

Sensor switch series

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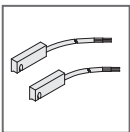
Index	Page
-----	P.6-2.1
-----	P.6-2.3
-----	P.6-2.5
-----	P.6-2.7
-----	P.6-2.9
-----	P.6-2.11
-----	P.6-2.13
-----	P.6-1.15
-----	P.6-2.17
-----	P.6-2.18
-----	P.6-2.20
-----	P.6-2.20
-----	P.6-2.20
-----	P.6-2.21
-----	P.6-2.22

Model	Cylinder type
CS - 95 CS - 95N(P)	PRU (Ø16-Ø40) / PRF (Ø16-Ø40) / PRUT (Ø16-Ø40)
CS - 100(S) CS - 100N(P)	FDA (Ø20-Ø40) / DBF (Ø20-Ø40) / DBS (Ø20-Ø40) / DBT (Ø25-Ø40) / SDA (Ø12-Ø40) / DMB (Ø32-Ø100) / DU (Ø40-Ø200) / DCK2 (Ø40-Ø80) / RTU (Ø32-Ø40)
CS - 120 CS - 120N(P)	SBA · SBB · SBD (Ø10 · Ø16) / SBR (Ø6 · Ø10 · Ø16) / SDA (Ø12)
CS - 130 CS - 130N(P)	SBA · SBB · SBD (Ø10 · Ø16) / SBR (Ø6 · Ø10 · Ø16) / SDA (Ø16-Ø40) / DBS2 · DBF2 (Ø20-Ø40)
CS - 30E(F,S) CS - 30EN(EP)	JD · JTD (Ø12-Ø100) / TD · STU (Ø16-Ø32) / TB · TSB (Ø32-Ø63) / STB · STC · STD · STF (Ø32-Ø50) / RTP (5-30) / SCR(L) (Ø20-Ø63) / STM (Ø16-Ø32) / TXB (Ø16-Ø63) / MRU (Ø10-Ø40)
CS - 5G CS - 5GN(P)	HDS (Ø10-Ø32) / HDM (Ø12-Ø32) / HDP (Ø10-Ø32) / HDZ (Ø16-Ø40)
CS - 8G CS - 8B CS - 8GN(P)	MRB (Ø10-Ø40) / MRX (Ø10-Ø25) / MRU (Ø10-Ø40) / MRH (Ø15-Ø32) / MDX (Ø6-Ø25) / RTM (10 - 100) / HDZ (Ø16-Ø40) / HDF (Ø12-Ø20) / HDL (Ø20-Ø32) / HDT (Ø10-Ø40) / HDR (Ø25-Ø63)
CS - 9D CS - 9B CS - 9H CS - 9DN(P)	JD · JTD · JTDF · JCB (Ø20-Ø63) / JE (Ø12-Ø100) / STB(C · D · F) (Ø32-Ø50) / TCR · TCF (Ø40-Ø80) / MRB (Ø10-Ø40) / MRX (Ø10-Ø25) / MRU (Ø10-Ø40) / MRH (Ø15-Ø32) / MQX (Ø6-Ø20) / MSR(L) (Ø10-Ø16) / FMR(L) (Ø10-Ø32) / TD (Ø6-Ø40) / STM(U) (Ø10-Ø32) / TB(U) · TSB(U) · TXB(U) (Ø10-Ø63) / RTB (3 - 500) / RTBM (10-100) / RTZA(B) (10-50) / SCR(L) (Ø12-Ø63) / HER (Ø20-Ø40) / HBR (Ø20-Ø80) / HFR (Ø20-Ø63) / HDZ (Ø16-Ø40) / HDF (Ø12-Ø20) / HDL (Ø20-Ø32) / HDT (Ø10-Ø40) / HDR (Ø25-Ø63) / HDW (Ø20-Ø100)
CS - 6T(H)	TDX (Ø10-Ø20) / TDXU (Ø16-Ø25) / STX (Ø10-Ø25) / HCQ (Ø32-Ø80)
CS - 15T(B) CS - 15TN(P)	HDS (Ø10-Ø32) / HDP (Ø10-Ø32) / HDM (Ø12-Ø32) / HDZ (Ø10)
CS - 32B	DN (Ø32-Ø40) / GH(B)(U) (Ø32-Ø40) / RTH (Ø32-Ø40)
CS - 50B	DN (Ø50-Ø63) / GH(B)(U) (Ø50-Ø63) / RTH (Ø50-Ø63)
CS - 80B	DN (Ø80-Ø100) / RTH (Ø80-Ø100)
CS - 180	DCK2 (Ø25-Ø80) / DCQ (Ø50)
CS - □ - PG	Sensor connector

MEMO

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A large grid of graph paper, consisting of 20 columns and 30 rows of small squares, intended for writing or drawing.



CS - 95 series - Sensor switch

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► Suitable for cylinder



Model	Cylinder	Bore size
CS-95	PRU	Ø16~Ø40
	PRF	Ø16~Ø40
	PRUT	Ø16~Ø40

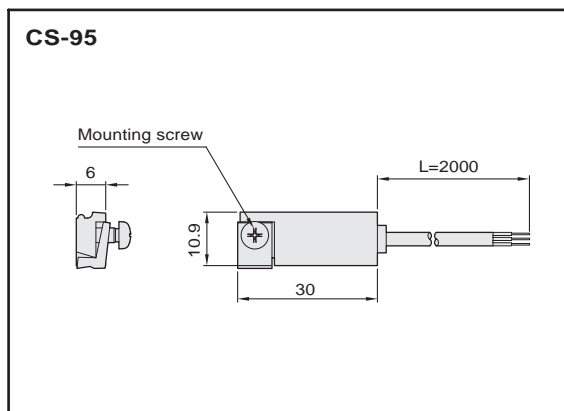
► Reed sensor switch

○ Specification

Item	Model	CS-95
Wiring system		Two lead wire type
Switching voltage	V	DC(AC): 10~240V DC(AC): 10~150V
Switching current	mA	200mA MAX.
Contact capacity		10W MAX.
Delay time		< 2ms
Contact		Normal open Normal close
Protection grade		IP-67
Color of indicator light		Yellow
Cable		Ø2 Wire cable x 2M
Voltage drop		3V MAX.
Sensitivity		Normal
Contact protective circuit		Non
Operating temp	°C	-10°~70°
Weight	g	1.2

○ Dimension

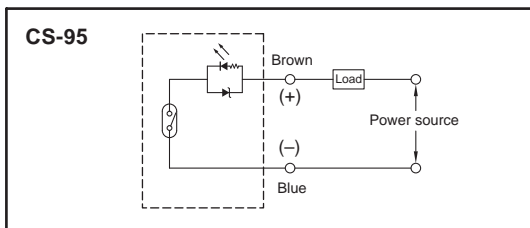
Unit : mm



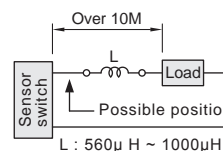
○ Sensor switch circuit and Connection diagram

○ Note

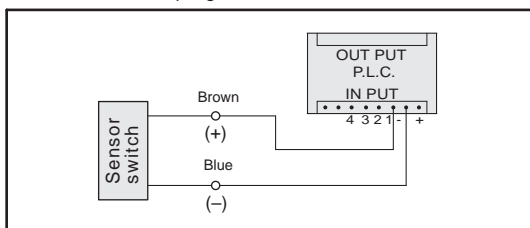
● Basic connection : Connect to relay or other resistor



- When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
- Applied voltage and current shall not exceed the specified value.
- When inductive load is connected it is advisable to install protection circuit.



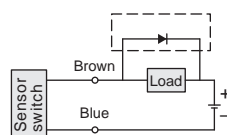
● Connect to the programmable controller



○ Protect electric circuit

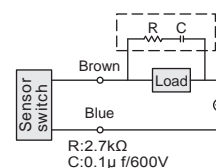
DC load :

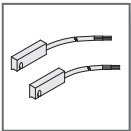
Connection in parallel one diode at counter clock-wire direction of two sides of load



AC load :

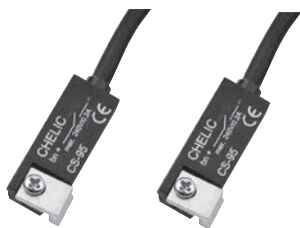
Connection in parallel one R. C electric circuit at two sides of load.





CS - 95N(P) series - Sensor switch

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◉ Suitable for cylinder

Model	Cylinder	Bore size
CS-95N(P)	PRU	Ø16~Ø40
	PRF	Ø16~Ø40
	PRUT	Ø16~Ø40

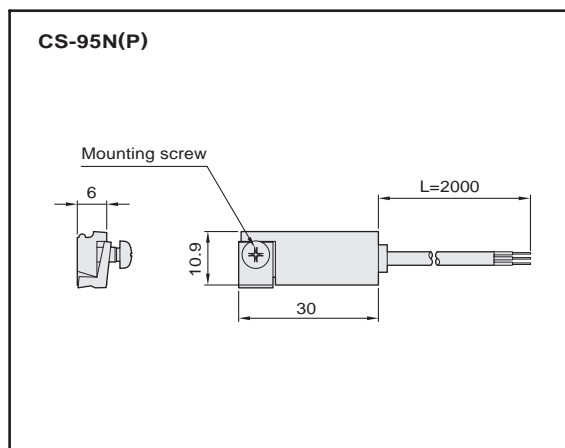
◉ Solid state sensor sinking switch

◉ Specification

Item	Model	CS-95N	CS-95P
Wiring system		Three wires	
Switching voltage	V	DC : 5 ~ 30V	
Switching current	mA	200mA MAX.	
Contact capacity		< 1ms (1000Hz)	
Contact		Normal open	
Contact		NPN. Current sinking	PNP. Current sourcing
Voltage drop		2V MAX.	2.5V MAX.
Voltage consumption		0.01 mA MAX.	
Color of indicator light		Red	
Operating temp	°C	-10° ~ 70°	
Protection grade		IP - 67	
Cable		Ø 4 , 3 Single wire x 2M	
Sensitive level		Normal	
Weight	g	22 ± 2	
Contact protective circuit		Yes	

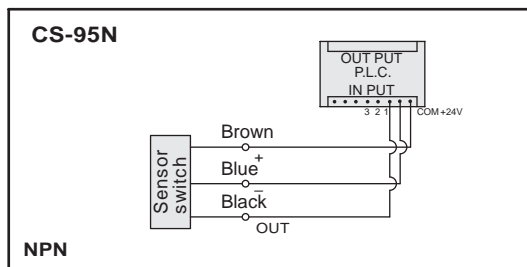
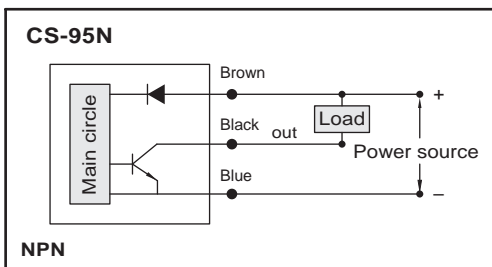
◉ Dimension

Unit : mm

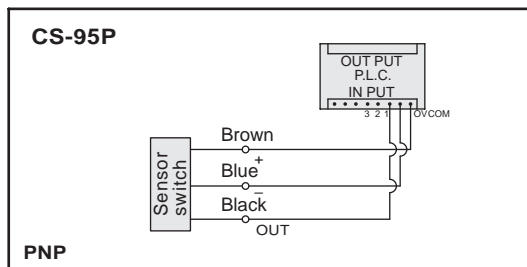
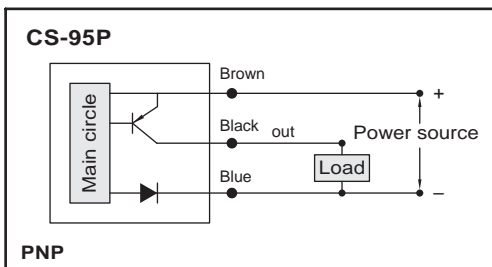


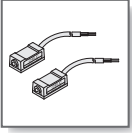
◉ Sensor switch circuit and Connection diagram

● Wire connection diagram of programmable controller (NPN)



● Wire connection diagram of programmable controller (PNP)





CS - 100(S) series - Sensor switch

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Suitable for cylinder



Reed sensor switch

Model	Cylinder	Bore size
CS-100(S)	FDA	Ø20~Ø40
	DBF	Ø20~Ø40
	DBS	Ø20~Ø40
	DBT	Ø25~Ø40
	DMB	Ø32~Ø100
	DU	Ø40~Ø200
	DCK2	Ø40~Ø80
RTU	Ø32~Ø40	

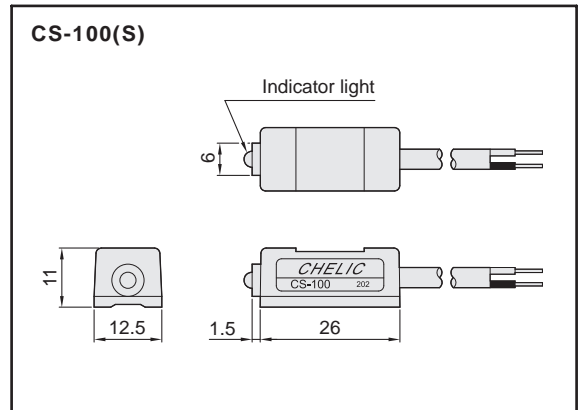
Specification

Item	Model	CS-100	CS-100(S)
Wiring system		Two lead wire type	
Switching voltage	V	DC : 5 ~ 240V AC : 5 ~ 240V	
Switching current	mA	100mA MAX.	
Contact capacity		10W MAX.	
Delay time		< 2ms (500 Hz)	
Contact		Normal open	
Protection grade		IP-67	
Color of indicator light		Green	
Cable		Ø4 Wire cable x 2M	
Voltage drop		3.5V MAX.	
Sensitivity	Note	Normal	High
Contact protective circuit		Non	
Operating temp	°C	-10° ~ 70°	
Weight	g	43 ± 2	

Note : For high sensitivity, add "-S" to the port number.

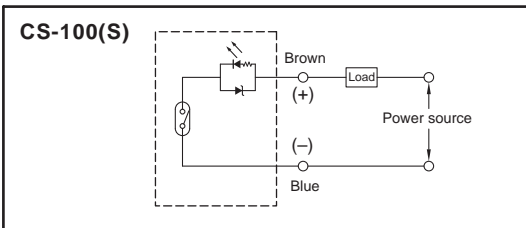
Dimension

Unit : mm

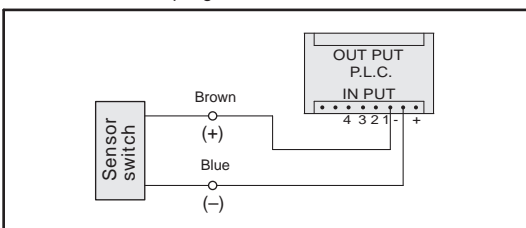


Sensor switch circuit and Connection diagram Note

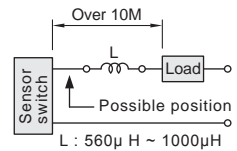
Basic connection : Connect to relay or other resistor



Connect to the programmable controller



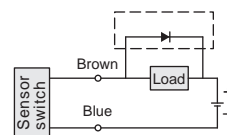
- When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
- Applied voltage and current shall not exceed the specified value.
- When inductive load is connected it is advisable to install protection circuit.



Protect electric circuit

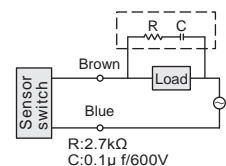
DC load :

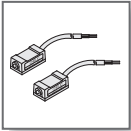
Connection in parallel one diode at counter clock-wire direction of two sides of load



AC load :

Connection in parallel one R. C electric circuit at two sides of load.





CS - 100N(P) series - Sensor switch

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► Solid state sensor switch

◉ Suitable for cylinder

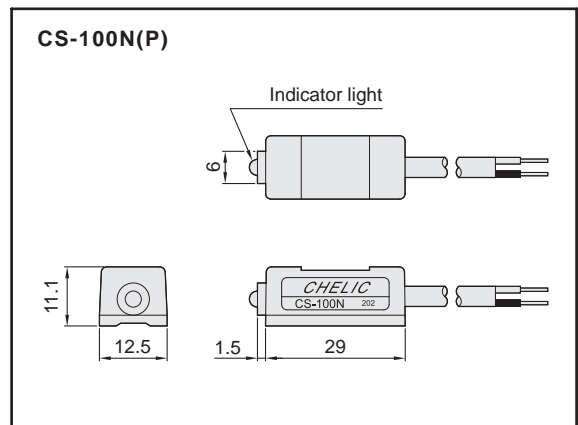
Model	Cylinder	Bore size
CS-100N(P)	FDA	Ø20~Ø40
	DBF	Ø20~Ø40
	DBS	Ø20~Ø40
	DBT	Ø25~Ø40
	DMB	Ø32~Ø100
	DU	Ø40~Ø200
	DCK2	Ø40~Ø80
	RTU	Ø32~Ø40

◉ Specification

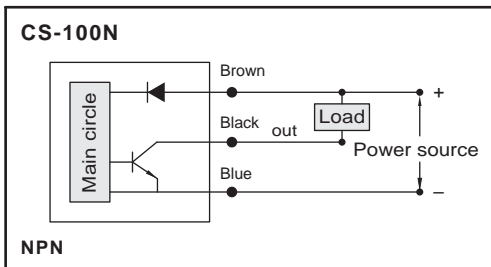
Item	Model	CS-100N	CS-100P
Wiring system		Three wires	
Switching voltage	V	DC : 5 ~ 30V	
Switching current	mA	200mA MAX.	
Contact capacity		< 1ms (1000Hz)	
Contact		Normal open	
Contact		NPN. Current sinking	PNP. Current sourcing
Voltage drop		1.5 V MAX.	
Voltage consumption		OFF : 7 mA (24V) ON : 15 mA (24V) MAX.	
Color of indicator light		Red	Green
Operating temp	°C	-10° ~ 70°	
Protection grade		IP - 67	
Cable		Ø 4 , 3 Single wire x 2M	
Weight	g	50 ± 2	
Contact protective circuit		Yes	

◉ Dimension

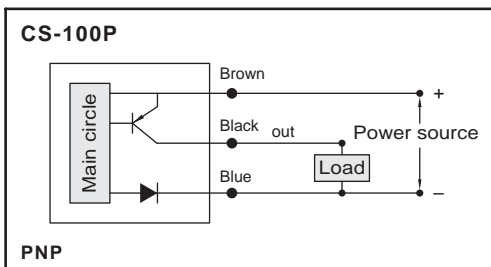
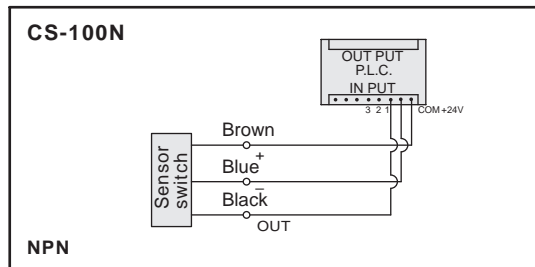
Unit : mm



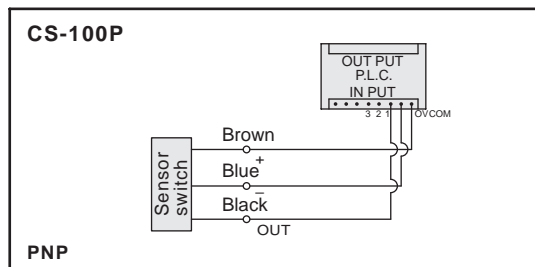
◉ Sensor switch circuit and Connection diagram

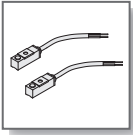


● Wire connection diagram of programmable controller (NPN)



● Wire connection diagram of programmable controller (PNP)





CS - 120 series - Sensor switch

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◉ Suitable for cylinder



Model	Cylinder	Bore size
CS-120	SBA,SBB,SBD	Ø10 , Ø16
	SBR	Ø6 , Ø10 , Ø16
	SDA	Ø12~Ø40

◉ Reed sensor switch

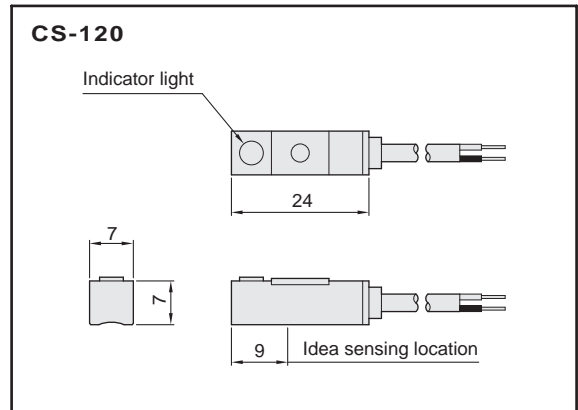
◉ Specification

Item	Model	CS-120 - □
Wiring system		Two lead wire type
Switching voltage	V	DC : 5 ~ 240V AC : 5 ~ 240V
Switching current	mA	100mA MAX.
Contact capacity		10W MAX.
Delay time		< 2ms (500 Hz)
Contact		Normal open
Protection grade		IP-67
Color of indicator light		Red
Cable		Ø4 Wire cable x 2M
Voltage drop		3V MAX.
Sensitivity	Note	Normal
Contact protective circuit		Non
Operating temp	°C	-10° ~ 70°
Weight	g	25 ± 2

Note : For high sensitivity, add "-S" to the port number.

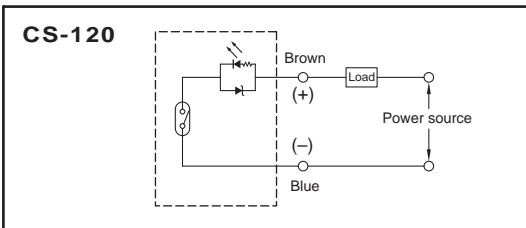
◉ Dimension

Unit : mm

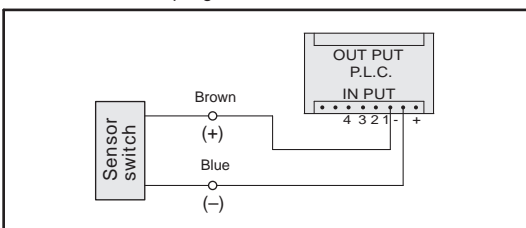


◉ Sensor switch circuit and Connection diagram ◉ Note

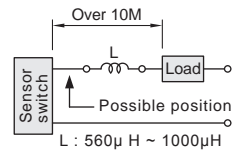
● Basic connection : Connect to relay or other resistor



● Connect to the programmable controller



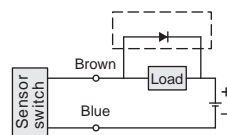
1. When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
2. Applied voltage and current shall not exceed the specified value.
3. When inductive load is connected it is advisable to install protection circuit.



◉ Protect electric circuit

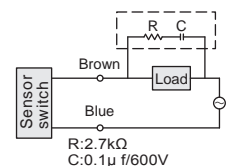
DC load :

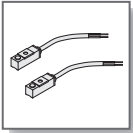
Connection in parallel one diode at counter clock-wire direction of two sides of load



AC load :

Connection in parallel one R. C electric circuit at two sides of load.





CS - 120N(P) series - Sensor switch

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◉ Suitable for cylinder

Model	Cylinder	Bore size
CS-120N(P)	SBA,SBB,SBD	Ø10 , Ø16
	SBR	Ø6 , Ø10 , Ø16
	SDA	Ø12~Ø40

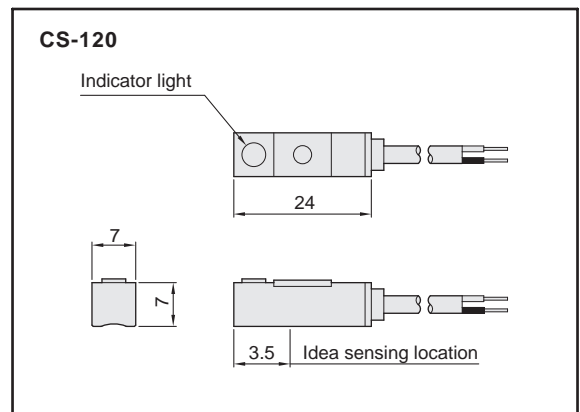
◉ Solid state sensor switch

◉ Specification

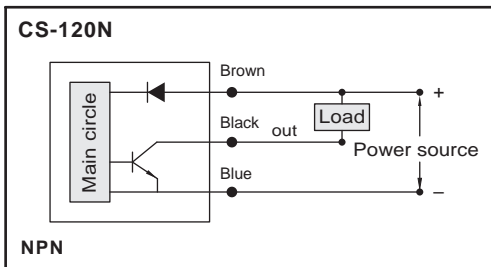
Item	Model	CS-120N	CS-120P
Wiring system		Three wires	
Switching voltage	V	DC : 5 ~ 30V	
Switching current	mA	200mA MAX.	
Contact capacity		< 1ms (1000 Hz)	
Contact		Normal open	
Contact		NPN. Current sinking	PNP. Current sourcing
Voltage drop		0.5V MAX.	
Voltage consumption		ON : 20 mA (24V) MAX.	
Color of indicator light		Red	Green
Operating temp	°C	-10° ~ 70°	
Protection grade		IP-67	
Cable		Ø2.8 · 3 Single wire x 2M	
Weight	g	28±2	
Contact protective circuit		Yes	

◉ Dimension

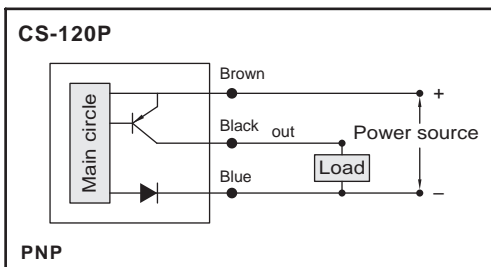
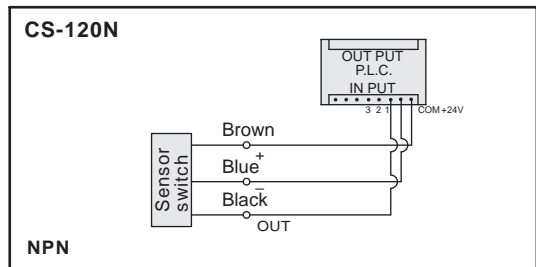
Unit : mm



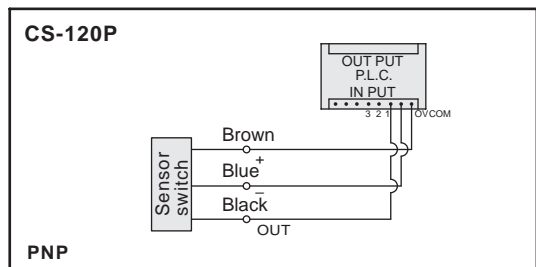
◉ Sensor switch circuit and Connection diagram

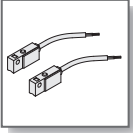


● Wire connection diagram of programmable controller (NPN)



● Wire connection diagram of programmable controller (PNP)





CS - 130 series - Sensor switch

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Suitable for cylinder

Model	Cylinder	Bore size
CS-130	SBA,SBB,SBD	Ø10 , Ø16
	SBR	Ø6 , Ø10 , Ø16
	SDA	Ø16
	DBS2	Ø20~Ø40
	DBF2	Ø20~Ø40

Reed sensor switch

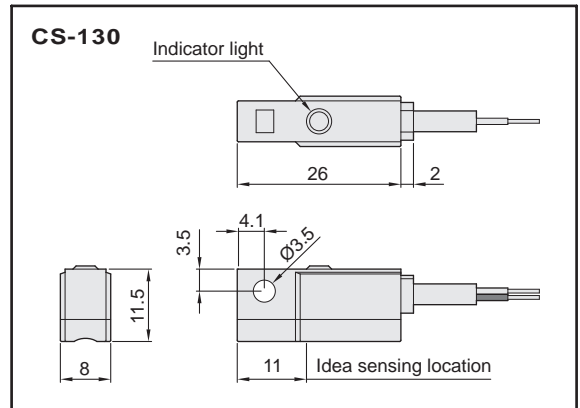
Specification

Item	Model	CS-130 - □
Wiring system		Two lead wire type
Switching voltage	V	DC : 5 ~ 240V AC : 5 ~ 240V
Switching current	mA	100mA MAX.
Contact capacity		10W MAX.
Delay time		< 2ms (500 Hz)
Contact		Normal open
Protection grade		IP-67
Color of indicator light		Red
Cable		Ø3.3 Wire cable × 2M
Voltage drop		2.5V MAX.
Sensitivity	Note	Normal
Contact protective circuit		Non
Operating temp	°C	-10° ~ 70°
Weight	g	25 ± 2

Note : For high sensitivity, add "-S" to the port number.

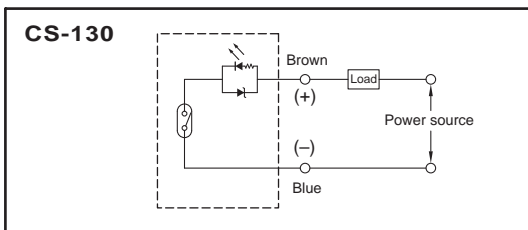
Dimension

Unit : mm

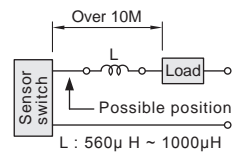


Sensor switch circuit and Connection diagram Note

Basic connection : Connect to relay or other resistor



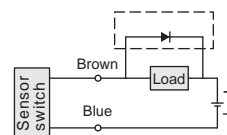
- When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
- Applied voltage and current shall not exceed the specified value.
- When inductive load is connected it is advisable to install protection circuit.



Protect electric circuit

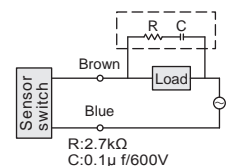
DC load :

Connection in parallel one diode at counter clock-wire direction of two sides of load

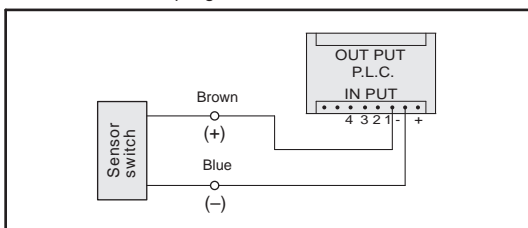


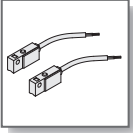
AC load :

Connection in parallel one R. C electric circuit at two sides of load.



Connect to the programmable controller





CS - 130N(P) series - Sensor switch

CHELIC PNEUMATIC



◉ Suitable for cylinder

Model	Cylinder	Bore size
CS-130N(P)	SBA,SBB,SBD	Ø10 , Ø16
	SBR	Ø6 , Ø10 , Ø16
	SDA	Ø16
	DBS2	Ø20~Ø40
	DBF2	Ø20~Ø40

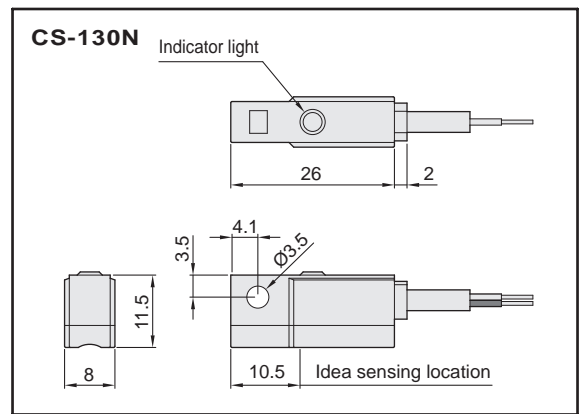
◉ Solid state sensor switch

◉ Specification

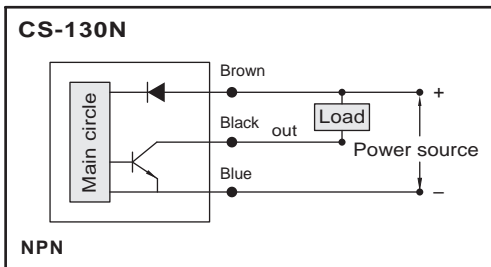
Item	Model	CS-130N	CS-130P
Wiring system		Three wires	
Switching voltage	V	DC : 5 ~ 28V	
Switching current	mA	50mA MAX.	
Contact capacity		< 1ms (1000 Hz)	
Contact		Normal open	
Contact		NPN. Current sinking	PNP. Current sourcing
Voltage drop		0.5V MAX.	
Voltage consumption		ON : 10 mA (24V) MAX.	
Color of indicator light		Red	Green
Operating temp	°C	-10° ~ 70°	
Protection grade		IP-67	
Cable		Ø3.3 · 3 Single wire x 2M	
Weight	g	50±2	
Contact protective circuit		Yes	

◉ Dimension

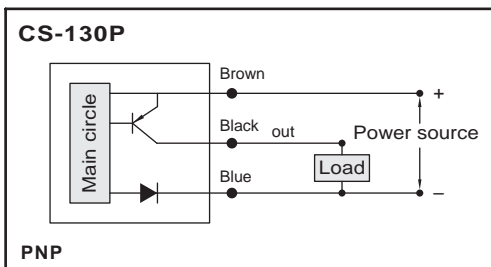
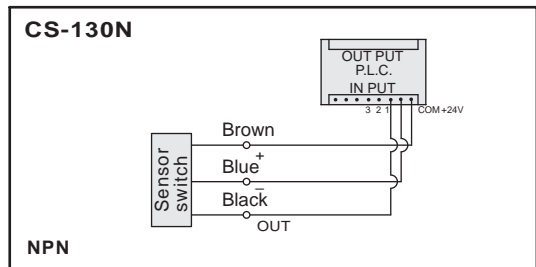
Unit : mm



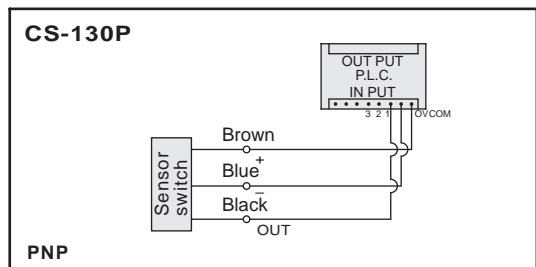
◉ Sensor switch circuit and Connection diagram

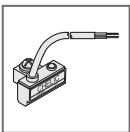


● Wire connection diagram of programmable controller (NPN)



● Wire connection diagram of programmable controller (PNP)





CS - 30E(F),S series - Sensor switch

CHELIC PNEUMATIC



Reed sensor switch

Suitable for cylinder

Model	Cylinder	Bore size
CS-30E	JD,JTD	Ø12~Ø100
	TD,STU	Ø16~Ø32
	TB,TSB	Ø32~Ø63
	STB,STC,STD,STF	Ø32~Ø50
	RTP	5~30
	SCR(L)	Ø20~Ø63
CS-30F	STM	Ø16~Ø32
	TXB	Ø16~Ø63
	MRU	Ø10~Ø40

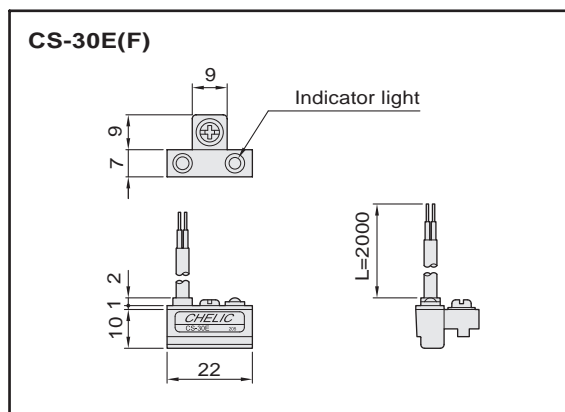
Specification

Item	Model	CS-30E(F)	CS-30S
Wiring system		Two lead wire type	
Switching voltage	V	DC : 5 ~ 240V AC : 5 ~ 240V	
Switching current	mA	100mA MAX.	
Contact capacity		10W MAX.	
Delay time		< 2ms (500 Hz)	
Contact		Normal open	
Protection grade		IP-67	
Color of indicator light		Red	
Cable		Ø3.3 Wire cable × 2M	
Voltage drop		3.5V MAX.	
Sensitivity	Note	Normal	High
Contact protective circuit		Non	
Operating temp	°C	-10° ~ 70°	
Weight	g	35±2	

Note : For high sensitivity, add "-S" to the port number.

Dimension

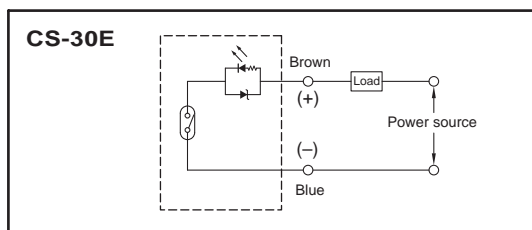
Unit : mm



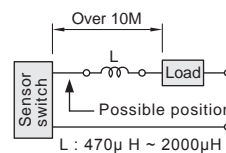
Sensor switch circuit and Connection diagram

Note

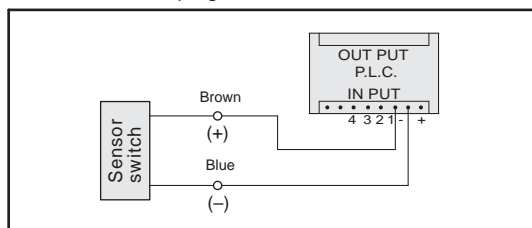
Basic connection : Connect to relay or other resistor



- When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
- Applied voltage and current shall not exceed the specified value.
- When inductive load is connected it is advisable to install protection circuit.



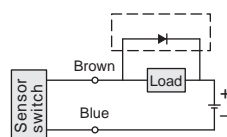
Connect to the programmable controller



Protect electric circuit

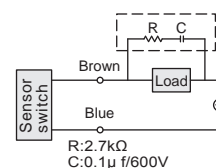
DC load :

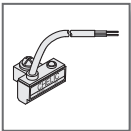
Connection in parallel one diode at counter clock-wire direction of two sides of load



AC load :

Connection in parallel one R. C electric circuit at two sides of load.





CS - 30EN(EP) series - Sensor switch

CHELIC PNEUMATIC



► Solid state sensor switch

◉ Suitable for cylinder

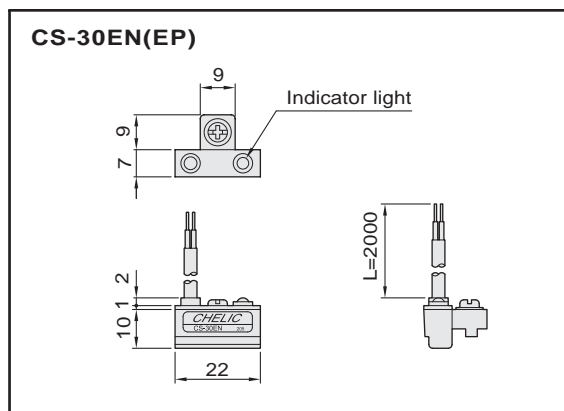
Model	Cylinder	Bore size
CS-30EN(EP)	JD,JTD	Ø12~Ø100
	TD,STU	Ø16~Ø32
	TB,TSB	Ø32~Ø63
	STB,STC,STD,STF	Ø32~Ø50
	RTP	5~30
	SCR(L)	Ø20~Ø63
	STM	Ø16~Ø32
	TXB	Ø16~Ø63
MRU	Ø10~Ø40	

◉ Specification

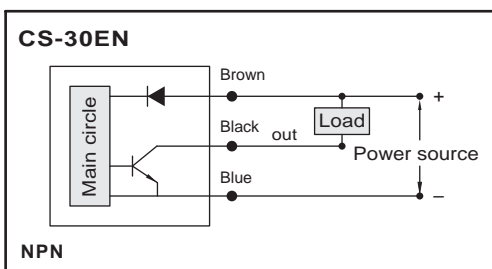
Item	Model	CS-30EN	CS-30EP
Wiring system		Three wires	
Switching voltage	V	DC : 5 ~ 30V	
Switching current	mA	200mA MAX.	
Contact capacity		< 1ms (1000 Hz)	
Contact		Normal open	
Contact		NPN. Current sinking	PNP. Current sourcing
Voltage drop		0.5V MAX.	
Voltage consumption		OFF : 7mA (24V)	ON : 8 mA (24V) MAX.
Color of indicator light		Red	Green
Operating temp	°C	-10° ~ 70°	
Protection grade		IP-67	
Cable		Ø3.3 · 3 Single wire x 2M	
Weight	g	35 ± 2	
Contact protective circuit		Yes	

◉ Dimension

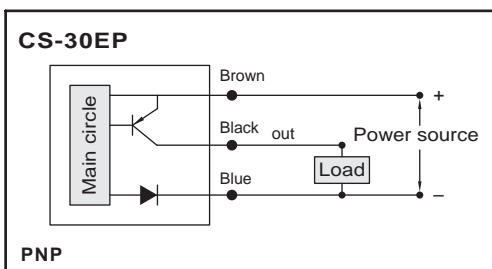
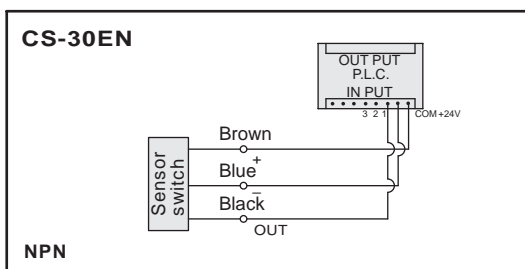
Unit : mm



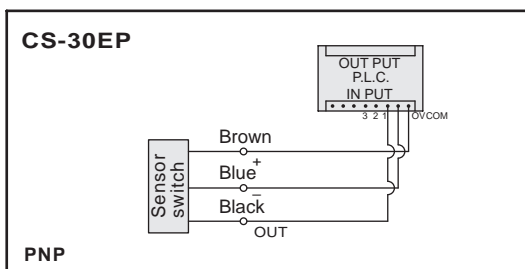
◉ Sensor switch circuit and Connection diagram

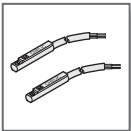


● Wire connection diagram of programmable controller (NPN)



● Wire connection diagram of programmable controller (PNP)





CS - 5G series - Sensor switch

CHELIC PNEUMATIC

► Suitable for cylinder



► Solid state sensor switch

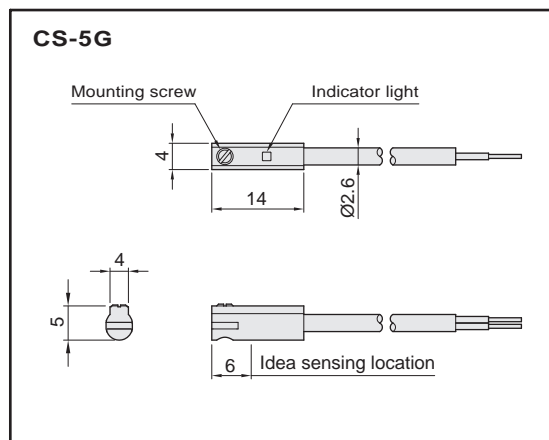
Model	Cylinder	Bore size
CS-5G	HDS	Ø10~Ø32
	HDM	Ø12~Ø32
	HDP	Ø10~Ø32
	HDZ	Ø16~Ø40

► Specification

Item	Model	CS-5G
Wiring system		Two lead wire type
Switching voltage	V	DC : 10 ~28V
Switching current	mA	4~20mA MAX
Contact capacity		0.6W MAX.
Delay time		< 2ms (500Hz)
Contact		Normal open
Protection grade		IP - 67
Color of indicator light		Red
Cable		Ø2.6 Wire cable x 2M
Voltage drop		3.5V MAX
Sensitivity		0.8mA MAX.
Contact protective circuit		Yes
Operating temp	°C	-10°~70°
Weight	g	20 ± 2

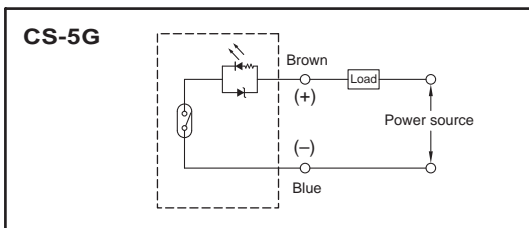
► Dimension

Unit : mm

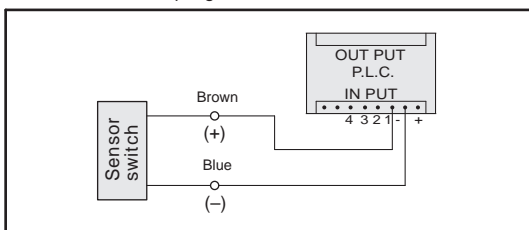


► Sensor switch circuit and Connection diagram ► Note

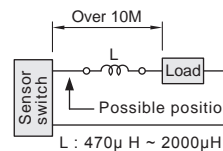
● Basic connection : Connect to relay or other resistor



● Connect to the programmable controller



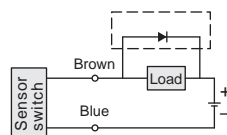
1. When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
2. Applied voltage and current shall not exceed the specified value.
3. When inductive load is connected it is advisable to install protection circuit.



► Protect electric circuit

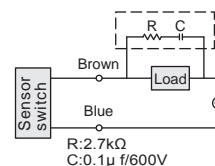
DC load :

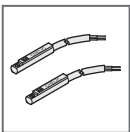
Connection in parallel one diode at counter clock-wire direction of two sides of load



AC load :

Connection in parallel one R. C electric circuit at two sides of load.





CS - 5GN(P) series - Sensor switch

CHELIC PNEUMATIC

◀ Suitable for cylinder



◀ Solid state sensor switch

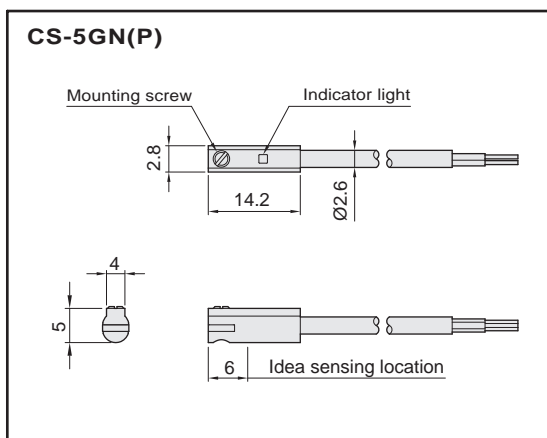
Model	Cylinder	Bore size
CS-5GN(P)	HDS	Ø10~Ø32
	HDM	Ø12~Ø32
	HDP	Ø10~Ø32
	HDZ	Ø16~Ø40

◀ Specification

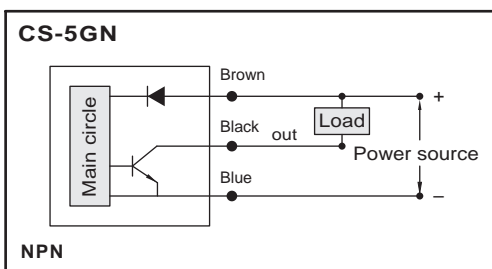
Item	Model	CS-5GN	CS-5GP
Wiring system		Three wires	
Switching voltage	V	DC : 4.5 ~28V	
Switching current	mA	50mA MAX.	
Contact capacity		< 1ms (1000Hz)	
Contact		Normal open	
Contact		NPN. Current sinking	PNP. Current sourcing
Voltage drop		0.5 VMAX.	
Voltage consumption		OFF : 7mA (24V) ON : 10mA (24V) MAX.	
Color of indicator light		Red	
Operating temp	°C	-10°~70°	
Protection grade		IP - 67	
Cable		Ø2.6 · 3 Single wire × 2M	
Weight	g	20 ± 2	
Contact protective circuit		Yes	

◀ Dimension

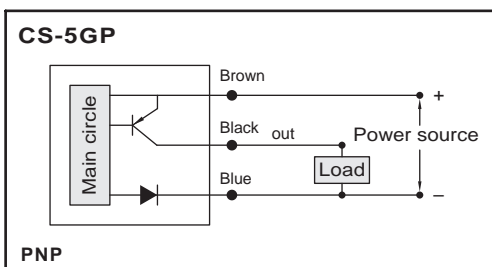
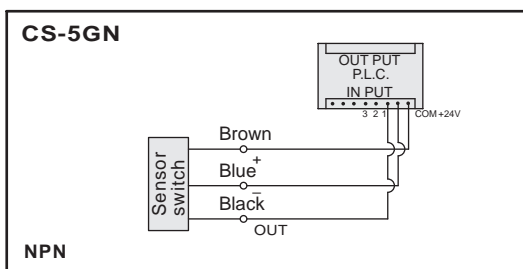
Unit : mm



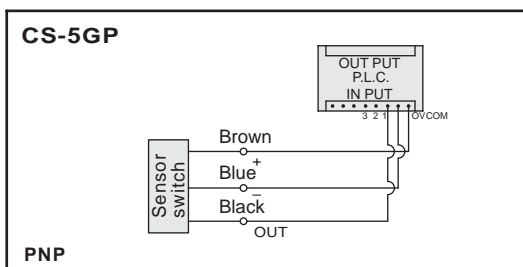
◀ Sensor switch circuit and Connection diagram

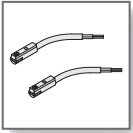


● Wire connection diagram of programmable controller (NPN)



● Wire connection diagram of programmable controller (PNP)





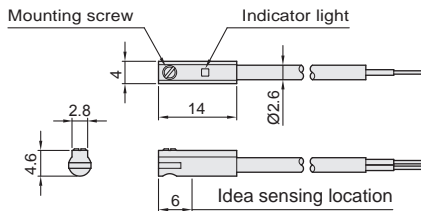
CS - 8G / CS - 8B series - Sensor switch

CHELIC PNEUMATIC

CS-8G series



Dimension



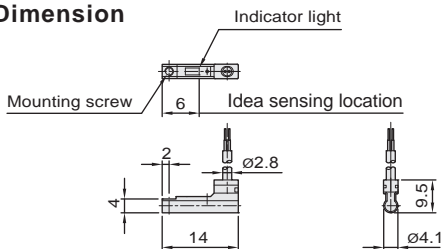
Specification

Item	Model	CS-8G
Wiring system		Two lead wire type
Switching voltage	V	DC : 10 ~ 28V
Switching current	mA	4 ~ 20 mA MAX.
Contact capacity		0.6W MAX.
Delay time		< 2ms (500 Hz)
Contact		Normal open
Protection grade		IP-67
Color of indicator light		Red
Cable		Ø2.6 Wire cable x 2M
Voltage drop		3.5V MAX.
Sensitivity		Normal
Contact protective circuit		Yes
Operating temp	°C	-10° ~ 70°
Weight	g	20 ± 2

CS-8B series



Dimension

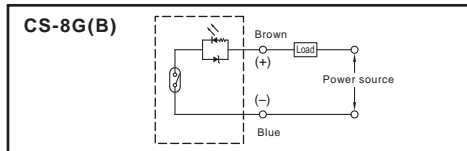


Specification

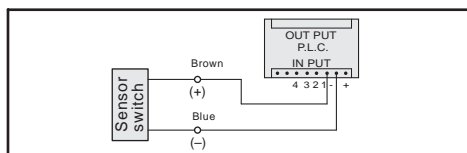
Item	Model	CS-8B
Wiring system		Two lead wire type
Switching voltage	V	DC : 10 ~ 28V
Switching current	mA	4 ~ 20 mA MAX.
Contact capacity		0.6W MAX.
Delay time		< 2ms (500 Hz)
Contact		Normal open
Protection grade		IP-67
Color of indicator light		Red
Cable		Ø2.6 Wire cable x 2M
Voltage drop		3.5V MAX.
Sensitivity		Normal
Contact protective circuit		Yes
Operating temp	°C	-10° ~ 70°
Weight	g	20 ± 2

Sensor switch circuit and Connection diagram

- Basic connection : Connect to relay or other resistor

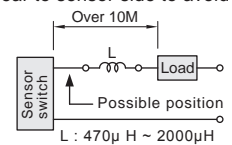


- Connect to the programmable controller



Note

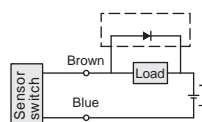
- When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
- Applied voltage and current shall not exceed the specified value.
- When inductive load is connected it is advisable to install protection circuit.



Protect electric circuit

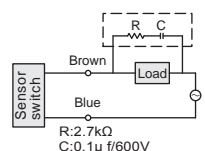
DC load :

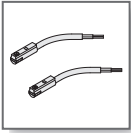
Connection in parallel one diode at counter clock-wire direction of two sides of load



AC load :

Connection in parallel one R, C electric circuit at two sides of load.





CS - 8GN(P) series - Sensor switch

HELIC PNEUMATIC



◀ Solid state sensor switch

◉ Suitable for cylinder

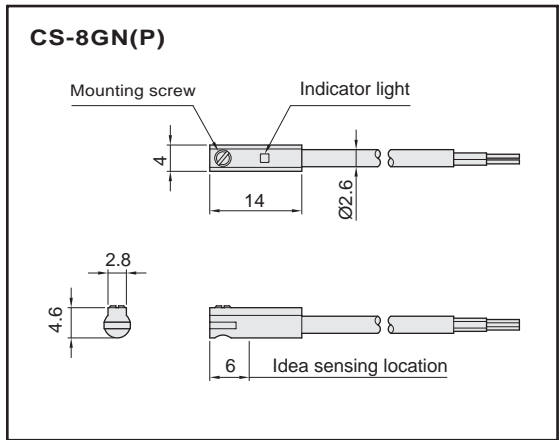
Model	Cylinder	Bore size
CS-8GN(P)	MRB	Ø10~Ø40
	MRX	Ø10~Ø25
	MRU	Ø10~Ø40
	MRH	Ø15~Ø32
	MDX	Ø 6 ~ Ø25
	RTM	10~100
	HDZ	Ø16~Ø40
	HDF	Ø12~Ø20
	HDL	Ø20~Ø32
	HDT	Ø10~Ø40
HDR	Ø25~Ø63	

◉ Specification

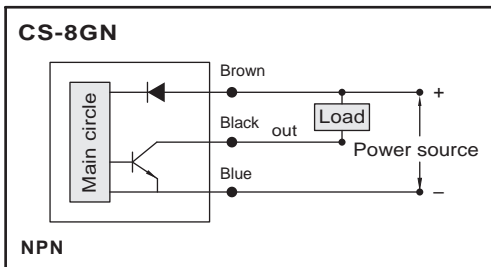
Item	Model	CS-8GN	CS-8GP
Wiring system		Three wires	
Switching voltage	V	DC : 4.5 ~ 28V	
Switching current	mA	50mA MAX.	
Contact capacity		< 1ms (1000Hz)	
Contact		Normal open	
Contact		NPN. Current sinking	PNP. Current sourcing
Voltage drop		0.5 V MAX.	
Voltage consumption		OFF : 7mA (24V) ON : 10mA (24V) MAX.	
Color of indicator light		Red	
Operating temp	°C	-10°~70°	
Protection grade		IP - 67	
Cable		Ø2.6 · 3 Singe wire × 2M	
Weight	g	22 ± 2	
Contact protective circuit		Yes	

◉ Dimension

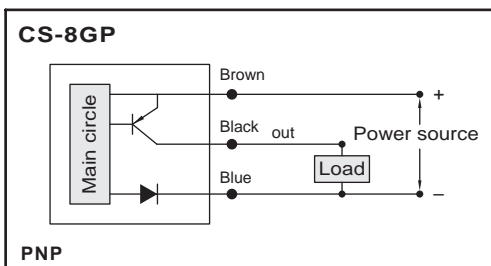
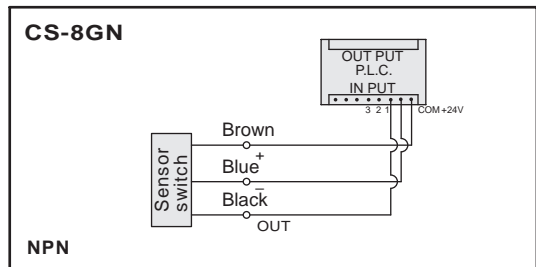
Unit : mm



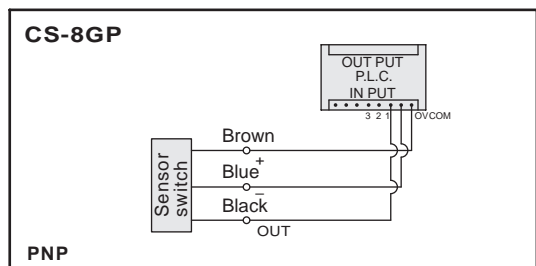
◉ Sensor switch circuit and Connection diagram

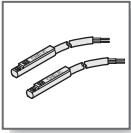


● Wire connection diagram of programmable controller (NPN)



● Wire connection diagram of programmable controller (PNP)





CS-9D / CS-9B / CS-9H series - Sensor switch

CHELIC PNEUMATIC

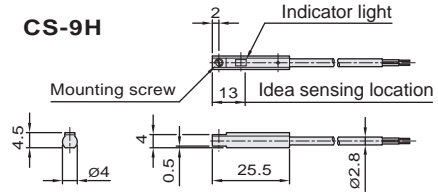
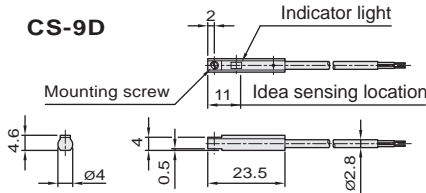
CS-9D series



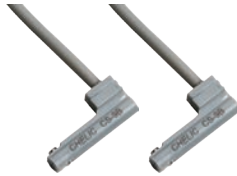
Item	Model	CS-9D	CS-9D(S)	CS-9H	CS-9H(S)
Wiring system		Two lead wire type		Two lead wire type	
Switching voltage V		DC: 5~120V AC: 5~120V		DC: 5~240V AC: 5~240V	
Switching current mA		100mA MAX.		100mA MAX.	
Contact capacity		6W MAX.		10W MAX.	
Delay time		< 2ms (500Hz)		< 2ms (500Hz)	
Contact		Normal open		Normal open	
Protection grade		IP-67		IP-67	
Color of indicator light		Red		Green	
Cable		Ø2.8 Wire cable x 2M		Ø2.8 Wire cable x 2M	
Voltage drop		3.5V MAX.		3.5V MAX.	
Sensitivity	Note	Normal	High	Normal	High
Contact protective circuit		Non		Non	
Operating temp °C		-10°~70°		-10°~70°	
Weight		20 ± 2		20 ± 2	

Note : For high sensitivity, add "-S" to the port number.

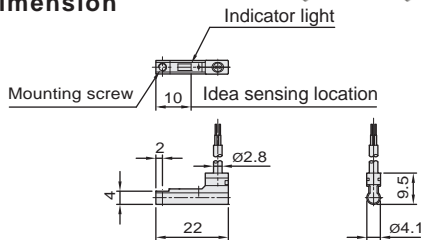
Dimension



CS-9B series



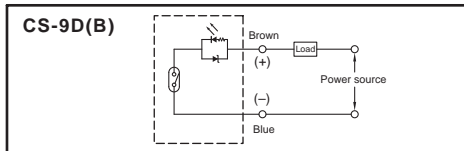
Dimension



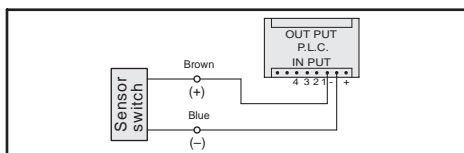
Item	Model	CS-9B
Wiring system		Two lead wire type
Switching voltage V		DC: 5~120V AC: 5~120V
Switching current mA		100mA MAX.
Contact capacity		6W MAX.
Delay time		< 2ms (500Hz)
Contact		Normal open
Protection grade		IP-67
Color of indicator light		Red
Cable		Ø2.8 Wire cable x 2M
Voltage drop		3.5V MAX.
Sensitivity		Normal
Contact protective circuit		Non
Operating temp °C		-10°~70°
Weight		18 ± 2

Sensor switch circuit and Connection diagram

- Basic connection : Connect to relay or other resistor

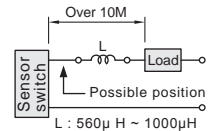


- Connect to the programmable controller



Note

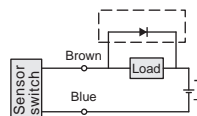
1. When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
2. Applied voltage and current shall not exceed the specified value.
3. When inductive load is connected it is advisable to install protection circuit.



Protect electric circuit

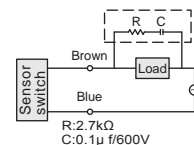
DC load :

Connection in parallel one diode at counter clock-wise direction of two sides of load



AC load :

Connection in parallel one R, C electric circuit at two sides of load.





CS - 9DN(P) series - Sensor switch

CHELIC PNEUMATIC

◉ Suitable for cylinder



Model	Cylinder	Bore size	Cylinder	Bore size	Cylinder	Bore size	Cylinder	Bore size
CS-9DN(P)	JD	Ø6 ~ Ø63	MRX	Ø10~Ø25	TB(U)	Ø10~Ø63	HBR	Ø20~Ø80
	JTD	Ø20~Ø63	MRU	Ø10~Ø40	TSB(U)	Ø10~Ø63	HFR	Ø20~Ø63
	JCB	Ø20~Ø63	MRH	Ø15~Ø32	TXB(U)	Ø10~Ø63	HDZ	Ø16~Ø40
	STB	Ø32~Ø50	MSR(L)	Ø10~Ø16	RTB	3 ~ 500	HDF	Ø12~Ø20
	STC	Ø32~Ø50	FMR(L)	Ø10~Ø32	RTBM	10 ~ 100	HDL	Ø20~Ø32
	STD	Ø32~Ø50	MQX	Ø 6 ~ Ø20	RTZB	10 ~ 50	HDT	Ø10~Ø40
	STF	Ø32~Ø50	TD	Ø10~Ø40	SCR(L)	Ø12~Ø63	HDR	Ø25~Ø63
	MRB	Ø10~Ø40	STU(M)	Ø10~Ø32	HER	Ø20~Ø40	HDW	Ø20~Ø100

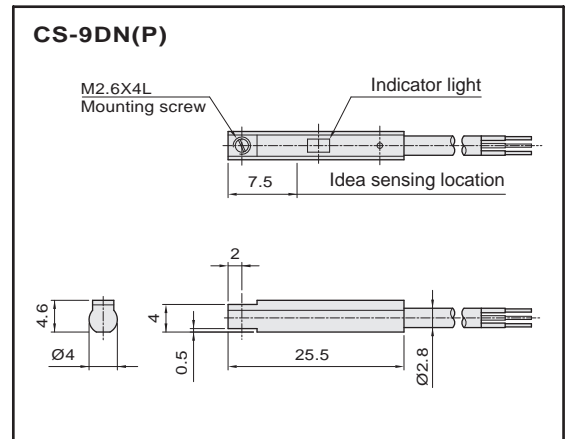
◉ Solid state sensor switch

◉ Specification

Item	Model	CS-9DN	CS-9DP
Wiring system		Three wires	
Switching voltage V		DC : 5 ~ 30V	
Switching current mA		200mA MAX.	
Contact capacity		< 1ms (1000Hz)	
Contact		Normal open	
Contact		NPN. Current sinking	PNP. Current sourcing
Voltage drop		1 V MAX.	
Voltage consumption		OFF : 7mA (24V) ON : 8mA (24V) MAX.	
Color of indicator light		Red	Green
Operating temp °C		-10°~70°	
Protection grade		IP - 67	
Cable		Ø 3.3 , 3 Single wire x 2M	
Weight g		22 ± 2	
Contact protective circuit		Yes	

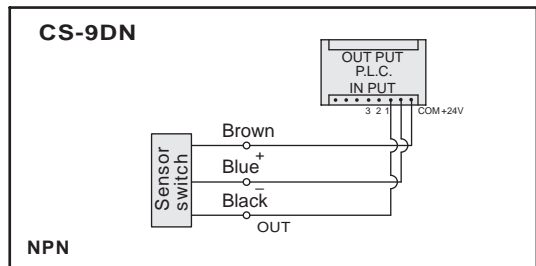
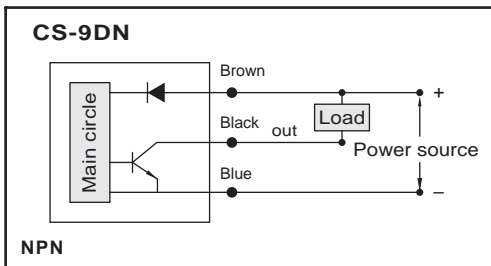
◉ Dimension

Unit : mm

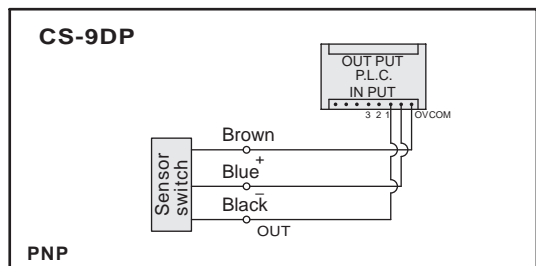
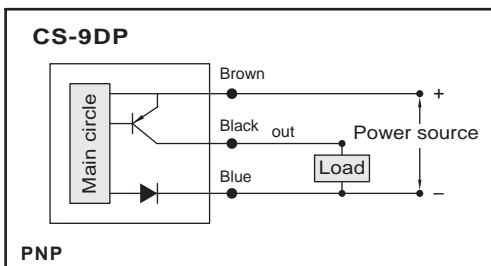


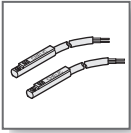
◉ Sensor switch circuit and Connection diagram

● Wire connection diagram of programmable controller (NPN)



● Wire connection diagram of programmable controller (PNP)

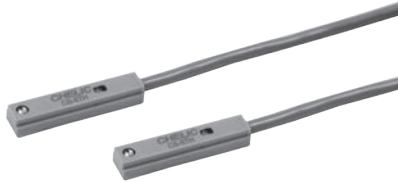




CS - 6T(H) series - Sensor switch

CHELIC PNEUMATIC

Suitable for cylinder



Model	Cylinder	Bore size
CS-6T(H)	TDX	Ø10~Ø25
	TDXU	Ø16~Ø25
	STX	Ø10~Ø25
	HCQ	Ø32~Ø80

Reed sensor switch

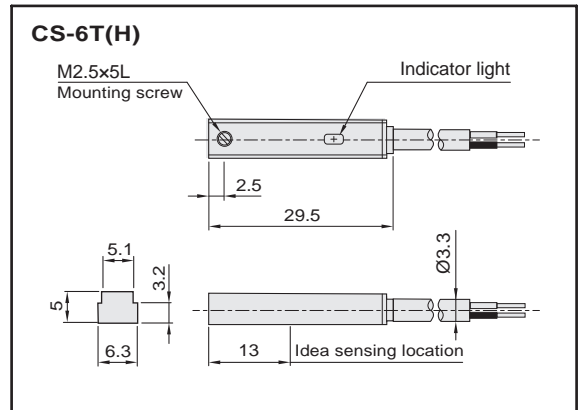
Specification

Item	Model	CS-6T(H)
Wiring system		Two lead wire type
Switching voltage	V	DC : 5 ~ 240V AC : 5 ~ 240V
Switching current	mA	100 mA MAX.
Contact capacity		10W MAX.
Delay time		< 2ms (500 Hz)
Contact		Normal open
Protection grade		IP-67
Color of indicator light		Red
Cable		Ø3.3 Wire cable x 2M
Voltage drop		3.5V MAX.
Sensitivity	Note	Normal High
Contact protective circuit		Non
Operating temp	°C	-10° ~ 70°
Weight	g	32 ± 2

Note : For high sensitivity, add "-S" to the port number.

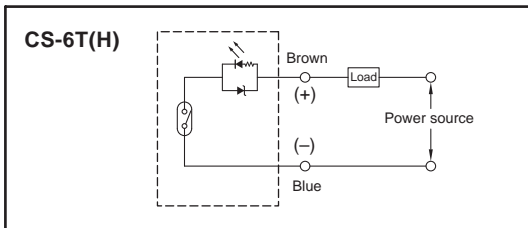
Dimension

Unit : mm

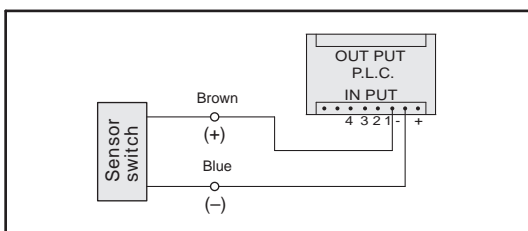


Sensor switch circuit and Connection diagram

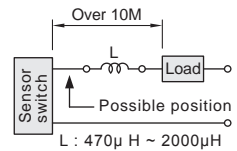
Basic connection : Connect to relay or other resistor



Connect to the programmable controller



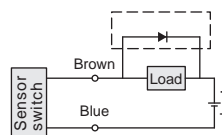
- When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
- Applied voltage and current shall not exceed the specified value.
- When inductive load is connected it is advisable to install protection circuit.



Protect electric circuit

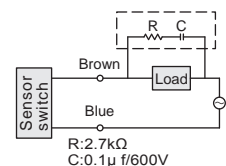
DC load :

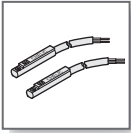
Connection in parallel one diode at counter clock-wire direction of two sides of load



AC load :

Connection in parallel one R. C electric circuit at two sides of load

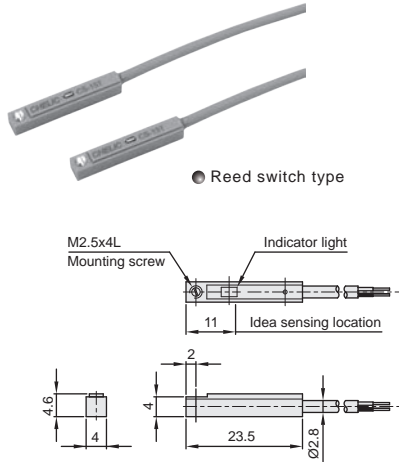




CS - 15T(B) series - Sensor switch

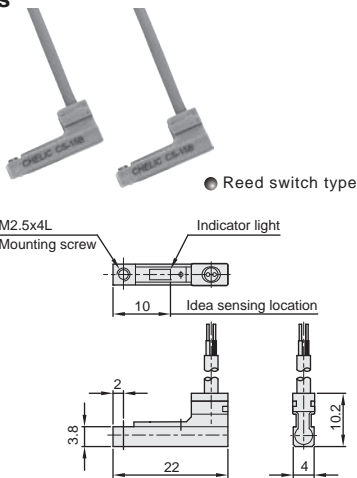
CHELIC PNEUMATIC

CS-15T series



Item	Model	CS-15T
Wiring system		Two lead wire type
Switching voltage V		DC: 5~120V AC: 5~120V
Switching current mA		100mA MAX.
Contact capacity		6W MAX.
Delay time		< 2ms (500Hz)
Contact		Normal open
Protection grade		IP-67
Color of indicator light		Red
Cable		Ø2.8 Wire cable x 1M
Voltage drop		3.5V MAX.
Sensitivity		Normal
Contact protective circuit		Non
Operating temp °C		-10°~70°
Weight		20 ± 2

CS-15B series

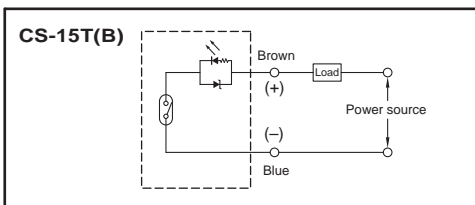


Item	Model	CS-15B
Wiring system		Two lead wire type
Switching voltage V		DC: 5~120V AC: 5~120V
Switching current mA		100mA MAX.
Contact capacity		6W MAX.
Delay time		< 2ms (500Hz)
Contact		Normal open
Protection grade		IP-67
Color of indicator light		Red
Cable		Ø2.8 Wire cable x 1M
Voltage drop		3.5V MAX.
Sensitivity		Normal
Contact protective circuit		Non
Operating temp °C		-10°~70°
Weight		18 ± 2

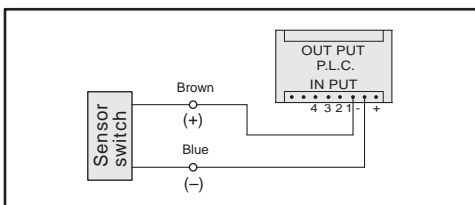
Dimension

Sensor switch circuit and Connection diagram

Basic connection : Connect to relay or other resistor

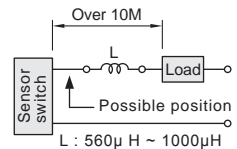


Connect to the programmable controller



Note

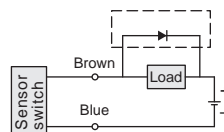
- When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
- Applied voltage and current shall not exceed the specified value.
- When inductive load is connected it is advisable to install protection circuit.



Protect electric circuit

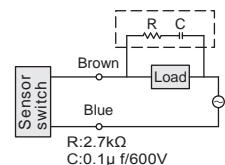
DC load :

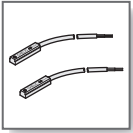
Connection in parallel one diode at counter clock-wire direction of two sides of load



AC load :

Connection in parallel one R. C electric circuit at two sides of load.





CS - 15TN(P) series - Sensor switch

CHELIC PNEUMATIC



◀ Solid state sensor switch

▶ Suitable for cylinder

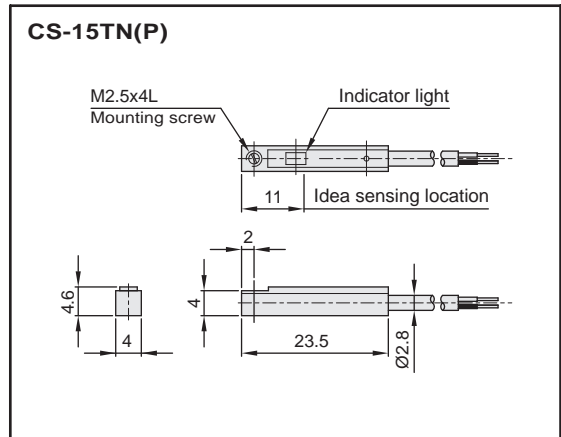
Model	Cylinder	Bore size
CS-15TN(P)	HDS · HDP	Ø10~Ø32
	HDM	Ø12~Ø32
	HDZ	Ø10~Ø40

◀ Specification

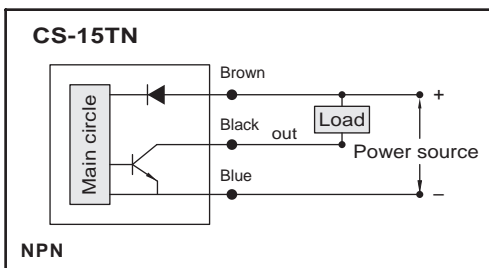
Item	Model	CS-15TN	CS-15TP
Wiring system		Three wires	
Switching voltage	V	DC : 5~30V	
Switching current	mA	200mA MAX.	
Contact capacity		< 1ms (1000Hz)	
Contact		Normal open	
Contact		NPN. Current sinking	PNP. Current sourcing
Voltage drop		1 V MAX.	
Voltage consumption		OFF : 7mA (24V) ON : 8mA (24V) MAX.	
Color of indicator light		Red	Green
Operating temp	°C	-10°~70°	
Protection grade		IP-67	
Cable	g	Ø 3.3 , 3 Single wire x 2M	
Weight		22 ± 2	
Contact protective circuit		Yes	

◀ Dimension

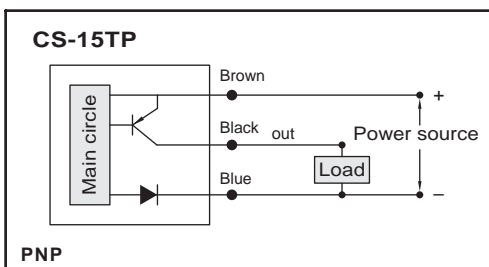
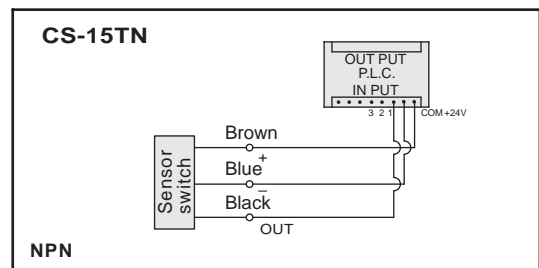
Unit : mm



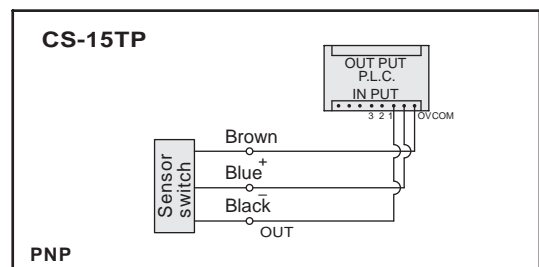
◀ Sensor switch circuit and Connection diagram

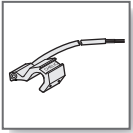


● Wire connection diagram of programmable controller (NPN)



● Wire connection diagram of programmable controller (PNP)





CS - 32 (50 , 80) B series - Sensor switch

CHELIC PNEUMATIC



◻ Suitable for cylinder

Model	Cylinder	Bore size
CS - 32B	DN , GHB(U) , RTH	Ø32 - Ø40
CS - 50B	DN , GHB(U) , RTH	Ø50 - Ø63
CS - 80B	DN , RTH	Ø80 - Ø100

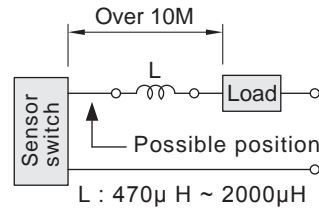
◻ Reed sensor switch

◻ Specification

Item	Model	CS - 32B	CS - 50B	CS - 80B
Wiring system		Two lead wire type		
Switching voltage	V	DC: 5~240V AC: 5~240V		
Switching current	mA	200mA MAX.		
Contact capacity		10W MAX.		
Delay time		< 1ms (1000Hz)		
Contact		Normal open		
Protection grade		IP-67		
Color of indicator light		Red		
Cable		Ø4 Wire cable x 2M		
Voltage drop		3.5V MAX.		
Sensitivity	Note	Normal		
Contact protective circuit		Non		
Operating temp	°C	-10°~70°		
Weight	g	63 ± 2	68 ± 2	92 ± 2

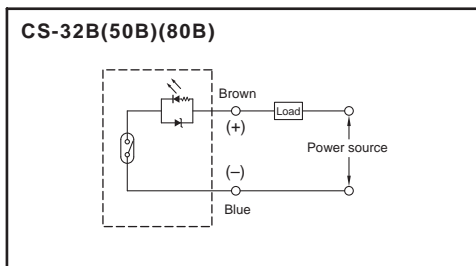
◻ Note

- When wire length of sensor switch connection load is more than 10 meters, inductor shall be installed near to sensor side to avoid ripple.
- Applied voltage and current shall not exceed the specified value.
- When inductive load is connected it is advisable to install protection circuit.

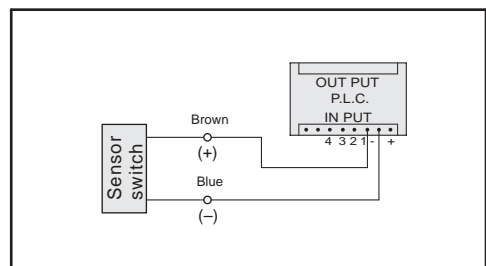


◻ Sensor switch circuit and Connection diagram

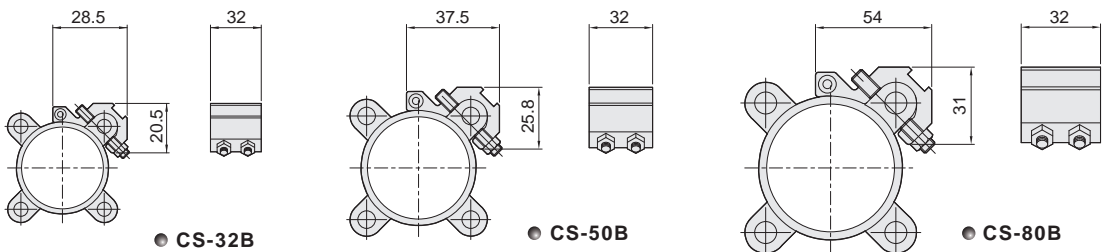
● Basic connection : Connect to relay or other resistor

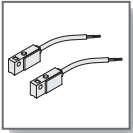


● Connect to the programmable controller



◻ Dimension

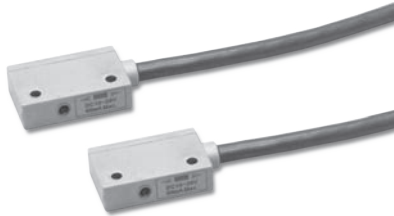




CS - 180 series - Sensor switch

CHELIC PNEUMATIC

► Suitable for cylinder



Model	Cylinder	Bore size
CS-180	DCK2S	Ø25~ Ø80
	DCQS	Ø50

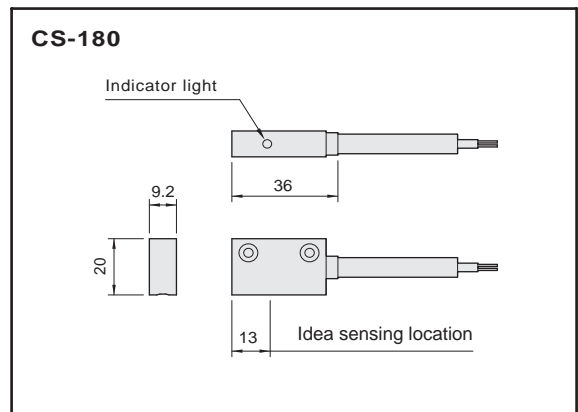
► Solid state sensor switch

► Specification

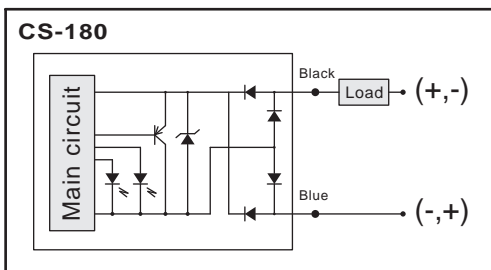
Item	Model	CS-180
Wiring system		Two lead wire type
Switching voltage V		DC : 10 ~ 28V
Contact capacity mA		5 ~ 50mA MAX.
Delay time		50 ms MAX
Contact		Normal open
Voltage drop		5V MAX.
Color of indicator light		Unstable : Red Stable : Green
Operating temp. °C		-10° ~ 60°
Protection grade		IP-67
Cable		Ø5.4,2C,PVC
Contact protective circuit		yes
Weight g		28 ± 2

► Dimension

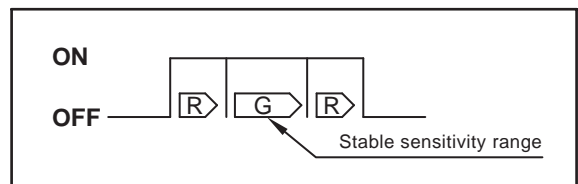
Unit : mm



► Sensor switch circuit diagram :



► Switch Output : Indication lamp



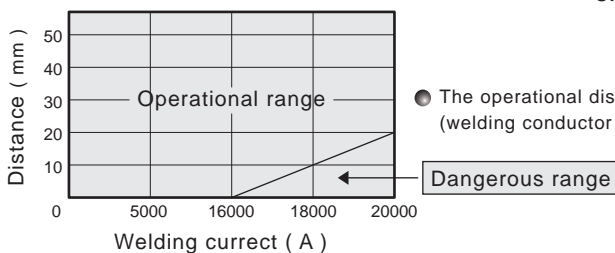
● CS-180

The function of three sensing range indicators ensures the preciseness of setting position.

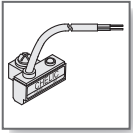
Unstable sensing range : Red LED light UP

Stable sensing range : Green LED light UP

► Weld - field immune



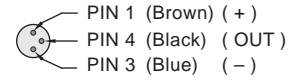
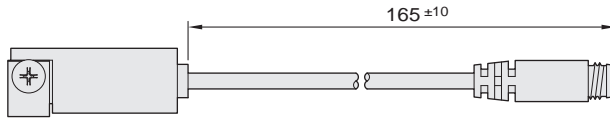
● The operational distance can be 0 mm between KT-1000D and welding gun (welding conductor or cable) when the welding current less than 16000 A



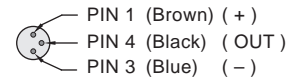
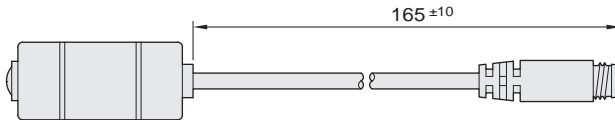
Sensor switch connectors

CHELIC PNEUMATIC

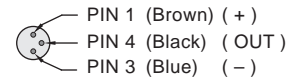
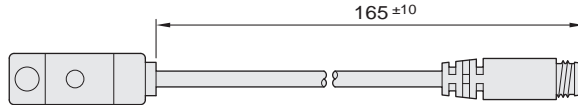
CS-95 - PG



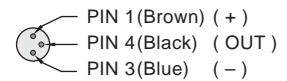
CS-100 - PG



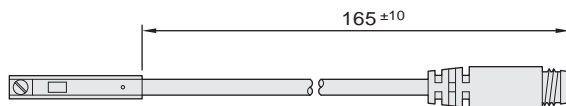
CS-120 - PG



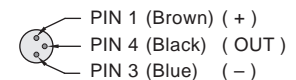
CS-30E(F) - PG



CS-9D - PG

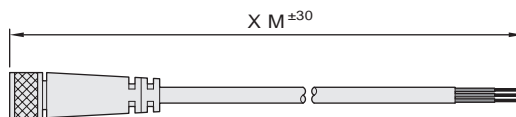
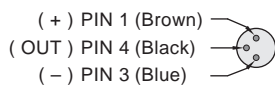


CS-15T - PG



CS-2M

CS-5M



CS - 2M - PVC : Female connector , cable length 2M

CS - 5M - PVC : Female connector , cable length 5M