



High performance pressure switches



High performance pressure switches for AC currents

Industries



MDR 1	AC current; switching capacity 4.0 kW Max. cut-out pressure 11 bar	P. 25	Compressors, pumps
MDR 11	AC current; switching capacity 4.0 kW Max. cut-out pressure 11 bar / 160 psi UL / CSA-approval optional	P. 28	Compressors, pumps
MDR 2	current; switching capacity 2.2 kW Max. cut-out pressure 12 bar	P. 31	Compressors, pumps
MDR 21	AC current; switching capacity 4.0 kW Max. cut-out pressure 12 bar / 175 psi UL / CSA-approval optional	P. 34	Compressors, pumps



High performance pressure switches for 3-phase currents

Industries



MDR 3	3-phase; switching capacity 7.5 (11) kW available with overload relays Max. cut-out pressure 35 bar UL / CSA-approval optional	P. 37	Compressors, pumps
MDR 4	3-phase; switching capacity 4.0 / 5.5 kW Max. cut-out pressure 16 bar	P. 44	Compressors, pumps
MDR 5	3-phase; switching capacity 5.5 kW available with overload relays Max. cut-out pressure 16 bar	P. 50	Compressors, pumps

Pressure switch MDR 1 / 6, Pump version



- Single phase
- Switching capacity 4.0 kW
- Max. cut-out pressure 6 bar
- Incl. s PG 11 Z/ZK
- 2-pole (N.C.)
- Steel flange
- Acc. to EN 60947
- Optional differential adjustment

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 1/6	MDR-1 DSD BAEA 017A030 XDE XXX	-	2,5 - 6	1/4" ST	220	212119
MDR 1/6	MDR-1 DTD BAEA 017A030 XDE XXX	-	2,5 - 6	1/4" ST-Ü	220	212126

Pressure switch MDR 1 / 11, Compressor version



- Single phase
- Switching capacity 4.0 kW
- Max. cut-out pressure 11 bar
- Incl. cable glands PG 11 Z/ZK and unloader valve AEV 1 S
- 2-pole (N.C.)
- Acc. to EN 60947
- Optional differential adjustment

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR1/11-EA	MDR-1 GBA AAEA 060A080 QDE XXX	EA	2,5 - 11	1/4"	220	212133
MDR1/11-EA	MDR-1 GEA AAEA 060A080 QDE XXX	EA	2,5 - 11	F4 1/4"	220	212140
MDR1/11-EA	MDR-1 GFA AAEA 060A080 QDE XXX	EA	2,5 - 11	F4 3/8"	220	212157
MDR1/11	MDR-1 GBA BAEA 060A080 QDE XXX	-	2,5 - 11	1/4"	220	216049
MDR1/11	MDR-1 GEA BAEA 060A080 QDE XXX	-	2,5 - 11	F4 1/4"	220	216025
MDR1/11	MDR-1 GFA BAEA 060A080 QDE XXX	-	2,5 - 11	F4 3/8"	220	216063

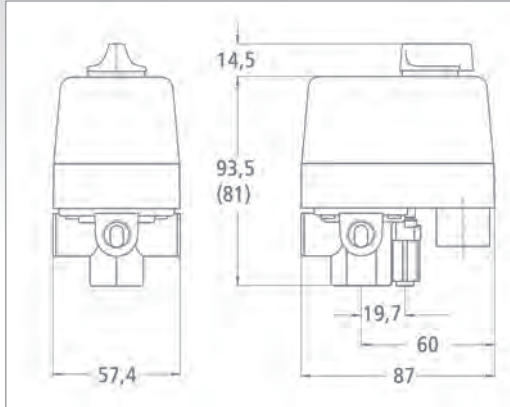
Technical Data MDR 1	
Rated insulation voltage U _i	500 V
Motor switching capacity (AC 3) U _e =240 V (1~)	4,0 kW
Electrical life (AC 3) Cycles	> 1 x 10 ⁵
Mechanical life Cycles	> 5 x 10 ⁵
Max. electrical cycles Cycles/h	120
Max. mechanical cycles Cycles/h	600
Rated operational current I _e at 240 V AC	20 A
Bursting strength P _z	> 35 bar
Permissible medium temperature Air	- 5...+ 80 °C

Technical Data MDR 1 acc. to 60947 UL/CSA	
Permissible medium temperature Water	+ 70 °C
Degree of Protection acc. to EN 60529	IP 44
Conductor cross-section 1 .. fine stranded cable 1 x / 2 x	2,5 / 2,5 mm ²
Conductor cross-section 1 rigid cable 1 x / 2 x	2,5 / 2,5 mm ²

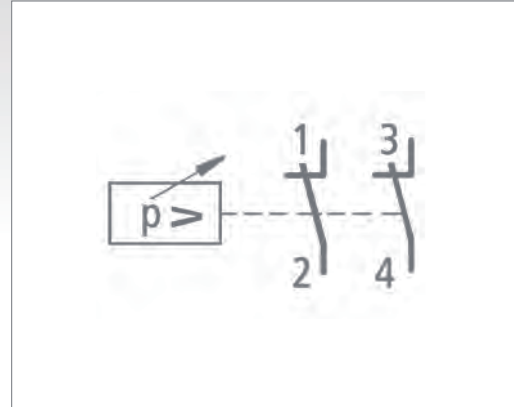
Diaphragm media resistance MDR 1	
Acetylene, Butane, Ethylene glycol, Carbon dioxide, Air, Mineral oils, Water, Distilled water, Sea water, Hydrogen, Water steam	resistant

A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22.

Dimensions / Circuit Diagrams MDR 1



Pressure switch MDR-1



Accessories MDR 1

Order reference	Description	Weight (in g)	Part No
	Unloader valves		
EV 15*	with quick-connect 6 mm for plastic unloader valves	25	226765
	Delayed unloader valves		
AEV 15*	with quick-connect 6 mm for plastic unloader valves	25	217541
	Cable glands		
WN	Grommet	6	200888
PG 11 G	Conduits for mounting of cable glands (inner thread)	6	255024
PG 11 Z		12	255031
PG 11 ZK	With strain relief and cable support	12	255048
	Cover		
H1 (Cover MDR 1)	Cover without On/Off lever (Neutral version, without marking)	40	230700
H1-EA (Cover MDR 1 + EA)	Cover with On/Off lever for manual On/Off (Neutral version, without marking)	40	227366
Cover MDR 1 + EA + lever	Conversion kit H1 to cover H1-EA	40	230717
	Differential adjustment		
MDR-1 Differential kit	Kit for setting cut-in and differential pressures (10 pcs.)	20	230618

*only for pneumatic tubes with outside tolerances according to e. g. Festo PAN 6x1 mm

Unloader valves / Delayed unloader valves

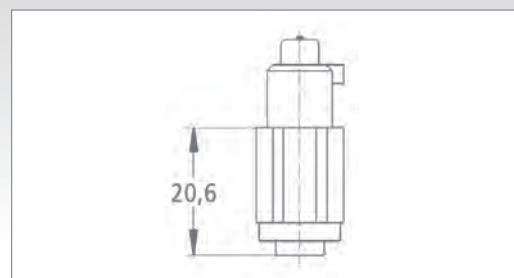
Dimensions unloader valves



EV 15

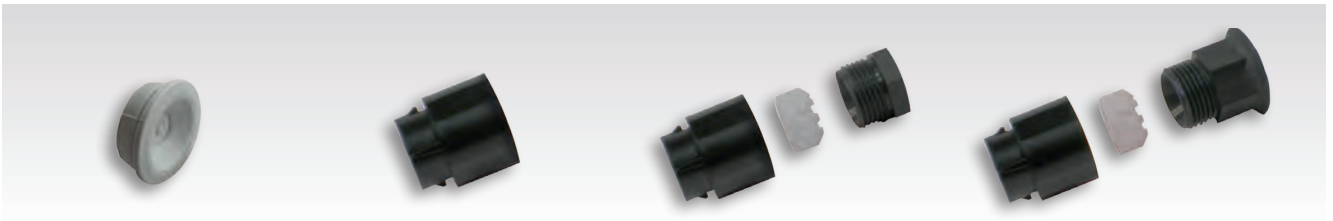


AEV 15



EV 15 / AEV 15

Cable glands MDR 1



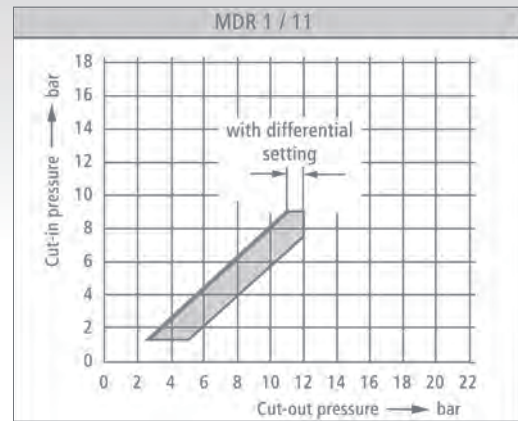
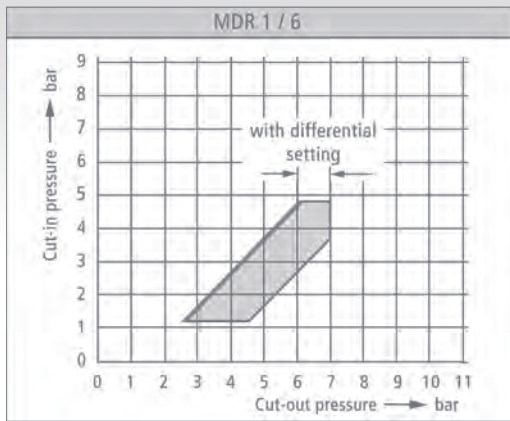
WN

PG 11 G

PG 11 Z

PG 11 ZK

Pressure Diagrams MDR 1



Explanation

Devices without differential pressure adjustment

After selecting the cut-in pressure, the cut-out pressure can be read from the pressure diagram. If only the cut-out pressure is known, the cut-in pressure to be set can also be determined from the diagram.

Example: MDR 1/6 without differential pressure adjustment

For a preselected cut-in pressure of 4 bar, the cut-out pressure is 5 bar. If, for example, the cut-out pressure is to be 4 bar, a cut-in pressure of approx. 2.7 bar has to be set.

Devices with differential pressure adjustment

An intersecting point is determined in the diagram by selecting a pair of cut-in and cut-out pressure values. If this point lies within the shaded area, this pair of values can be set on the pressure switch. If this point lies outside the shaded area, these values cannot be set.

Example: MDR 1/11 with differential pressure adjustment

With a preselected cut-in pressure of 4 bar, the cut-out pressure can be determined and set between 5.4 and 8 bar using the differential pressure adjustment.

Pressure switch MDR 11 / 6, Pump version



- Single phase
- Switching capacity 4.0 kW / 4 Hp
- Max. cut-out pressure 6 bar / 87 psi
- Incl. cable glands PG13.5 Z/ZK
- 2-pole (N.C.)
- Steel flange
- Acc. to EN 60947
- UL / CSA-approval optional
- Optional differential adjustment



Steel flange ST-Ü

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 11/6-EA	MDR-11 DSD AAIA 017A030 XHI XXX	EA	2,5 - 6	1/4" ST	300	235712
MDR 11/6-EA	MDR-11 DTD AAIA 017A030 XHI XXX	EA	2,5 - 6	1/4" ST-Ü	320	235729

Cable glands for retrofitting, see accessories!

Pressure switch MDR 11 / 11, Compressor version



- Single phase
- Switching capacity 4.0 kW / 4 HP
- Max. cut-out pressure 11 bar / 160 psi
- Incl. cable glands PG13,5 Z/ZK
- With delayed unloader valve AEV 11 S
- 2-pole (N.C.)
- Acc. to EN 60947
- UL / CSA-approval optional
- Optional differential adjustment

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 11/11-EA	MDR-11 GBA AAIA 060A080 QHI XXX	EA	2,5 - 11	1/4"	300	235736
MDR 11/11-EA	MDR-11 GEA AAIA 060A080 QHI XXX	EA	2,5 - 11	F4 1/4"	320	235743

Unloader valves and cable glands for retrofitting, see accessories!

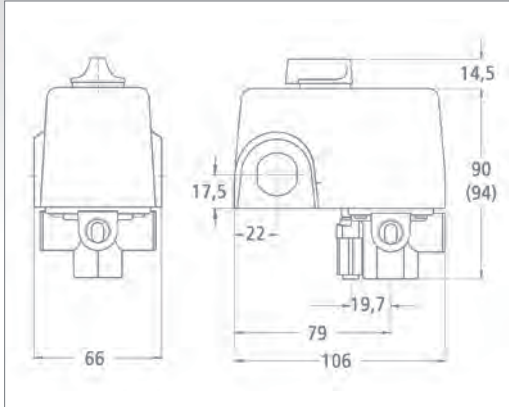
Technical Data MDR 11 acc. to 60947 UL/CSA	
Rated insulation voltage U _i	500 V
Motor switching capacity (AC 3) U _e =240 V (1~)	4,0 kW
Motor switching capacity (UL 508, CSA 22.2) U _e =240 V (1~) / U _e =120 V (1~)	3,0 HP/2,0 HP
Electrical life (UL 508, CSA 22.2) U _e =240 V dc; 2,7A	0,5 HP
Electrical life (AC 3) Cycles	> 1 x 10 ⁵
Mechanical life Cycles	> 5 x 10 ⁵
Max. electrical cycles Cycles/h	120
Max. mechanical cycles Cycles/h	600
Rated operational current I _e (EN 60947) at 240 V AC	20 A
Rated operational current I _e (UL/CSA) at 240 V AC	26 A
Bursting strength P _z	> 35 bar

Technical Data MDR 11 acc. to 60947 UL/CSA	
Permissible medium temperature Air	- 5...+ 80 °C
Permissible medium temperature Water	+ 70 °C
Degree of Protection acc. to EN 60529	IP 44
Conductor cross-section 1 .. fine stranded cable 1 x / 2 x	2,5 / 2,5 mm ²
Conductor cross-section 1 rigid cable 1 x / 2 x	2,5 / 2,5 mm ²

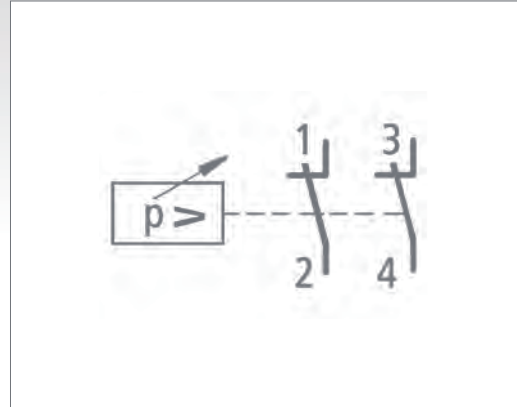
Diaphragm media resistance MDR 11	
Acetylene, Butane, Ethylene glycol, Carbon dioxide, Air, Mineral oils, Water, Distilled water, Sea water, Hydrogen, Water steam	resistant

A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22.

Dimensions / Circuit Diagrams MDR 11



Pressure switch MDR 11



Accessories MDR 11

Order reference	Description	Weight (in g)	Part No.
	Unloader valves		
EV 1 S*	with quick-connect 6 mm for plastic unloader valves	25	226765
EV 1 WSi	90° unloader valve with quick-connect for 1/4" plastic tubes, quick-connect can be rotated 360°	25	247593
	Delayed unloader valves		
AEV 1 S*	with quick-connect 6 mm for plastic unloader valves	25	217541
	Cable glands		
WN	Grommets	6	201243
PG 13,5 Z-21	With strain relief	12	201021
PG 13,5 ZK-21	With strain relief and cable support	12	201038
	Differential pressure adjustment		
MDR 1 Differential kit	Kit for setting cut-in and differential pressures (10 pcs.)	20	230618

*only for pneumatic tubes with outside tolerances according to e. g. Festo PAN 6x1mm

Unloader valves / Delayed unloader valves



EV 1S

EV 1WSi

AEV 1S

Cable glands MDR 11



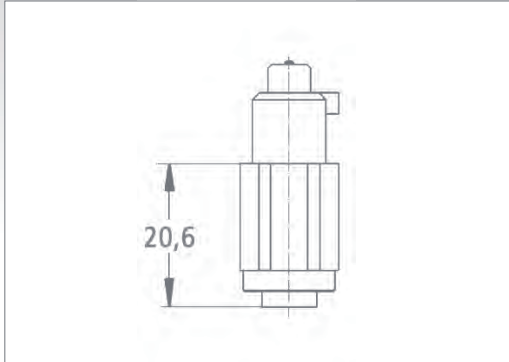
WN

PG 13,5 Z-21

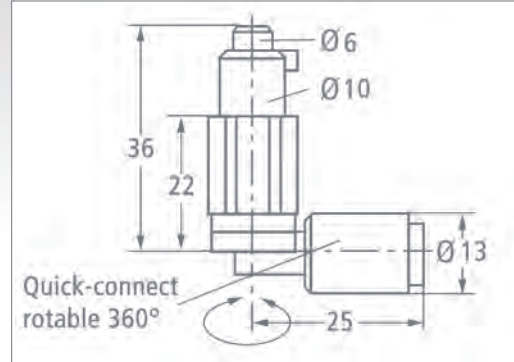
PG 13,5 ZK-21

High performance Pressure switches

Dimensions, Accessories MDR 11

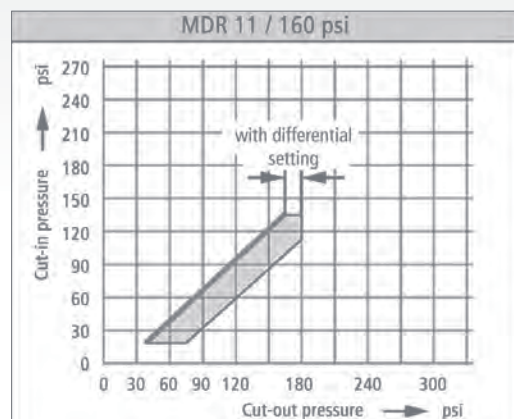
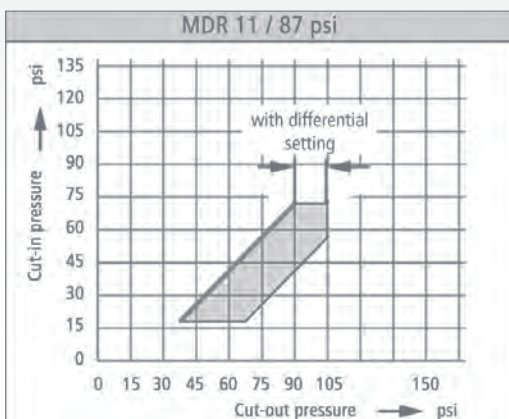
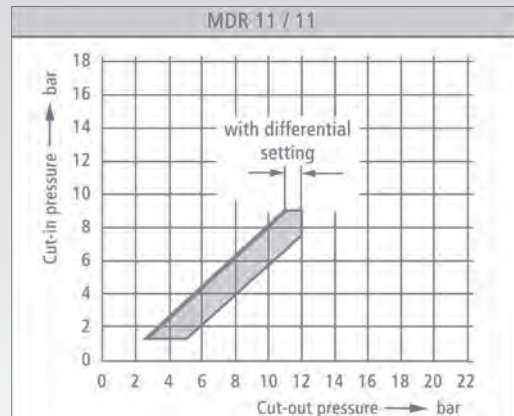
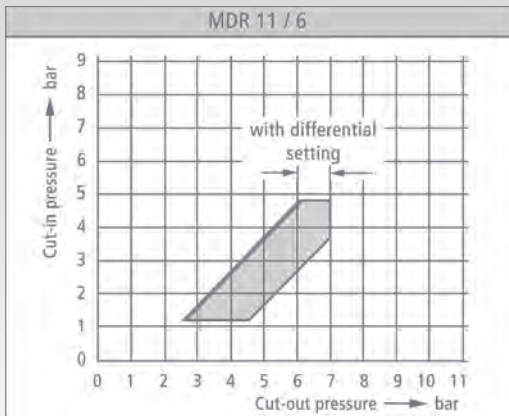


EV 1S / AEV 1S



EV 1WSi

Pressure Diagrams MDR 11



Explanation

Devices without differential pressure adjustment

After selecting the cut-in pressure, the cut-out pressure can be read from the pressure diagram. If only the cut-out pressure is known, the cut-in pressure to be set can also be determined from the diagram.

Example: MDR 1/6 without differential pressure adjustment

For a preselected cut-in pressure of 4 bar, the cut-out pressure is 5 bar. If, for example, the cut-out pressure is to be 4 bar, a cut-in pressure of approx. 2.7 bar has to be set.

Devices with differential pressure adjustment

An intersecting point is determined in the diagram by selecting a pair of cut-in and cut-out pressure values. If this point lies within the shaded area, this pair of values can be set on the pressure switch. If this point lies outside the shaded area, these values cannot be set.

Example: MDR 1/11 with differential pressure adjustment

With a preselected cut-in pressure of 4 bar, the cut-out pressure can be determined and set between 5.4 and 8 bar using the differential pressure adjustment.



Pressure switch MDR 2



- Single phase
- Switching capacity 2.2 kW
- Max. cut-out pressure 12 bar
- 2-pole (N.C.)
- Acc. to EN 60947

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 2/6-EA	MDR-2 DBA AAAAA 015A030 XAA XXX	EA	1,5 - 7	1/4"	300	212164
MDR 2/11-EA	MDR-2 GBA AAAAA 070A090 XAA XXX	EA	4 - 12	1/4"	300	212171
MDR 2/11-EA	MDR-2 GEA AAAAA 070A090 XAA XXX	EA	4 - 12	F4 1/4"	320	212188
MDR 2/11-EA	MDR-2 GFA AAAAA 070A090 XAA XXX	EA	4 - 12	F4 3/8"	320	212195
MDR 2/11-EA	MDR-2 GDA AAAAA 070A090 XAA XXX	EA	4 - 12	F4 1/2"	320	212201
MDR 2/6	MDR-2 DBA BAAA 015A030 XAA XXX	-	1,5 - 7	1/4"	300	217381
MDR 2/11	MDR-2 GBA BAAA 070A090 XAA XXX	-	4 - 12	1/4"	300	217404
MDR 2/11	MDR-2 GEA BAAA 070A090 XAA XXX	-	4 - 12	F4 1/4"	320	219408
MDR 2/11	MDR-2 GFA BAAA 070A090 XAA XXX	-	4 - 12	F4 3/8"	320	226888
MDR 2/11	MDR-2 GDA BAAA 070A090 XAA XXX	-	4 - 12	F4 1/2"	320	226895

Unloader valves and cable glands for retrofitting, see accessories!

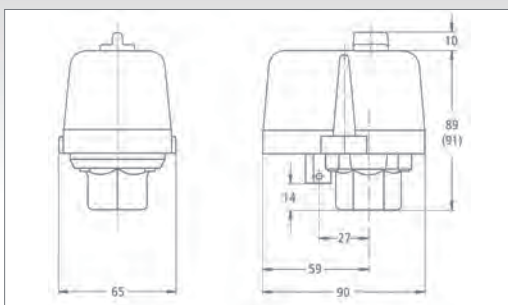
Technical Data MDR 2 acc. to 60947	
Rated insulation voltage U _i	500 V
Motor switching capacity (AC 3) U _e =240 V (1~)	2,2 kW
Electrical life (AC 3) Cycles	> 1 x 10 ⁵
Mechanical life Cycles	> 5 x 10 ⁵
Max. electrical cycles Cycles/h	120
Max. mechanical cycles Cycles/h	600
Rated operational current I _e at 240 V AC 3	16 A
Bursting strength P _z	> 35 bar
Permissible medium temperature Air	- 5...+ 80 °C

Technical Data MDR 2 acc. to 60947	
Permissible medium temperature Water	+ 80 °C
Degree of Protection acc. to EN 60529	IP 44
Conductor cross-section 1 .. fine stranded cable 1 x / 2 x	2,5 / 2,5 mm ²
Conductor cross-section 1 rigid cable 1 x / 2 x	2,5 / 2,5 mm ²

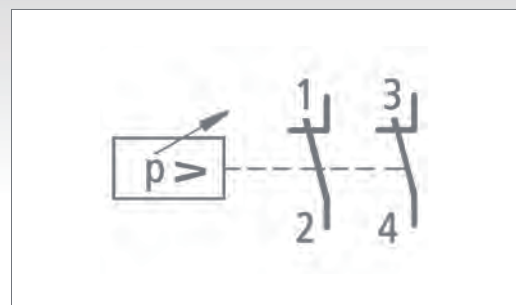
Diaphragm media resistance MDR 2	
Air, Water	resistant

A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22..

Dimensions / Circuit Diagrams MDR 2



Pressure switch MDR-2



Accessories MDR 2

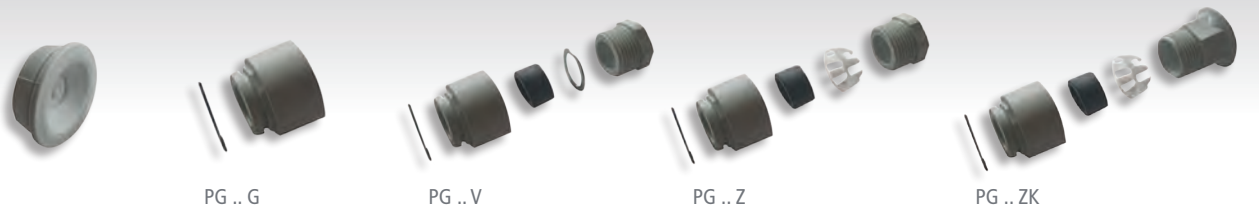
Order reference	Description	Weight (in g)	Part No
Unloader valves			
EV 2	With screw connection for 6 mm plastic or copper discharge tubes	25	200666
EV 2S*	With quick-connect for 6 mm plastic discharge tubes	25	200680
EV 2W	90° with screw connection for 6 mm plastic or discharge copper tubes	25	200697
EV 2Wi	90° with screw connection for 1/4" mm plastic or discharge copper tubes	15	200703
EV 2WS*	90° with quick-connect for 6 mm plastic discharge tubes	15	200710
Delayed unloader valves			
AEV 2	With screw connection for 6 mm plastic or copper discharge tubes	25	200727
AEV 2S*	With quick-connect for 6 mm plastic discharge tubes	25	200741
AEV 2W	90° with screw connection for 6 mm plastic or copper discharge tubes	15	200758
AEV 2Wi	90° with screw connection for 1/4" mm plastic or copper discharge tubes	15	200765
AEV 2WS*	90° with quick-connect for 6 mm plastic discharge tubes	15	200772
Cable glands			
WN	Grommet	6	200888
PG 11 G	Conduits for mounting of cable glands (Inner thread)	6	200895
PG 11 V	Cable gland complete	12	200901
PG 11 Z	With strain relief	12	200925
PG 11 ZK	With strain relief and cable support	12	200918
PG 13,5 G	Conduits for mounting of cable glands (Inner thread)	6	200963
PG 13,5 V	Cable gland complete	12	200932
PG 13,5 Z	With strain relief	12	200956
PG 13,5 ZK	With strain relief and cable support	12	200949
Cover			
H2 (Cover MDR 2)	Cover without On/Off lever (Neutral version without marking)	40	217510
H2-EA (Cover MDR 2+EA)	Cover with On/Off lever for manual On/Off (neutral version, without marking)	40	229445

*only for pneumatic tubes with outside tolerances according to e. g. Festo PAN 6x1mm

Unloader valves / Delayed unloader valves



Cable glands MDR 2



WN

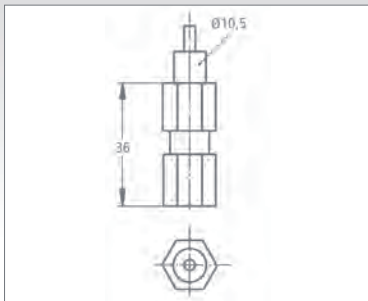
PG..G

PG..V

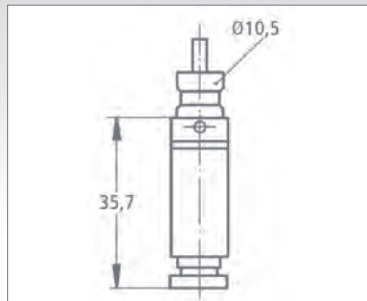
PG..Z

PG..ZK

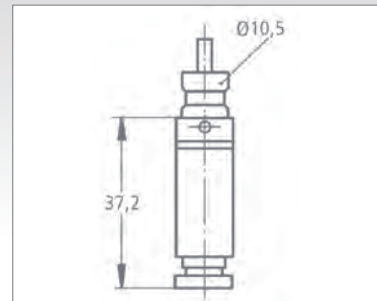
Dimensions, Accessories MDR 2



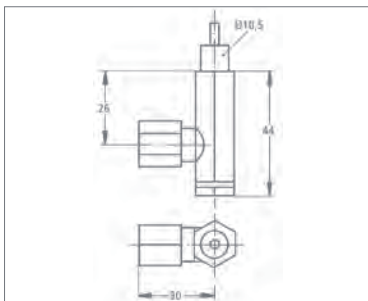
EV 2



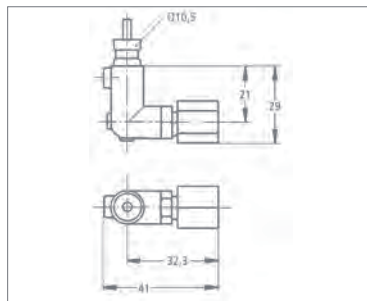
EV 2S



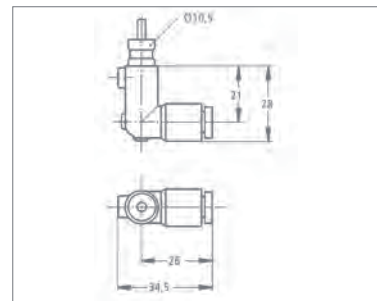
AEV 2S



AEV 2

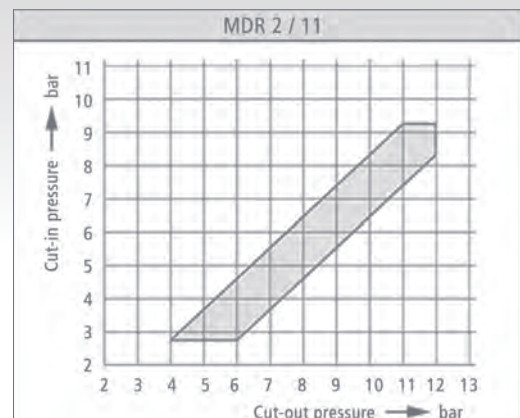
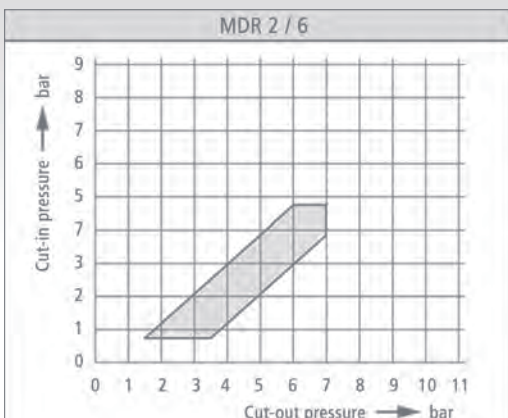


EV 2W / EV 2Wi
AEV 2W / AEV 2Wi



EV 2WS /
AEV 2WS

Pressure Diagrams



Pressure switch MDR 21



- Single phase
- Switching capacity 2.2 kW
- Max. cut-out pressure 12 bar / 175 psi
- 2-pole (N.C.)
- Acc. to EN 60947
- UL / CSA-approval optional

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 21/6-EA	MDR-21 DBA AACA 015A030 XAA XXX	EA	1,5 - 7	1/4"	300	212218
MDR 21/6-EA	MDR-21 DEA AACA 015A030 XAA XXX	EA	1,5 - 7	F4 1/4"	320	212225
MDR 21/11-EA	MDR-21 GBA AACA 070A090 XAA XXX	EA	4 - 12	1/4"	300	212232
MDR 21/11-EA	MDR-21 GEA AACA 070A090 XAA XXX	EA	4 - 12	F4 1/4"	320	212249
MDR 21/6	MDR-21 DBA BACA 015A030 XAA XXX	-	1,5 - 7	1/4"	300	219910
MDR 21/6	MDR-21 DEA BACA 015A030 XAA XXX	-	1,5 - 7	F4 1/4"	320	226901
MDR 21/11	MDR-21 GBA BACA 070A090 XAA XXX	-	4 - 12	1/4"	300	226918
MDR 21/11	MDR-21 GEA BACA 070A090 XAA XXX	-	4 - 12	F4 1/4"	320	226925

Unloader valves and cable glands for retrofitting, see accessories!

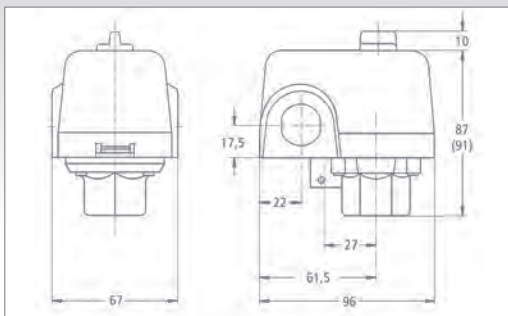
Technical Data MDR 21 nach EN 60947 UL/CSA	
Rated insulation voltage U _i	500 V
Motor switching capacity (UL 508, CSA 22.2) U _e =120 V (1~)	2 HP
Motor switching capacity (UL 508, CSA 22.2) U _e =240 V (1~)	3 HP
Motor switching capacity (AC 3) Cycles	2,2 kW
Electrical life (AC 3) Cycles	> 1 x 10 ⁵
Mechanical life Cycles	> 5 x 10 ⁶
Max. electrical cycles Cycles/h	120
Max. mechanical cycles Cycles/h	600
Rated operational current I _e (UL 508, CSA 22.2) at 240 V AC	24 A
Bursting strength P _z	> 35 bar

Technical Data MDR 21 nach EN 60947 UL/CSA	
Permissible medium temperature Air	- 5...+ 80 °C
Permissible medium temperature Water	+ 80 °C
Degree of Protection acc. to EN 60529	IP 44
Conductor cross-section 1 ... fine stranded cable 1 x / 2 x	2,5 / 2,5 mm ²
Conductor cross-section 1 ... rigid cable 1 x / 2 x	2,5 / 2,5 mm ²

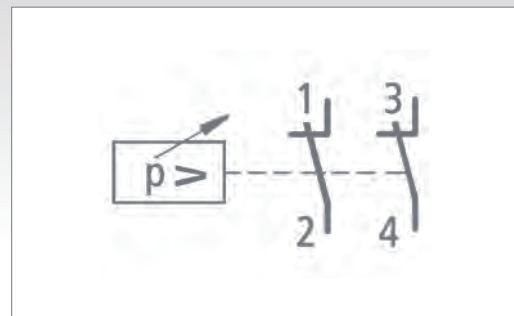
Diaphragm media resistance MDR 21	
Air, Water	resistant

A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22.

Dimensions / Circuit Diagrams MDR 21



Pressure switch MDR 21



Pressure switch MDR 21

Accessories MDR 21

Order reference	Description	Weight (in g)	Part No.
Unloader valves			
EV 2	With screw connection for 6 mm plastic or copper discharge tubes	25	200666
EV 2S*	With quick-connect for 6 mm plastic discharge tubes	25	200680
EV 2W	90° with screw connection for 6 mm plastic or discharge copper tubes	15	200697
EV 2Wi	90° with screw connection for 1/4" mm plastic or discharge copper tubes	15	200703
EV 2WS*	90° with quick-connect for 6 mm plastic discharge tubes	15	200710
Delayed unloader valves			
AEV 2	With screw connection for 6 mm plastic or copper discharge tubes	25	200727
AEV 2S*	With quick-connect for 6 mm plastic discharge tubes	25	200741
AEV 2W	90° with screw connection for 6 mm plastic or copper discharge tubes	15	200758
AEV 2Wi	90° with screw connection for 1/4" mm plastic or copper discharge tubes	15	200765
AEV 2WS*	90° with quick-connect for 6 mm plastic discharge tubes	15	200772
Cable glands			
WN	Grommet	6	201243
PG 13,5 Z-21	With strain relief	12	201021
PG 13,5 ZK-21	With strain relief and cable support	12	201038
Cover			
H 21 (Cover MDR 21)	Cover without On/Off lever (Neural version without marking)	40	229452
H 21-EA (Cover MDR 2+EA)	Cover with On/Off lever for manual On/Off (neutral version, without marking)	40	217503

* only for pneumatic tubes with outside tolerances according to e. g. Festo PAN 6x1mm

High performance
Pressure switches

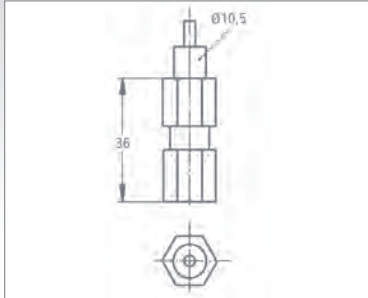
Unloader valves / Delayed unloader valves



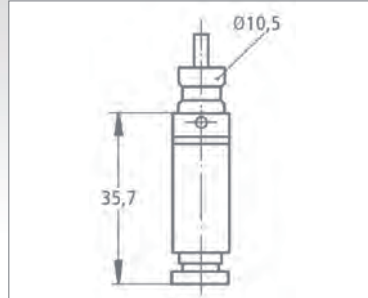
Cable glands MDR 21



Dimensions, Accessories MDR 21



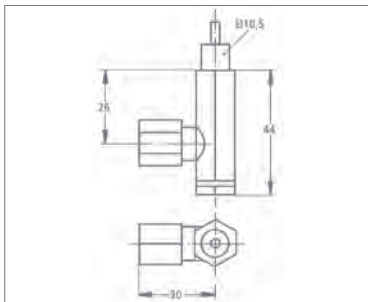
EV 2



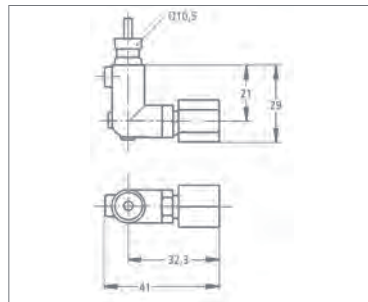
EV 2S



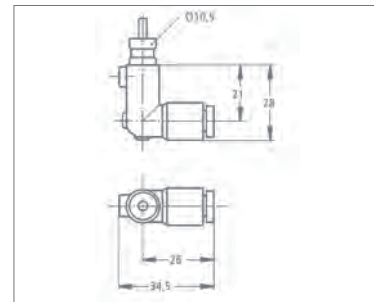
AEV 2S



AEV 2

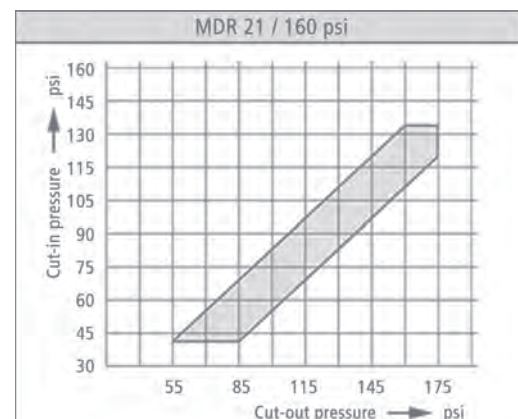
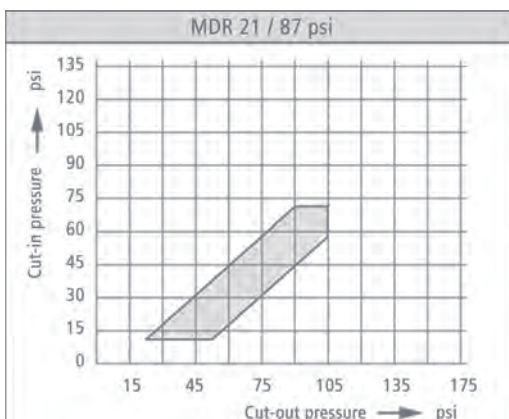
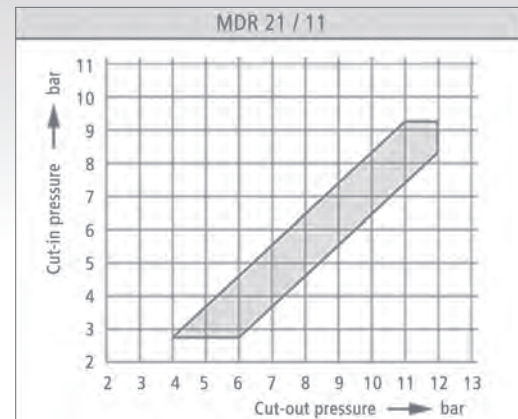
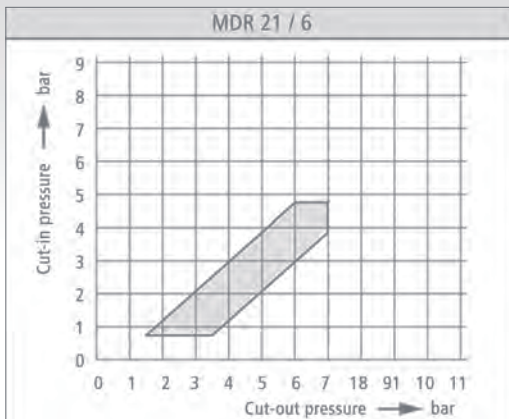


EV 2W / EV 2Wi
AEV 2W / AEV 2Wi



EV 2WS /
AEV 2WS

Pressure Diagrams



1 bar = 14,5 psi; 10 psi = ca. 0,7 bar

Pressure switch MDR 3



- 3-phase
- Switching capacity 7.5 (11) kW / 20 HP
- Available with overload relay
- Max. cut-out pressure 35 bar
- 3-pole (N.C.)
- Acc. to EN 60947
- UL / CSA-approval optional

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 3/6-EA	MDR-3 DAA AAAA 045A060 XAA XXX	EA	1,3 - 6	1/2"	610	212256
MDR 3/11-EA	MDR-3 GAA AAAA 090A110 XAA XXX	EA	4 - 11	1/2"	610	212263
MDR 3/11-EA	MDR-3 GBA AAAA 090A110 XAA XXX	EA	4 - 11	1/4"	610	212270
MDR 3/11-EA	MDR-3 GEA AAAA 090A110 XAA XXX	EA	4 - 11	F4 1/4"	640	212287
MDR 3/11-EA	MDR-3 GDA AAAA 090A110 XAA XXX	EA	4 - 11	F4 1/2"	640	212294
MDR 3/11-EA	MDR-3 GFA AAAA 090A110 XAA XXX	EA	4 - 11	F4 3/8"	640	212300
MDR 3/16-EA	MDR-3 HAA AAAA 130A160 XAA XXX	EA	6 - 16	1/2"	610	212317
MDR 3/16-EA	MDR-3 HBA AAAA 130A160 XAA XXX	EA	6 - 16	1/4"	610	212324
MDR 3/16-EA	MDR-3 HEA AAAA 130A160 XAA XXX	EA	6 - 16	F4 1/4"	640	212331
MDR 3/16-EA	MDR-3 HDA AAAA 130A160 XAA XXX	EA	6 - 16	F4 1/2"	640	212348
MDR 3/16-EA	MDR-3 HFA AAAA 130A160 XAA XXX	EA	6 - 16	F4 3/8"	640	212355
MDR 3/25-EA	MDR-3 IAA AAAA 215A250 XAA XXX	EA	7,5 - 25	1/2"	610	212362
MDR 3/25-EA	MDR-3 IDA AAAA 215A250 XAA XXX	EA	7,5 - 25	F4 1/2"	640	212379
MDR 3/35-EA	MDR-3 JAA AAAA 320A350 XAA XXX	EA	12 - 35	1/2"	610	229711
MDR 3/35-EA	MDR-3 JDA AAAA 320A350 XAA XXX	EA	12 - 35	F4 1/2"	640	229728
MDR 3/6	MDR-3 DAA BAAA 045A060 XAA XXX	-	1,3 - 6	1/2"	590	226932
MDR 3/11	MDR-3 GAA BAAA 090A110 XAA XXX	-	4 - 11	1/2"	590	226949
MDR 3/11	MDR-3 GBA BAAA 090A110 XAA XXX	-	4 - 11	1/4"	590	226956
MDR 3/11	MDR-3 GEA BAAA 090A110 XAA XXX	-	4 - 11	F4 1/4"	620	226963
MDR 3/11	MDR-3 GDA BAAA 090A110 XAA XXX	-	4 - 11	F4 1/2"	620	226970
MDR 3/11	MDR-3 GFA BAAA 090A110 XAA XXX	-	4 - 11	F4 3/8"	620	226987
MDR 3/16	MDR-3 HAA BAAA 130A160 XAA XXX	-	6 - 16	1/2"	590	226994
MDR 3/16	MDR-3 HBA BAAA 130A160 XAA XXX	-	6 - 16	1/4"	590	227007
MDR 3/16	MDR-3 HEA BAAA 130A160 XAA XXX	-	6 - 16	F4 1/4"	620	227014
MDR 3/16	MDR-3 HDA BAAA 130A160 XAA XXX	-	6 - 16	F4 1/2"	620	227021
MDR 3/16	MDR-3 HFA BAAA 130A160 XAA XXX	-	6 - 16	F4 3/8"	620	227038
MDR 3/25	MDR-3 IAA BAAA 215A250 XAA XXX	-	7,5 - 25	1/2"	590	227045
MDR 3/25	MDR-3 IDA BAAA 215A250 XAA XXX	-	7,5 - 25	F4 1/2"	620	227052
MDR 3/35	MDR-3 JAA BAAA 320A350 XAA XXX	-	12 - 35	1/2"	590	229698
MDR 3/35	MDR-3 JDA BAAA 320A350 XAA XXX	-	12 - 35	F4 1/2"	620	229704

Unloader valves and cable glands for retrofitting, see accessories!

Type overview Pressure Switch MDR 3 RM versions, with roller diaphragm - tight pressure differential, extended medium resistance

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 3/6-RM	MDR-3 DAB BAAA 028A035 XAA XXX	-	1,3 - 6	1/2"	770	229674
MDR 3/11-RM	MDR-3 GAB BAAA 060A070 XAA XXX	-	4 - 10	1/2"	770	227595
MDR 3/11-RM	MDR-3 GOB BAAA 060A070 XAA XXX	-	4 - 10	1/2"+1/4"	810	227601
MDR 3/11-RM-EA	MDR-3 GAB AAAA 060A070 XAA XXX	EA	4 - 10	1/2"	800	227632
MDR 3/11-RM-EA	MDR-3 GOB AAAA 060A070 XAA XXX	EA	4 - 10	1/2"+1/4"	850	227649
MDR 3/16-RM	MDR-3 HAB BAAA 145A160 XAA XXX	-	6 - 16	1/2"	770	227618
MDR 3/16-RM	MDR-3 HOB BAAA 145A160 XAA XXX	-	6 - 16	1/2"+1/4"	810	227625
MDR 3/16-RM-EA	MDR-3 HAB AAAA 145A160 XAA XXX	EA	6 - 16	1/2"	800	227656
MDR 3/16-RM-EA	MDR-3 HOB AAAA 145A160 XAA XXX	EA	6 - 16	1/2"+1/4"	850	227663

Unloader valves and cable glands for retrofitting, see accessories!

Technical Data MDR 3 acc. to EN 60947, UL / CSA	
Rated insulation voltage U_i	690 V
Motor switching capacity (UL 508, CSA 22.2) $U_e=120$ V (1~)	2 HP
Motor switching capacity (AC3) $U_e=240$ V (1~)	5,5 kW
Motor switching capacity (UL 508, CSA 22.2) $U_e=240$ V (1~)	3 HP
Motor switching capacity (AC 3) $U_e=240$ V (3~)	5,5 kW
Motor switching capacity (UL 508, CSA 22.2) $U_e=240$ V (3~)	7,5 HP
Motor switching capacity (AC 3) $U_e=400$ V (3~)	7,5/11* kW
Motor switching capacity (UL 508, CSA 22.2) $U_e=480$ V (3~)	15 HP
Motor switching capacity (AC 3) $U_e=500$ V (3~)	7,5/11* kW
Motor switching capacity (UL 508, CSA 22.2) $U_e=600$ V (3~)	20 HP
Motor switching capacity (AC 3) $U_e=690$ V (3~)	7,5/15* kW

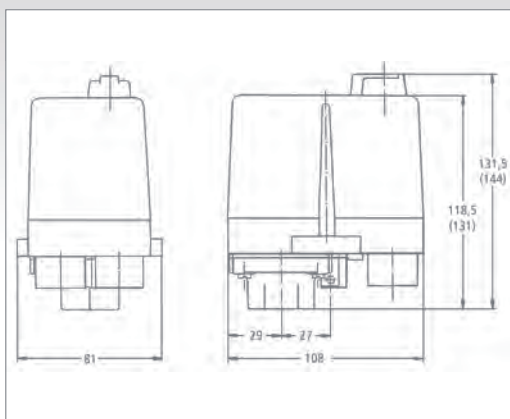
Diaphragm media resistance MDR 3	
Air, Water	resistant

Technical Data MDR 3 acc. to EN 60947, UL / CSA	
Schaltstücklebensdauer (AC 3) Schaltspiele	$> 1 \times 10^5$
Mechanische Lebensdauer Schaltspiele	$> 1 \times 10^6$
Max. Schalthäufigkeit elektrisch Schaltspiele/h	120
Max. Schalthäufigkeit mechanisch Schaltspiele/h	600
Bemessungsbetriebsstrom I_e bei 690 V AC 3	24 A
Berstdruck Pz	≤ 16 > 40 bar ≥ 25 > 60 bar
Zul. Medientemperatur Luft	-5...+ 80 °C
Zul. Medientemperatur Wasser	+ 80 °C
Schutzart nach EN 60529	IP 54
Anschlussquerschnitte 1 feindrätig 1 x / 2 x	4 / 2,5 mm ²
Anschlussquerschnitte 1 eindrätig 1 x / 2 x	6 / 4 mm ²

Diaphragm media resistance MDR 3 USA	
Acetylene, Gasoline, Butane, Diesel, Natural gas, Petroleum, Ethylene glycol, Glycerol, Fuel oil, Urine, Carbon dioxide, Carbonic acid, Air, Mineral oils, Vegetable oil, Propane, Silicon oil, Nitrogen, Synthetic oils, Water, Distilled water, Hydrogen, Sea water, Water steam	resistant

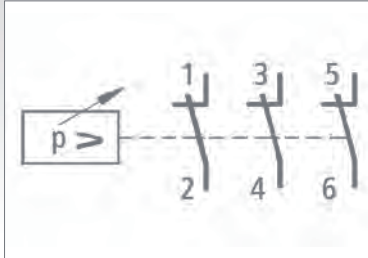
A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22.

Dimensions MDR 3

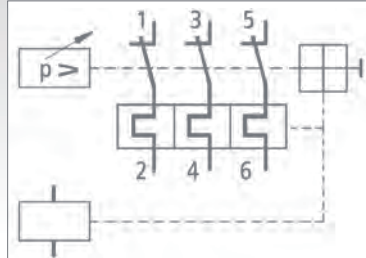


Pressure switch MDR-3

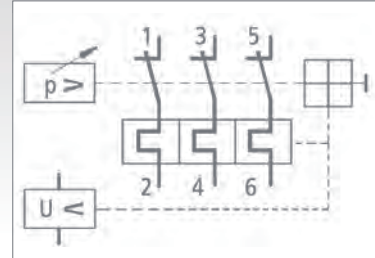
Circuit Diagrams MDR 3



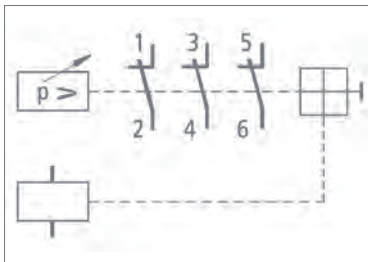
MDR 3



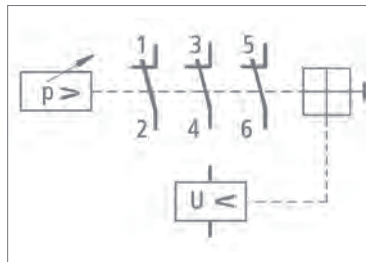
MDR 3 EA 3 R 3 RA 3



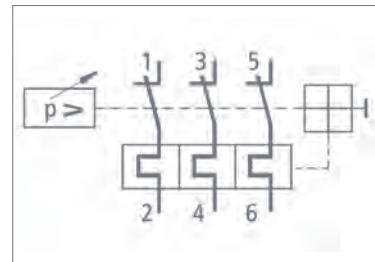
MDR 3 EA 3 R 3 RU 3



MDR 3 EA 3 RA 3



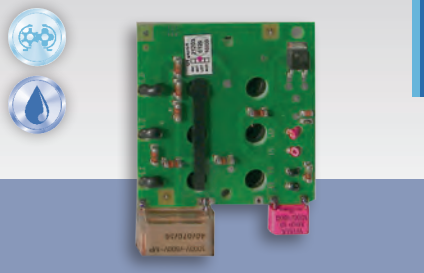
MDR 3 EA 3 RU 3



MDR 3 EA 3 R 3

Accessory DPA-Board for MDR 3

(Use only with MDR-3..E/A and RU 3/400-S0; article-nr. 201557)



Description

Installing the DPA - circuit board onto MDR 3, the pressure switch offers the following additional functions:

- Phase sequence control
- Phase failure detection
- Supervision of an external opener possible, e. g. Klixon for temperature
- supervision (clamp tension < 230 V)
- Undervoltage release

For all functions the neutral conductor is not necessary. In case of malfunction the pressure switch will be switched off. Only upon solving the malfunction, the pressure switch can be switched on again.

Field of application: place-variable compressors, building site-area etc.

Order reference	Description	Voltage	Packing (units)	Part No.
DPA-Board	Phase sequence, phase drop protection board	400 V / 50 Hz	1	258520

Accessories Hourmeter kit MDR 3



Description

The MDR 3 can be equipped or retrofitted with an operating hourmeter to monitor the pump and compressor running time. The hourmeter is available as a kit and can be attached to the cover in 4 different positions, each offset at an angle of 90°.

This ensures optimum readability. The kit consists of an operating hourmeter for either 230 V or 400 V and a perforated MDR 3 cover with or without ON/OFF lever.

Order reference	Description	Voltage	Packing (units)	Part No.
H3 - B 230	Hourmeter and Cover for MDR-3	230 V / 50 Hz	1	237297
H3 - B 400	Hourmeter and Cover for MDR-3	400 V / 50 Hz	1	237303
H3-EA - B 230	Hourmeter and Cover for MDR-3+EA	230 V / 50 Hz	1	237310
H3-EA - B 400	Hourmeter and Cover for MDR-3+EA	400 V / 50 Hz	1	237327

can be used at 60 Hz with higher engine speed



Pressure switch MDR 3

Accessories MDR 3

Order reference	Description	Weight (in g)	Part No.
Unloader valves			
EV 3	With screw connection for 6 mm plastic or copper discharge tubes	25	201045
EV 3i	With screw connection for 1/4" plastic or copper discharge tubes	25	201052
EV 3S ^{1) 2)}	With quick-connect for 6 mm plastic discharge tubes	25	201069
EV 3W ¹⁾	90° unloader valve with screw connection for 6 mm plastic or copper discharge tubes	18	201076
EV 3Wi ¹⁾	90° unloader valve with screw connection for 1/4" plastic or copper discharge tubes	18	201083
EV 3WS ^{1) 2)}	90° unloader valve with quick-connect for 6 mm plastic discharge tubes	10	201090
EV 3L	With screw connection for 6 mm plastic or copper discharge tubes	30	201229
Delayed unloader valves			
AEV 3	With screw connection for 6 mm plastic or copper discharge tubes	25	201106
AEV 3S ^{1) 2)}	With quick-connect for 6 mm plastic discharge tubes	25	201120
AEV 3W ¹⁾	90° unloader valve with screw connection for 6 mm plastic or copper discharge tubes	18	201137
AEV 3Wi ¹⁾	90° unloader valve with screw connection for 1/4" plastic or copper discharge tubes	18	201144
AEV 3WS ^{1) 2)}	90° unloader valve with quick-connect for 6 mm plastic discharge tubes	10	201151
Cable glands			
PG 9 Z	With strain relief (for additional wiring)	12	201373
WN	Grommet	6	201243
PG 11 G	Conduits for mounting of cable glands (Inner thread)	6	201250
PG 11 V	Cable gland complete	12	201267
PG 11 Z	With strain relief	12	201274
PG 11 ZK	With strain relief and cable support	12	201281
PG 13,5 G	Conduits for mounting of cable glands (Inner thread)	6	201298
PG 13,5 V	Cable gland complete	12	201304
PG 13,5 Z	With strain relief	12	201311
PG 13,5 ZK	With strain relief and cable support	12	201328
PG 16 G	Conduits for mounting of cable glands (Inner thread)	6	201335
PG 16 V	Cable gland complete	12	201342
PG 16 Z	With strain relief	12	201359
PG 16 ZK	With strain relief and cable support	18	201366
MW 3	Mounting bracket for MDR 3	65	246138
Cover			
H3 (Cover MDR 3)	Cover without rotary knob (Neutral version, without marking)	100	229490
H3-EA (Cover MDR 3+EA)	Cover with rotary knob for manual On/Off (Neutral version, without marking)	100	230007
Thermal, 3-pole overload relay			
SK 3	Arc-chamber without lock mechanism (supplied as standard with MDR 3...)	90	201380
SK 3-S	SK 3-S Arc-chamber with lock mechanism (supplied as standard with MDR 3...+EA)	110	201397
SK R3/ 1,0	0,63 – 1,00 A	145	201403
SK R3/ 1,6	1,00 – 1,60 A	145	201410
SK R3/ 2,5	1,60 – 2,50 A	145	201427
SK R3/ 4,0	2,50 – 4,00 A	145	201434
SK R3/ 6,3	4,00 – 6,30 A	145	201441
SK R3/ 10,0	6,30 – 10,00 A	145	201458
SK R3/ 16,0	10,00 – 16,00 A	145	201465
SK R3/ 20,0	16,00 – 20,00 A	145	201472
SK R3/ 24,0	20,00 – 24,00 A	145	201489
SK R3/ 30/2	22,00 – 30,00 A, 2-polig	145	201496
Undervoltage and shunt releases			
RU 3/24-50	Undervoltage release 24 V, 50 Hz	100	226857
RU 3/230-50	Undervoltage release 230 V, 50 Hz	100	201540
RU 3/400-50	Undervoltage release 400 V, 50 Hz	100	201557
RA 3/24-50	Shunt release 24 V, 50 Hz	100	201564
RA 3/110-50	Shunt release 110 V, 50 Hz	100	201571
RA 3/230-50	Shunt release 230 V, 50 Hz	100	201588
RA 3/240-60	Shunt release 240 V, 60 Hz	100	214113
RA 3/400-50	Shunt release 400 V, 50 Hz	100	225935
RA 3/480-60	Shunt release 480 V, 60 Hz	100	201595

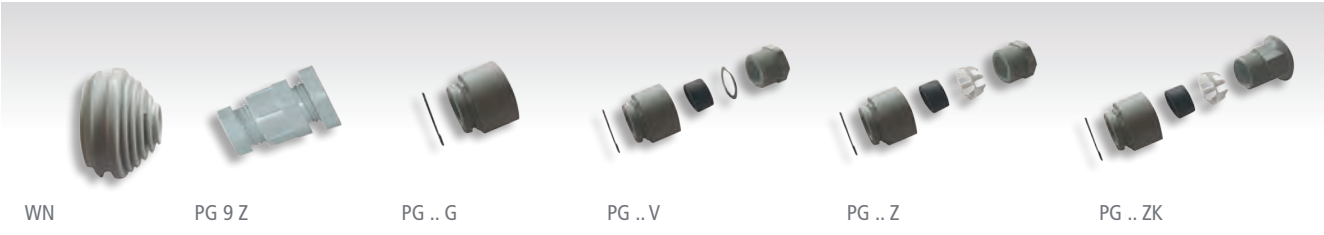
¹⁾ up to ≤ 16 bar

²⁾ only for pneumatic tubes with outside tolerances according to e. g. Festo PAN 6x1mm

Unloader valves / Delayed unloader valves



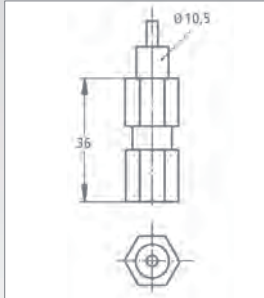
Cable glands MDR 3



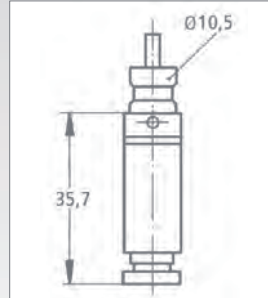
Wall-mounting bracket, 3-pole overload relay, undervoltage and shunt releases



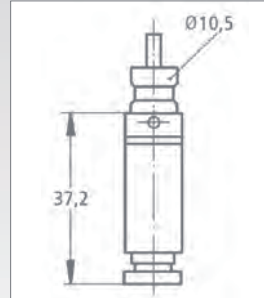
Dimensions, Accessories MDR 3



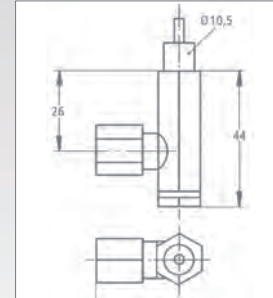
EV 3 / EV 3i



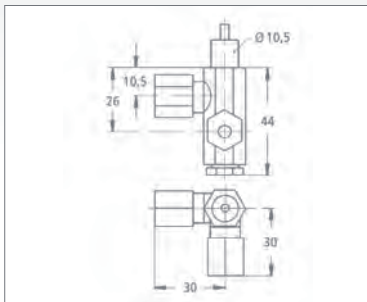
EV 3S



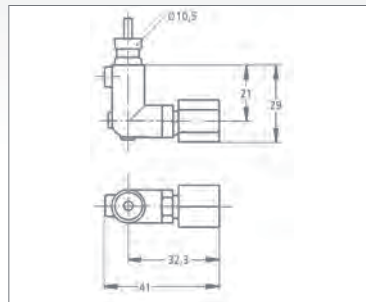
AEV 3S



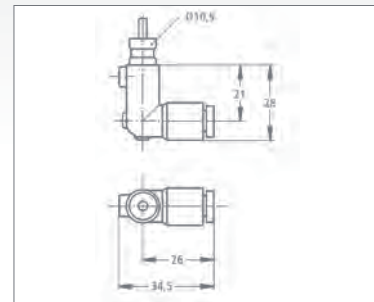
AEV 3



EV 3L

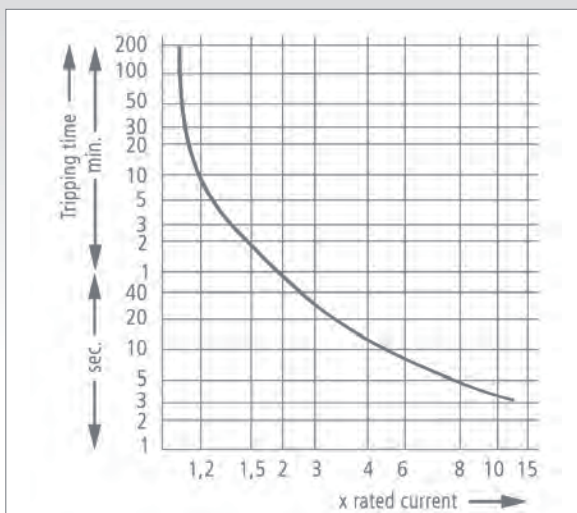


EV 3W / EV 3Wi
AEV 3W / AEV 3Wi

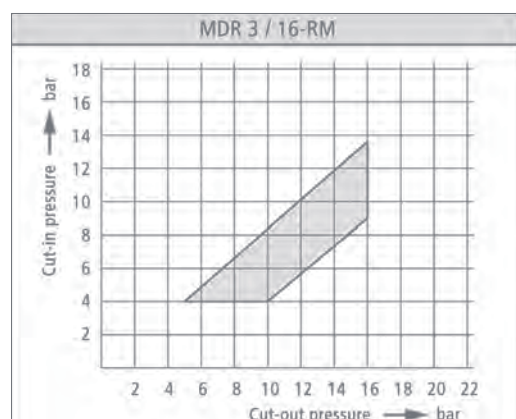
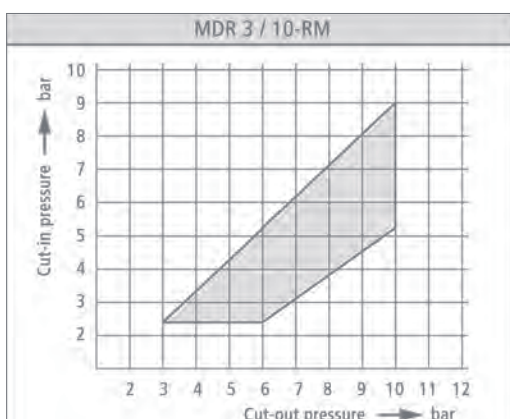
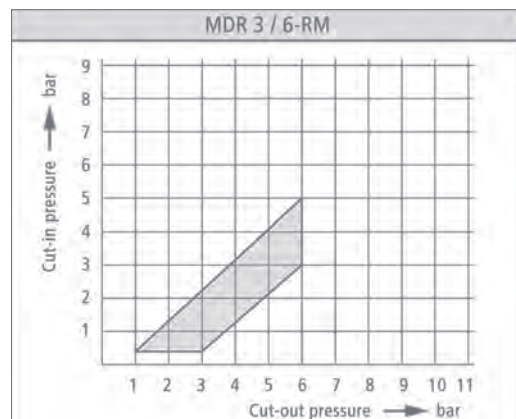
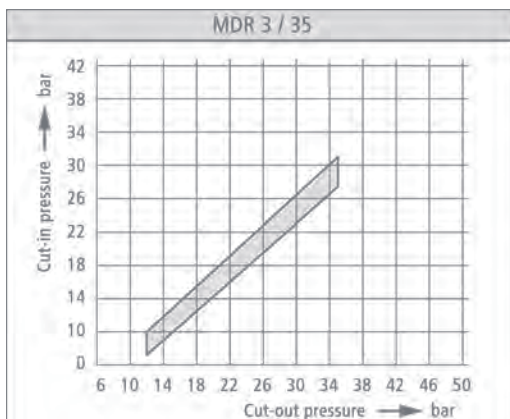
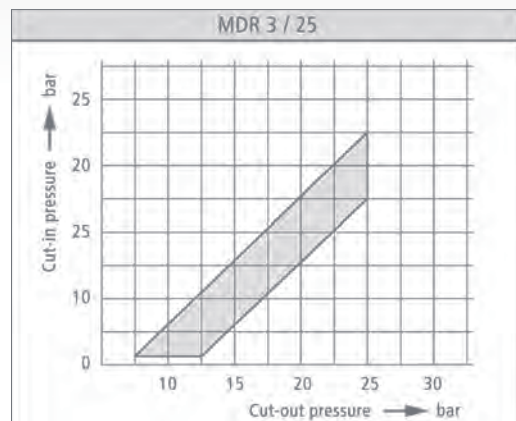
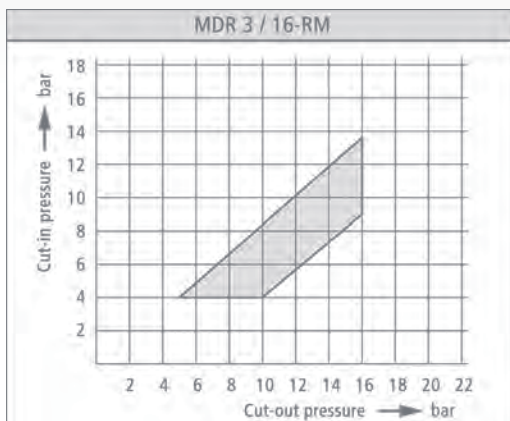
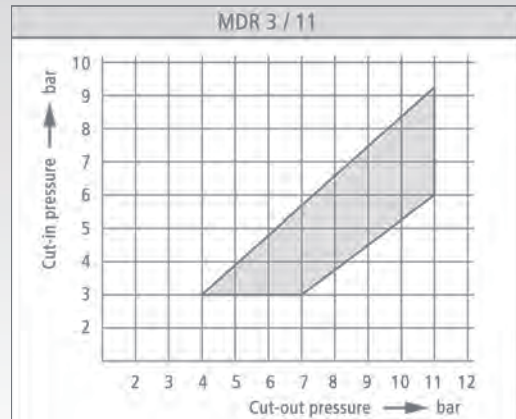
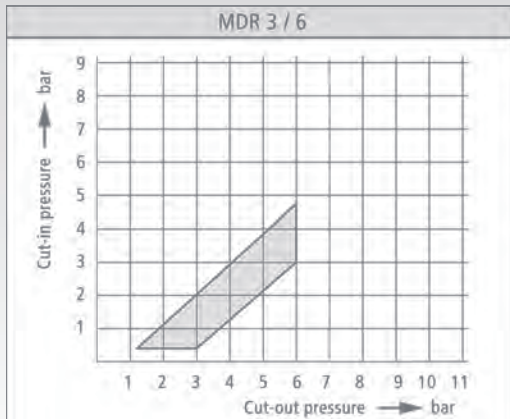


EV 3WS / AEV 3WS

Tripping curves R3 (average)



Pressure Diagrams MDR 3



Pressure switch MDR 4 S



- 3-phase
- Switching capacity 4.0 / 5.5 kW
- Max. cut-out pressure 16 bar
- 3-pole (N.C.)
- Acc. to EN 60947
- 4-way-flange (optional)

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 4S/6-EA	MDR-4 DBA AFAA 040A060 XAA XXX	EA	1,5 - 6	1/4"	420	212584
MDR 4S/6-EA	MDR-4 DAA AFAA 040A060 XAA XXX	EA	1,5 - 6	1/2"	420	212591
MDR 4S/6-EA	MDR-4 DOA AFAA 040A060 XAA XXX	EA	1,5 - 6	1/2" + 1/4"	460	212607
MDR 4S/6-EA	MDR-4 DEA AFAA 040A060 XAA XXX	EA	1,5 - 6	F4 1/4"	460	257899
MDR 4S/6-EA	MDR-4 DDA AFAA 040A060 XAA XXX	EA	1,5 - 6	F4 1/2"	460	257905
MDR 4S/6-EA	MDR-4 DFA AFAA 040A060 XAA XXX	EA	1,5 - 6	F4 3/8"	460	257912
MDR 4S/11-EA	MDR-4 GBA AFAA 090A110 XAA XXX	EA	4 - 11	1/4"	420	212614
MDR 4S/11-EA	MDR-4 GAA AFAA 090A110 XAA XXX	EA	4 - 11	1/2"	420	212621
MDR 4S/11-EA	MDR-4 GOA AFAA 095A110 XAA XXX	EA	4 - 11	1/2" + 1/4"	460	212638
MDR 4S/11-EA	MDR-4 GEA AFAA 090A110 XAA XXX	EA	4 - 11	F4 1/4"	460	257929
MDR 4S/11-EA	MDR-4 GDA AFAA 090A110 XAA XXX	EA	4 - 11	F4 1/2"	460	257936
MDR 4S/11-EA	MDR-4 GFA AFAA 090A110 XAA XXX	EA	4 - 11	F4 3/8"	460	257943
MDR 4S/16-EA	MDR-4 HBA AFAA 135A160 XAA XXX	EA	6 - 16	1/4"	420	212645
MDR 4S/16-EA	MDR-4 HAA AFAA 135A160 XAA XXX	EA	6 - 16	1/2"	420	212652
MDR 4S/16-EA	MDR-4 HOA AFAA 135A160 XAA XXX	EA	6 - 16	1/2" + 1/4"	460	212669
MDR 4S/16-EA	MDR-4 HEA AFAA 135A160 XAA XXX	EA	6 - 16	F4 1/4"	460	257950
MDR 4S/16-EA	MDR-4 HDA AFAA 135A160 XAA XXX	EA	6 - 16	F4 1/2"	460	257967
MDR 4S/16-EA	MDR-4 HFA AFAA 135A160 XAA XXX	EA	6 - 16	F4 3/8"	460	257974
MDR 4S/25-EA	MDR-4 IBA AFAA 210A250 XAA XXX	EA	8,5 - 25	1/4"	420	212676
MDR 4S/25-EA	MDR-4 IAA AFAA 210A250 XAA XXX	EA	8,5 - 25	1/2"	420	212683
MDR 4S/25-EA	MDR-4 IOA AFAA 210A250 XAA XXX	EA	8,5 - 25	1/2" + 1/4"	460	212690
MDR 4S/25-EA	MDR-4 IEA AFAA 210A250 XAA XXX	EA	8,5 - 25	F4 1/4"	460	263883
MDR 4S/25-EA	MDR-4 IDA AFAA 210A250 XAA XXX	EA	8,5 - 25	F4 1/2"	460	263890
MDR 4S/25-EA	MDR-4 IFA AFAA 210A250 XAA XXX	EA	8,5 - 25	F4 3/8"	460	263906
MDR 4S/6	MDR-4 DBA BFAA 040A060 XAA XXX	-	1,5 - 6	1/4"	420	220084
MDR 4S/6	MDR-4 DAA BFAA 040A060 XAA XXX	-	1,5 - 6	1/2"	420	220077
MDR 4S/6	MDR-4 DOA BFAA 040A060 XAA XXX	-	1,5 - 6	1/2" + 1/4"	460	220121
MDR 4S/6	MDR-4 DEA BFAA 040A060 XAA XXX	-	1,5 - 6	F4 1/4"	460	257981
MDR 4S/6	MDR-4 DDA BFAA 040A060 XAA XXX	-	1,5 - 6	F4 1/2"	460	257998
MDR 4S/6	MDR-4 DFA BFAA 040A060 XAA XXX	-	1,5 - 6	F4 3/8"	460	258001
MDR 4S/11	MDR-4 GBA BFAA 090A110 XAA XXX	-	4 - 11	1/4"	420	204251
MDR 4S/11	MDR-4 GAA BFAA 090A110 XAA XXX	-	4 - 11	1/2"	420	206194
MDR 4S/11	MDR-4 GOA BFAA 095A110 XAA XXX	-	4 - 11	1/2" + 1/4"	460	227069
MDR 4S/11	MDR-4 GEA BFAA 090A110 XAA XXX	-	4 - 11	F4 1/4"	460	258018
MDR 4S/11	MDR-4 GDA BFAA 090A110 XAA XXX	-	4 - 11	F4 1/2"	460	258025
MDR 4S/11	MDR-4 GFA BFAA 090A110 XAA XXX	-	4 - 11	F4 3/8"	460	258032
MDR 4S/16	MDR-4 HBA BFAA 135A160 XAA XXX	-	6 - 16	1/4"	420	204244
MDR 4S/16	MDR-4 HAA BFAA 135A160 XAA XXX	-	6 - 16	1/2"	420	220107
MDR 4S/16	MDR-4 HOA BFAA 135A160 XAA XXX	-	6 - 16	1/2" + 1/4"	460	227076
MDR 4S/16	MDR-4 HEA BFAA 135A160 XAA XXX	-	6 - 16	F4 1/4"	460	258049
MDR 4S/16	MDR-4 HDA BFAA 135A160 XAA XXX	-	6 - 16	F4 1/2"	460	258056
MDR 4S/16	MDR-4 HFA BFAA 135A160 XAA XXX	-	6 - 16	F4 3/8"	460	258063
MDR 4S/25	MDR-4 IBA BFAA 210A250 XAA XXX	-	8,5 - 25	1/4"	420	227083
MDR 4S/25	MDR-4 IAA BFAA 210A250 XAA XXX	-	8,5 - 25	1/2"	420	227090
MDR 4S/25	MDR-4 IOA BFAA 210A250 XAA XXX	-	8,5 - 25	1/2" + 1/4"	460	221210
MDR 4S/25	MDR-4 IEA BFAA 210A250 XAA XXX	-	8,5 - 25	F4 1/4"	460	263913
MDR 4S/25	MDR-4 IDA BFAA 210A250 XAA XXX	-	8,5 - 25	F4 1/2"	460	263920
MDR 4S/25	MDR-4 IFA BFAA 210A250 XAA XXX	-	8,5 - 25	F4 3/8"	460	263937

Unloader valves and cable glands for retrofitting, see accessories!

Pressure switch MDR 4 SD



- 3-phase
- Switching capacity 4.0 / 5.5 kW
- Max. cut-out pressure 11 bar
- With scale and transparent cover
- 3-pole (N.C.)
- Acc. to EN 60947

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 4 SD/6	MDR-4 DAA BFDA 040A060 XAA XXX	-	1,5 - 6	1/2"	420	212737
MDR 4 SD/6	MDR-4 DBA BFDA 040A060 XAA XXX	-	1,5 - 6	1/4"	420	212744
MDR 4 SD/11	MDR-4 GAA BFDA 090A110 XAA XXX	-	4 - 11	1/2"	420	212751
MDR 4 SD/11	MDR-4 GBA BFDA 090A110 XAA XXX	-	4 - 11	1/4"	420	212768

Unloader valves and cable glands for retrofitting, see accessories!

Pressure switch MDR 4 SU



- 3-phase
- Switching capacity 2.5 / 4.0 kW
- Max. cut-out pressure 16 bar
- With reversed function
- 3-pole (N.O.)
- Acc. to EN 60947

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 4 SU/6	MDR-4 DAA BFCA 040A060 XAA XXX	-	1,5 - 6	1/2"	420	212706
MDR 4 SU/11	MDR-4 GAA BFCA 090A110 XAA XXX	-	4 - 11	1/2"	420	212713
MDR 4 SU/16	MDR-4 HAA BFCA 090A110 XAA XXX	-	6 - 16	1/2"	420	212720

Unloader valves and cable glands for retrofitting, see accessories!

Technical Data MDR 4 S / MDR 4 SD acc. to EN 60947	
Rated insulation voltage U_i	500 V
Motor switching capacity (AC 3) $U_e=240$ V (1~)	2,5 kW
Motor switching capacity (AC 3) $U_e=230$ V (3~)	4,0 kW
Motor switching capacity (AC 3) $U_e=400$ V (3~)	5,5 kW
Motor switching capacity (AC 3) $U_e=500$ V (3~)	5,5 kW
Electrical life (AC 3) $U_e=240$ V (3~)	$> 1 \times 10^5$
Mechanical life Cycles	$> 5 \times 10^5$
Max. electrical cycles Cycles/h	120

Technical Data MDR 4 SU acc. to EN 60947	
Rated insulation voltage U_i	500 V
Motor switching capacity (AC 3) $U_e=240$ V (1~)	1,5 kW
Motor switching capacity (AC 3) $U_e=230$ V (3~)	2,5 kW
Motor switching capacity (AC 3) $U_e=400$ V (3~)	4,0 kW
Electrical life (AC 3) Cycles	$> 1 \times 10^5$
Mechanical life Cycles	$> 5 \times 10^5$
Max. electrical cycles Cycles/h	120
Max. mechanical cycles Cycles/h	600
Rated operational current I_e at 400 V AC	12 A
Bursting strength P_z	> 35 bar

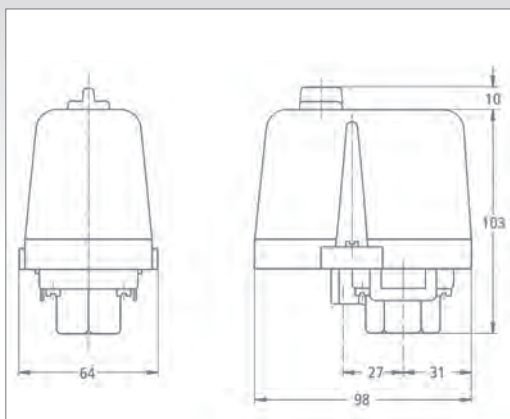
Technical Data MDR 4 S / MDR 4 SD acc. to EN 60947	
Max. mechanical cycles Cycles/h	600
Rated operational current I_e at 400 V AC/500 VAC 3	16 A / 9 A
Bursting strength P_z	> 35 bar
Permissible medium temperature Air	- 5...+ 80 °C
Permissible medium temperature Water	+ 80 °C
Degree of Protection acc. to EN 60529	IP 44
Conductor cross-section 1 ... fine stranded cable 1 x / 2 x	2,5 / 2,5mm ²
Conductor cross-section 1 ... rigid cable 1 x / 2 x	2,5 / 2,5mm ²

Technical Data MDR 4 SU acc. to EN 60947	
Permissible medium temperature Air	- 5...+ 80 °C
Permissible medium temperature Water	+ 80 °C
Degree of Protection acc. to EN 60529	IP 44
Conductor cross-section 1 ... fine stranded cable 1 x / 2 x	2,5 / 2,5mm ²
Conductor cross-section 1 ... rigid cable 1 x / 2 x	2,5 / 2,5mm ²

Diaphragm media resistance MDR 4	
Air, Water	resistant

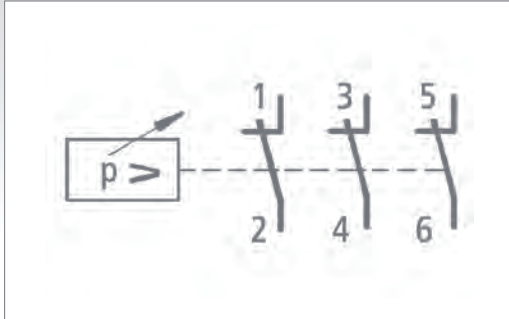
A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22..

Dimensions MDR 4

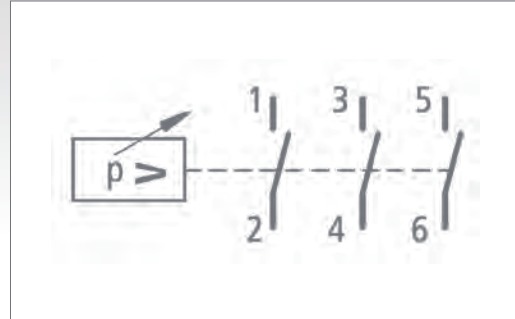


Pressure switch MDR 4

Circuit Diagrams MDR 4



MDR 4 S MDR 4 SD



MDR 4 SU

Accessories MDR 4

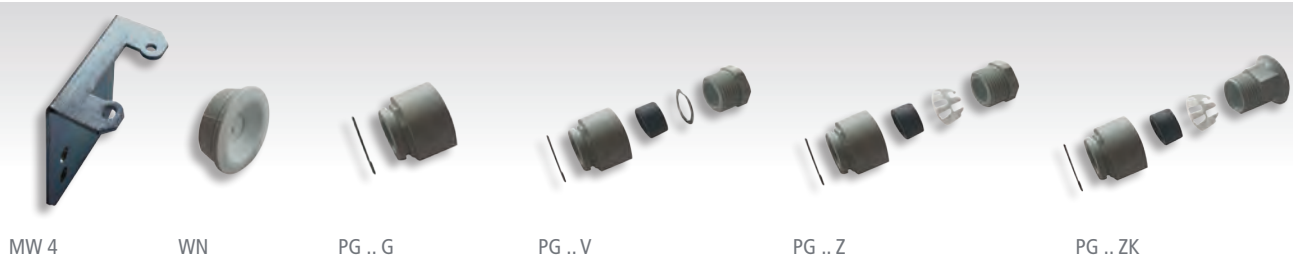
Order reference	Description	Weight (in g)	Part No
Unloader valves			
EV 4	With screw connection for 6 mm plastic or copper discharge tubes	25	201601
EV 4S ¹⁾²⁾	With quick-connect for 6 mm plastic discharge tubes	25	201625
EV 4W ¹⁾	90° with screw connection for 6 mm plastic or discharge copper tubes	15	255055
EV 4Wi ¹⁾	90° with screw connection for 1/4" mm plastic or discharge copper tubes	15	255062
EV 4WS ¹⁾²⁾	90° with quick-connect for 6 mm plastic discharge tubes	15	201656
Delayed unloader valves			
AEV 4	With screw connection for 6 mm plastic or copper discharge tubes	25	201663
AEV 4S ¹⁾²⁾	With quick-connect for 6 mm plastic discharge tubes	25	201687
AEV 4W ¹⁾	90° with screw connection for 6 mm plastic or copper discharge tubes	15	201694
AEV 4Wi ¹⁾	90° with screw connection for 1/4" mm plastic or copper discharge tubes	15	255079
AEV 4WS ¹⁾²⁾	90° with quick-connect for 6 mm plastic discharge tubes	15	255086
Cable glands			
WN	Grommet	6	200888
PG 11 G	Conduits for mounting of cable glands (Inner thread)	6	200895
PG 11 V	Cable gland complete	12	200901
PG 11 Z	With strain relief	12	200925
PG 11 ZK	With strain relief and cable support	12	200918
PG 13,5 G	Conduits for mounting of cable glands (Inner thread)	6	200963
PG 13,5 V	Cable gland complete	12	200932
PG 13,5 Z	With strain relief	12	200956
PG 13,5 ZK	With strain relief and cable support	12	200949
MW 4	Mounting bracket for MDR 4 and MDR 43	65	230021
Cover			
H4 (Cover MDR 4S)	Cover without rotary knob (Neutral version, without marking)	70	229469
H4S+EA (Cover MDR 4S+EA)	Cover with rotary knob for manual On/Off (Neutral version, without marking)	70	229476
H4SD (Cover MDR 4SD)	Cover without rotary knob for MDR 4 SD (transparent)	70	229483

1) up to ≤16 bar, 2) only for pneumatic tubes with outside tolerances according to e. g. Festo PAN 6x1mm

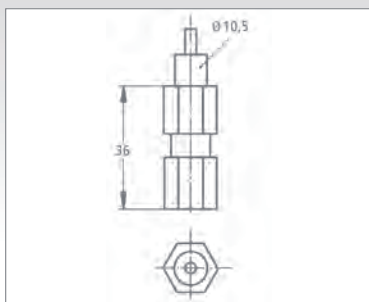
Unloader valves / Delayed unloader valves



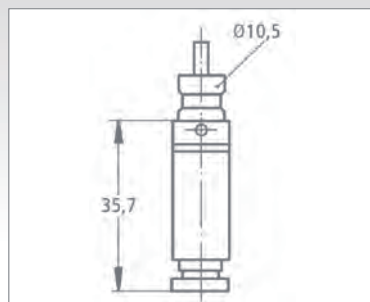
Wall-mounting bracket / Cable glands MDR 4



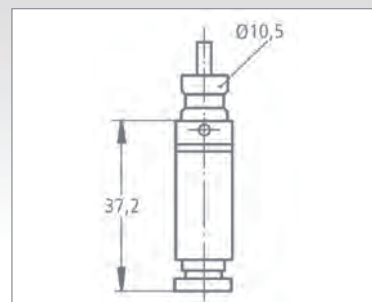
Dimensions, Accessories MDR 4



EV 4

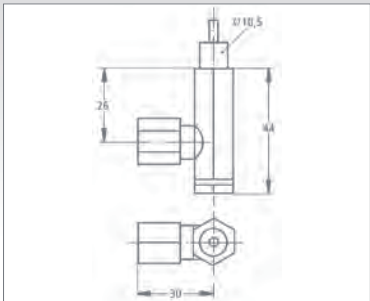


EV 4S

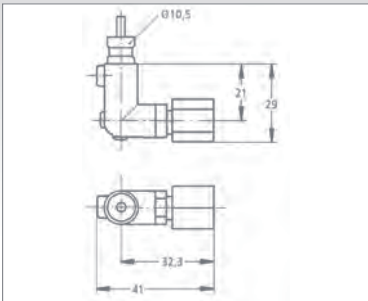


AEV 4S

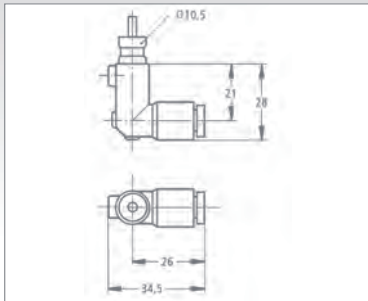
Dimensions, Accessories MDR 4



EV 4

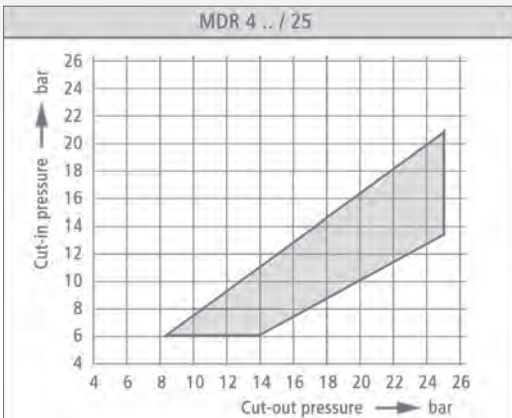
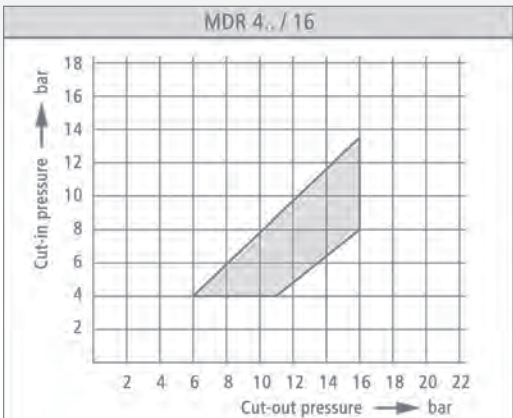
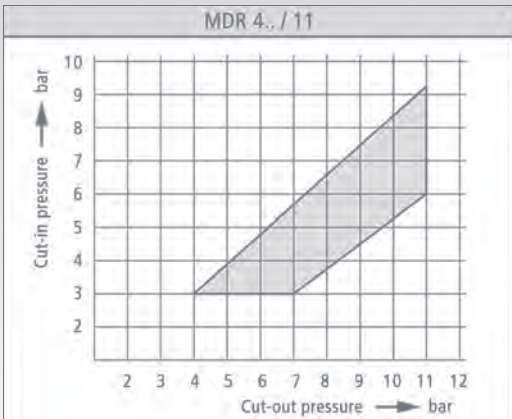
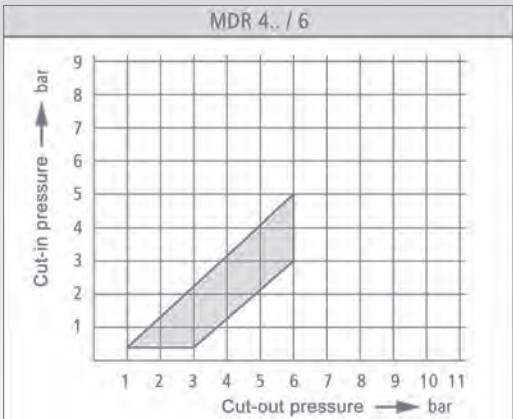


EV 4S



AEV 4S

Pressure Diagrams MDR 4



High performance
Pressure switches

Pressure switch MDR 5



- 3-phase
- Switching capacity 5.5 kW
- Available with overload relay
- Max. cut-out pressure 45 bar
- 3-pole (N.C.)
- Acc. to EN 60947

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 5/5	MDR-5 CAA BAAA 015A030 XXX XXX	-	1,5 - 5	1/2"	820	212850
MDR 5/5-K	MDR-5 CAA AAAA 015A030 XXX XXX	K*	1,5 - 5	1/2"	860	212867
MDR 5/5	MDR-5 COA BAAA 015A030 XXX XXX	-	1,5 - 5	1/2" + 1/4"	860	212874
MDR 5/5-K	MDR-5 COA AAAA 015A030 XXX XXX	K*	1,5 - 5	1/2" + 1/4"	900	212881
MDR 5/8	MDR-5 EAA BAAA 070A080 XXX XXX	-	2 - 8	1/2"	820	212898
MDR 5/8-K	MDR-5 EAA AAAA 070A080 XXX XXX	K*	2 - 8	1/2"	860	212904
MDR 5/8	MDR-5 EOA BAAA 070A080 XXX XXX	-	2 - 8	1/2" + 1/4"	860	212911
MDR 5/8-K	MDR-5 EOA AAAA 070A080 XXX XXX	K*	2 - 8	1/2" + 1/4"	900	212928
MDR 5/11	MDR 5 GAA BAAA 090A110 XXX XXX	-	2 - 11	1/2"	820	212935
MDR 5/11-K	MDR-5 GAA AAAA 090A110 XXX XXX	K*	2 - 11	1/2"	860	212942
MDR 5/11	MDR-5 GOA BAAA 090A110 XXX XXX	-	2 - 11	1/2" + 1/4"	860	212959
MDR 5/11-K	MDR-5 GOA AAAA 090A110 XXX XXX	K*	2 - 11	1/2" + 1/4"	900	212966
MDR 5/16	MDR-5 HAA BAAA 130A160 XXX XXX	-	2,5 - 16	1/2"	820	212973
MDR 5/16-K	MDR-5 HAA AAAA 130A160 XXX XXX	K*	2,5 - 16	1/2"	860	212980
MDR 5/16	MDR 5 HOA BAAA 130A160 XXX XXX	-	2,5 - 16	1/2" + 1/4"	860	212997
MDR 5/16-K	MDR-5 HOA AAAA 130A160 XXX XXX	K*	2,5 - 16	1/2" + 1/4"	900	213000
MDR 5/45	MDR-5 KAA BAAA 300 A400 XXX XXX	-	13 - 45	1/2"	820	256182
MDR 5/45-K	MDR-5 KAA AAAA 300 A400 XXX XXX	K*	13 - 45	1/2"	860	258513

*For these switches, a thermal, 3-pole overload relay has to be ordered separately, the ON/OFF mechanism will only work with an additional relay
Unloader valves and cable glands for retrofitting, see accessories!

Special execution IP 65



- Applications: e.g. pump shafts
- 3-phase
- Switching capacity 5.5 kW
- Max. cut-out pressure 16 bar
- Incl. cable glands PG 16/13,5 ZK
- 3-pole (N.C.)
- Acc. to EN 60947
- Degree of protection IP 65

Order reference	Type code	ON / OFF Rotary knob	Pressure range P _{OFF} in bar	Flange	Weight (in g)	Part No.
MDR 5/5	MDR-5 CAA BAAA 015A030 XNN XXZ	-	1,5 - 5	1/2"	783	258469
MDR 5/8	MDR-5 EAA BAAA 070A080 XNN XXZ	-	2 - 8	1/2"	783	258476
MDR 5/11	MDR 5 GAA BAAA 090A110 XNN XXZ	-	2 - 11	1/2"	783	258483
MDR 5/16	MDR-5 HAA BAAA 130A160 XNN XXZ	-	2,5 - 16	1/2"	783	258490

Pressure switch MDR 5

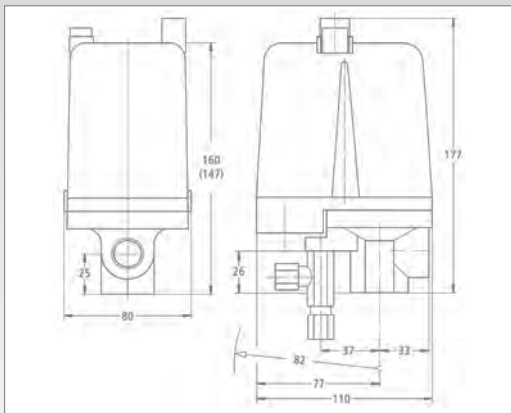
Technical Data MDR 5 acc. to EN 60947	
Rated insulation voltage U_i	500 V
Motor switching capacity (AC 3) $U_e=240$ V (1~)	2,5 kW
Motor switching capacity (AC 3) $U_e=230$ V (3~)	4,0 kW
Motor switching capacity (AC 3) $U_e=400$ V (3~)	5,5 kW
Motor switching capacity (AC 3) $U_e=500$ V (3~)	4,0 kW
Electrical life (AC 3) Cycles	$> 1 \times 10^5$
Mechanical life Cycles	$> 5 \times 10^5$
Max. electrical cycles Cycles/h	120
Max. mechanical cycles Cycles/h	600
Rated operational current I_e at 400 V AC 3 / 500 V AC 3	16 A / 12 A

Technical Data MDR 5 acc. to EN 60947		
Bursting strength P_z	up to 16 bar up to 45 bar	> 40 bar > 60 bar
Permissible medium temperature Air		- 5...+ 80 °C
Permissible medium temperature Water		+ 80 °C
Degree of Protection acc. to EN 60529		IP 54 / IP 65
Conductor cross-section 1 ... fine stranded cable 1 x / 2 x		2,5 / 2,5 mm ²
Conductor cross-section 1 ... rigid cable 1 x / 2 x		4 / 4 mm ²

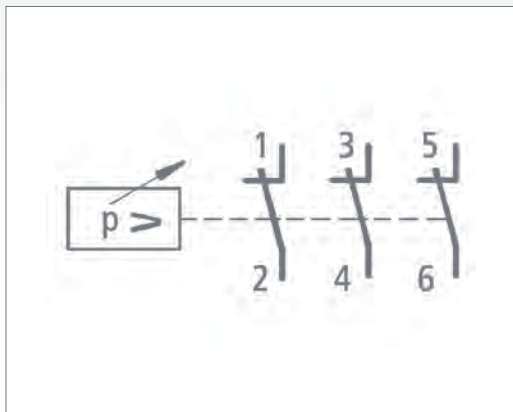
Diaphragm media resistance MDR 5	
Acetylene, Gasoline, Butane, Diesel, Natural gas, Petroleum, Ethylene glycol, Glycerol, Fuel oil, Urine, Carbon dioxide, Carbonic acid, Air, Mineral oils, Vegetable oil, Propane, Silicon oil, Nitrogen, Synthetic oils, Water, Distilled water, Hydrogen, Sea water, Water steam	resistant

A detailed overview of diaphragm media resistance for all pressure switches can be found in the table on page 22.

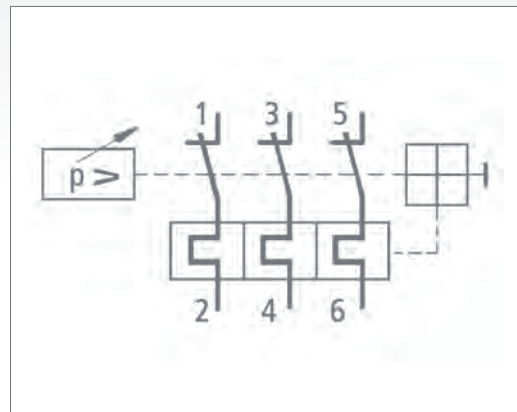
Dimensions MDR 5



Pressure switch MDR-5



MDR 5



MDR 5K - R5

Accessories MDR 5

Order reference	Description	Weight (in g)	Part No.
Unloader valves			
EV 5	With screw connection for 6 mm plastic or copper discharge tubes, screw connection for vent port	30	201878
EV 5i	With screw connection for 1/4" plastic or copper discharge tubes	30	201885
EV 5E	With screw connection for 6 mm plastic or copper discharge tubes	25	201892
EV 5Ei	With screw connection for 1/4" plastic or copper discharge tubes	25	201908
Delayed unloader valves			
AEV 5	With screw connection for 6 mm plastic or copper discharge tubes	25	201939
AEV 5i	With screw connection for 1/4" plastic or copper discharge tubes	25	201946
Cable glands			
WN M20	Grommet	6	269496
VS-M20	Screw plug M20		269502
M20 Z	With strain relief, clamping range 6-12 mm	12	269533
M20 ZK	With strain relief and cable support, clamping range 6-12 mm	12	269540
M20 L	With strain relief, clamping range 10-14 mm	12	269519
M20 LK	With strain relief and cable support, clamping range 10-14 mm	12	269526
MW 5	Mounting bracket	120	230045
Cover			
H5 (Cover MDR 5)	Cover without push-buttons	130	230052
H5-K (Cover MDR 5+K)	Cover with On/Off push-buttons (Only functions together with the thermal R5 overload relay)	150	217527
Thermal, 3-pole overload relay			
R 5/1,5	0,86 - 1,50 A	150	202028
R 5/2,45	1,50 - 2,45 A	150	202035
R 5/4,2	2,40 - 4,20 A	150	202042
R 5/7,0	4,00 - 7,00 A	150	202059
R 5/10,3	6,10 - 10,3 A	150	202066
R 5/14,0	9,00 - 14,0 A	150	202073
R 5/18,0	11,0 - 18,0 A	150	202080

Unloader valves / Delayed unloader valves



EV 5, EV 5i



EV 5E / EV 5Ei



AEV 5 / AEV 5i

Cable glands MDR 5



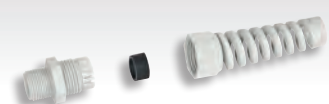
WN-M 20



VS - M 20



M 20 Z / M 20 L



M 20 ZK / M 20 LK

Accessories, Miscellaneous MDR 5



MW 5



H5



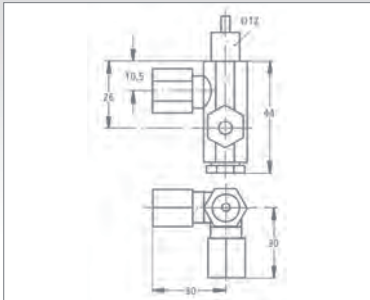
H5-K



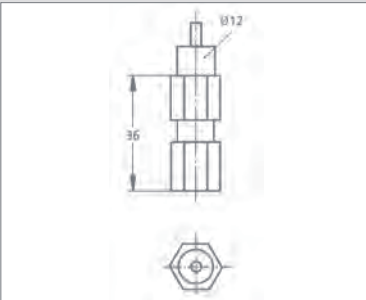
R 5/..

High performance
Pressure switches

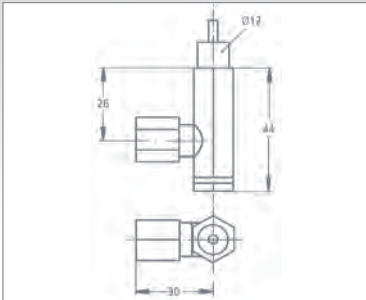
Dimensions, Accessories



EV 4

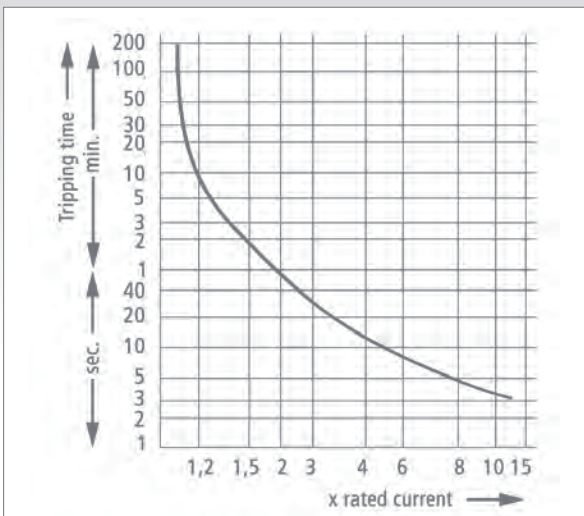


EV 4S



AEV 4S

Tripping curves R5 (average)



Pressure Diagrams MDR 5

