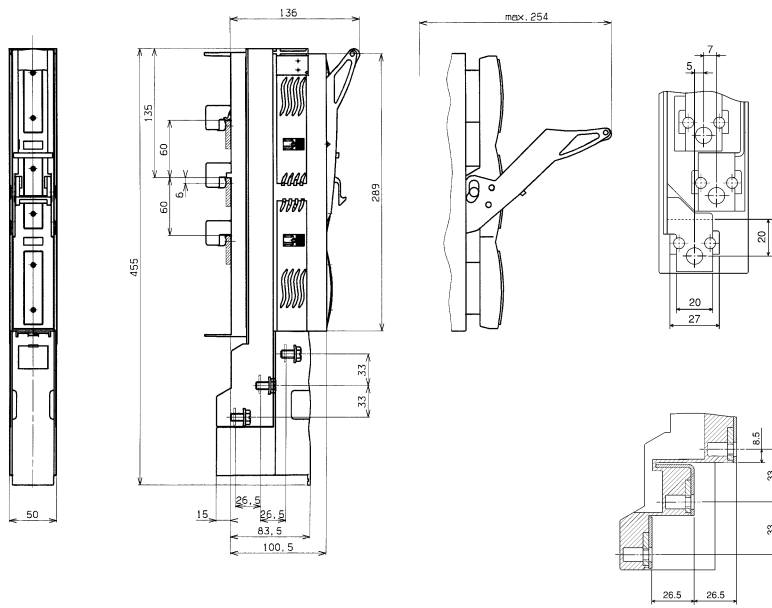
	x	y
33 510	0	0
33 511	28	97.5
33 516	0	0
33 550	0	0
33 551	28	97.5



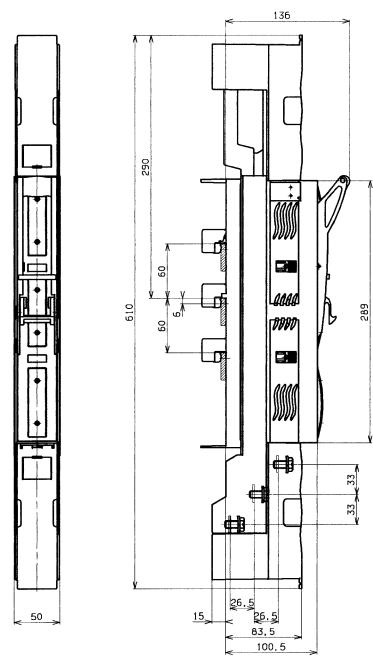
33 513	x	y
33 514	0	0
33 553	28	97.5
33 554	0	0
33 910	28	97.5
33 911		



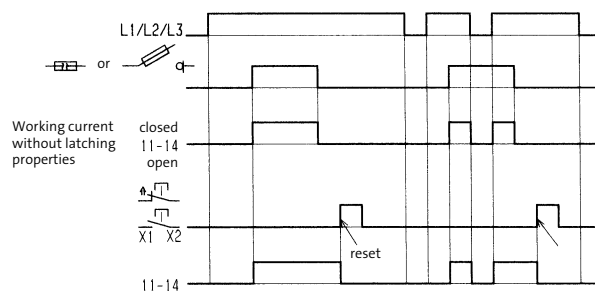
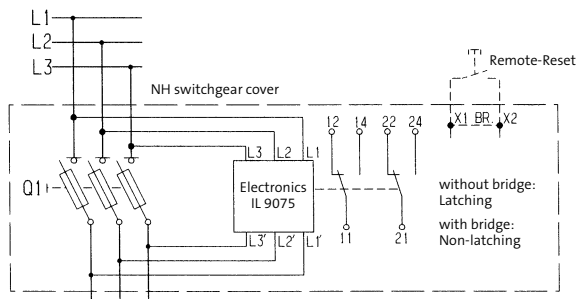
33 234



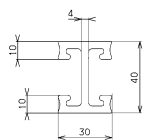
33 285



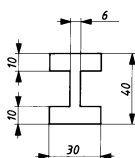
NH fuse switch disconnecter with electronic fuse monitoring



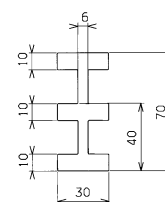
- 01 223
- 01 224
- 01 225
- 01 226
- 01 250
- 01 395
- 01 396
- 01 609



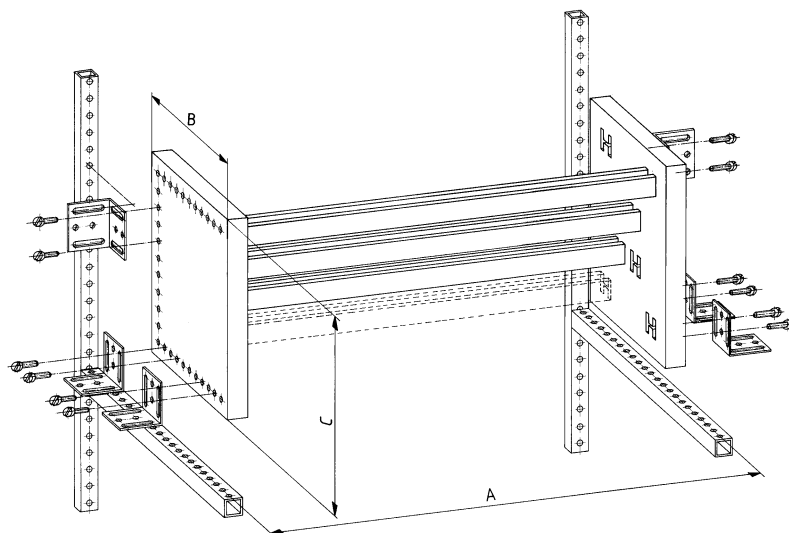
- 01 190
- 01 229
- 01 249
- 01 397
- 01 398
- 01 608
- 01 831
- 01 838



- 01 187
- 01 188
- 01 189
- 01 227
- 01 399
- 01 400



	a	b	c
35 004	688 - 763	300	300
35 005	488 - 563	300	300
35 006	688 - 763	300	300
35 007	488 - 563	300	300
35 015	488 - 563	300	300
35 016	688 - 763	300	300

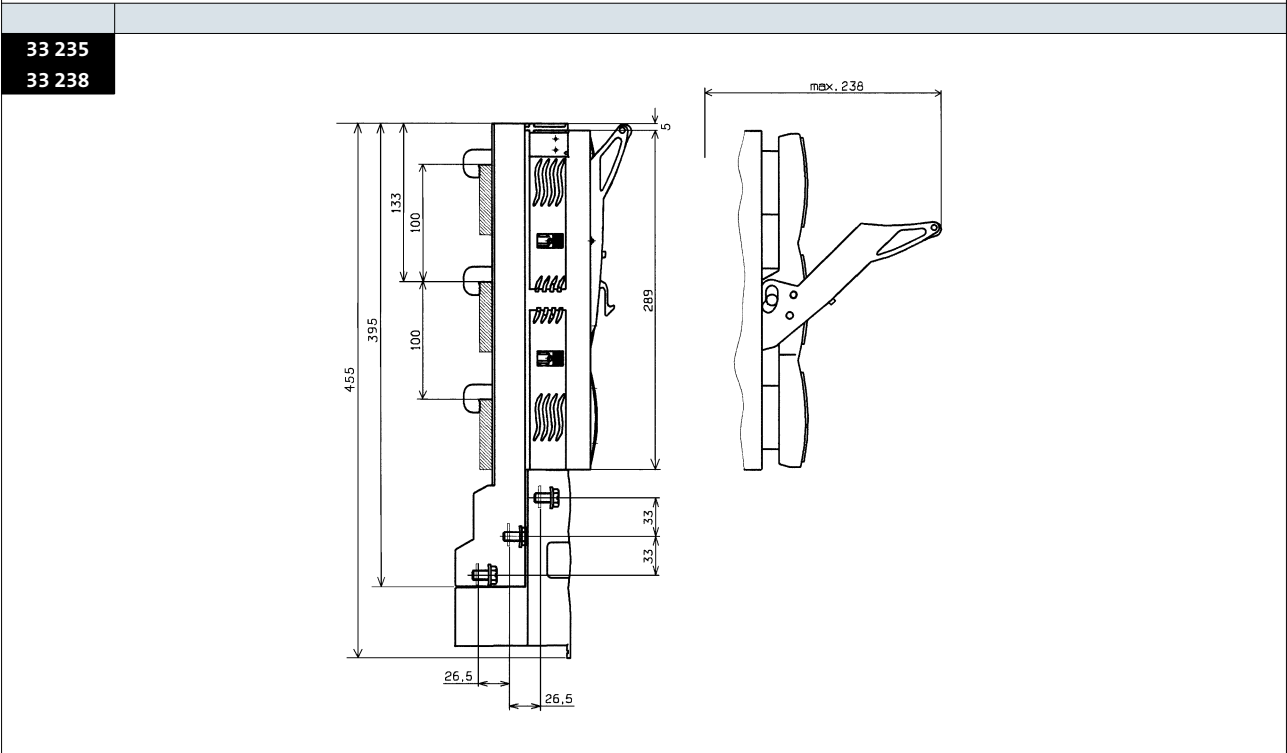
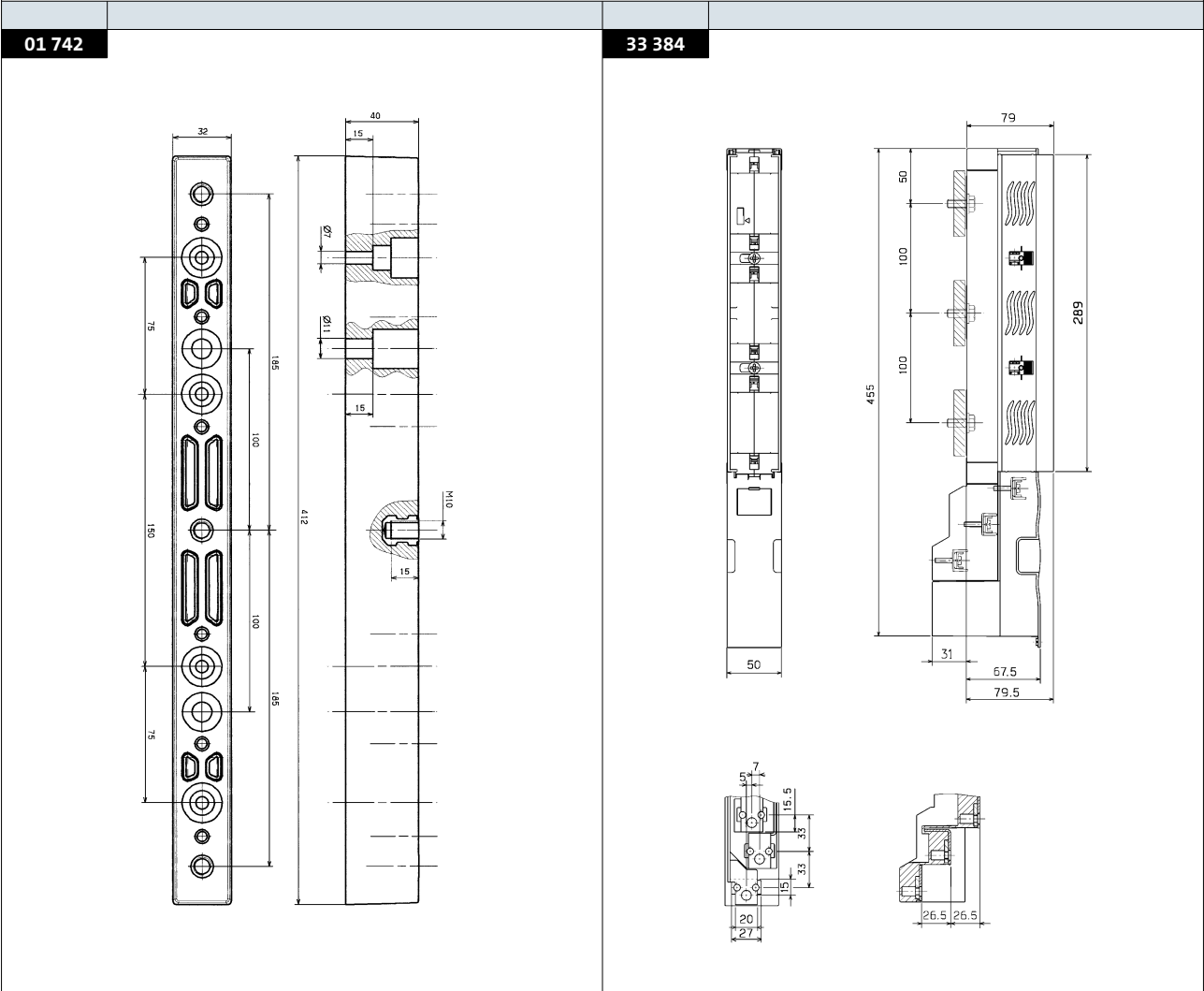


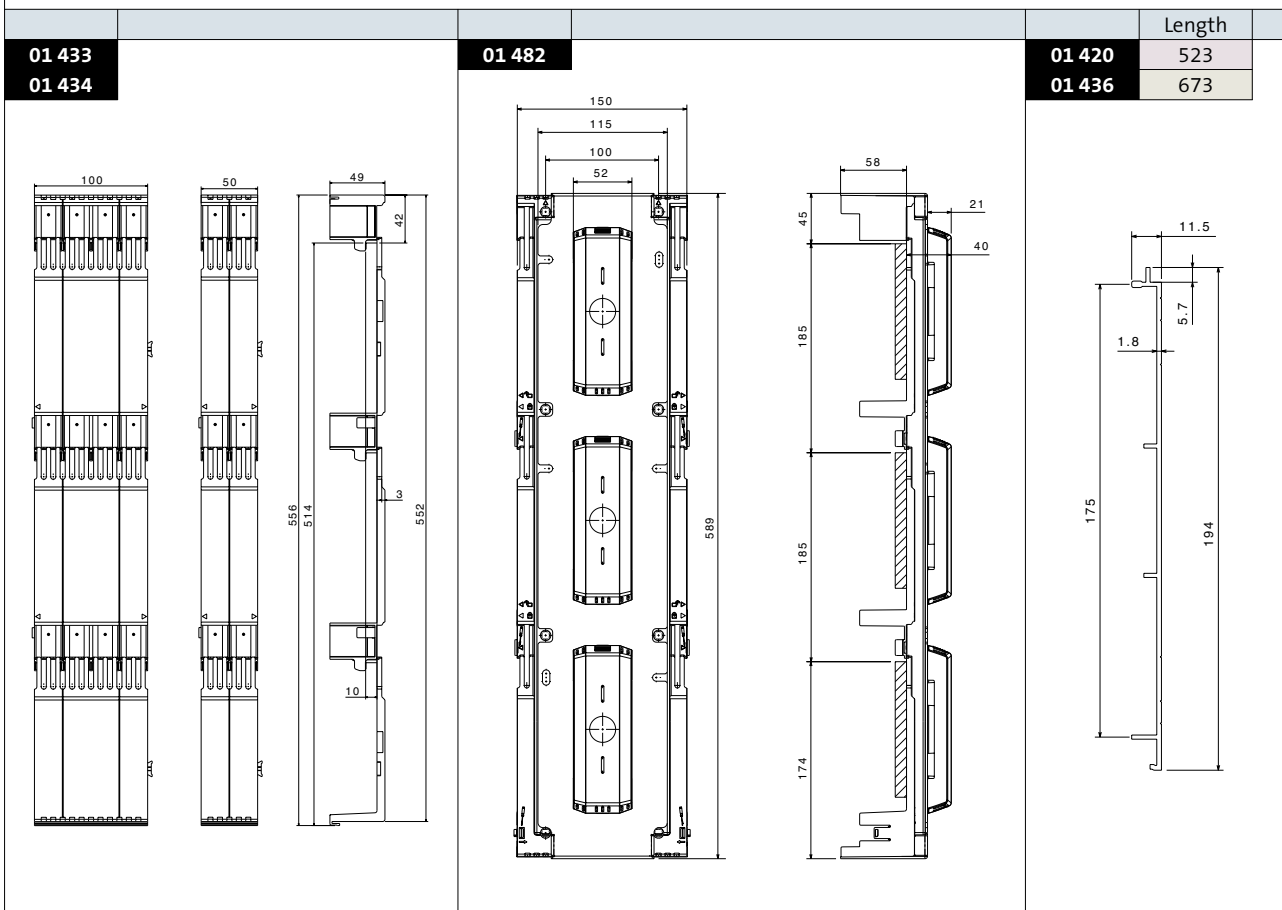
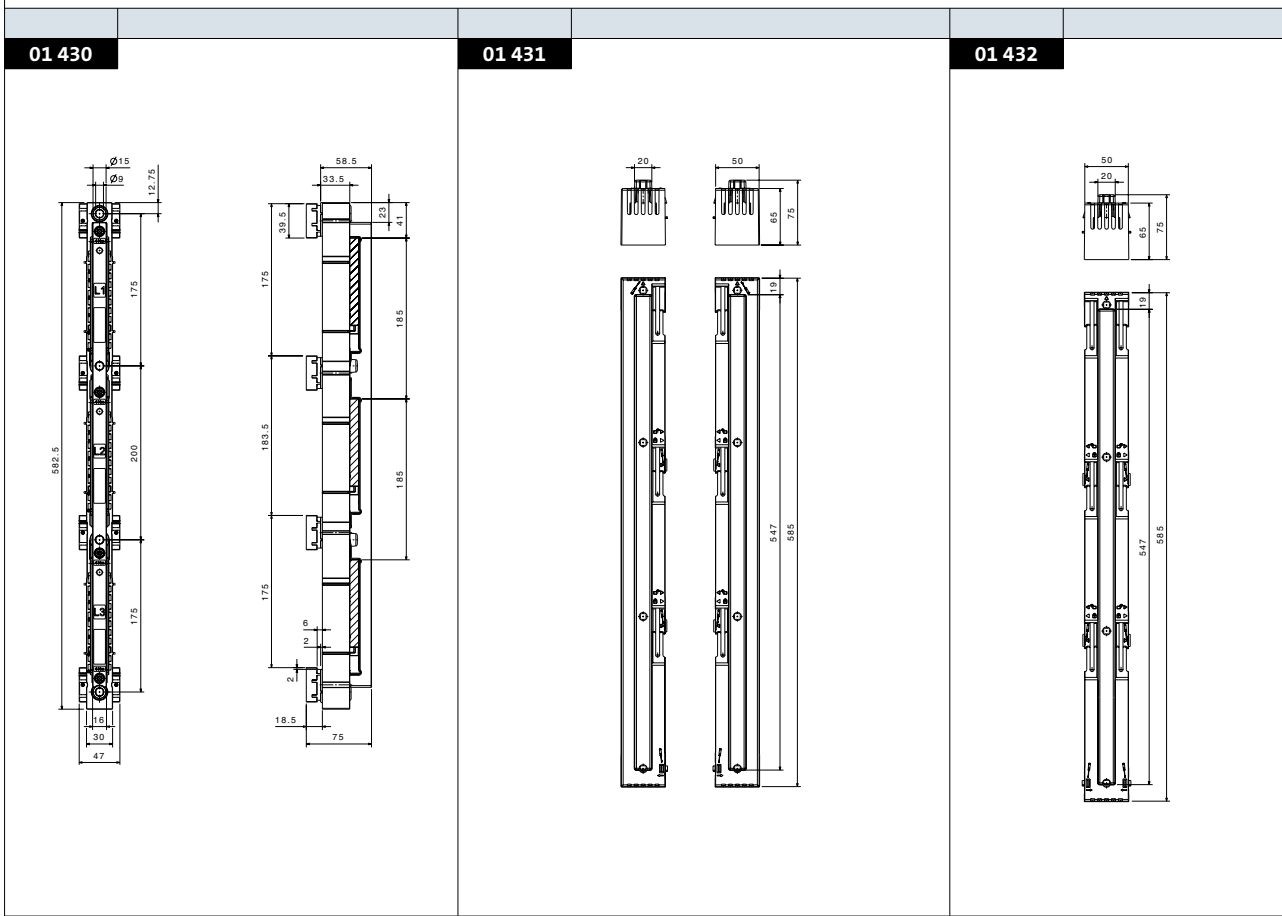
<p>35 008</p>	<p>35 009</p>		
<p>01 369</p>	<p>01 377 01 378 01 610</p>		
<p>01 379</p>	<p>01 380</p>		
<p>01 479</p>	<p>01 254</p>	<p>01 230</p>	<p>33 341</p>

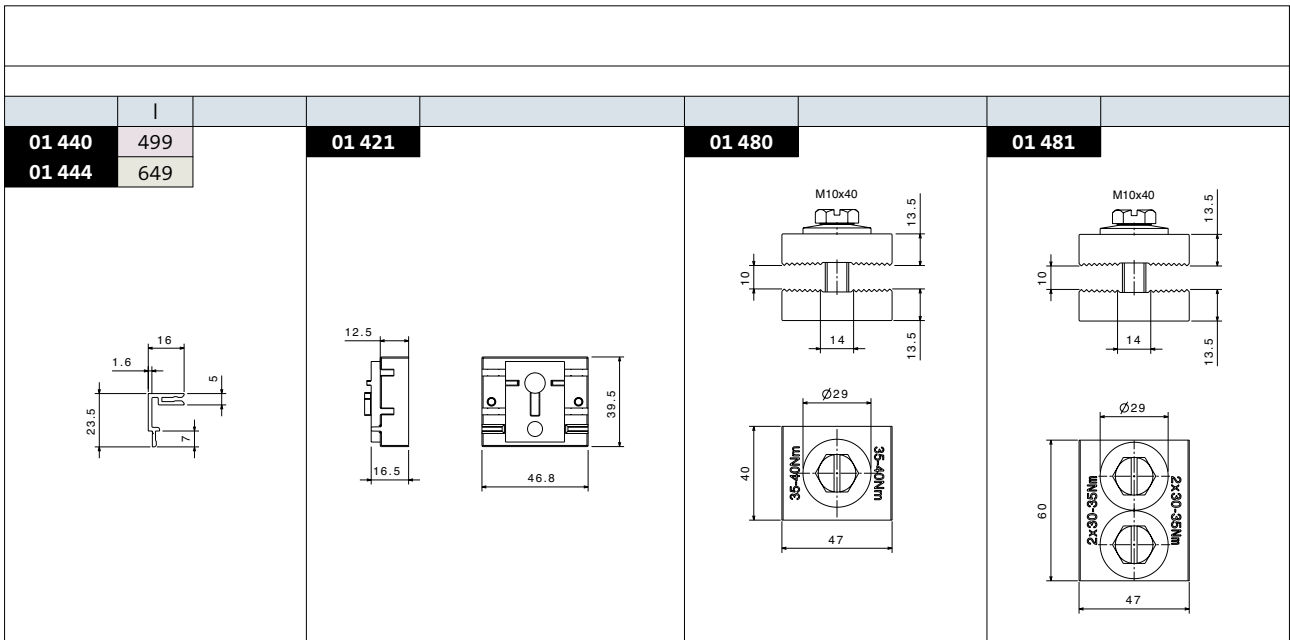
	a	b		
01 092	30	48		32 001

	a	b	c	d	h		a	b	c	d	e	f	g	max. h
01 206	20	40	40	60	20	01 047	42	38	37	47	23.5	15	27.5	55
01 207	32	50	50	70	20	01 512	24	17.5	19.5	24.5	11.5	9	23	30
01 218	40	63	60	82	20	01 514	32	29.5	29	36	20.5	12	24	42
01 222	40	80			30									
01 616	32	40	50	60	20									
01 617	50	63	70	82	20									

	a	b	c	d	e	g	h	k	Ø l	m	n	o	x
03 369	35	102	28	60	86	70	70	57					35
03 370	35	102	28	60	86	70	70	57					35
03 384	60	175	41	84	110	106	90	86					60
03 587	35	102	28	60	86	70	70	57	8.5				35
03 599	65	193	40	92	113	118	87	98					65
03 601	60	175	41	84	110	106	90	86	6.5	10	9	10	60
03 790	80	198	40	93	133	123	123	98	8.5	7	5	18	80
03 795	65	193	40	92	113	118	87	98	8.5	7	5	18	65

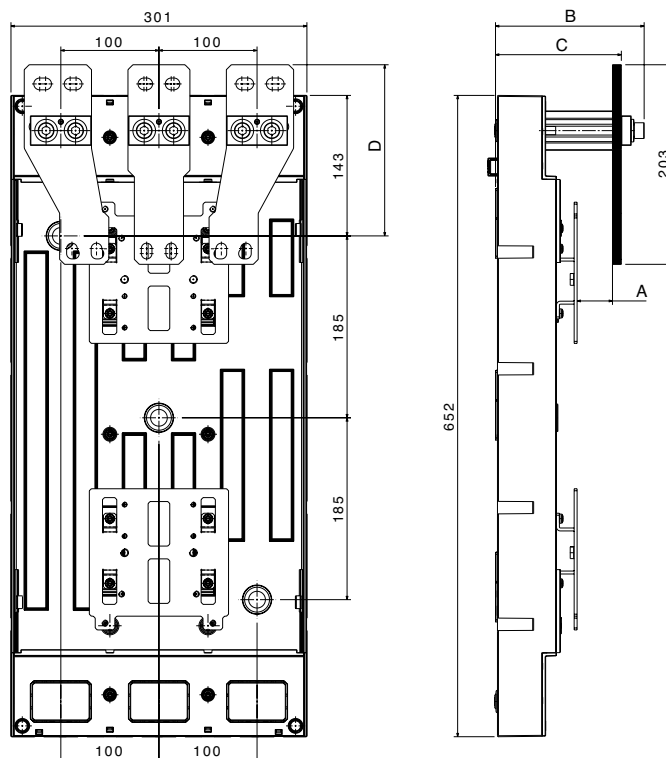






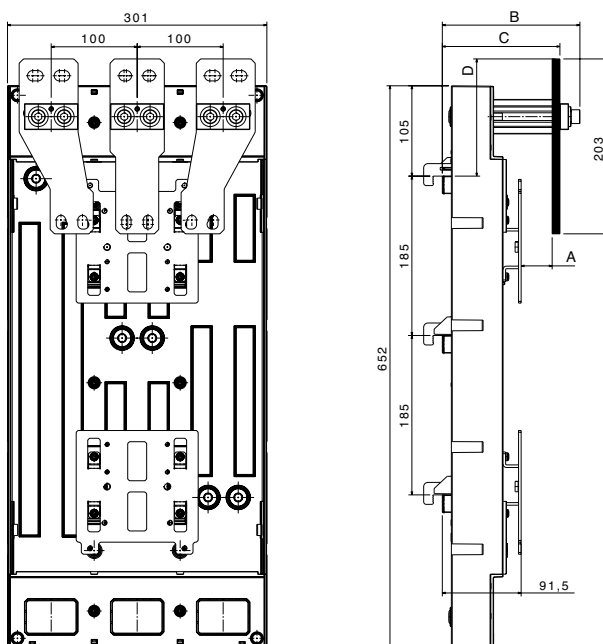
	Switchgear	A	B	C	D
32786	ABB Tmax T7 800 / 630	*)	*)	*)	*)
32785	ABB Tmax T7 1000	26	145	116	127
32784	ABB Tmax T7 1250	26.5	146	120	127
32782	Eaton NZM4 800, 630	*)	*)	*)	*)
32779	Eaton NZM4 1000	*)	*)	*)	*)
32781	Eaton NZM4 1250	*)	*)	*)	*)
32780	Eaton NZM4 1600	36	156	143	136
32778	Schneider Electric NS800 / 630	*)	*)	*)	*)
32777	Schneider Electric NS1000	*)	*)	*)	*)
32776	Schneider Electric NS1250	21.5	146	120	174
32775	Schneider Electric NS1600	21.5	151	125	174
32774	Siemens VL 800	*)	*)	*)	*)
32773	Siemens VL 1250 (1000A)	*)	*)	*)	*)
32772	Siemens VL 1250 (1250A)	36	151	128	74

*) on request



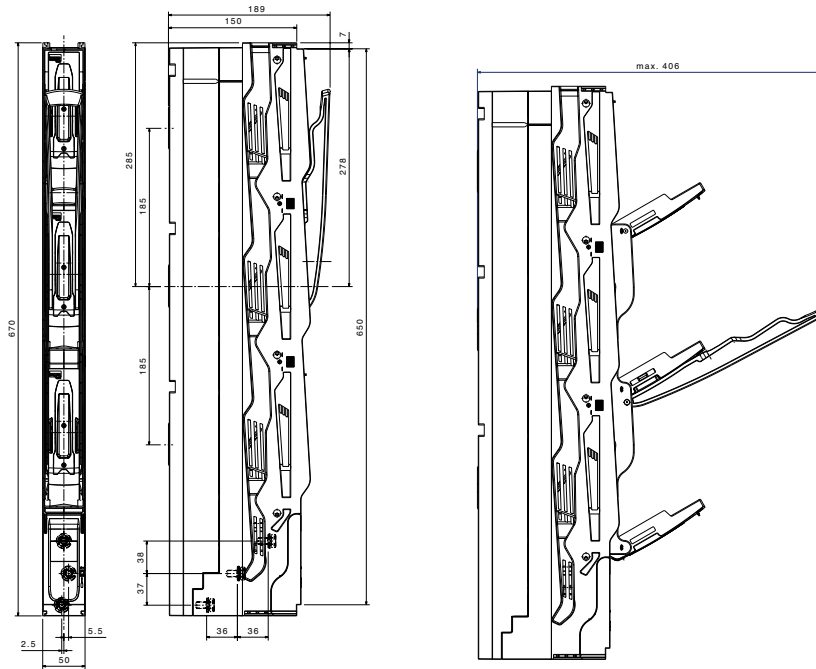
Switchgear		A	B	C	D
32767	ABB Tmax T7 800 / 630	*)	*)	*)	*)
32766	ABB Tmax T7 1000	26	154	125	89
32765	ABB Tmax T7 1250	26.5	154	128	89
32768	Eaton NZM4 800 / 630	*)	*)	*)	*)
32763	Eaton NZM4 1000	*)	*)	*)	*)
32762	Eaton NZM4 1250	*)	*)	*)	*)
32761	Eaton NZM4 1600	36	156	143	136
32764	Schneider Electric NS800 / 630	*)	*)	*)	*)
32758	Schneider Electric NS1000	*)	*)	*)	*)
32757	Schneider Electric NS1250	21.5	154	128	136
32756	Schneider Electric NS1600	21.5	159	133	136
32754	Siemens VL 800	*)	*)	*)	*)
32755	Siemens VL 1250 (1000A)	*)	*)	*)	*)
32753	Siemens VL 1250 (1250A)	36	160	137	136

*) on request

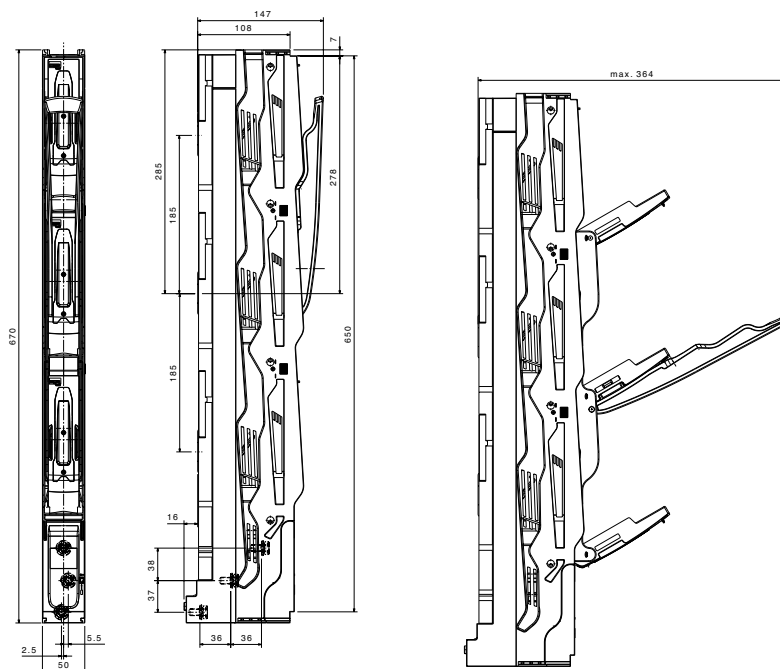


32 750	32 751

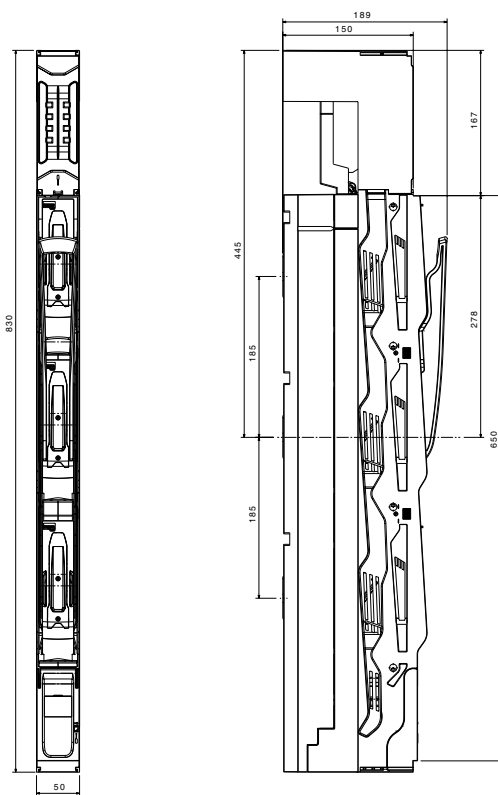
33 700
33 770



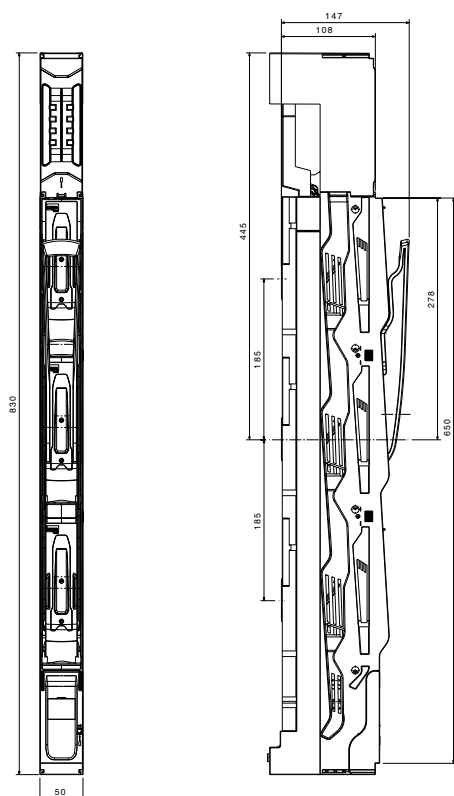
33 704
33 773



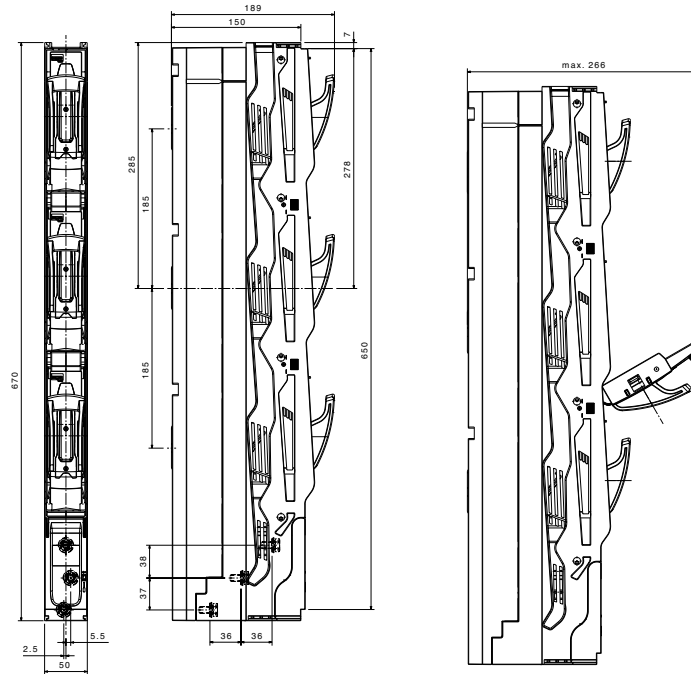
33 720
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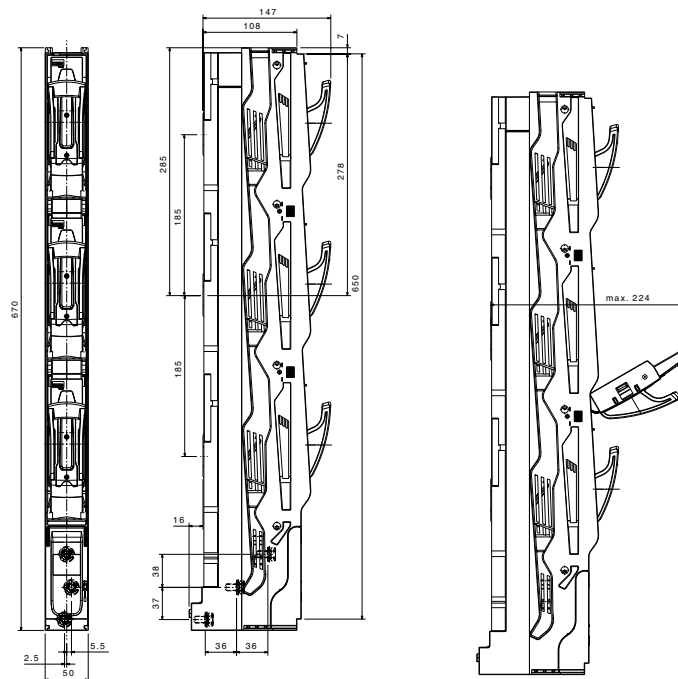
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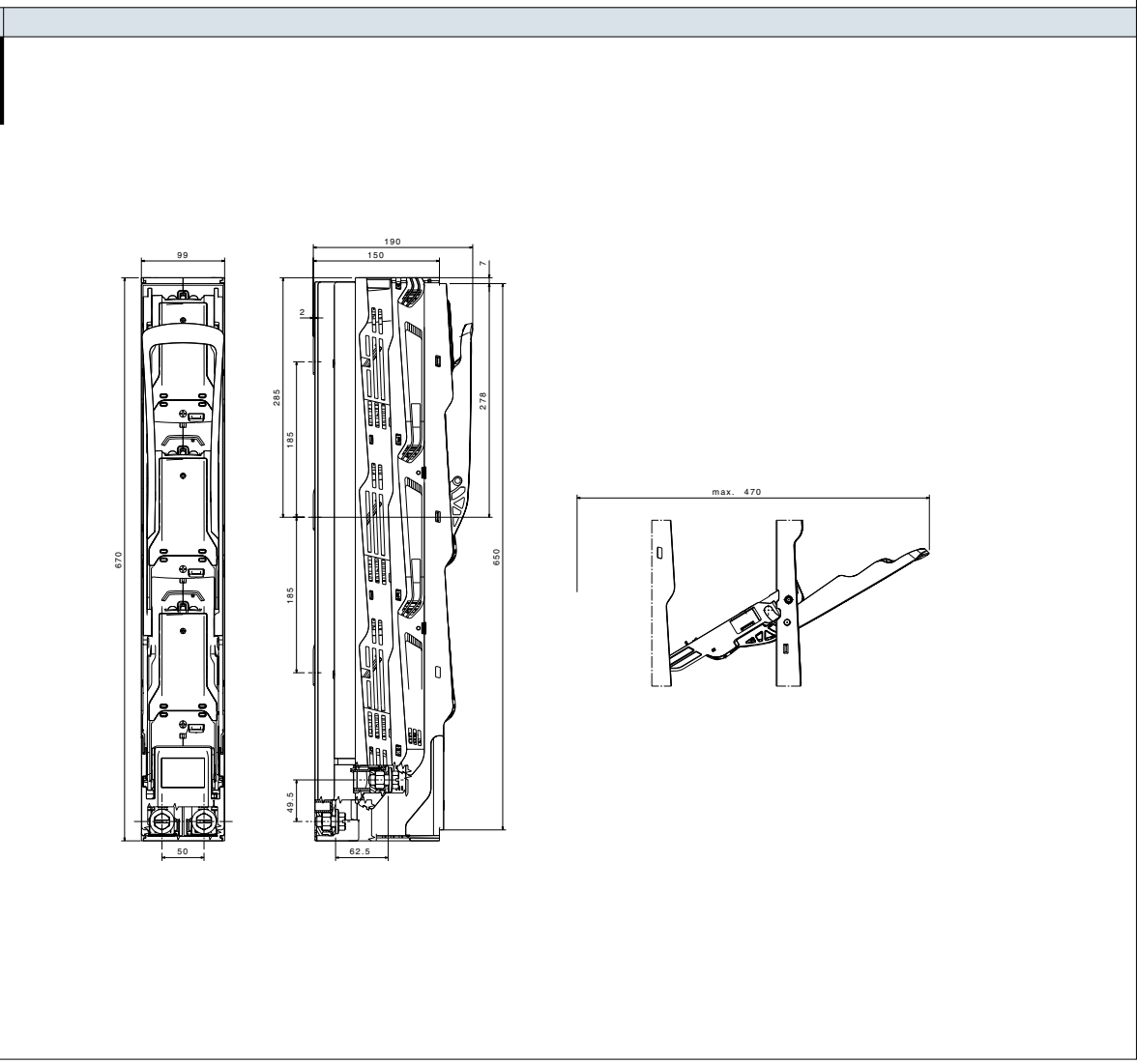
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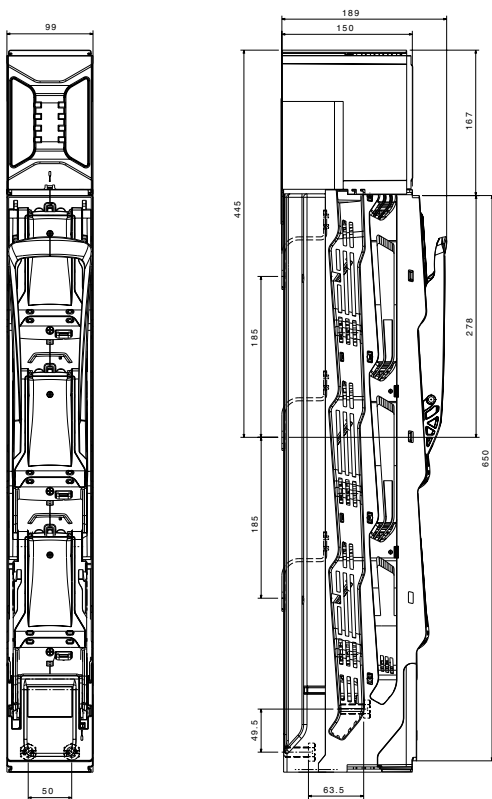
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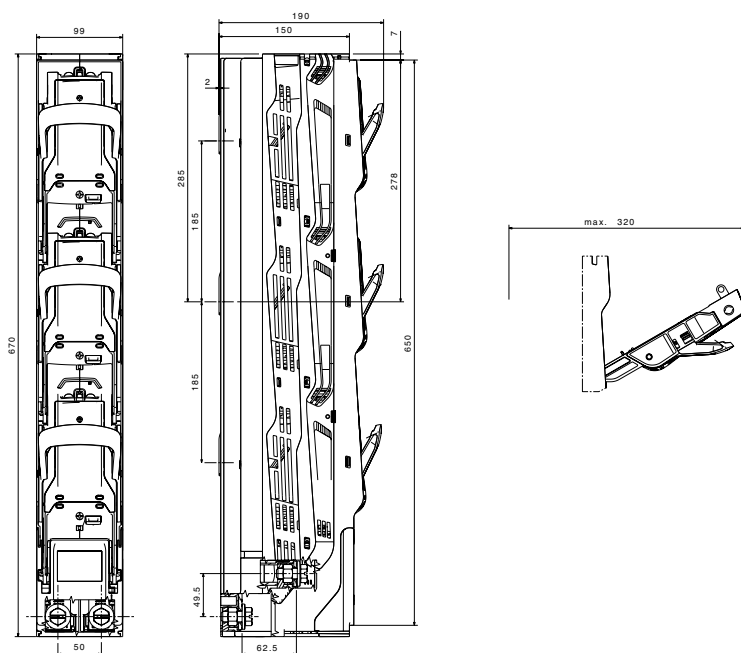
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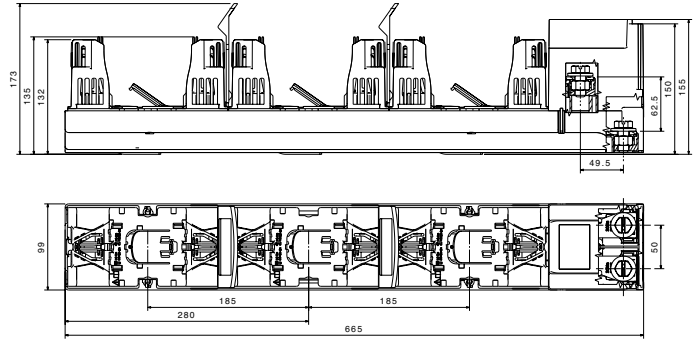


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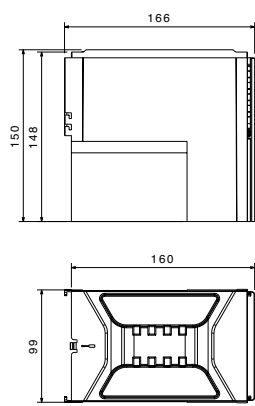




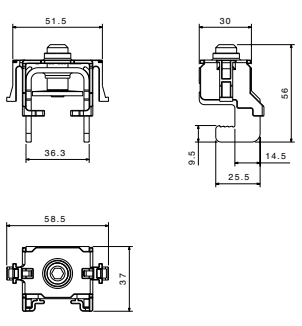
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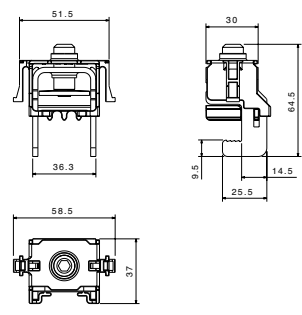
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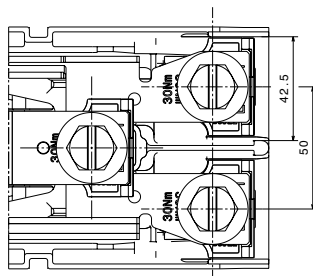
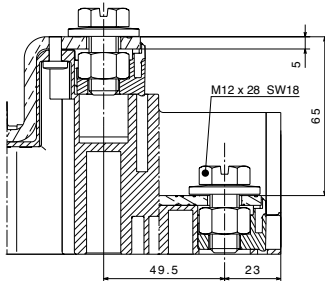
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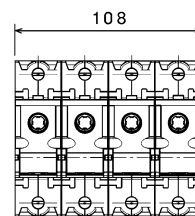
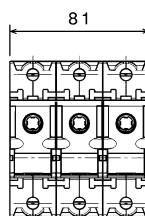
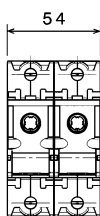
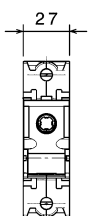
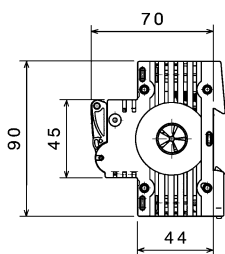
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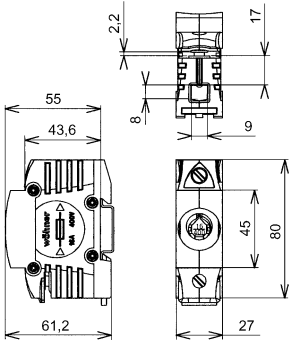
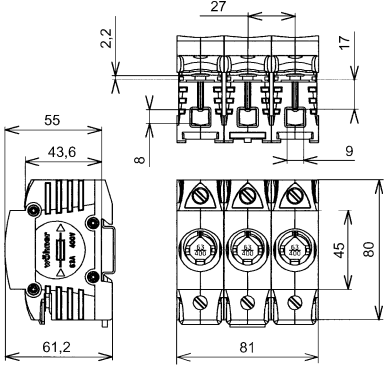
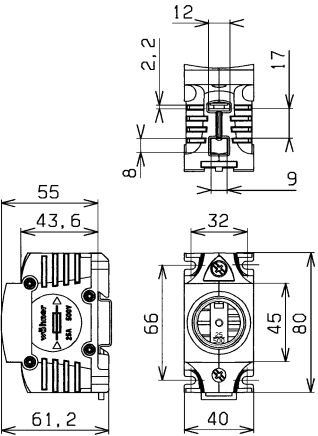
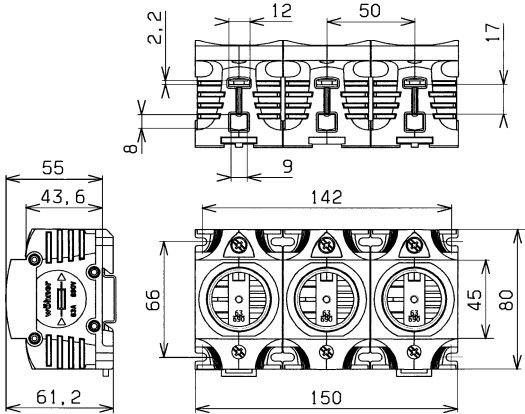
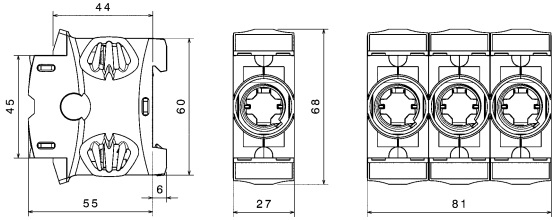
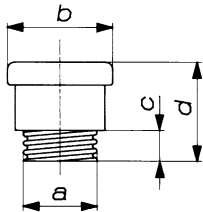


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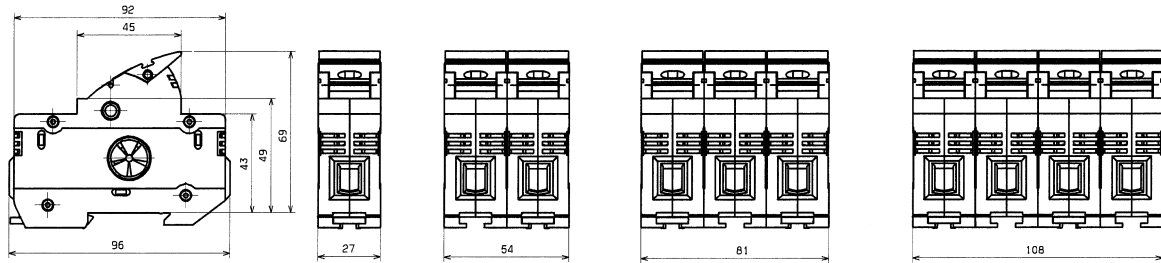
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31 039	21	29	42	16	6.5	3		31 057	6	26	1	27
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31 103	13	18	45	17	4	2		31 102	18	16	3	18
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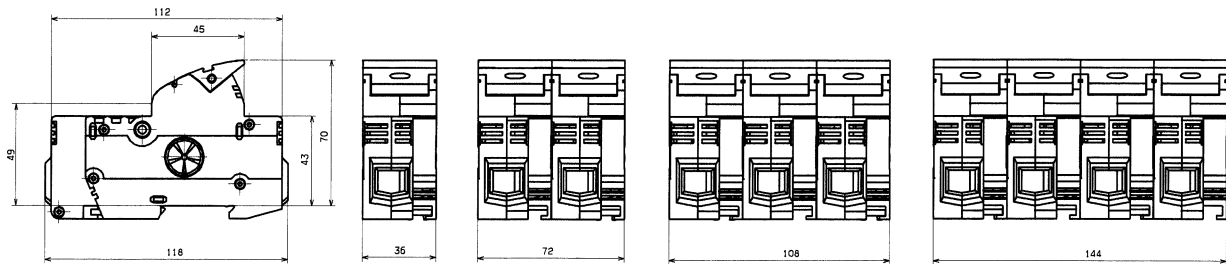
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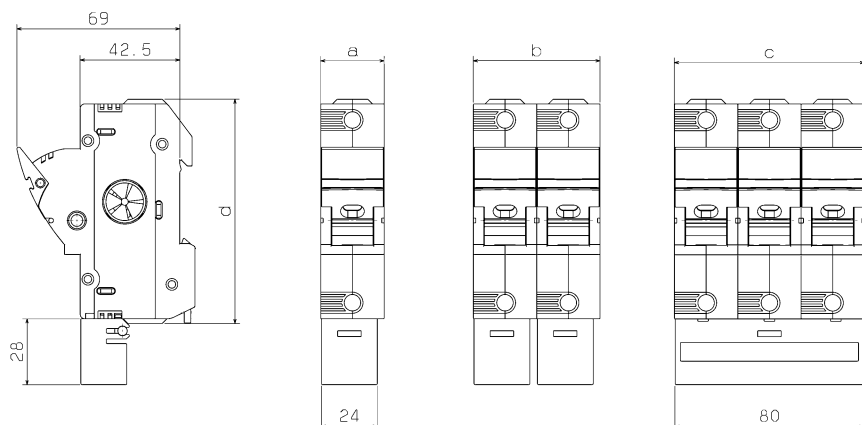
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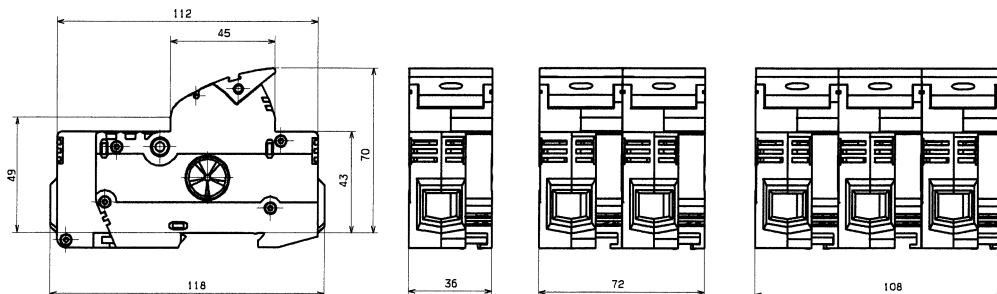
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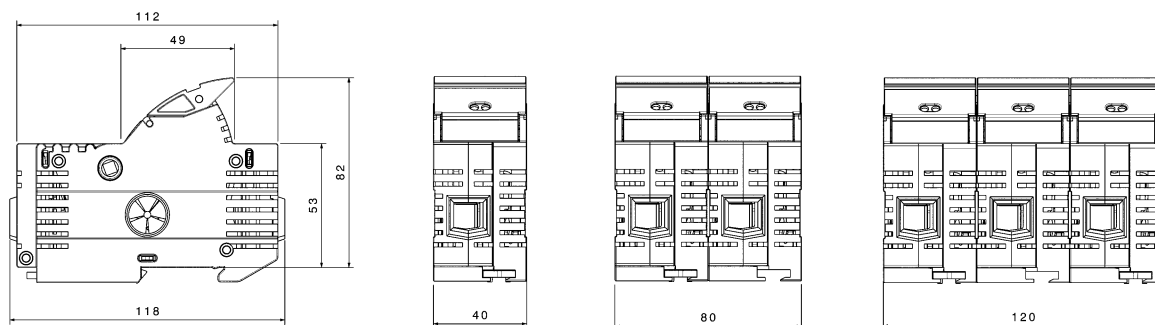
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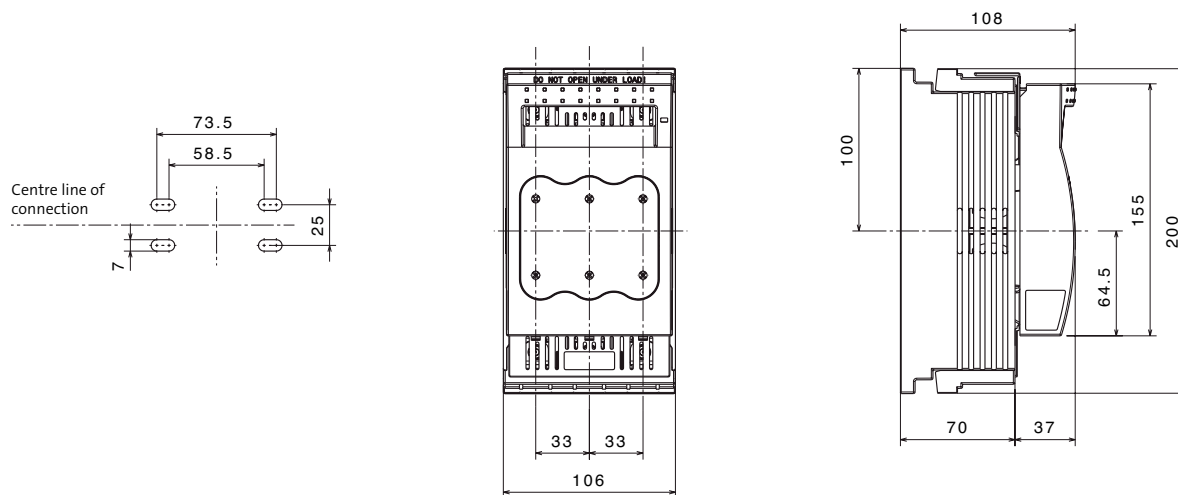
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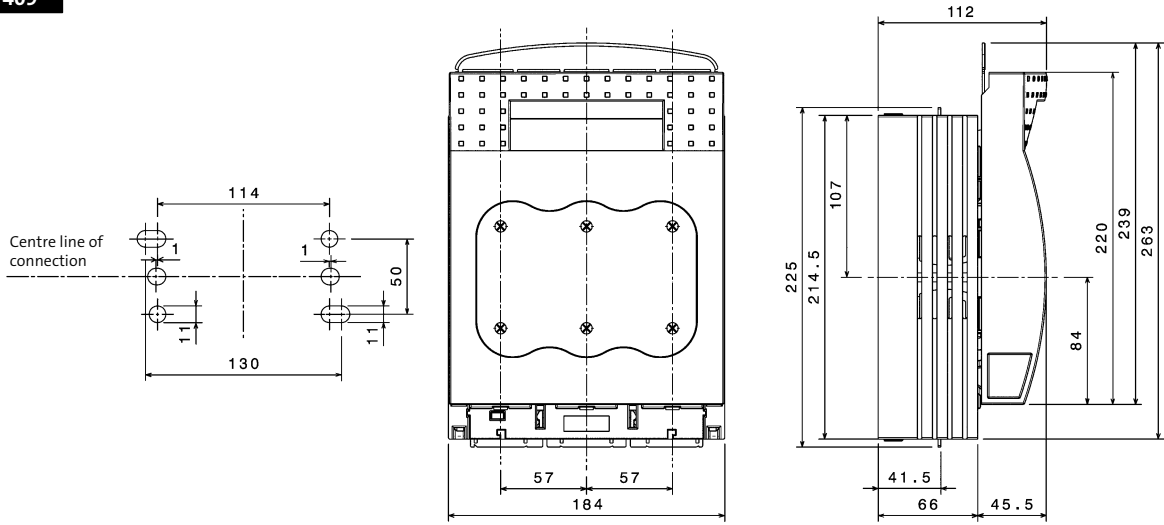
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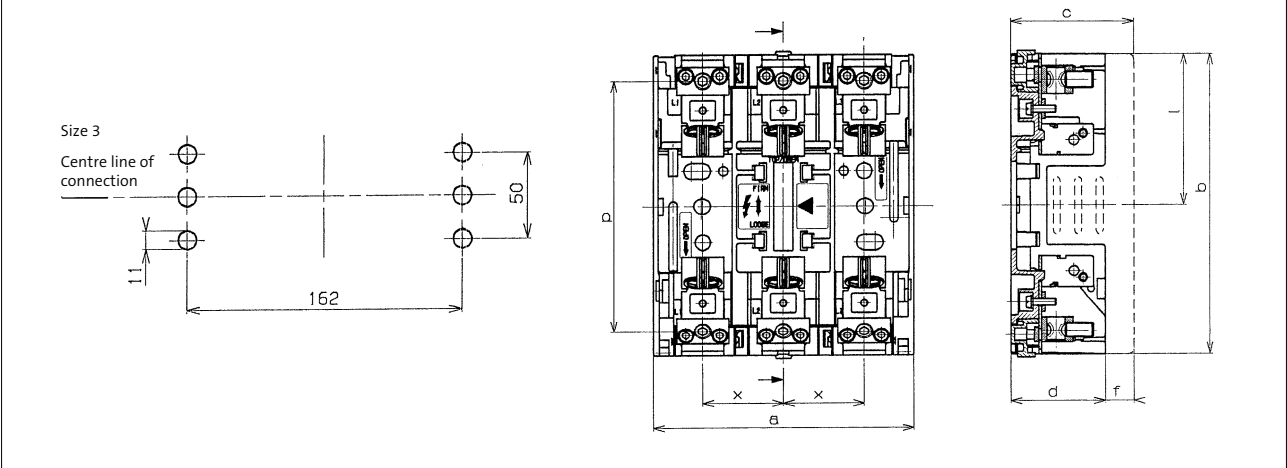
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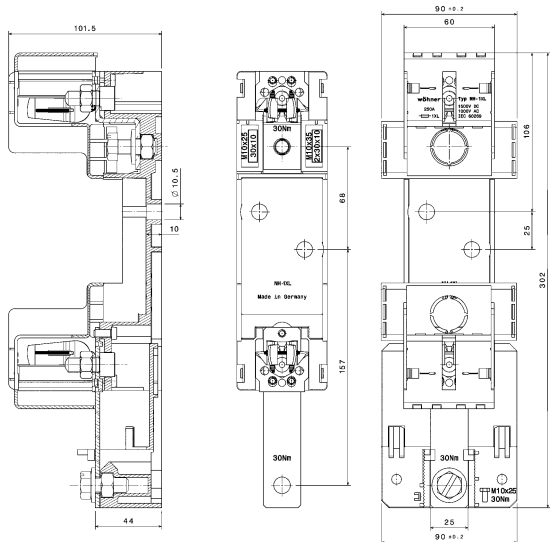
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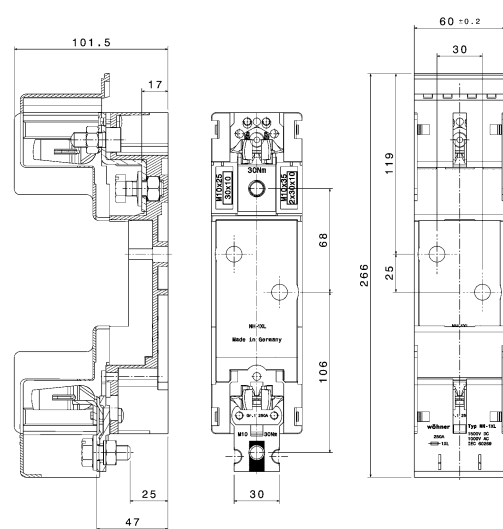
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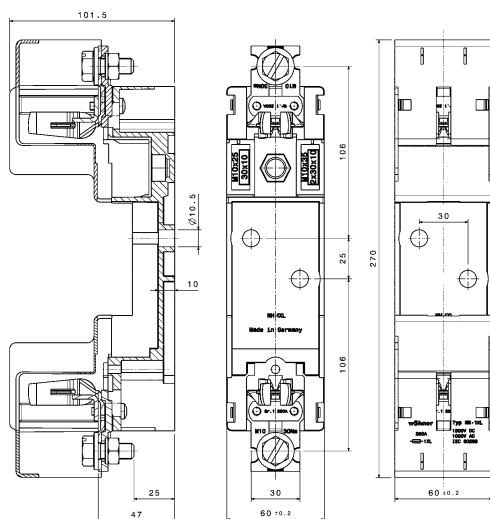
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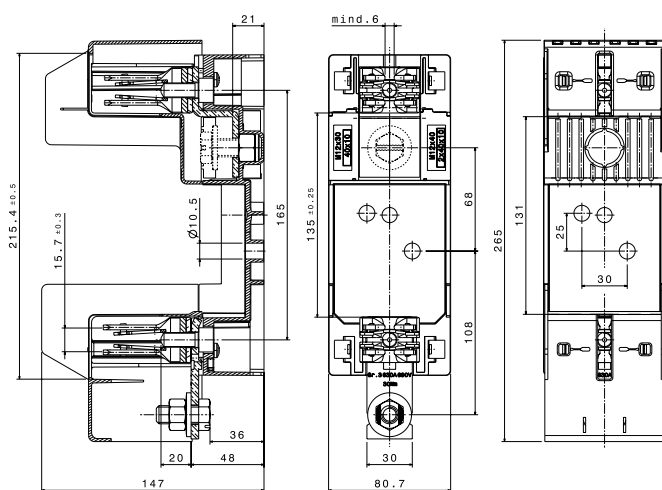
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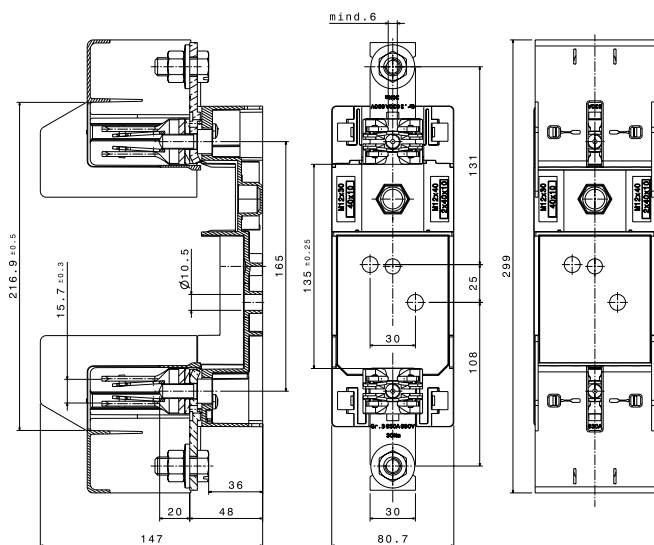
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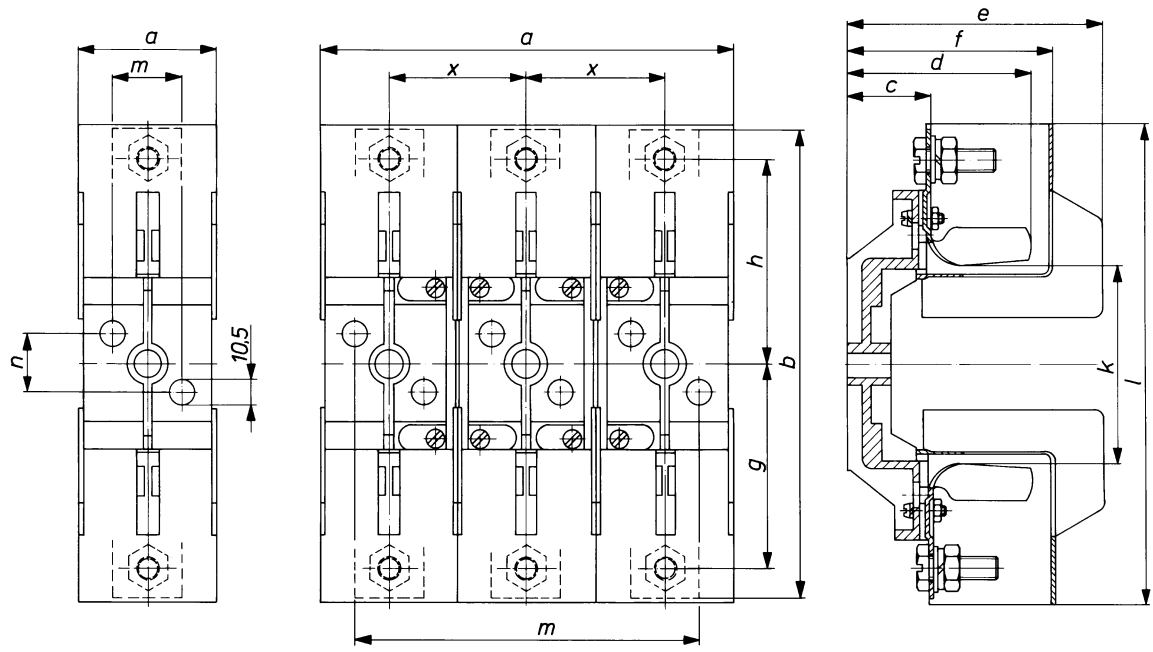
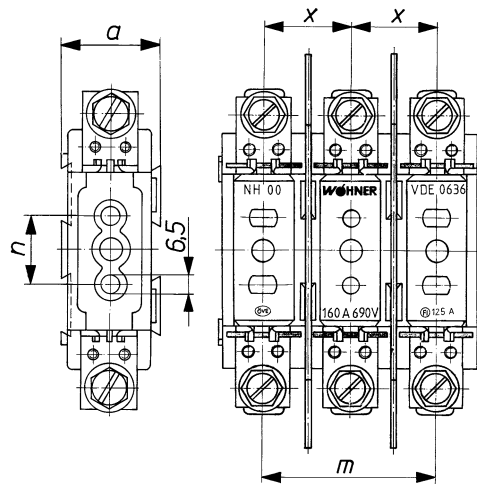
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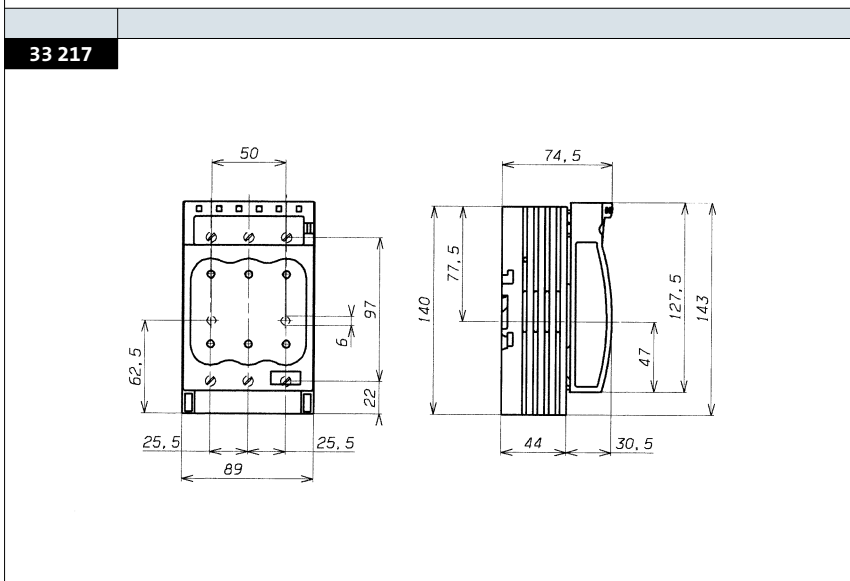


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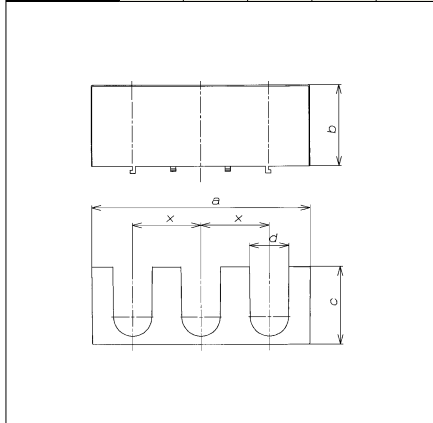


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03 355	97	120	28	58	88		50	50	57	145	32	64	25
03 749	97	120	28	58	88	62	50	50	57	147	32	64	25
03 758	35.3	120	28	58	88	62	50	50	57	147			25
03 759	97	120	28	58	88	62	50	50	57	147	32	64	25
03 760	35.3	120	28	58	88	62	50	50	57	147			25
03 761	97	120	28	58	88	62	50	50	57	147	32	64	25
03 762	60	200	37	80	110	89	87.5	87.5	83	205		30	25
03 763	180	200	37	80	110	89	87.5	87.5	83	205	60	150	25
03 764	60	200	37	80	110	89	87.5	87.5	83	205		30	25
03 765	180	200	37	80	110	89	87.5	87.5	83	205	60	150	25
03 766	64	232	40	98	121	104	100	100	82	237		30	25
03 767	194	232	40	98	121	104	100	100	82	237	65	160	25
03 768	80	232	40	99	133.5	105	105	105	82	247		30	25
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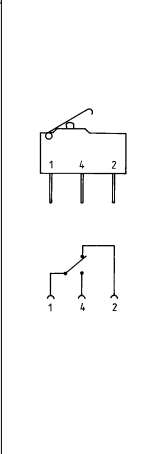
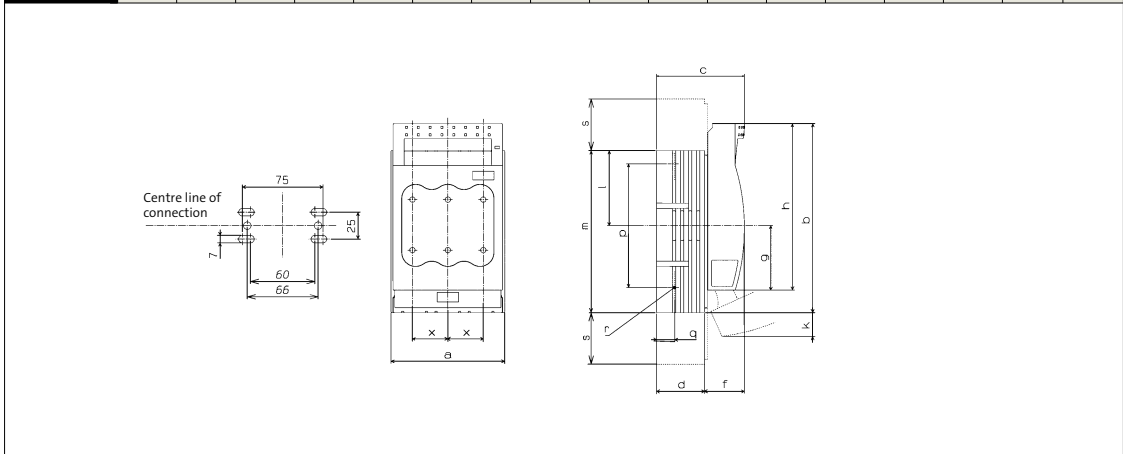




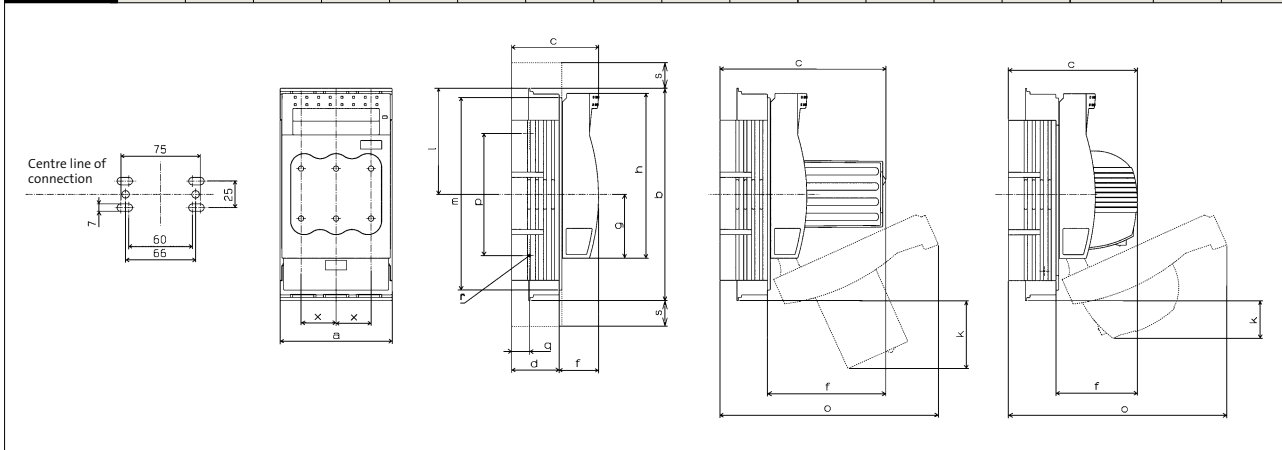
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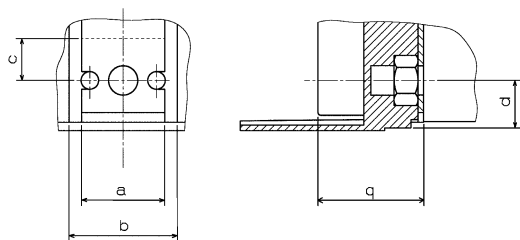
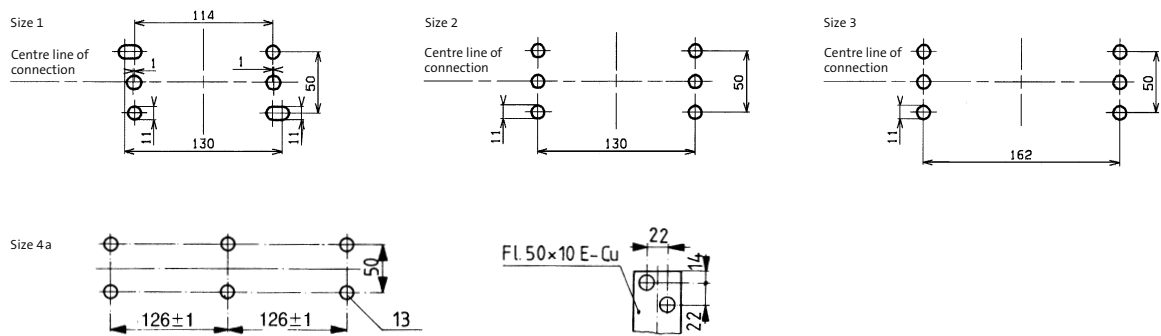
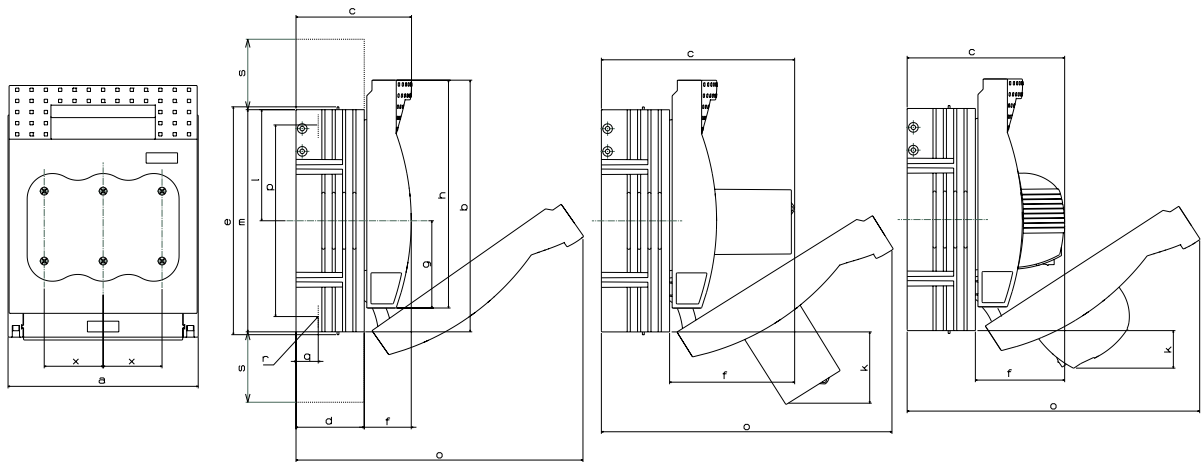
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33 222	00	106	176	82.5	45	37	60	155	22	70	151	206	115	17	M8	48	33	



	Size	a	b	c	d	f	g	h	k	l	m	o	p	q	r	s	x
33 199	00	106	200	82.5	45	37	60	155	—	100	181	206	101	17	2xM5	33	24
33 200	00	106	200	82.5	45	37	60	155	—	100	181	206	115	17	M8	33	24
33 207	00	106	200	157	45	112	60	155	64	100	181	206	101	17	2xM5	33	24
33 208	00	106	200	157	45	112	60	155	64	100	181	206	115	17	M8	33	24
33 328	00	106	200	122	45	77	60	155	35	100	181	206	101	17	2xM5	33	24
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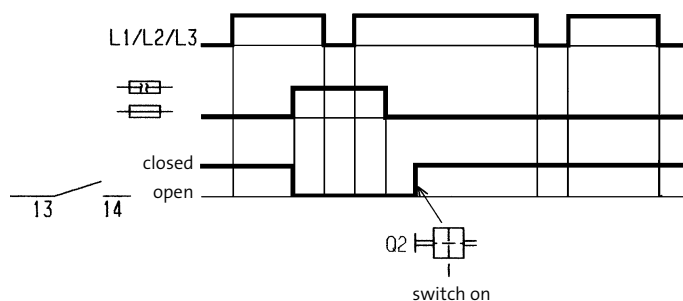
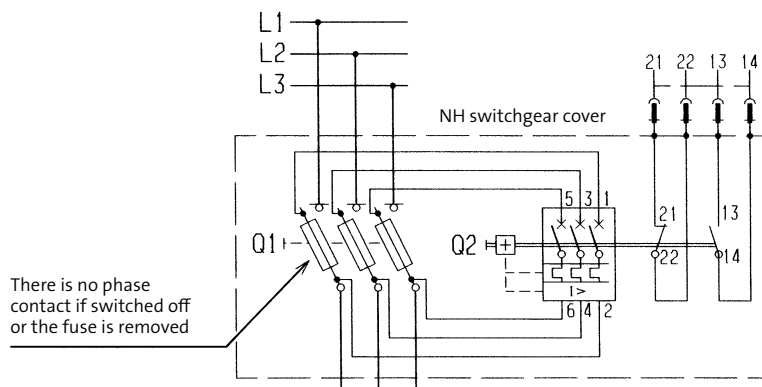


	Size	a	b	c	d	e	f	g	h	l	m	p	q	r	x	s
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33 150	2	210	288	203	80	—	123	92	249	124	255	210	25	M10	65	52
33 151	3	256	300	217.5	94.5	—	123	98.5	259	127.5	267	210	30	M12	81	48
33 201	1	184	243	111.5	66	220	45.5	84	220	107	214.5	185	21.5	M10	57	68
33 202	2	210	288	128	80	—	48	92	249	124	255	210	25	M10	65	52
33 203	3	256	300	142.5	94.5	—	48	98.5	259	127.5	267	210	30	M12	81	48
33 204	4a	378	352	233	151	—	75	104	256	192	352	—	39	2xM12	126	—
33 330	1	184	243	152	66	220	86	84	220	107	214.5	185	21.5	M10	57	68
33 331	2	210	288	168.5	80	—	88.5	92	249	124	255	210	25	M10	65	52
33 332	3	256	300	183	94.5	—	88.5	98.5	259	127.5	267	210	30	M12	81	48
33 393	1	184	243	111.5	66	220	45.5	84	220	107	214.5	185	21.5	M10	57	68

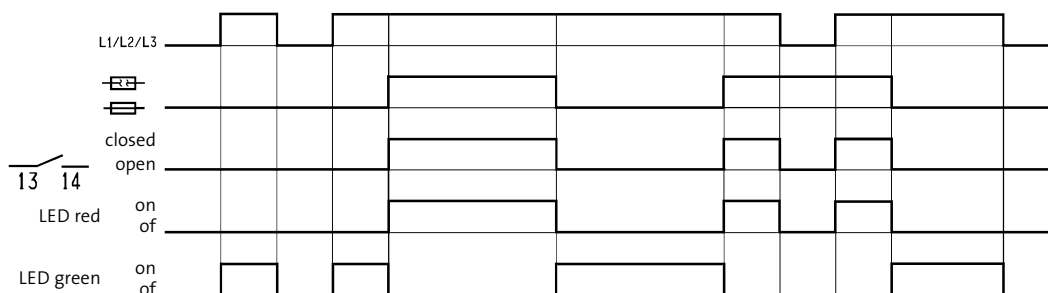
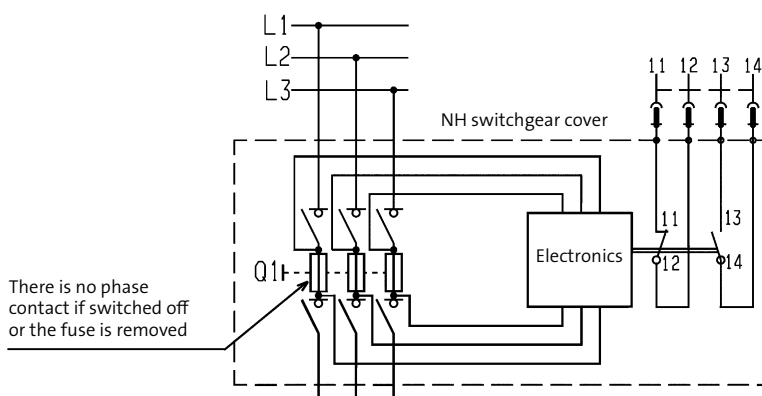


Size	a	b	c	d	q
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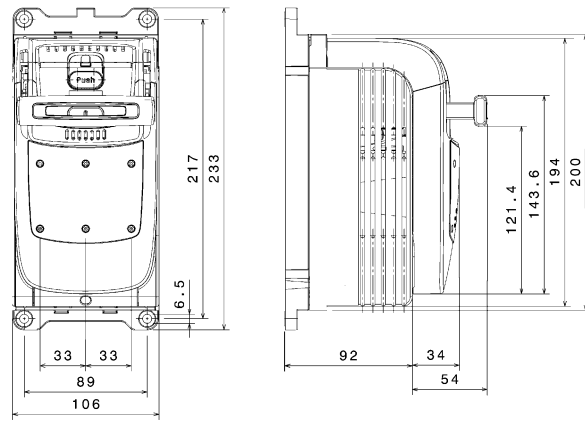
QCB, NH fuse switch disconnecter with electro-mechanical fuse monitoring



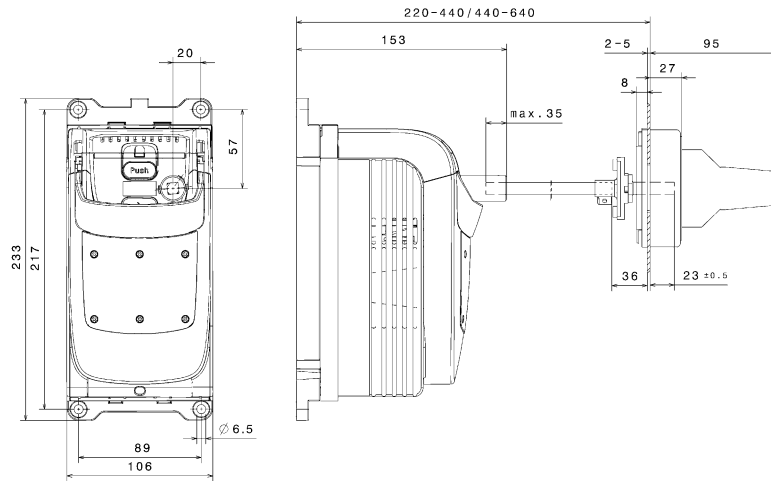
QCS, Switch disconnecter with NH fuses with electronic fuse monitoring



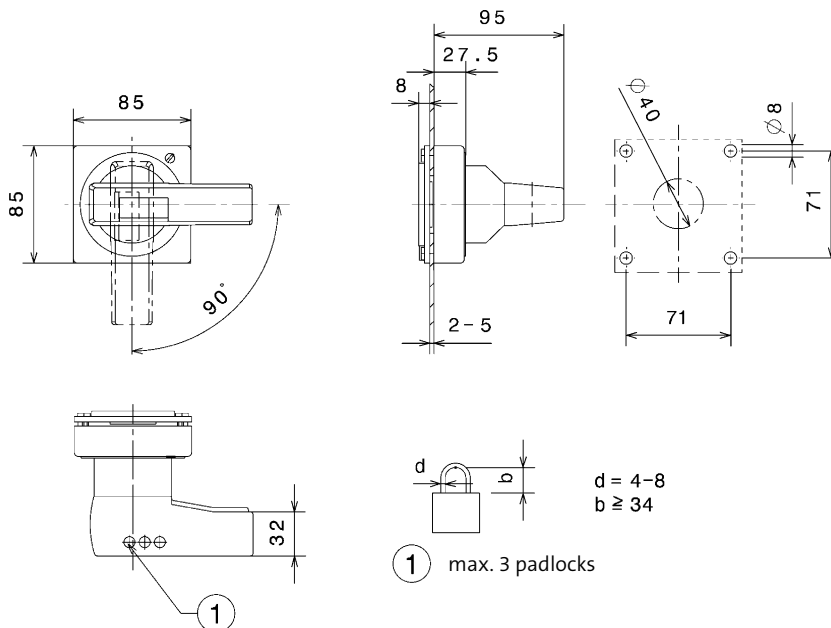
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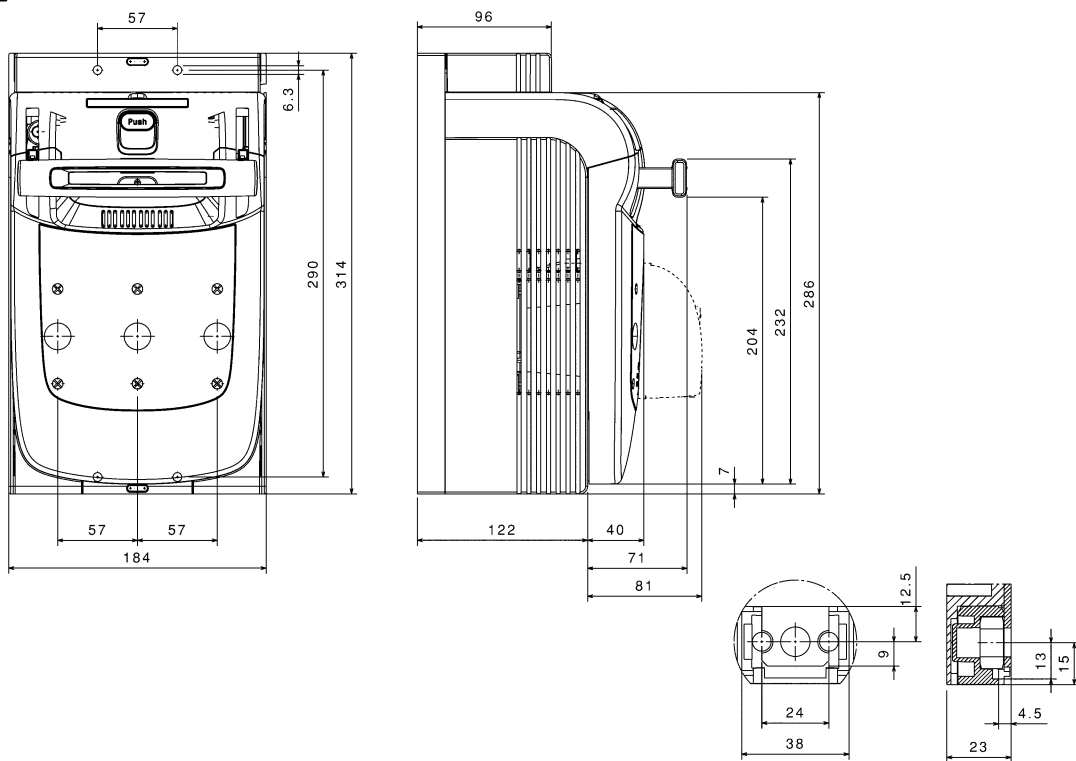
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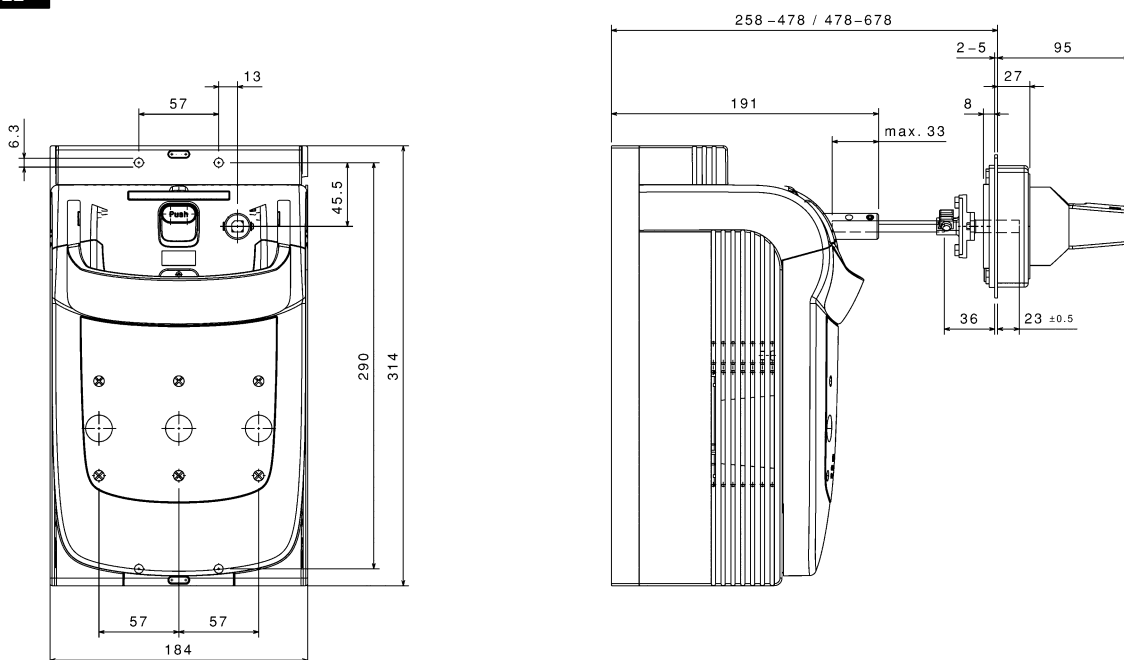
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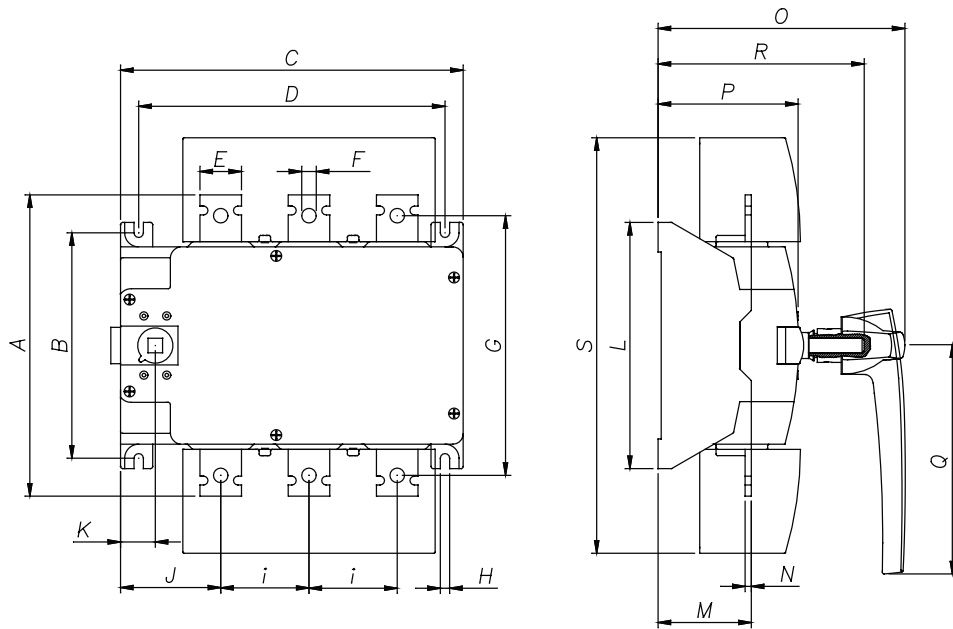
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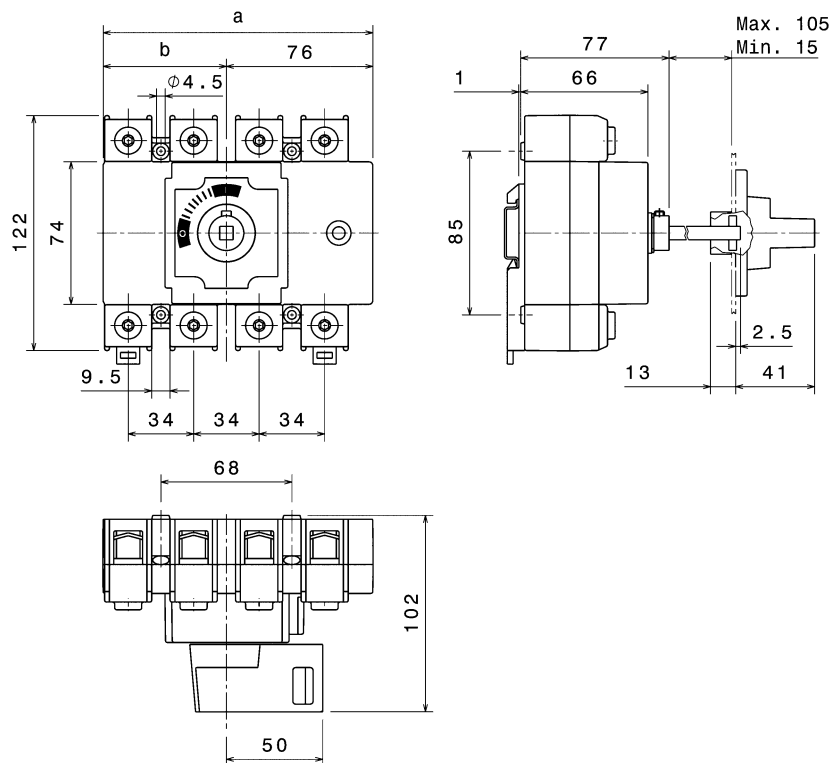
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33 911



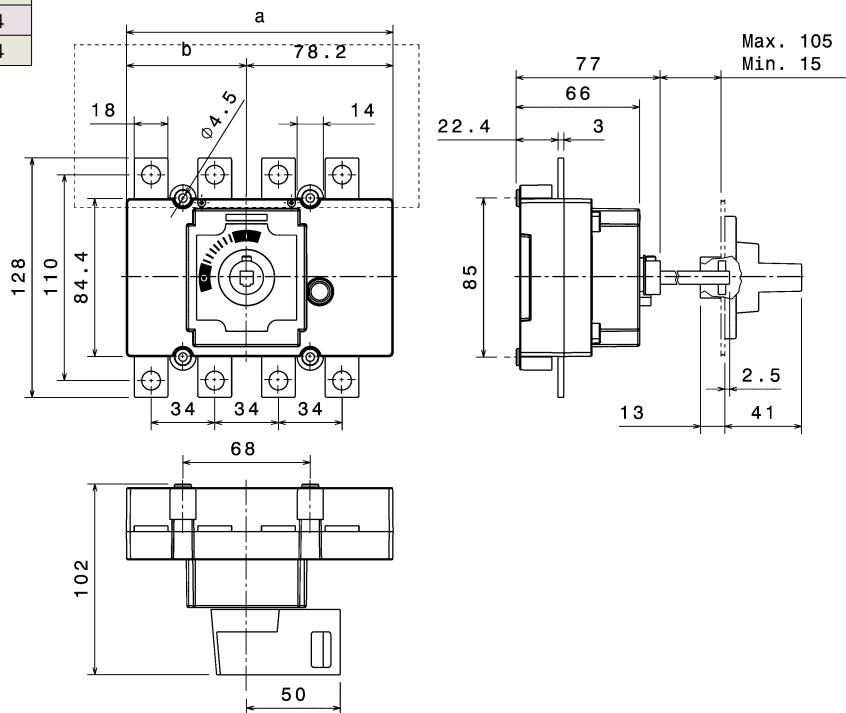
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33 334	33 356	400A	232	181.5	270	241.5	30	10.5	208	7	65	88	29	200	73	5	196.5	106.5	180	165	338
33 335	33 357	630A	238	181.5	270	241.5	35	10.5	208	7	65	88	29	200	73	5	196.5	106.5	180	165	338
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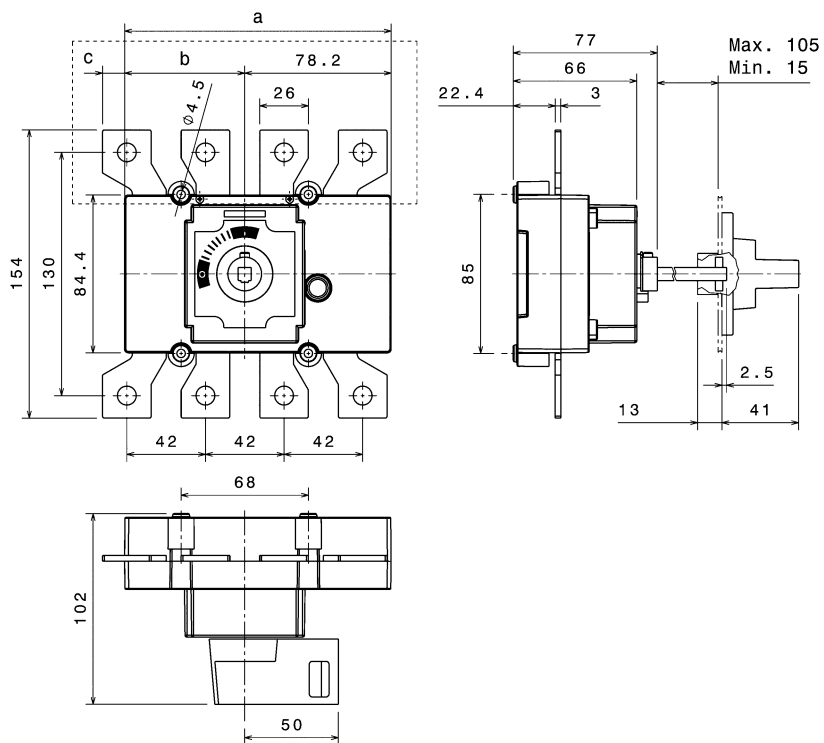
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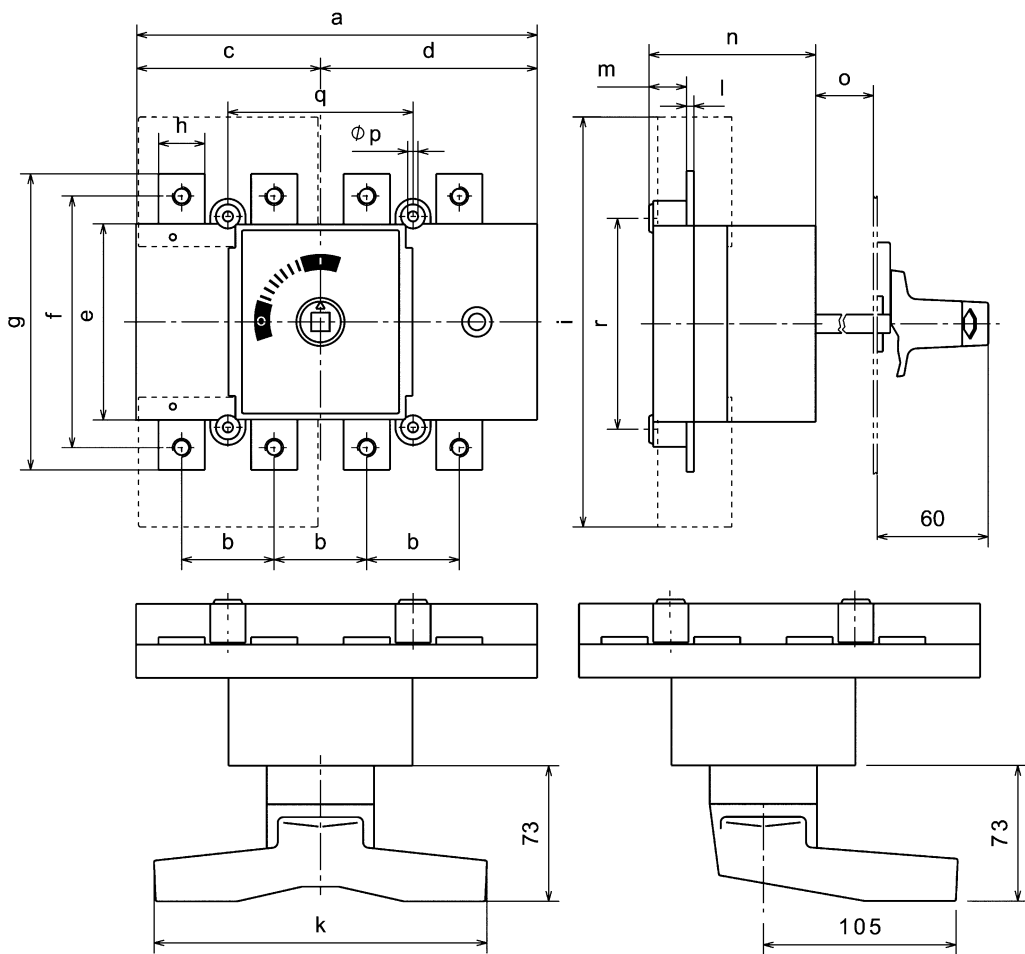
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33 445	142	64	11.8



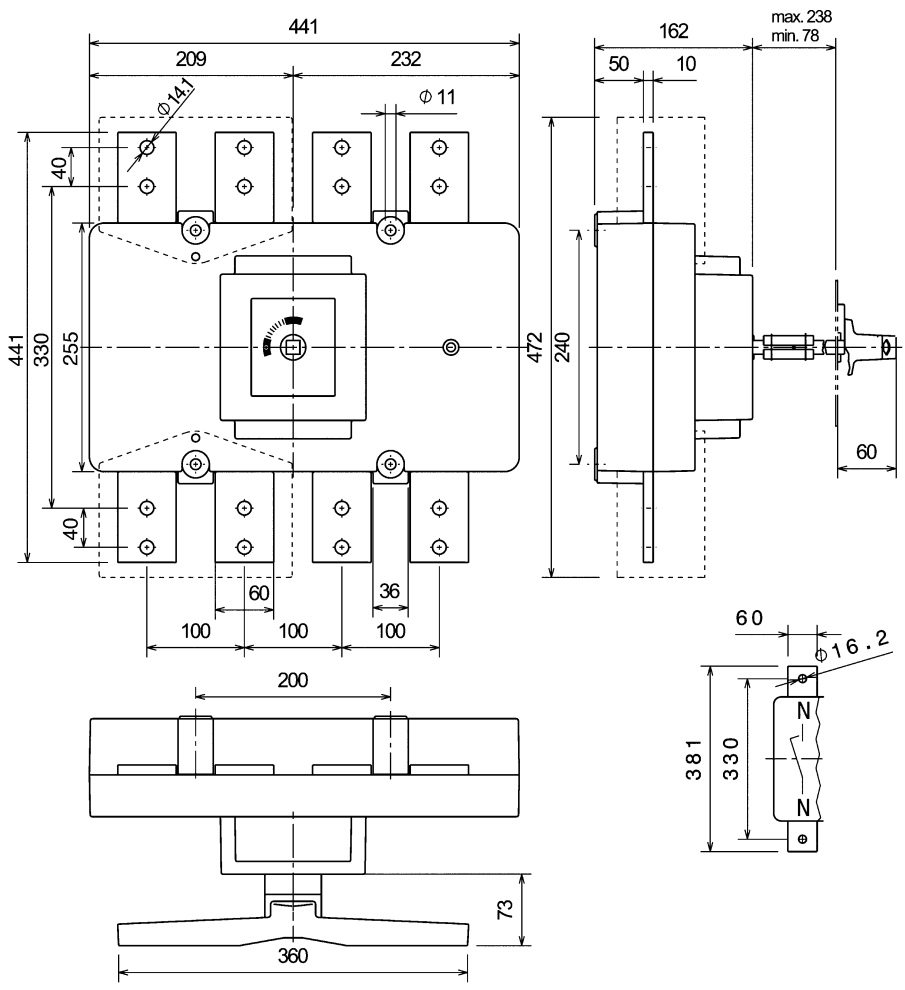
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33 434	325	75	150	175	190	250	290	40	340	285	8	39	137	18	108	9	140	190
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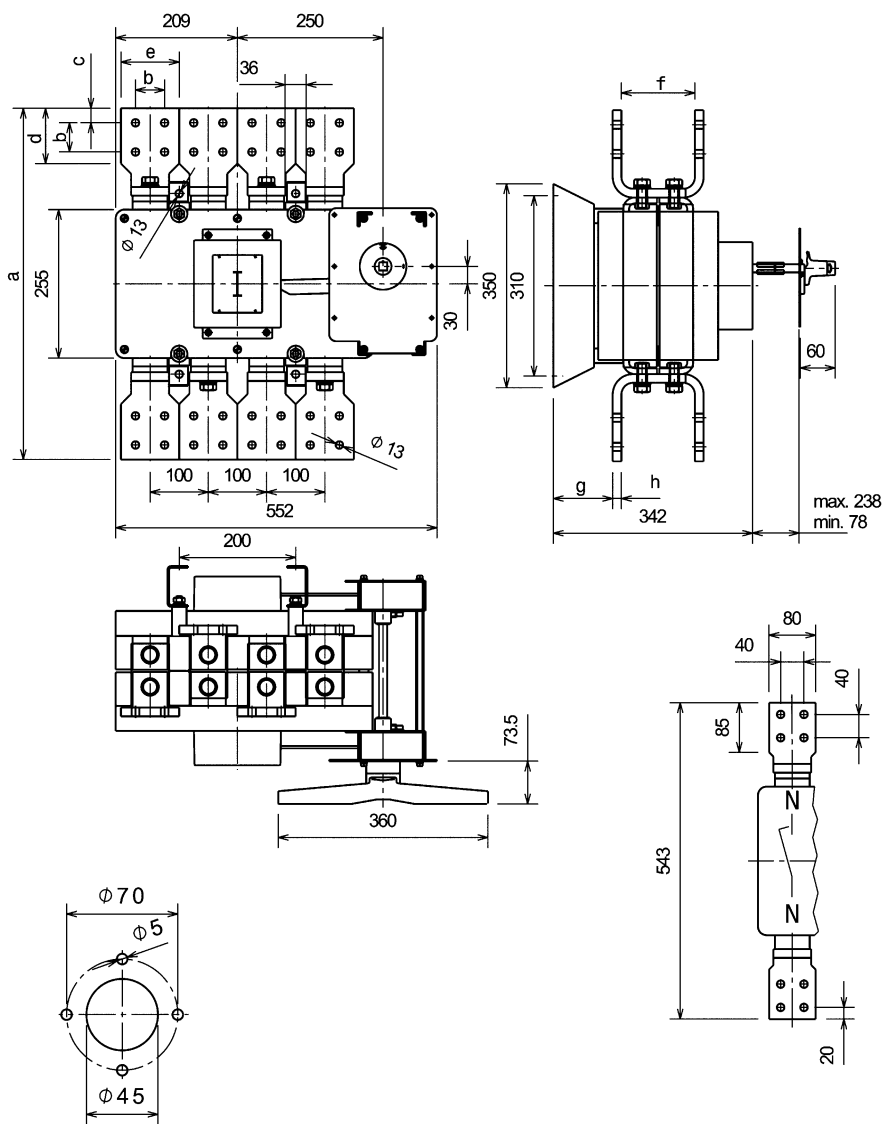
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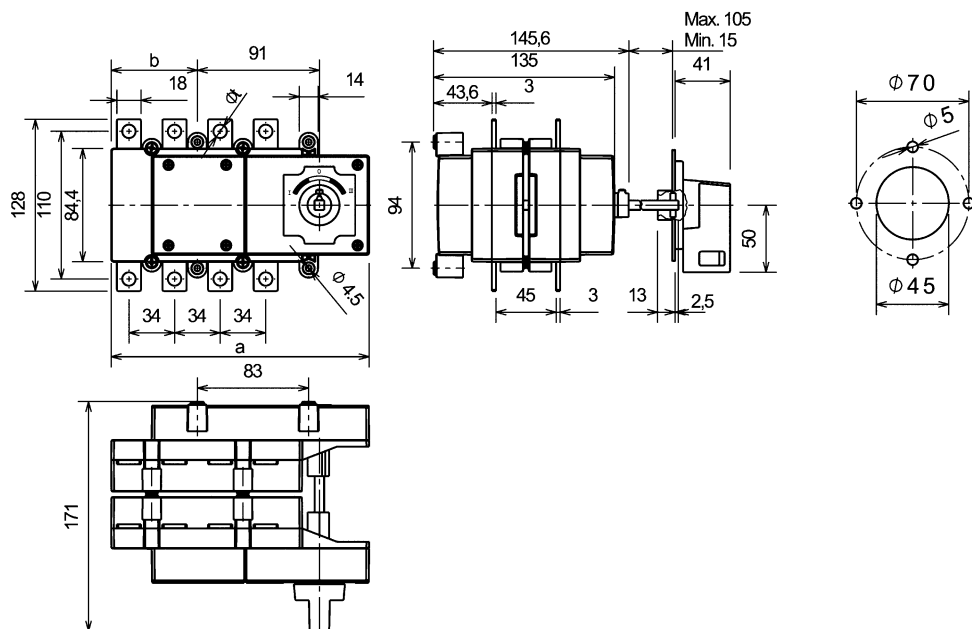
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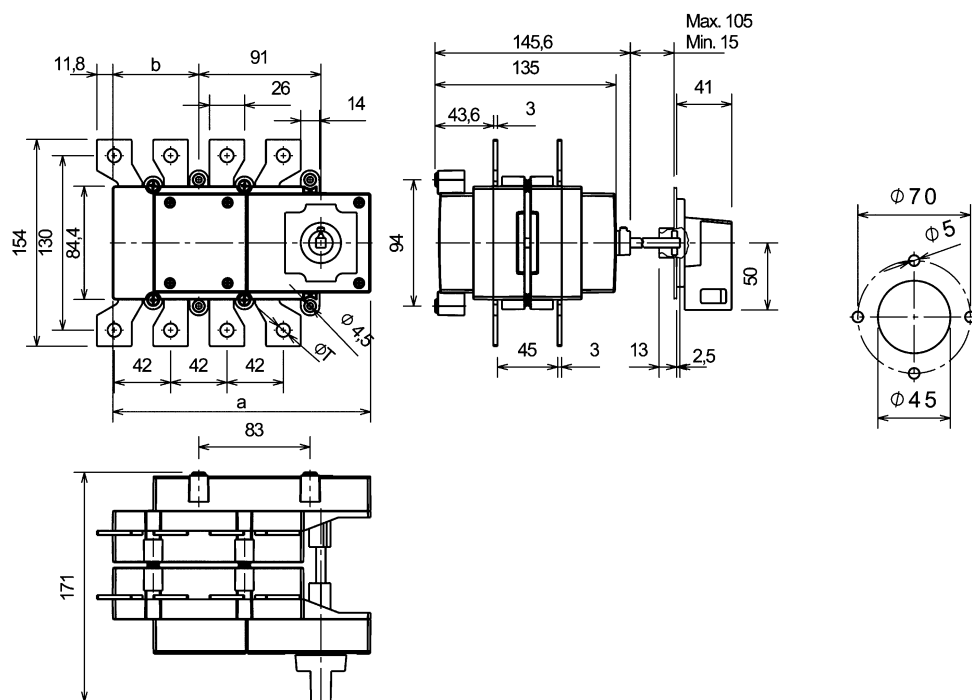
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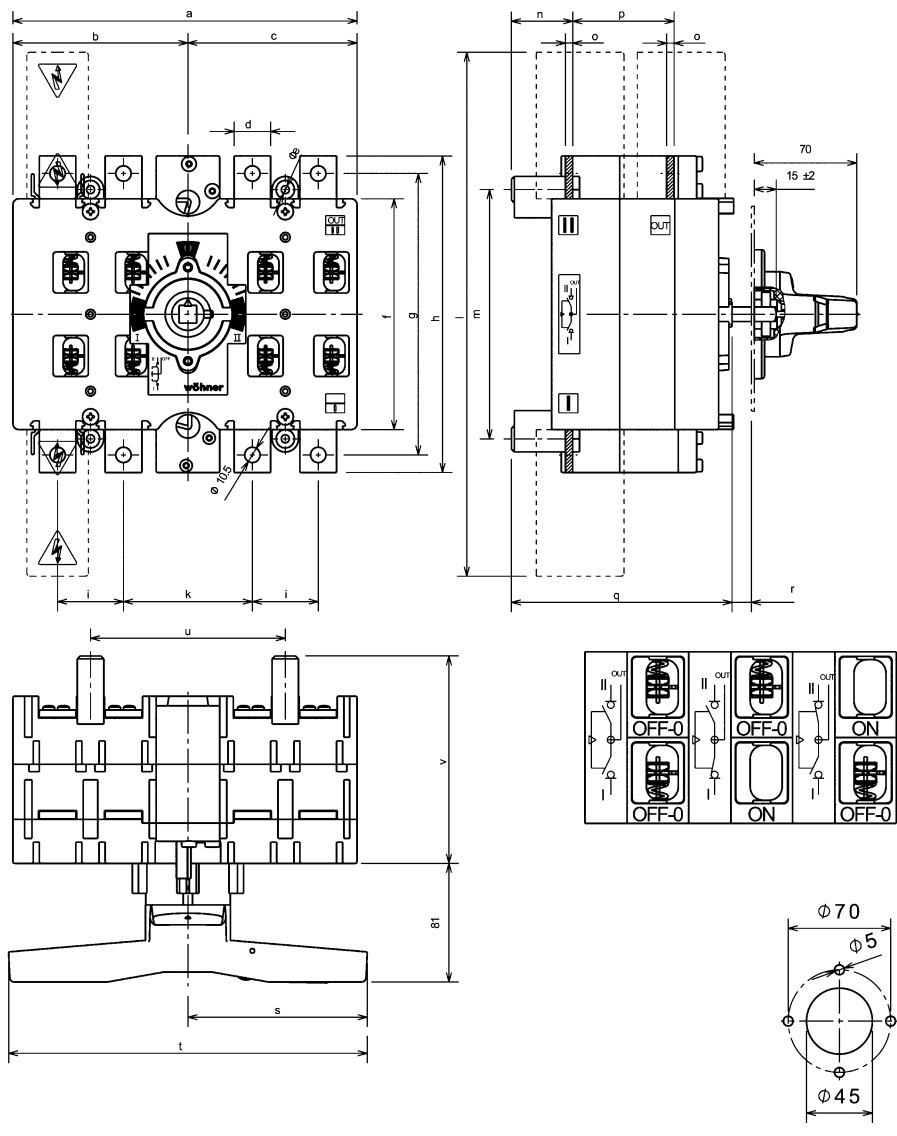
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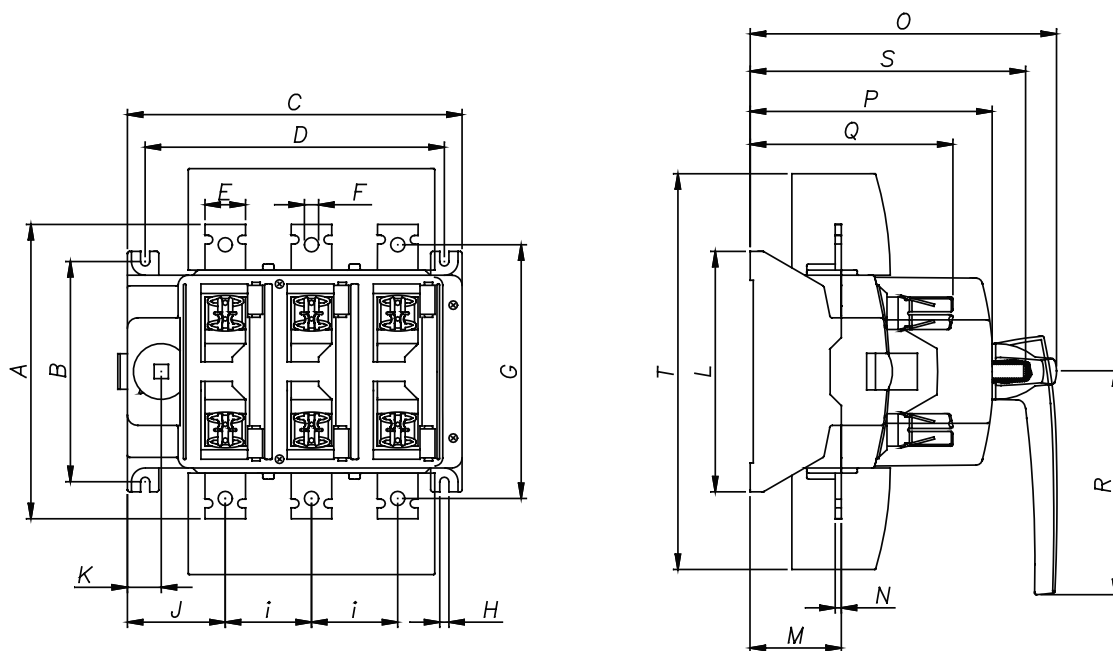
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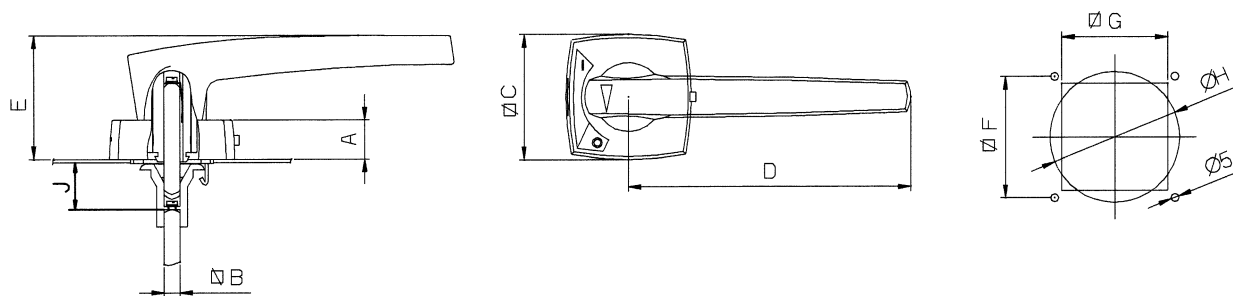
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33 461	321	162	159	40	7	232	282	312	65	121	482	247	46	5	87	180	75	7	-	245	186	171	12.5
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33 463	424	210	214	50	9	295	375	419	85	163	595	315	57	6	88	208	56	7	-	360	248	199	14.5
33 467	235	119.5	115.5	25	5.5	157	192	216	45	88	357	170	42	3	67	151	103	7	105	-	133	142	10.5
33 468	235	119.5	115.5	25	5.5	157	192	216	45	88	357	170	42	3	67	151	103	7	105	-	133	142	10.5
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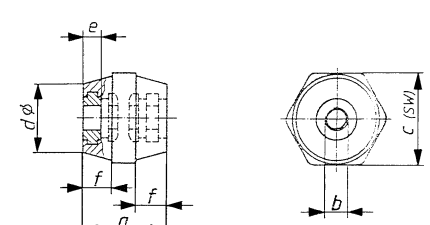
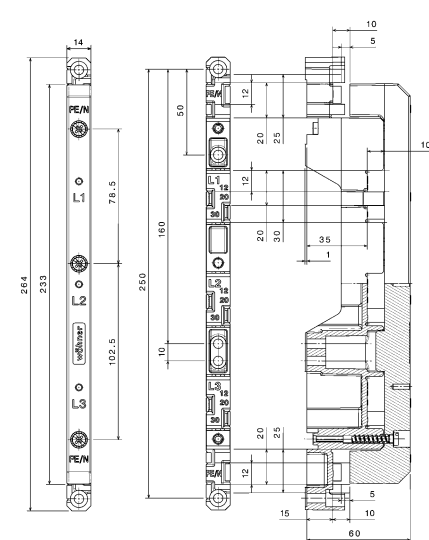
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33 338	33 360	1	232	181.5	270	241.5	30	10.5	208	7	65	88	29	200	73	5	253	196	152.5	180	218	338
33 339	33 361	2	238	181.5	270	241.5	35	10.5	208	7	65	88	29	200	73	5	253	196	161	180	218	338
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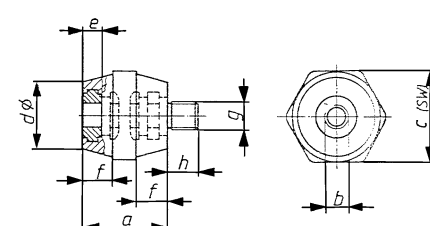
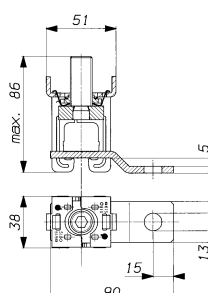
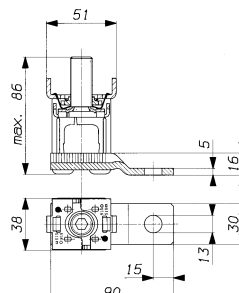
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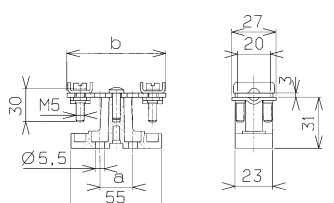
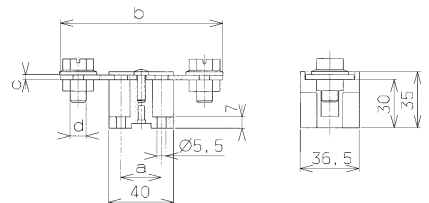
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05 780	30	M 6	30	26	6	8		
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05 782	35	M 8	32	28	10	12		
05 783	40	M 8	40	35	10	12		
05 784	40	M 10	40	35	12	14		
05 785	45	M 6	46	38	8	10		
05 786	45	M 8	46	38	10	12		
05 787	45	M 10	46	38	12	14		
05 788	50	M 10	36	29	14	16		
05 789	60	M 10	40	35	14	16		
05 790	50	M 8	36	29	10	12		
05 791	40	M 12	40	35	11	13		
05 792	30	M 8	30	26	8	10		

	a	b	c	d	e	f	g	h		
05 800	30	M 6	30	26	6	8	M 6	6	01 888	01 890
05 801	35	M 6	32	25	8	10	M 6	8		
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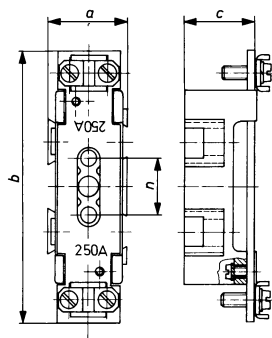




	a	b			a	b	c	d		
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					03 198	630A	125	198	5	M12x28

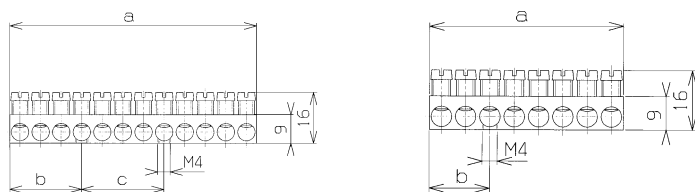



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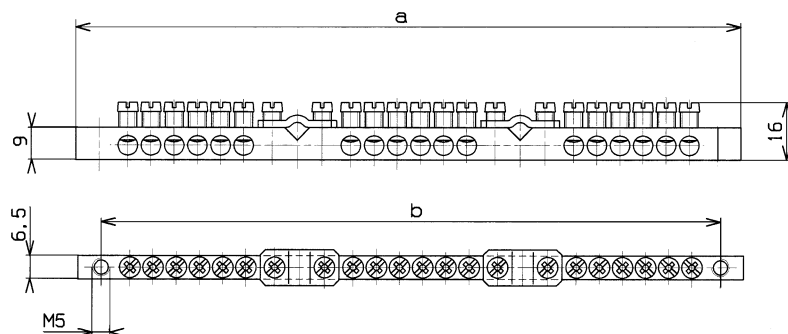
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03 757	55	200	40	25
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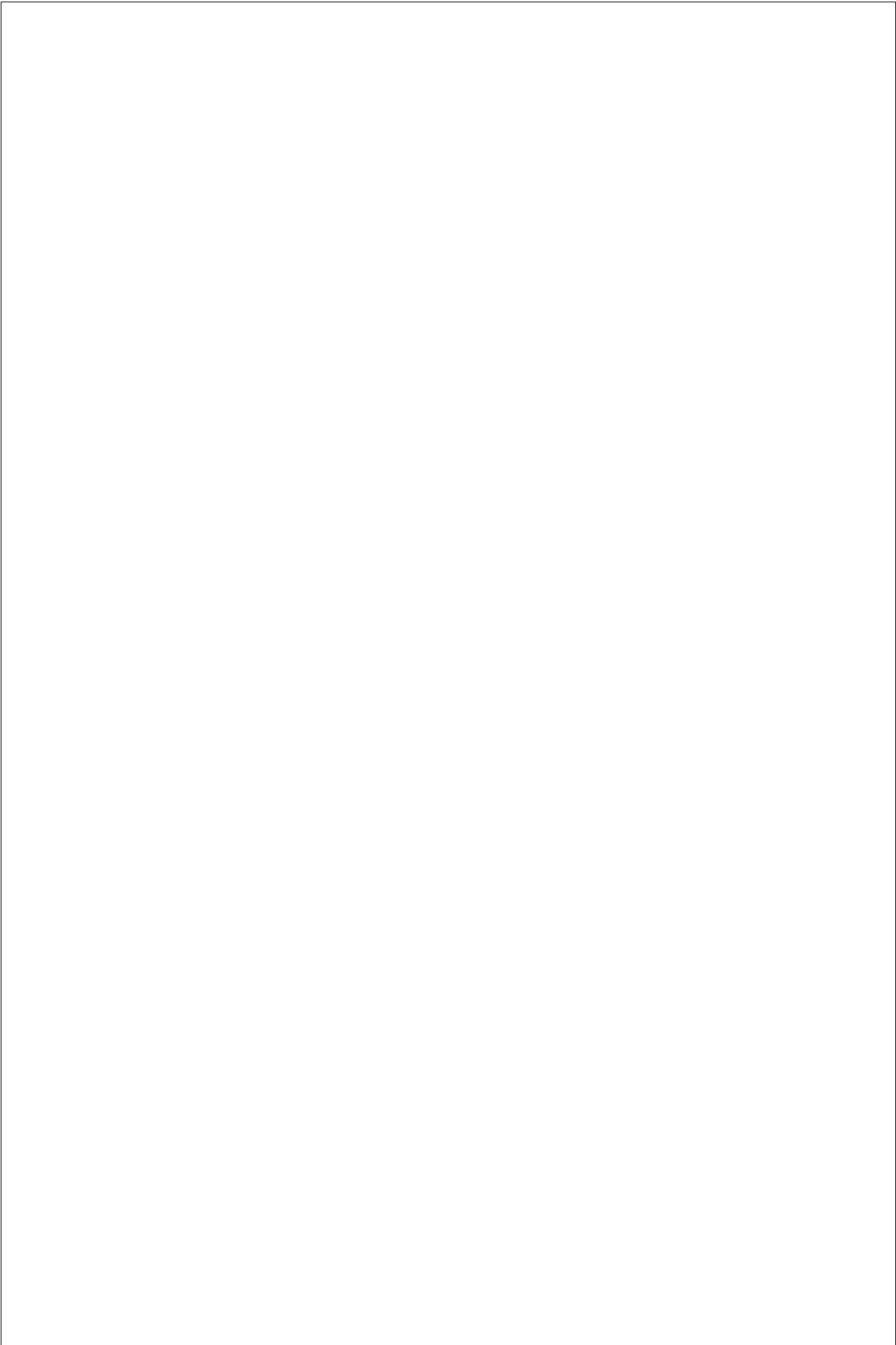
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01 127	78	22.5	26
01 128	104	3	97.5
01 129	156	29	97.5



	a	b	clamp
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01 927	124	111	1
01 928	186.5	173.5	2
01 929	249	236	3
01 930	311.5	298.5	4
01 931	374	361	5
01 932	1000		



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Terms of Sale and Delivery of Wöhner GmbH & Co. KG

I. General

1. Diverging and/or supplementary conditions of the Customer not expressly acknowledged by us in writing are not binding upon us, even if they are not expressly opposed by us.
2. Orders shall not be deemed as accepted but upon confirmation by us or delivery having been made.

II. Delivery

1. We aim high at complying as punctual as possible with the delivery dates confirmed by us. Should such compliance with the delivery time be impossible due to circumstances beyond our control, such as natural disasters, war, or measures of industrial action with us or our subcontractors, a reasonable extension of the delivery time sets in. Should such impediments continue to exist for more than 2 months, each contracting party is entitled to withdrawal.
2. Partial delivery is possible. With manufacture to Customer's specifications, delivery deviations of 10% more/less are permissible. Wöhner reserves the right of modifications, especially of the given values, measures and weights, as well as of constructional modifications. Drawings are not binding.
3. In case of delay in delivery on our side and an additional period of time of reasonable length having been granted to us by the Customer, and with such period having been elapsed, the Customer may either withdraw from the Contract or – inasmuch as he shows satisfactorily that he has suffered a loss by this – demand for each terminated week of such delay a compensation of 0,5% but all in all not more than 5% of the purchase price of such delayed delivery. Any further claims of the Customer in all cases of delayed delivery are excluded, even in case of expiration of an additional period of time that may have been granted to us. To claims for compensation apply also par. IX.1 pages 2 and 3 and IX.4.
4. Returns accepted by our firm upon prior agreement confirmed in writing are reimbursed with 90% of the invoice value. Returns are not possible but within the first 14 days following delivery and in closed original packing. With returns, packing is not reimbursed. With returns of a total value of less than 250,- Euros a handling fee of 25,- Euros net is charged.

III. Prices, Dispatch, Liability for Damage to Goods in Transit

1. Accounting is done at the list prices, allowances, and terms valid at the day of delivery. Bullion surcharges are charged separately at the quotation of the day on the day of the order received. Our prices are based on a price of 200.- € per 100kg of copper, 185.- € per 100kg of brass and 180.- € per kg of silver.
2. All list and offer prices are net, without the statutory VAT, without packing and ex works. Orders under 100.- € are charged without any allowance. From 500.- € net on, Wöhner delivers "free domicile, packing extra" and from 1000.- € net on "free domicile, standard packing included". Insurance charges equalling 1% of the net total price are also charged. Basis of these terms is a complete order and the taking of the goods in packing units. Special wishes of the Customer (e. g. delivery under an address other than that of the Customer, express delivery, special packing, commissioning of a particular forwarder) are taken into account as far as possible. The additional costs resulting therefrom are borne by the Customer.

3. Tool costs paid pro rata by the Customer create no entitlement to the tools, unless otherwise agreed by the parties. They remain the property of the firm of Wöhner. This applies also to the rights in exclusive developments.

4. With dispatch ex works and also in case of partial delivery, risk passes in any event to the Customer, even when in individual cases freight paid delivery was agreed.

With the product being ready for dispatch and its dispatch or taking delivery of being delayed for reasons beyond our control, risk passes to the Customer at the moment of receipt of the advice of readiness for dispatch.

IV. Payments

1. On invoiced amounts received within 14 days upon the invoice date the Customer may deduct 2% discount. Except for that our invoices are payable 30 days upon the invoice date without deduction, unless otherwise individually agreed.

2. According to the statutory regulations, the Customer is in default especially 30 days upon payment being due and receipt of an invoice or an equivalent list of accounts receivable. Payments shall be considered as being made on the day the amount is at our disposal. From the due date on, statutory default interest of 8% above the basic interest rate is charged.

3. Dishonoured cheques or bills of exchange, suspension of payments, and petition in insolvency proceedings against the assets of the Customer make all our claims – also in case of respite – immediately become due.

4. The Customer may only set off such claims that are established uncontested or have become final and absolute.

V. Reservation of Title

1. We reserve full title in the products until payment in full of all accounts receivable under a current business relation.

2. The Customer is obliged to the careful handling of the products. The Customer is obliged to inform us immediately of any attachment of the products by third parties, e. g. in case of seizure, as well as of possible damages to or the destruction of the products. Any change in the possession of the products and the change of his own residence must immediately be communicated to us by the Customer.

3. With the Customer being in breach of contract, especially in case of delay in payment, we are entitled to withdraw from the Contract and to demand the return of the products.

4. The Customer is entitled to resell the products in the ordinary course of business. He already now assigns to us all claims to the size of our invoice amount that accrue to him against a third party through such reselling. We accept this assignment. Upon assignment the Customer is entitled to collect the sum due. We reserve the right to collect the sum due ourselves the moment the Customer does not properly comply with his financial obligations and is in default.

5. The processing and working up of the products by the Customer is always done in our name and on our behalf. Where the products are being worked up with objects not in our possession, we acquire co-ownership in the new article at the ratio of the value of the products delivered by us to the other worked up objects. The same applies when the products are mixed with other objects not in our possession.

VI. Duty to Examine and Notice of Defect

Has the Customer failed to give notice of defect according to § 377 sub-par. 1 HGB / German Commercial Code, which has to be sent in writing to our firm within 10 days upon receipt of the products, any recourse of the Customer is excluded, unless such defect is of a kind not recognisable at the time of the examination.

VII. Warranty

1. We warrant the faultlessness corresponding to the respective state of the art. Modifications in construction or design that do not impair neither the functionality nor the value of the product do not represent an imperfection.

2. For the condition of the product only the product description shall basically pass for being agreed on.

3. With the product being defective, of which notification in writing has to be made immediately by the Customer, we shall within a reasonable period of time remove such defect at no cost by our after-sales service or deliver a faultless article (= subsequent performance). We choose in each case under the aspect of reasonableness the adequate kind of subsequent performance. Should subsequent improvement or substitute delivery fail, the Customer may withdraw from the Contract or reduce the purchase price. In case of a substitute delivery or withdrawal we reserve ourselves the assertion of an adequate allowance for use. To claims for damages applies par. IX, any further claims of the customer are excluded.

4. All statutory and contractual claims of the Customer based on a defective product become statute-barred for new products after two years upon handing over. Removal of defects or new delivery are no new beginning of the limitation period. This does not apply where the law provides for periods of time exceeding two years, especially in case of § 479 BGB / German Civil Code (right of recourse). For claims for damages par. IX.3 is applicable.

5. Rights of recourse of the customer against the supplier under § 478 BGB / German Civil Code (recourse of the contractor) do not exist but in so far as the Customer and his buyer have not made any agreements that go beyond the legally fixed claims based on defects and when the article was resold in an unmodified state. Necessary expenses will not be refunded but with the Customer presenting a copy of the proof of purchase of the consumer, a description of defects, and evidence of the necessary expenses.

VIII. Industrial Property Rights / Copyrights

Orders according to drawings, drafts or other indications given to us are executed at Customer's risk regarding patent, industrial design, and trademark rights. Should the execution of such orders interfere with any third party's industrial property rights, the Customer accepts responsibility for any damage incurred to us by such interference.

IX. Other Liabilities

1. Any claims for damages by the Customer for whatsoever cause in law are excluded. This does not apply where obligatory liability is given, e. g. under the German product liability law, or in cases of intent, gross negligence, for personal injury or the breach of essential contractual obligations. Yet, indemnity for breach of essential contractual obligations is limited to a foreseeable contractually inherent damage, as far as it is not a case of intent or gross negligence or liability for personal injury is given.

2. Any other claims against us do not exist, especially no claims for damages and no rights of recourse for non-compliance with the instructions for use or the mounting instructions, or for misuse of the products. Claims for damages and rights of recourse do also not exist for damages arising out of in-expert installation, mounting or repair of our products, or for damages arising during transport after the passing of risk to the Customer. Any intruding action on the product, especially the changing of parts and/or modification of the original Wöhner product exclude liability.

3. Claims for damages for defects become statute-barred one year upon handing over of the product, except for the reproach of gross fault or fraudulent intent, or in case of injuries to health.

4. A reversal of the burden of proof to the prejudice of the Customer is not incidental to the above terms.

X. Place of Performance and Venue

1. Place of performance for all obligations under this contractual relationship is the registered office of Wöhner.

2. Place of venue is – with the Customer being merchant entered in the commercial register – at our choice Coburg or the seat of our respective locally responsible distribution company.

3. For these contractual relations the German Law is applicable to the exclusion of the United Nations Convention on Contracts for the International Sale of Goods (CISG).

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
01 008	0.525			2/9, 5/1	3		01 140	6.5			2/2	1	
01 025				2/5	2		01 141	0.521			2/10	3	
01 026				2/5	10		01 143		0.013		7/6	50	
01 027	1.124			7/7	1		01 144		0.013		7/6	50	
01 028	2.25			7/7	1		01 145	0.536	0.403		2/10	3	
01 029	3.75			7/7	1		01 147		0.891		2/35, 2/6	1	
01 035	1.392			7/7	1		01 162		0.463		2/35, 2/6	1	
01 047	0.251			2/8, 3/1, 5/2	6		01 165	0.036	0.021		1/2	1	
01 054	0.404			7/7	1		01 166		0.181		1/2, 2/10	12	
01 059				7/12	1		01 170				2/21, 7/3	100	
01 060	4.66			7/7	1		01 182		0.04		2/27, 2/30, 6/20	3	
01 061	14.9			2/9, 5/2, 7/7	1		01 184	4.5			7/7	1	
01 063	2.25			7/8	1		01 185	0.198			2/9, 5/1	3	
01 064	3.75			7/8	1		01 186	0.717			2/9, 5/1	3	
01 068				1/2, 2/7	25		01 187	24.624			2/4	1	
01 069	0.196			2/7, 2/8, 2/9, 5/2, 5/3	3		01 188	4.64			5/2	1	
01 070	0.235			2/7, 2/9, 5/2, 5/3	3		01 189	6.723			5/2	1	
01 071	0.355			2/7, 2/9, 5/2, 5/3	3		01 190	23.34			2/4	1	
01 075	2.25			7/8	1		01 193		0.509		1/2, 2/10	3	
01 076	4.5			7/8	1		01 194	0.806			7/7	1	
01 084	0.806			7/8	1		01 196	0.928			7/7	1	
01 089	0.928			7/8	1		01 198	0.032			6/1, 6/16, 6/4, 6/9	3	
01 090	1.392			7/8	1		01 199		0.386		2/6	1	
01 091	2.32			7/8	1		01 201		0.049		2/8	3	
01 092	0.185	0.652		2/9, 3/1	3		01 202		0.069		2/8	3	
01 094		0.853		2/9, 3/1, 5/1	3		01 203				1/2, 2/7, 5/1	25	
01 095	2.99			7/8	1		01 204	9.7			2/2	1	
01 096	5.98			7/8	1		01 206				2/8	10	
01 097	3.73			7/8	1		01 223	15.96			2/4	1	
01 098				7/12	20		01 224	15.92			2/4	1	
01 099	7.46			7/8	1		01 225	2.006			5/2	1	
01 100				7/12	20		01 226	2.881			5/2	1	
01 103				7/10	20		01 227	36.936			2/4	1	
01 104				7/10	20		01 228	0.042			6/16, 6/4, 6/5, 6/9	3	
01 112	4.66			7/8	1		01 229	23.32			2/4	1	
01 113	9.32			7/8	1		01 231		0.018		2/3, 2/35	3	
01 114		0.006		7/5	100		01 232		0.018		2/3, 2/35	2	
01 116		0.004		2/3, 2/35	4		01 234				2/3	4	
01 119				7/5	50		01 236				2/5	1	
01 120				7/5	50		01 237				2/5	1	
01 121				7/5	50		01 238				2/5	1	
01 123	11.8			7/8	1		01 240	0.031	0.018		2/6	1	
01 126		0.012		7/5	100		01 243	0.045	0.027		2/6	1	
01 127		0.016		7/5	100		01 244				1/1, 2/5	10	
01 128		0.024		7/5	100		01 245				1/1, 2/5, 3/1	10	
01 129		0.037		7/5	50		01 249	15.56			2/4	1	
01 130		0.249		7/5	1		01 250	10.6			2/4	1	
01 131				2/1	5		01 251				3/1	5	
01 132		0.004		2/3, 2/35	4		01 252				2/5	5	
01 135	0.019	0.011		1/2, 2/7	6		01 253	1.8			7/7	1	
01 136				2/5	1		01 254				3/1	10	
01 137				2/35, 2/5	1		01 255	2.7			7/7	1	
01 138				2/21, 7/3	30		01 256	4.476			7/7	1	
01 139				7/3	10		01 257		0.013		7/6	50	
							01 258		0.013		7/6	50	
							01 272				1/1, 1/5	10	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
01 273	18.7			2/9, 5/2, 7/7	1		01 434				4/1	4	
01 274	1.03			2/10	3		01 436				4/2	3	
01 275	1.612			2/10	3		01 437				4/2	1	
01 284				1/2, 2/7	100		01 438				4/2	1	
01 285				1/2, 2/7	50		01 439				4/2	1	
01 287				1/2, 2/7	25		01 440				4/1	1	
01 289				1/2, 2/7	100		01 441				4/2	1	
01 290				1/2, 2/7	50		01 442				4/2	1	
01 292				1/2, 2/7	25		01 443				4/2	1	
01 295	6.059			2/10	1		01 444				4/1	1	
01 298				7/7, 7/8	3		01 479		0.007		3/1	4	
01 299				7/7, 7/8	4		01 480	0.407			4/1, 4/2	3	
01 300				2/6	3		01 481	0.602			4/1, 4/2	3	
01 301				2/6	3		01 482				4/1, 4/2	1	
01 314				1/1, 1/5	2		01 484	0.019			2/1, 2/6	10	
01 317				1/1, 1/5	10		01 485				2/1, 2/35	10	
01 318		0.128		2/7, 5/1, 5/3	6		01 495				2/1	10	
01 319		0.115		2/7, 5/3	6		01 498		0.025		2/20	10	
01 320				2/5	8		01 500				2/1	10	
01 323	3.6			7/7	1		01 508				2/1	10	
01 324	5.9			7/7	1		01 509	9.32			2/9, 5/2, 7/7	1	
01 325				2/1, 6/2	10		01 510	11.8			2/9, 5/2, 7/7	1	
01 343	7.46			7/7	1		01 512	0.027			2/8, 3/1	25	
01 355				7/3	1		01 513	0.397			2/9, 5/1	3	
01 356				2/1	10		01 514	0.091			2/8, 3/1, 5/2	20	
01 357				2/1, 2/35	10		01 515				2/1	2	
01 358				2/1	10		01 518				2/1	2	
01 359				2/1, 2/35	10		01 537		0.668		2/6	1	
01 360				2/10	1		01 538		0.347		2/6	1	
01 361				2/10	1		01 539				2/7	1	
01 362				2/10	1		01 540				2/7	1	
01 363				2/1, 6/2	1		01 541				7/11	50	
01 364	0.015	0.009		1/5	1		01 542				7/11	50	
01 367	0.015	0.009		1/5	1		01 543				7/11	50	
01 369				5/3	6		01 544				7/11	50	
01 370	0.045	0.027		1/5	1		01 545				7/11	50	
01 371				1/5	2		01 546				7/11	50	
01 373				2/3	4		01 547				7/11	50	
01 374				1/1	10		01 548				7/11	50	
01 376				1/5	10		01 549				7/11	50	
01 377	6.967			5/3	1		01 550				7/11	50	
01 378	9.8			5/3	1		01 554				2/5	1	
01 379				5/3	12		01 555				2/35, 2/5	2	
01 380				5/3	12		01 562	0.032			1/2	6	
01 401	0.031	0.018		1/2	1		01 563	0.033			2/6	8	
01 413				2/7	10		01 573				2/1, 7/3	10	
01 417				2/5	2		01 583	2.32			7/7	1	
01 420				4/2	3		01 586				2/8	10	
01 421				4/2	4		01 587				2/8	10	
01 422				2/3	2		01 590				2/7	1	
01 424				2/20	10		01 596				2/7	1	
01 425				2/3	4		01 597				2/35, 2/7	1	
01 426	0.045	0.030		1/5	1		01 599				2/35, 2/5	1	
01 427	0.031	0.020		1/5	1		01 601				2/1, 6/2	1	
01 429		0.313		7/3	3		01 602				2/1, 6/2	1	
01 430				4/1	4		01 603				7/3	10	
01 431				4/1	1		01 608	15.54			2/4	1	
01 432				4/1	2		01 609	10.62			2/4	1	
01 433				4/1	8								

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
01 610	34.16			2/4, 5/3	1		01 726				7/9	50	
01 611	2.25			7/7	1		01 727				7/9	50	
01 612	2.99			7/7	1		01 728				7/9	50	
01 613	5.98			7/7	1		01 729				7/10	50	
01 614	3.73			7/7	1		01 730				7/10	1	
01 615	7.46			2/9, 5/2, 7/7	1		01 741				7/11	25	
01 616				2/8	6		01 747	0.027			2/8	25	
01 618	1.284			1/1, 1/5, 2/2	1		01 748	0.091			2/8	20	
01 619	1.606			2/2	1		01 749	0.251			2/8	6	
01 620	2.144			2/2	1		01 753		0.347		2/6	1	
01 621	2.678			2/2	1		01 754		0.668		2/6	1	
01 622	3.214			2/2	1		01 756				2/7	1	
01 623	2.57			1/1, 2/2	1		01 757				2/7	1	
01 624	4.286			2/2	1		01 759		0.115		2/7, 5/3	3	
01 625	6.432			2/2, 3/1, 4/1	1		01 760		0.222		2/7, 5/1, 5/3	3	
01 626	8.568			3/1, 4/1	1		01 765	17.28			4/1	1	
01 627	10.728			3/1, 4/1	1		01 766	21.74			4/1	1	
01 628	12.94			3/1, 4/1	1		01 767	25.728			4/1	1	
01 647		0.025		2/20	10		01 823	0.213			2/10	6	
01 670				7/11	5		01 827	0.29	0.217		2/10	6	
01 671				7/11	5		01 829	0.824	0.635		2/10	3	
01 672				7/11	5		01 831	4.24			5/2	1	
01 673				7/11	5		01 838	2.933			5/2	1	
01 674				7/11	5		01 886	0.795			2/10	3	
01 675				7/11	5		01 888	0.128			7/3	3	
01 676				7/11	5		01 890	0.13	0.044		7/3	3	
01 677				7/11	5		01 905	0.452	0.7		2/10	3	
01 678				7/11	5		01 906	0.23			2/9, 5/1	3	
01 679				7/11	5		01 907	0.262			2/9, 5/1	3	
01 685				7/9	10		01 911	0.262			2/9, 5/1	3	
01 686				7/9	10		01 926		0.018		7/5	100	
01 687				7/9	10		01 927		0.036		7/5	50	
01 688				7/9	10		01 928		0.054		7/5	60	
01 689				7/9	10		01 929		0.072		7/5	50	
01 690				7/9	10		01 930		0.09		7/5	50	
01 691				7/9	10		01 931		0.108		7/5	100	
01 692				7/9	10		01 932		0.276		7/5	1	
01 693				7/9	10		01 934	0.301			2/9, 5/1	3	
01 694				7/9	10		01 935	0.358			2/9, 5/1	3	
01 701				7/11	25		01 936	0.23			2/9, 5/1	3	
01 702				7/11	25		01 980				2/20	10	
01 703				7/11	25		01 981				2/20	10	
01 704				7/11	25		01 990	0.213			2/10	6	
01 705				7/11	25		01 996				2/8	10	
01 706				7/11	25		01 997				2/8	10	
01 707				7/11	25		01 998				7/12	1	
01 708				7/11	25		03 161	0.054		0.09	7/13	3	
01 709				7/11	25		03 162	0.127		0.239	7/13	3	
01 715				7/9	50		03 163	0.198		0.29	7/13	3	
01 716				7/9	50		03 164	0.241		0.377	7/13	3	
01 717				7/9	50		03 173	0.056			6/14, 7/6	10	
01 718				7/9	50		03 181	0.8			7/14	1	
01 719				7/9	50		03 182	0.8			7/14	1	
01 720				7/9	50		03 183	0.8			7/14	1	
01 721				7/9	50		03 185	0.8			7/13	3	
01 722				7/9	50		03 193	0.025			6/14, 7/6	10	
01 724				7/9	50		03 195	0.066			6/14, 7/6	10	
01 725				7/9	50		03 196	0.142			6/14, 7/6	10	
							03 197	0.108			6/14, 7/6	10	
							03 198	0.236			6/14, 7/6	10	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
03 199	0.209		0.63	2/23, 2/32	1		03 553				7/14	3	
03 213	0.27		0.818	6/14, 7/6	3		03 555				7/14	3	
03 214				7/22	1		03 556				7/14	3	
03 215				7/22	1		03 557				7/14	3	
03 217				7/22	1		03 558				7/14	3	
03 219				7/22	1		03 559				7/14	3	
03 220				7/22	1		03 560				7/14	3	
03 221				7/22	1		03 561				7/14	3	
03 222				7/22	1		03 563				7/14	3	
03 224				7/22	1		03 566				7/14	3	
03 225				7/22	1		03 568				7/14	3	
03 226				7/22	1		03 569				7/14	3	
03 227				7/22	1		03 570				7/14	3	
03 228				7/21	1		03 571				7/14	3	
03 229				7/21	1		03 572				7/14	3	
03 230				7/21	1		03 573				7/14	3	
03 231				7/21	1		03 574				7/14	3	
03 233				7/21	1		03 575				7/14	3	
03 234				7/21	1		03 577				7/14	3	
03 235				7/21	1		03 579				7/14	3	
03 236				7/21	1		03 581				7/14	3	
03 238				7/21	1		03 582				7/14	3	
03 239				7/21	1		03 587	0.045		0.297	3/3	10	
03 240				7/21	1		03 599	0.383		1.233	3/3	3	
03 241				7/21	1		03 601	0.183		0.62	3/3	3	
03 243				7/13	3		03 620		0.025		6/14	10	
03 287				1/4	4		03 654	0.189		1.003	2/32	4	
03 288	0.201		0.77	6/3	3		03 656	0.19		1.03	2/32	4	
03 289	0.139		0.585	6/3	3		03 657		0.11		6/14, 7/6	10	
03 290	0.097		0.4	6/3	3		03 668		0.108		6/14, 7/6	10	
03 293	0.447		1.094	6/3	3		03 693	1.235		2.874	2/32	1	
03 294	0.412		1.094	6/3	3		03 727				2/33, 3/2, 6/20	3	
03 299	0.201		0.612	2/23, 2/32	1		03 757	0.269		0.642	6/14, 7/6	3	
03 300	0.602	0.252	1.35	2/25, 2/32	1		03 758	0.033		0.202	6/13	12	
03 301	0.463		0.8	2/25, 2/32	1		03 759	0.099		0.606	6/13	4	
03 316	0.189	0.032	0.516	1/4	1		03 760	0.033		0.188	6/13	12	
03 350	0.033		0.202	6/13	10		03 761	0.101		0.564	6/13	4	
03 351	0.099		0.606	6/13	4		03 762	0.089		0.32	6/13	3	
03 354	0.033		0.188	6/13	10		03 763	0.267		0.96	6/13	1	
03 355	0.101		0.564	6/13	4		03 765	0.275		1.476	6/13	1	
03 359				6/13	10		03 766	0.366		1.134	6/13	3	
03 369	0.046		0.29	3/3	10		03 767	1.097		3.402	6/13	1	
03 370	0.045		0.297	3/3	10		03 768	0.412		1.094	6/13	3	
03 377				6/13	100		03 769	1.236		3.282	6/13	1	
03 384	0.183		0.62	3/3	3		03 790	0.423		1.169	3/3	3	
03 502				7/13	1		03 791				3/3	10	
03 519		0.025		6/14	10		03 792				3/3	3	
03 523				7/13	3		03 793				3/3	3	
03 524				7/13	3		03 794				3/3	3	
03 525				7/13	3		03 795	0.383		1.233	3/3	3	
03 526				7/13	3		03 849				2/27, 2/30, 6/22	10	
03 527				7/13	3		03 908				7/13	3	
03 528				7/13	3		03 909				7/13	3	
03 529				7/13	3		03 910				7/13	3	
03 530				7/13	3		03 911				7/13	3	
03 531				7/13	3		03 912				7/13	3	
03 532				7/13	3		03 913				7/13	3	
03 533				7/13	3		03 914				7/13	3	
03 534				7/13	3		03 915				7/13	3	
03 550				7/14	3								
03 552				7/14	3								

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
03 916				7/13	3		31 042				6/1, 6/10, 6/11	20	
03 917				7/13	3		31 056	1.485			6/16, 6/4, 6/5, 6/9	4	
03 918				7/13	3		31 057	0.505			6/1, 6/16, 6/4, 6/9	10	
03 919				7/13	3		31 070				2/19	10	
03 924				7/14	3		31 071				2/19	10	
03 929				7/14	3		31 072				2/19	5	
03 930				7/14	3		31 073				2/19	5	
03 942				7/14	3		31 084				6/16, 6/4, 6/5, 6/9	10	
03 943				7/14	3		31 085				6/16, 6/4, 6/5, 6/6, 6/9	25	
03 946				7/14	3		31 086				6/5, 6/6	100	
03 947				7/14	3		31 098				7/12	20	
05 188		0.018		6/14, 7/6	50		31 100				7/12	20	
05 779				7/4	100		31 101	0.22			6/1, 6/9	25	
05 780				7/4	20		31 102	0.812			6/9	10	
05 781				7/4	20		31 103				6/1, 6/9	50	
05 782				7/4	20		31 104				7/10	20	
05 783				7/4	20		31 110	0.006		0.006	6/7	12	
05 784				7/4	20		31 111	0.02		0.012	6/7	6	
05 786				7/4	20		31 112	0.011		0.012	6/7	6	
05 787				7/4	20		31 113	0.016		0.018	6/7	4	
05 788				7/4	20		31 114	0.03		0.024	6/7	3	
05 789				7/4	20		31 115	0.012		0.015	6/7	6	
05 790				7/4	20		31 116	0.04		0.03	6/7	3	
05 791				7/4	20		31 117	0.025		0.03	6/7	3	
05 792				7/4	20		31 118	0.038		0.045	6/7	2	
05 800				7/4	20		31 119	0.066		0.06	6/7	1	
05 801				7/4	20		31 120	0.024		0.028	6/7	6	
05 802				7/4	20		31 121	0.079		0.056	6/7	3	
08 824		0.002		7/5	100		31 122	0.048		0.056	6/7	3	
08 825				7/5	100		31 123	0.072		0.084	6/7	2	
30 322	3.277	2.101		2/10	1		31 124	0.127		0.112	6/7	1	
30 473	4.228	2.101		2/10	1		31 130	0.006		0.006	6/8	12	
30 894				2/33, 3/2, 6/20	3		31 132	0.011		0.012	6/8	6	
31 004				6/5, 6/6	100		31 133	0.016		0.018	6/8	4	
31 005				7/10	20		31 135	0.011			6/8	6	
31 006				7/10	20		31 138	0.037			6/8	2	
31 008				7/15	10		31 140	0.024		0.028	6/8	6	
31 009				7/15	10		31 143	0.072		0.084	6/8	2	
31 010				7/15	10		31 157	0.02			6/1, 6/9	50	
31 011				7/15	10		31 158	0.222		2.685	2/20	1	
31 012	0.765			6/16, 6/4, 6/5, 6/9	10		31 168	0.066		0.06	6/7	1	
31 014	0.235			6/1, 6/16, 6/4, 6/5, 6/9	25		31 171	0.127		0.112	6/7	1	
31 017				7/15	10		31 173		0.026		6/6	9	
31 024	0.268			6/5	25		31 174		0.081		6/6	3	
31 026	0.67			6/5	10		31 175		0.041		6/6	9	
31 027				6/16, 6/4, 6/5, 6/6, 6/9	50		31 176		0.126		6/6	3	
31 028				6/1, 6/16, 6/4, 6/5, 6/6, 6/9	25		31 182				7/15	10	
31 029				6/16, 6/4, 6/5, 6/6, 6/9	25		31 183				7/15	10	
31 039	0.015			6/1, 6/10, 6/11	10		31 184				7/15	10	
							31 185				7/15	10	
							31 186				7/15	10	
							31 187				7/15	10	
							31 188				7/15	10	
							31 189				7/15	10	
							31 190				7/15	10	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
31 191				7/15	10		31 279	0.025		0.03	6/8	3	
31 192				7/15	10		31 280	0.038		0.045	6/8	2	
31 193				7/15	10		31 281	0.024		0.028	6/8	6	
31 194				7/15	10		31 282	0.048		0.056	6/8	3	
31 195				7/15	10		31 283	0.072		0.084	6/8	2	
31 196				7/15	10		31 284	0.024		0.028	6/12	6	
31 198				7/15	10		31 285	0.048		0.056	6/12	3	
31 199				7/15	10		31 286		0.022		6/5	9	
31 200				7/15	10		31 287	0.072		0.084	6/12	2	
31 201				7/15	10		31 288		0.066		6/5	3	
31 202				7/15	10		31 291		0.031		6/5	9	
31 203				7/15	10		31 293		0.094		6/5	3	
31 204				7/15	10		31 295	0.006		0.006	6/11	12	
31 205				7/17	10		31 296	0.011		0.012	6/11	6	
31 206				7/17	10		31 297	0.016		0.018	6/11	4	
31 207				7/17	10		31 298	0.006		0.006	6/11	12	
31 208				7/17	10		31 299	0.011		0.012	6/11	6	
31 209				7/17	10		31 300	0.016		0.018	6/11	4	
31 210				7/17	10		31 301		0.021		6/4	9	
31 211				7/17	10		31 302		0.064		6/4	3	
31 212				7/17	10		31 303		0.021		6/4	9	
31 213				7/17	10		31 306		0.063		6/4	3	
31 214				7/17	10		31 307	0.03		0.296	6/16	3	
31 215				7/17	10		31 308	0.051		0.44	6/16	2	
31 216				7/17	10		31 309	0.263			6/6	25	
31 217				7/17	10		31 310	0.671			6/6	10	
31 219				7/17	10		31 311	0.256			6/6	25	
31 220				7/17	10		31 312	0.641			6/6	10	
31 221				7/17	10		31 313	0.062		0.592	6/16	2	
31 225				7/17	10		31 314	0.09		0.888	6/16	1	
31 226				7/17	10		31 315	0.111		1.032	6/16	1	
31 227				7/17	10		31 316				6/16	1	
31 228				7/17	10		31 323				7/22	10	
31 229				7/17	10		31 324				7/22	10	
31 232	0.222		2.685	2/20, 2/22	1		31 325				7/22	10	
31 235				7/20	10		31 326				7/22	10	
31 236				7/20	10		31 327				7/22	10	
31 237				7/20	10		31 333				7/21	10	
31 238				7/20	10		31 338				7/21	10	
31 239				7/20	10		31 342				7/21	10	
31 240				7/20	10		31 345				7/21	10	
31 241				7/20	10		31 349				7/21	10	
31 242				7/20	10		31 351				7/21	10	
31 243				7/20	10		31 353				7/21	10	
31 244				7/19	10		31 354				7/21	10	
31 245				7/19	10		31 355				7/21	10	
31 246				7/19	10		31 357				7/21	10	
31 247				7/19	10		31 358				7/21	10	
31 248				7/19	10		31 359				7/21	10	
31 249				7/19	10		31 360				7/21	10	
31 250				7/19	10		31 361				7/21	10	
31 251				7/19	10		31 362				7/21	10	
31 252				7/19	10		31 363				7/21	10	
31 258	0.015		0.006	6/7	12		31 364				7/21	10	
31 269				6/9	1		31 366				7/16	10	
31 273	0.009		0.012	6/7	12		31 368				7/16	10	
31 274	0.023		0.024	6/7	4		31 370				7/16	10	
31 275	0.006		0.006	6/8	12		31 371				7/16	10	
31 276	0.011		0.012	6/8	6		31 372				7/16	10	
31 277	0.016		0.018	6/8	4		31 373				7/16	10	
31 278	0.012		0.015	6/8	6		31 374				7/16	10	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
31 385				7/16	10		31 904				7/10	36	
31 386				7/16	10		31 905				7/12	20	
31 387				7/16	10		31 906				7/12	10	
31 390				1/6	1		31 908				7/10	36	
31 394				7/19	10		31 909				7/10	36	
31 395				7/19	10		31 910				7/10	36	
31 396				7/19	10		31 911				7/12	20	
31 397				7/19	10		31 912				7/12	10	
31 398				7/19	10		31 913				7/10, 7/12	1	
31 399				7/19	10		31 914				2/21	5	
31 400				7/19	10		31 915				2/21	5	
31 401				7/20	10		31 918	0.028	0.037		2/19	10	
31 404				7/20	10		31 919	0.028	0.06		2/19	10	
31 405				7/20	10		31 920	0.04	0.032	0.268	6/12	6	
31 406				7/20	10		31 921	0.079	0.064	0.536	6/12	3	
31 407				7/20	10		31 922	0.118	0.096	0.804	6/12	2	
31 441	0.019	0.037		2/19	10		31 923	0.04	0.032	0.268	6/12	6	
31 442	0.019	0.06		2/19	10		31 924	0.079	0.064	0.536	6/12	3	
31 511				7/22	10		31 925	0.118	0.096	0.804	6/12	2	
31 512				7/22	10		31 929	0.006		0.006	6/11	12	
31 514				7/22	10		31 930	0.006		0.006	6/8	12	
31 515				7/22	10		31 932	0.024	0.032	0.028	6/12	6	
31 525	0.222		2.685	2/20	1		31 933	0.048	0.065	0.056	6/12	3	
31 543				6/2, 7/18	10		31 934	0.072	0.098	0.084	6/12	2	
31 544				6/2, 7/18	10		31 935		0.025		2/20	8	
31 545				6/2, 7/18	10		31 936		0.025		2/20	6	
31 546				6/2, 7/18	10		31 940	0.012		0.015	6/8	6	
31 547				6/2, 7/18	10		31 941	0.038		0.045	6/8	2	
31 548	0.45			6/1, 6/10, 6/11	10		31 942	0.024	0.032	0.028	6/8	6	
31 549	1.07			6/10, 6/11	10		31 943	0.072	0.098	0.084	6/8	2	
31 550	0.035			6/10, 6/11	10		31 946	0.028	0.037		2/19	8	
31 552				6/10, 6/11	20		31 947	0.028	0.06		2/19	6	
31 554	0.049			1/4	6		31 950	0.019	0.037		2/19	8	
31 555	0.007		0.006	6/1	5		31 951	0.019	0.06		2/19	6	
31 556	0.03		0.8	6/16	3		31 954	0.032		0.348	2/22	4	
31 557	0.09		0.888	6/16	1		31 955	0.032		0.348	2/22	4	
31 558				6/2, 7/18	20		31 956	0.022		0.232	6/2	6	
31 559				6/2, 7/18	20		31 957	0.048		0.348	6/8	3	
31 560				6/2, 7/18	20		31 958	0.032		0.348	2/22, 2/34	4	
31 561	0.68			6/10, 6/11	10		31 959	0.032		0.348	2/22, 2/34	4	
31 563				6/1	1		31 960	0.022		0.232	6/2	6	
31 564				6/9	1		31 961	0.022		0.232	2/22	6	
31 565				6/9	1		31 963	0.052		0.464	2/22, 2/35	4	
31 567				1/3, 2/18, 6/15, 7/1	3		31 964	0.052		0.464	2/22, 2/35	4	
31 568				1/3, 2/18, 6/15, 7/1	3		31 968	0.139	0.098		2/34	1	
31 569				1/3, 2/18, 6/15, 7/1	3		31 970	0.34	0.096		2/34	1	
31 570	0.005		0.006	2/22, 6/2	12		31 971	0.006		0.006	6/1	12	
31 572	0.005		0.006	2/22, 6/2	12		31 972	0.025		0.03	6/8	3	
31 574	0.082		1.014	2/21	1		31 973	0.006		0.006	6/1	12	
31 575	0.082		1.014	2/21	1		31 974	0.011		0.012	6/1	6	
31 578	0.082		1.014	2/21	1		31 976				2/21	1	
31 579	0.082		1.014	2/21	1		32 001	0.172	0.008		3/1	1	
31 588	0.082		1.014	2/21	1		32 004	0.952	0.052		2/17	1	
31 901				2/20	5		32 017	0.451			2/16	1	
31 902				2/20, 2/21, 6/16	20		32 018	0.271		0.375	2/15	1	
31 903				2/20	1		32 020	0.271		0.375	2/15	1	
							32 023	0.44			2/16	1	
							32 137	0.307	0.018		2/16	1	
							32 138	1.088	0.003		2/16	1	
							32 140	0.322	0.018		2/16	1	
							32 146	0.029			2/13, 2/35	4	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
32 156	0.312	0.007		2/16	1		32 498	0.048			2/14	4	
32 157	1.095	0.007		2/16	1		32 511				2/11, 2/13	10	
32 168	0.348	0.04		2/17	1		32 513				2/11, 2/13	10	
32 214	0.156	0.027		2/17	1		32 533	0.048			2/14	4	
32 215	0.156	0.027		2/17	1		32 534	0.084			2/14	4	
32 216	0.348	0.04		2/17	1		32 535	0.105			2/15	4	
32 400	0.047			2/11	4		32 549	0.271		0.375	2/15	1	
32 401	0.047			2/11	4		32 570	0.266	0.002	0.772	2/15	1	
32 402	0.047			2/11	4		32 575	0.271		0.375	2/15	1	
32 404	0.091			2/11	4		32 577	0.271		0.375	2/15	1	
32 408	0.091			2/11	4		32 578	0.611			2/36	1	
32 412	0.109			2/11	4		32 579	2.103	0.009		2/36	1	
32 416	0.109			2/11	4		32 580	0.617			2/36	1	
32 420	0.004			2/11	4		32 581	2.157	0.003		2/36	1	
32 421	0.011			2/11	4		32 582	0.609			2/36	1	
32 425	0.004			2/11	4		32 583	2.135	0.003		2/36	1	
32 426	0.011			2/11	4		32 584	0.6			2/36	1	
32 427	0.048			2/14	4		32 585	2.765	0.007		2/36	1	
32 428	0.048			2/14	4		32 588	0.051			2/14	4	
32 429	0.036			2/14	4		32 590	0.04			1/3	4	
32 430	0.042			2/12	4		32 591	0.087			1/3	4	
32 431	0.042			2/12	4		32 592	0.449			2/16	1	
32 432	0.046			2/12	2		32 593	1.458	0.003		2/16	1	
32 433	0.042			2/12	4		32 594	0.097			2/23	2	
32 434	0.048			2/14	4		32 595	0.233			2/25	2	
32 436	0.021			2/12	4		32 601	0.44			2/16	1	
32 438	0.048			2/14	4		32 628	0.033			1/6	12	
32 439	0.021			2/12	4		32 629	0.03			1/6	12	
32 440	0.04			2/14	2		32 630	0.031			1/6	12	
32 441	0.084			2/12	4		32 631				1/6	6	
32 442	0.084			2/12	4		32 632	0.008	0.005		1/6	12	
32 443	0.084			2/12	4		32 633				1/6	12	
32 444	0.084			2/12	4		32 634	0.007	0.005		1/6	12	
32 445	0.042			2/14	4		32 637	0.055			2/14	4	
32 446	0.084			2/12	4		32 638	0.064			2/14	4	
32 448	0.046			2/14	2		32 639	0.049			2/14	4	
32 449	0.084			2/12	4		32 640	0.217	0.004		1/5	1	
32 450	0.042			2/14	4		32 641	1.473	0.003		2/16	1	
32 451	0.048			2/14	4		32 651	0.462			2/16	1	
32 452	0.046			2/14	2		32 655	0.049			2/12	4	
32 453	0.052			2/14	2		32 659	0.064			2/14	4	
32 454	0.105			2/12	4		32 660	0.321			2/15	1	
32 455	0.105			2/12	4		32 661	0.321			1/3	1	
32 456	0.105			2/12	4		32 662	0.212			2/15	1	
32 457	0.105			2/12	4		32 663	0.212			2/15	1	
32 459	0.105			2/12	4		32 664	0.212			2/15	1	
32 460	0.105			2/15	4		32 750				4/3, 4/4	1	
32 461	0.105			2/12	4		32 751				4/3, 4/4	10	
32 463	0.105			2/15	2		32 753	21.660			4/4	1	
32 464	0.058			2/13	4		32 754	15.000			4/4	1	
32 465	0.058			2/13	4		32 755	15.000			4/4	1	
32 466	0.057			2/12	4		32 756	22.932			4/4	1	
32 467	0.057			2/12	4		32 757	21.493			4/4	1	
32 469	0.057			2/12	4		32 758	15.000			4/4	1	
32 472	0.057			2/12	4		32 759	24.000			4/4	1	
32 477	0.004			2/13	4		32 760	16.000			4/4	1	
32 478	0.011			2/13	4		32 761	23.386			4/4	1	
32 484	0.004			2/13	4		32 762	24.000			4/4	1	
32 485	0.011			2/13	4		32 763	15.000			4/4	1	
32 486	0.022			2/13	4		32 764	15.000			4/4	1	
32 487	0.022			2/13	4		32 765	21.493			4/4	1	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
32 766	14.148			4/4	1		33 147		0.288		2/30, 6/20	1	
32 767	15.000			4/4	1		33 148				2/29	1	
32 768	15.000			4/4	1		33 149	0.325		1.2	6/19	1	
32 772	21.729			4/3	1		33 150	0.684		2.064	6/19	1	
32 773	15.000			4/3	1		33 151	1.111		3.474	6/19	1	
32 774	15.000			4/3	1		33 152				6/21	1	
32 775	23.001			4/3	1		33 153				6/21	1	
32 776	21.562			4/3	1		33 154				6/21	1	
32 777	15.000			4/3	1		33 155				2/28, 2/30, 6/21	10	
32 778	15.000			4/3	1		33 156			0.052	1/4, 2/27, 2/30, 2/33, 3/2, 4/10, 4/9, 6/22	1	
32 779	23.386			4/3	1		33 157				2/28, 2/30, 6/22	10	
32 780	23.386			4/3	1		33 158				6/22	1	
32 781	23.386			4/3	1		33 159				6/22	100	
32 782	15.000			4/3	1		33 160	0.583		1.2	2/25, 2/29	1	
32 784	21.493			4/3	1		33 161	1.62		4.342	2/29	1	
32 785	14.218			4/3	1		33 162	2.766		6.723	2/29	1	
32 786	14.218			4/3	1		33 163		0.027		2/28, 2/30, 6/20, 6/24, 6/30	1	
32 907	0.008			2/13	24		33 164		0.049		2/30, 6/20, 6/24, 6/30	1	
32 912				1/3	10		33 165		0.069		2/30, 6/20, 6/24, 6/30	1	
32 914	0.052			2/13	24		33 166		0.08		2/28, 2/30, 6/17, 6/20	1	
32 915	0.026			2/13	24		33 167		0.137		2/30, 6/20	1	
32 921	0.004			2/13	24		33 168		0.177		2/30, 6/20	1	
32 937				2/17	4		33 193				6/22	1	
32 947				2/11, 2/13	10		33 194	0.888		2.274	2/21, 7/3	1	
32 948				2/11, 2/13	10		33 198	0.209		0.630	2/23, 2/29	1	
32 949				2/11, 2/13	10		33 199	0.11		0.624	6/19	1	
32 950				2/11, 2/13	10		33 200	0.11		0.624	6/19	1	
32 951				2/11, 2/13	10		33 201	0.306		1.368	6/19	1	
32 954				2/11, 2/13	50		33 202	0.665		2.064	6/19	1	
32 956				2/11	10		33 203	1.09		3.474	6/19	1	
32 963				2/13	10		33 204	7.09		14.3	6/19	1	
32 964				2/11	10		33 206	0.216		0.63	2/23, 2/29	1	
32 969				2/11, 2/13	50		33 207	0.116		0.624	6/19	1	
32 973				2/12	4		33 208	0.116		0.624	6/19	1	
32 974				2/12	4		33 216	0.375	0.065	0.861	2/29	1	
32 975	1.167	0.025		2/16	1		33 217	0.086	0.065	0.486	6/19	1	
32 976	0.358	0.015		2/16	1		33 219				6/21	10	
32 977	0.358	0.021		2/16	1		33 220				6/21	10	
32 978	1.473			2/16	1		33 221	0.11		0.624	6/19	1	
32 980	1.163	0.053		2/16	1		33 222	0.11		0.624	6/19	1	
32 981	0.212			2/15	1		33 223				6/21	2	
32 982				2/17	1		33 224		0.014		2/27, 2/30, 2/33, 3/2, 6/20	3	
32 983				4/3, 4/4	1		33 225				6/21	10	
32 984				4/3, 4/4	1								
32 985				4/3, 4/4	1								
32 986				4/3, 4/4	1								
32 987				4/3, 4/4	1								
33 036				3/2	2								
33 051				2/30, 6/22	10								
33 075	0.210		0.630	2/21, 7/3	1								
33 079	0.385		0.624	2/21, 7/3	1								
33 113				3/2	4								
33 142				2/28, 2/31, 6/18, 6/21	2								
33 143				2/31, 6/21	2								
33 144				2/31, 6/21	2								
33 145		0.124		2/28, 2/30, 6/17, 6/20	1								
33 146		0.202		2/30, 6/20	1								

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
33 226				6/21	10		33 366		0.08		6/24, 6/30	3	
33 234	0.488		2.241	2/33	1		33 367		0.131		6/24, 6/30	3	
33 235	0.351		1.875	3/2	1		33 376	0.404			6/20	4	
33 238				3/2	3		33 377	0.661			6/20	4	
33 246				6/24, 6/30	1		33 378	0.09	0.052		6/20	3	
33 247				6/22	1		33 380				6/24, 6/30	1	
33 268				4/10	3		33 381				6/24, 6/30	1	
33 270				4/10	3		33 384	0.35	0.044	1.875	3/2	1	
33 283				6/24, 6/30	1		33 385		0.288		2/30, 6/20	1	
33 285	0.488	0.002	2.241	2/33	1		33 392	0.998			6/20	4	
33 286	0.35		1.819	3/2	1		33 393	0.38	0.505	1.812	6/19	1	
33 292				4/10	3		33 394	0.201	0.003	0.612	2/23, 2/29	1	
33 293				4/10	3		33 398	0.201		0.690	2/23, 2/29	1	
33 294				4/10	3		33 402	0.351		0.99	2/23, 2/34	1	
33 295				4/10	3		33 403	0.769	0.225	1.8	2/25, 2/34	1	
33 298				4/10	3		33 408	0.255		1.01	6/12	1	
33 299				4/10	3		33 409	0.504	0.451	1.68	6/12	1	
33 300				4/9	3		33 416	0.189	0.03	0.516	1/4, 1/5	1	
33 308	1.48	2.1	5.1	6/12	1		33 418				2/31, 6/21	2	
33 311	3.134	1.05	8.349	2/34	1		33 419				2/31, 6/21	2	
33 315				2/31	1		33 420	0.208	0.005	0.612	2/23, 2/29	1	
33 316				2/31	1		33 421	0.463		0.99	2/23, 2/34	1	
33 317				2/31	2		33 422	0.48		0.99	2/23, 2/34	1	
33 324	0.209	0.005	0.63	2/23, 2/29	1		33 424	0.124			6/25	1	
33 325	0.577		1.2	2/25, 2/29	1		33 425	0.145			6/25	1	
33 326	1.614		4.342	2/29	1		33 426	0.124			6/25	1	
33 327	2.758		6.723	2/29	1		33 427	0.145			6/25	1	
33 328	0.11	0.003	0.624	6/19	1		33 428	0.214			6/25	1	
33 329	0.11	0.003	0.624	6/19	1		33 429	0.214			6/25	1	
33 330	0.319		1.2	6/19	1		33 430	0.473			6/25	1	
33 331	0.678		2.064	6/19	1		33 431	0.473			6/25	1	
33 332	1.103		3.474	6/19	1		33 432	0.913			6/25	1	
33 333	0.248			6/23	1		33 433	0.913			6/25	1	
33 334	0.98			6/23	1		33 434	2.606			6/25	1	
33 335	1.041			6/23	1		33 435	6.648			6/25	1	
33 336	2.043			6/23	1		33 436	6.648			6/25	1	
33 337	0.413			6/29	1		33 437	18.968			6/25	1	
33 338	1.803			6/29	1		33 438	20.468			6/25	1	
33 339	2.135			6/29	1		33 439	20.468			6/25	1	
33 340	3.897			6/29	1		33 440	0.166			6/25	1	
33 342				6/24, 6/30	1		33 441	0.193			6/25	1	
33 343				6/24, 6/30	1		33 442	0.166			6/25	1	
33 345				6/24, 6/30	1		33 443	0.193			6/25	1	
33 346				6/24, 6/30	1		33 444	0.273			6/25	1	
33 347				6/24, 6/30	1		33 445	0.273			6/25	1	
33 348				6/24, 6/30	1		33 446	0.564			6/25	1	
33 349				6/24, 6/30	1		33 447	0.564			6/25	1	
33 350				6/24, 6/30	2		33 448	1.217			6/25	1	
33 351				6/24, 6/30	2		33 449	1.217			6/25	1	
33 352				6/24, 6/30	2		33 450	3.186			6/25	1	
33 355	0.248			6/23	1		33 451	8.444			6/25	1	
33 356	0.98			6/23	1		33 452	26.968			6/25	1	
33 357	1.041			6/23	1		33 453	28.468			6/25	1	
33 358	2.043			6/23	1		33 454	28.468			6/25	1	
33 359	0.413			6/29	1		33 455	0.28			6/27	1	
33 360	1.803			6/29	1		33 456	0.28			6/27	1	
33 361	2.135			6/29	1		33 457	0.437			6/27	1	
33 362	3.897			6/29	1		33 458	0.888			6/27	1	
33 363				6/30	3		33 459	0.888			6/27	1	
33 364				6/24	3		33 460	0.888			6/27	1	
33 365				6/24	3		33 461	2.984			6/27	1	

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
33 462	2.984			6/27	1		33 725				4/9	1	
33 463	9.245			6/27	1		33 726				4/9	1	
33 464	0.392			6/27	1		33 727				4/9	1	
33 465	0.392			6/27	1		33 728	0.405			4/9	1	
33 466	0.557			6/27	1		33 730	2.555		7.146	4/7, 4/8	1	
33 467	1.209			6/27	1		33 731				4/7, 4/8	1	
33 468	1.209			6/27	1		33 732				4/9	1	
33 469	1.209			6/27	1		33 733				4/10	1	
33 470	3.984			6/27	1		33 734		0.030		4/9	3	
33 471	3.984			6/27	1		33 735	0.068			4/10	3	
33 472	11.74			6/27	1		33 736	0.068			4/10	3	
33 500	0.385	0.11	2.352	2/24	1		33 737	0.038			4/6, 4/9	3	
33 501	0.415	0.11	3.582	2/24	1		33 738	0.051			4/10, 4/8	3	
33 502	0.334	0.11	3.618	6/18	1		33 739	0.003			4/5, 4/9	3	
33 503	0.385	0.123	2.352	2/24	1		33 740				4/10, 4/2, 4/7	3	
33 504	0.415	0.123	2.904	2/24	1		33 741				4/9	1	
33 505	0.334	0.123	3.618	6/18	1		33 742				4/9	1	
33 506	0.368	0.111	2.094	2/24	1		33 744				4/10, 4/9	1	
33 507	0.344	0.111	8.94	6/18	1		33 745				4/10	1	
33 510	0.913	0.286	7.167	2/26	1		33 746				4/10	1	
33 511	1.059	0.286	10.071	2/26	1		33 747				4/10	1	
33 512	0.854	0.286	9.09	6/18	1		33 748				4/10	1	
33 513	0.913	0.334	7.167	2/26	1		33 749				4/9	1	
33 514	1.059	0.334	10.071	2/26	1		33 750				4/9	1	
33 515	0.854	0.334	9.09	6/18	1		33 751				4/9	1	
33 516	0.926	0.286	14.301	2/26	1		33 752				4/9	1	
33 540	0.444	0.11	3.798	2/24	1		33 753				4/10, 4/9	1	
33 541	0.474	0.11	5.028	2/24	1		33 754				4/10, 4/9	1	
33 542	0.393	0.11	5.064	6/17	1		33 770	0.606	1.560		4/5, 4/6	1	
33 543	0.444	0.123	3.798	2/24	1		33 771	0.630	4.200		4/5, 4/6	1	
33 544	0.474	0.123	5.028	2/24	1		33 772	0.606	1.560		4/5, 4/6	1	
33 545	0.393	0.123	5.064	6/17	1		33 773	0.534	1.350		4/5, 4/6	1	
33 550	0.896	0.286	6.177	2/26	1		33 774	0.558	3.990		4/5, 4/6	1	
33 551	1.041	0.286	7.641	2/26	1		33 775	0.534	1.350		4/5, 4/6	1	
33 552	0.837	0.286	8.1	6/17	1		33 906	0.434			6/20	4	
33 553	0.896	0.334	6.177	2/26	1		33 907	0.05			6/20	3	
33 554	1.042	0.334	7.641	2/26	1		33 908			0.056	2/27, 2/28, 6/18	1	
33 555	0.837	0.334	8.1	6/17	1		33 909	0.012	0.084	0.074	2/28, 2/30, 6/17, 6/20	3	
33 600	0.602	0.252	1.506	2/25, 2/29	1		33 910				2/27, 2/28, 6/18	1	
33 601	0.565		1.2	2/25, 2/29	1		33 911				2/27, 2/28, 6/18	1	
33 602	1.601		4.342	2/29	1		33 912				2/27, 2/28, 6/18	1	
33 603	2.745		8.868	2/29	1		33 913				2/27, 2/28, 6/18	1	
33 700	0.602		1.780	4/5, 4/6	1		33 914	0.09	0.044		2/27, 6/17	3	
33 701	1.733		3.706	4/7, 4/8	1		33 915		0.002		2/27, 6/17	3	
33 702	1.733		3.706	4/7, 4/8	1		33 916				2/28, 2/32	3	
33 703	2.555		7.146	4/7, 4/8	1		33 917			0.056	2/28, 2/30, 6/22	1	
33 704	0.530		1.570	4/5, 4/6	1		33 918				2/28, 2/30, 6/22	3	
33 705	0.530		1.570	4/5, 4/6	1		33 921				6/26	1	
33 706	1.733		3.706	4/7, 4/8	1		33 922				6/26	1	
33 707	1.733		3.706	4/7, 4/8	1		33 923				6/26	1	
33 708	2.555		7.146	4/7, 4/8	1		33 924				6/26	1	
33 715	0.602		1.780	4/5, 4/6	1								
33 716	1.733		3.706	4/7, 4/8	1								
33 717	1.733		3.706	4/7, 4/8	1								
33 718	2.555		7.146	4/7, 4/8	1								
33 719	0.530		1.570	4/5, 4/6	1								
33 720	0.626		4.420	4/5, 4/6	1								
33 721	1.781		3.706	4/7, 4/8	1								
33 722	1.781		3.706	4/7, 4/8	1								
33 723	2.598		7.146	4/7, 4/8	1								
33 724	0.554		4.210	4/5, 4/6	1								

Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size		Part no.	Amount of copper in kg	Amount of brass in kg	Amount of silver in g	Page	Pack size	
33 925				6/26	1		36 219				7/2	1	
33 926				6/26	1		36 220				7/2	1	
33 927				6/26	1		36 230				2/11, 2/13, 7/2	1	
33 928				6/26	1		36 902	0.049			6/15, 7/1	1	
33 929				6/26	1		36 903	0.062			6/15, 7/1	1	
33 930				6/26	1		36 904	0.076			6/15, 7/1	1	
33 931				6/28	1		36 905				7/2	1	
33 932				6/28	1		36 906				7/2	10	
33 933				6/28	1		36 907				7/2	10	
33 934				6/28	1		36 908				7/2	1	
33 935				6/28	1		36 909				7/2	1	
33 936				6/28	1		36 910				7/2	1	
33 937				6/28	1		36 911				7/2	1	
33 938				6/28	1		36 912				7/2	1	
33 939				6/26	1		36 913				7/2	1	
33 940				6/26	1		78 105				6/21	10	
33 941				6/26	1		78 139				6/21	10	
33 942				6/26	1		78 442				7/6	200	
33 943				6/26	1		78 443				7/6	200	
33 944				6/26	1		78 447				7/6	200	
33 945				6/26	1		78 463				1/1, 2/5	10	
33 946				6/26, 6/28	1		78 893				6/21	10	
33 947				6/26, 6/28	1		79 448				2/27, 2/32, 3/3, 6/13	30	
33 970				6/26	1		79 449				2/32, 3/3, 6/13, 6/3	30	
33 971				6/26	1		79 663				2/19, 2/20	10	
33 972				6/26	1		79 738				7/3	10	
33 973				6/26	1		79 811				2/27, 2/31, 6/21	1	
33 974				6/26	1		79 859				7/3	10	
35 001				5/2	1								
35 004	12.57			5/1	1								
35 005	8.73			5/1	1								
35 006	8.644			5/1	1								
35 007	5.966			5/1	1								
35 008				5/2	2								
35 009				5/2	1								
35 015	13.921			5/1	1								
35 016	20.17			5/1	1								
35 017				5/2	4								
36 100	0.023	0.004		6/15	1								
36 101	0.019			1/3	1								
36 102	0.019			2/18	1								
36 103	0.023	0.004		6/15	1								
36 104	0.019			1/3	1								
36 105	0.019			2/18	1								
36 106	0.022	0.005		6/15	1								
36 107	0.019			1/3	1								
36 108	0.019			2/18	1								
36 109	0.013			1/3, 2/18, 6/15, 7/1	1								
36 110	0.013			1/3, 2/18, 6/15, 7/1	1								
36 111	0.013			1/3, 2/18, 6/15, 7/1	1								
36 112	0.011	0.004		6/15, 7/1	1								
36 113	0.007			1/3, 7/1	1								
36 114	0.007			2/18, 7/1	1								
36 209				1/3, 2/18, 6/15, 7/2	1								
36 215				7/2	1								
36 216				7/2	1								
36 218				7/2	1								

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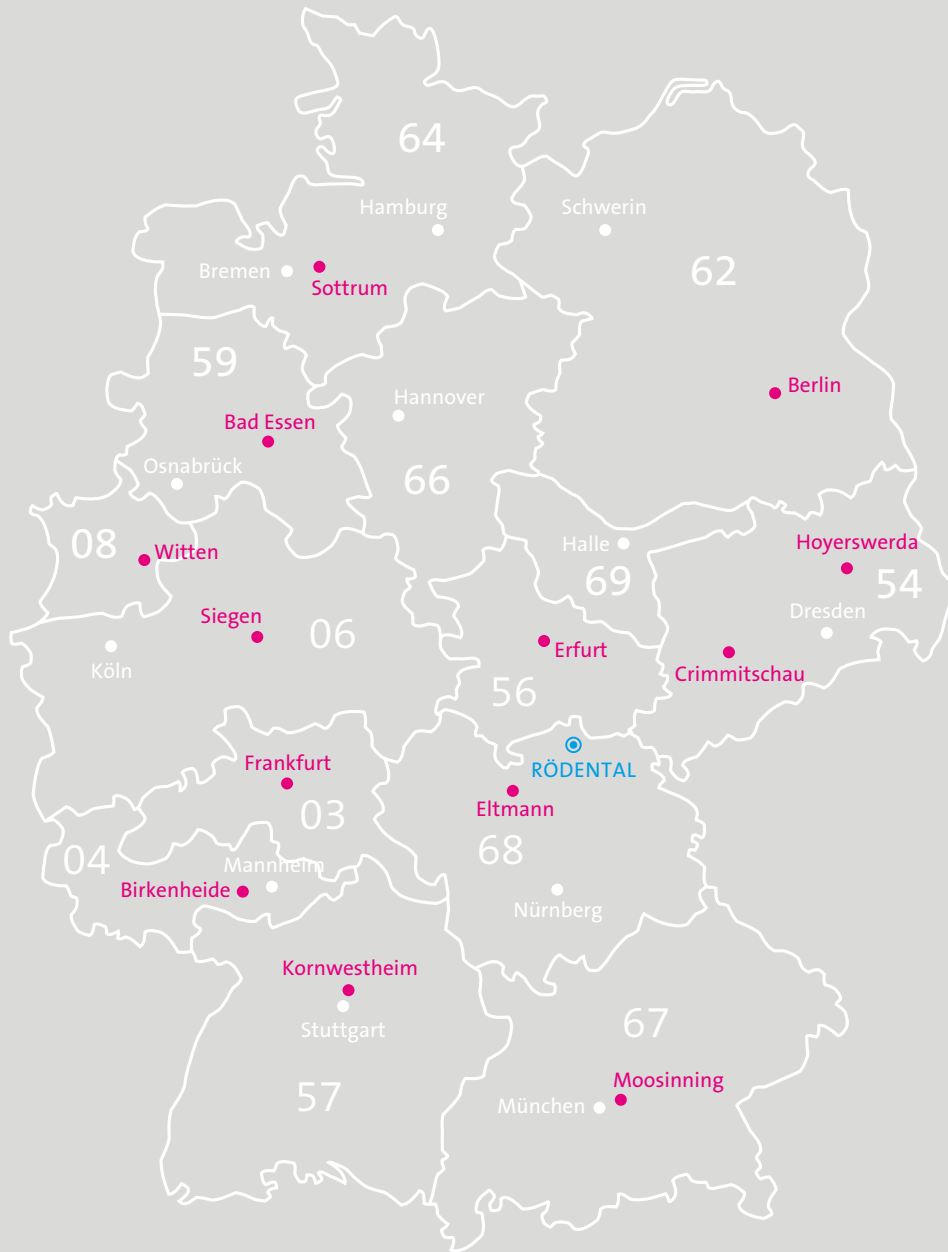
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