

## Proximity switches for magnetic cylinders



Our company is organised and committed to seek continuous improvements at every level.

Innovation and our ability to support our customers with dedicated solutions allow us to be the ideal partner for companies looking for high levels of quality and service.

Our technical catalogues illustrate the standard range of products manufactured. In addition our product portfolio also includes a wide and diverse range of custom products designed to satisfy the specific technical requirements of our customers. This characteristic is demonstrated by our focus on the products technical development, by the use of innovative injection moulding techniques and materials and in the design of the products dedicated electrical features.

Our commitment to innovation in terms of organisation, the traceability of all of the various processes together with our ability and desire to constantly support our customers from the products conception and throughout its complete lifetime allows our company to cooperate internationally with market leading organization in the following market sectors:

- AGRICULTURE ● FORESTRY ● FARMING
- AIR ● WATER ● FLUID ● STEAM ● GAS
- AUTOMOTIVE
- CONSTRUCTION ● EARTHMOVING
- ENERGY ● PETROCHEMICAL
- FOOD ● BEVERAGE ● VENDING
- INDUSTRIAL AUTOMATION ● ROBOTICS
- MARINE ● PORTS
- MINING ● QUARRYING ● CEMENT MIXING
- PACKAGING ● BOTTLING
- POWER TRANSMISSION ● HYDRAULICS ● PNEUMATICS
- TRANSPORT ● SERVICES
- TRANSFER MACHINES ● ASSEMBLY

Reference rules:

IEC 60335-1	Household and similar electrical appliances - Safety
IEC 60730-1	Automatic electrical controls for household and similar use
IEC 60204-1	Safety of machinery Electrical equipment of machines
2014/35 UE	Low voltage Directive
2011/65/UE	Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipments (RoHS)
EC N°1907/2006	Regualtion concerning the registration, evaluation, authorization and restriction of chemicals (REACH)

The drawings and the technical data reported on the data sheets have been checked and are believed to be correct. However no liability is accepted therefore.

We always recommend to contact our technical department for the most significant values. The company reserves the right to modify what is reported on specifications and drawings without notice due to technical or commercial reasons.

All technical data contained in this catalogue considers that our connectors are being used as connecting devices which in normal use (when under load) should not be inserted or withdrawn from any mating device.

With reference to CE marking, it should be noted that electronic components such as connectors are not subject to any form of marking and therefore must not be marked with a CE mark. This is confirmed within the conditions of the European Commission for Low Voltage and EMC guidelines.

Our connectors are developed and designed for the use in the field of equipment, control and electrical appliances. They can also be used in other applications under the responsibility of the user.

Any connecting wires should be stripped only so far that distances to conductive parts are not shortened.

When wires are crimped or soldered care should be taken to ensure that no single strands are exposed in order to prevent a short circuit.



## Atam Group. Innovation and technology.

Since 1992 Atam Group produces components for the automatic regulation and, more in general, for the wide market of industrial automation and engineering oil hydraulic. The group was born with the common intention to diversify strategies and researches with the purpose of completely satisfy the customer. The continuous technological evolution, oriented to anticipate the market demands and the competition, allows Atam Group to be an active and trusted partner in order to grant the maximum performances of each product.



# 1

Encapsulated coils  
Electromagnets  
Electrical windings



# 2

Operators





3

Operators for  
solenoid valves



4

Connecting devices  
for actuators and sensors  
Proximity switches



5

Proximity switches for  
magnetic cylinders  
Pressure switches

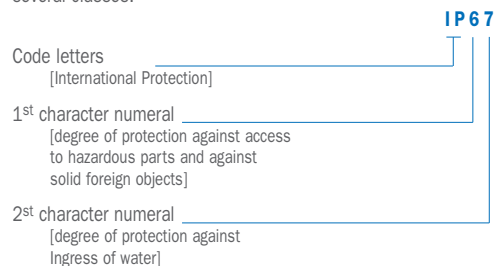


## Degree of protection (IP-Code)

Connectors have to be protected for safety reasons from outside influences like dust, foreign objects, direct contact, moisture and water.

This protection is provided on industrial connectors by its housing with their latching devices and sealed cable entries. The degree of protection can be selected depending on the type of intended use.

The standard IEC EN60529 has specified the degree of protection and divided into several classes.



### DEGREES OF PROTECTION against ACCESS to hazardous parts indicated by the first characteristic numeral

FIRST characteristic numeral	DEGREE OF PROTECTION	
	Brief Description	Definition
<b>0</b>	Non-protected	
<b>1</b>	Protected against access to hazardous parts with the back of a hand	The access probe sphere of 50 mm Ø shall have adequate clearance from hazardous parts
<b>2</b>	Protected against access to hazardous parts with a finger	The jointed test finger of 12 mm Ø 80 mm length shall have adequate clearance from hazardous parts
<b>3</b>	Protected against access to hazardous parts with a tool	The access probe of 2,5 mm Ø shall not penetrate
<b>4</b>	Protected against access to hazardous parts with a wire	The access probe of 1,0 mm Ø shall not penetrate
<b>5</b>	Protected against access to hazardous parts with a wire	The access probe of 1,0 mm Ø shall not penetrate
<b>6</b>	Protected against access to hazardous parts with a wire	The access probe of 1,0 mm Ø shall not penetrate

### DEGREES OF PROTECTION against SOLID foreign objects indicated by the first characteristic numeral

FIRST characteristic numeral	DEGREE OF PROTECTION	
	Brief Description	Definition
<b>0</b>	Non-protected	
<b>1</b>	Protected against solid foreign objects of $\geq 50$ mm Ø and greater	To object probe sphere of 50 mm Ø shall not fully penetrate
<b>2</b>	Protected against solid foreign objects of $\geq 12,5$ mm Ø and greater	To object probe sphere of 12,5 mm Ø shall not fully penetrate
<b>3</b>	Protected against solid foreign objects of $\geq 2,5$ mm Ø and greater	To object probe sphere of 2,5 mm Ø shall not fully penetrate
<b>4</b>	Protected against solid foreign objects of $\geq 1,0$ mm Ø and greater	To object probe sphere of 1,0 mm Ø shall not fully penetrate
<b>5</b>	Dust-protected	Ingress of dust is not totally prevented, but dust shall not penetrate in a quantity to interfere with satisfactory operation of the apparatus or to impair safety
<b>6</b>	Dust-tight	No ingress of dust









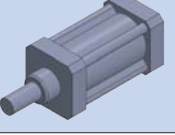
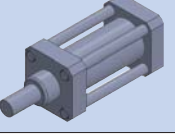
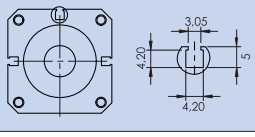
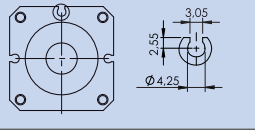
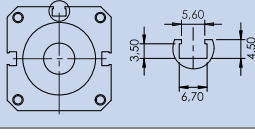
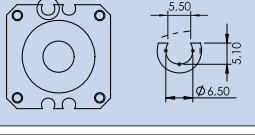
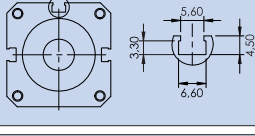
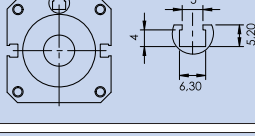
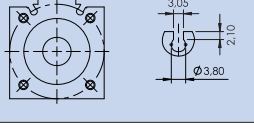
### DEGREES OF PROTECTION against WATER indicated by the second characteristic numeral

SECOND characteristic numeral	DEGREE OF PROTECTION	
	Brief Description	Definition
<b>0</b>	Non-protected	
<b>1</b>	Protected against vertically falling water drops	Vertically falling drops shall have no harmful effects
<b>2</b>	Protected against vertically falling water drops when up to 15°	Vertically falling drops shall have no harmful effects when the enclosure is tilted at any angle up to 15° on either side of the vertical
<b>3</b>	Protected against spraying water	Water sprayed at an angle up to 60° on either side of the vertical shall have no harmful effects
<b>4</b>	Protected against splashing water	Water splashed against the enclosure from any direction shall have no harmful effects
<b>5</b>	Protected against water jets	Water projected in powerful jets against the enclosure from any direction shall have no harmful effects
<b>6</b>	Protected against powerful water jets	Water projected in powerful jets against the enclosure from any direction shall have no harmful effects
<b>7</b>	Protected against immersion in water	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is temporarily immersed in water under standardized conditions of pressure and time
<b>8</b>	Protected against the effects of continuous immersion in water	Ingress of water in quantities causing harmful effects shall not be possible when the enclosure is continuously immersed in water under conditions which shall be agreed between manufacturer and user but which are more severe than for numeral 7
<b>IP69K in according to DIN40050-9</b>	Protected against the effects due to cleaning with hot water pressure jet	The water jet sprayed against the enclosure, in the conditions of pressure and temperature standardized, have no harmful effects














PROXIMITY SWITCHES FOR MAGNETIC CYLINDERS INDEX		PAG
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Round cylinder 							
ISO profile cylinder 							
Tie-rod cylinder 							
4 x 4 Slot 							
SMC C Slot 							
FESTO T Slot 							
NORGREN C Slot 							
FESTO T Slot 2 							
SMC T Slot 							
FESTO C Slot 							

## Cross index

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Round cylinder									
ISO profile cylinder									
Tie-rod cylinder									
4 x 4 Slot									
SMC C Slot									
FESTO T Slot									
NORGREN C Slot									
FESTO T Slot 2									
SMC T Slot									
FESTO C Slot									

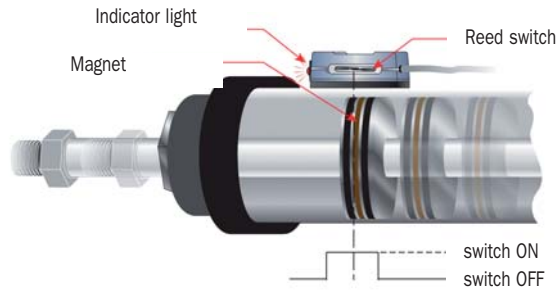
Cylinder/Proximity switches - cross index

## Proximity switches

OPERATING AND INSTALLING

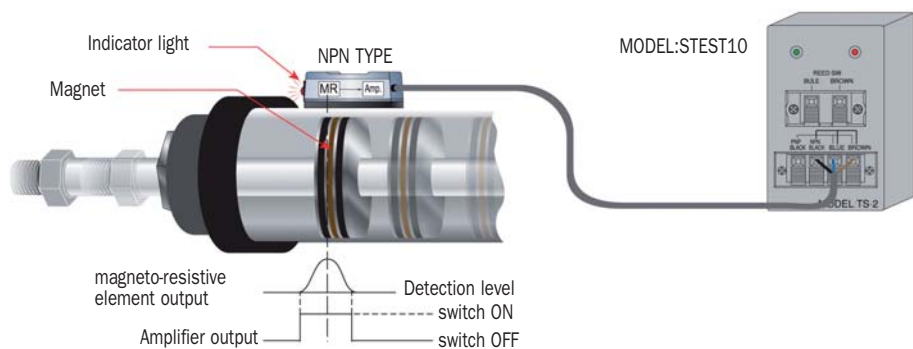
### REED SWITCH TYPE

When the piston's magnet approaches the proximity switch, the internal reed switch will detect the change of magnetic field and close the contacts.



### SOLID STATE TYPE

When the piston's magnet approaches the proximity switch, the internal magneto-resistive element can detect the change for magnetic field and cause a tiny voltage change. Switching output is achieved when this signal is amplified by the operation amplifier circuit in the proximity switch.



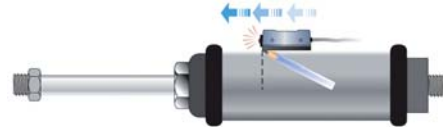
### HOW TO INSTALL THE PROXIMITY SWITCH

#### > END OF STROKE DETECTION

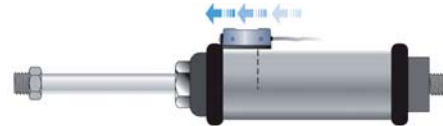
> **STEP 1** Set the piston to the end of stroke position.



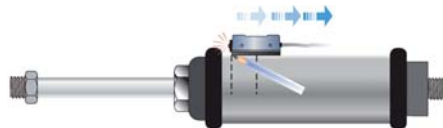
> **STEP 2** Slide the proximity switch forward and keep it close to the cylinder wall. Make a mark at the proximity switch turn-on point.



> **STEP 3** Slide the proximity switch forward continuously until the switch turns off.



> **STEP 4** Slide the proximity switch backward until the switch turns back on and make a mark.



> **STEP 5** The intermediate position between the 2 marks will be the most ideal position.

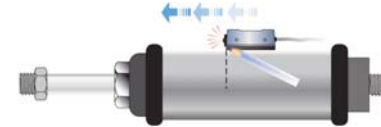


#### > INTERMEDIATE STROKE POSITION

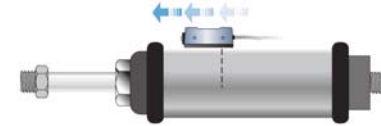
> **STEP 1** Set the piston to the required position.



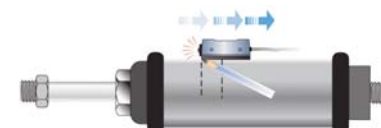
> **STEP 2** Slide the proximity switch forward and keep it close to the cylinder wall. Make a mark at the proximity switch turn-on point.



> **STEP 3** Slide the proximity switch forward continuously until the switch turns off.



> **STEP 4** Slide the proximity switch backward until the switch turns back on and make a mark.



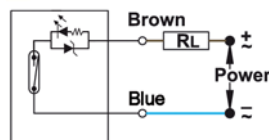
> **STEP 5** The intermediate position between the 2 marks will be the most ideal position.



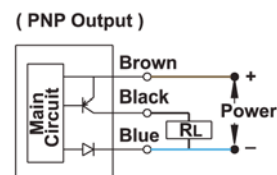
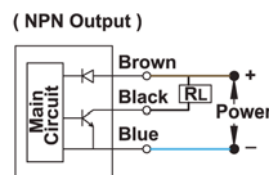
## Proximity switches

CAUTION

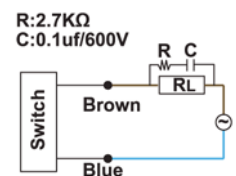
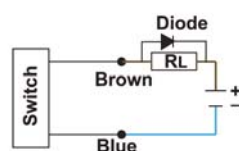
- **1** Do not exceed specification, permanent damage to the proximity switch may occur.
- **2** For reed switch type, polarity must also be observed for the proper function of LED. Connect the brown wire in series with load positive (+) and the blue wire to negative (-) of power source. If the polarity is reversed, reed switch remain functional but LED will remain in "OFF" state.



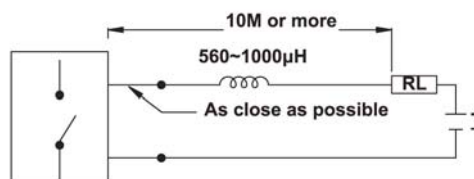
- **3** For solid-state type, polarity must also be observed. Connect brown wire to the positive (+) and the blue to the negative (-) of DC power source. The black wire must connect to the load only. If the black wire is accidentally connected to the power source, permanent damage to the proximity switch may occur.



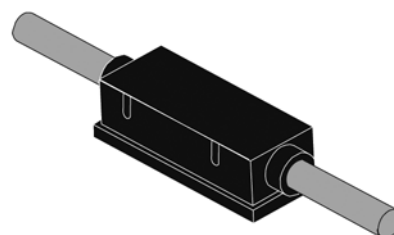
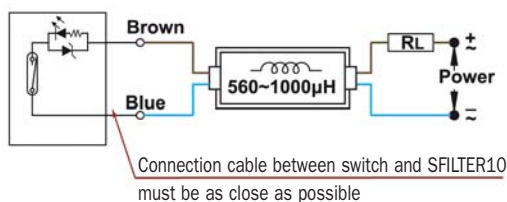
- **4** An external protection circuit may be required if the reed switch is used with inductive load, such as relay or solenoid. For DC inductive load, attach an external diode parallel to the load and use R-C circuit parallel with AC inductive load as illustrated below.



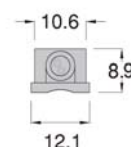
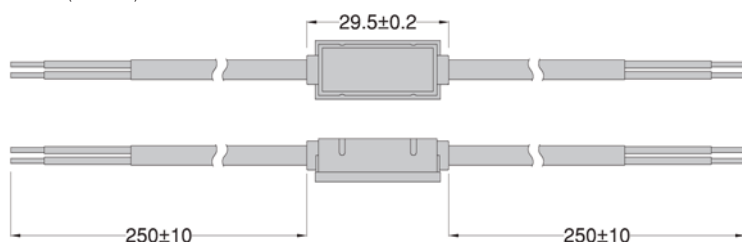
- **5** Keep proximity switches away from strong magnetic field to prevent malfunctions.
- **6** When using reed switch with capacitive load or if the lead wire length exceed 10-meter, an inductor (560 ~ 1000 μH) or SR-1 (surge suppressor) must be installed in series with the proximity switch to prevent damage (Sticking effect).



### Model:SFILTER10 (Surge Suppressor)



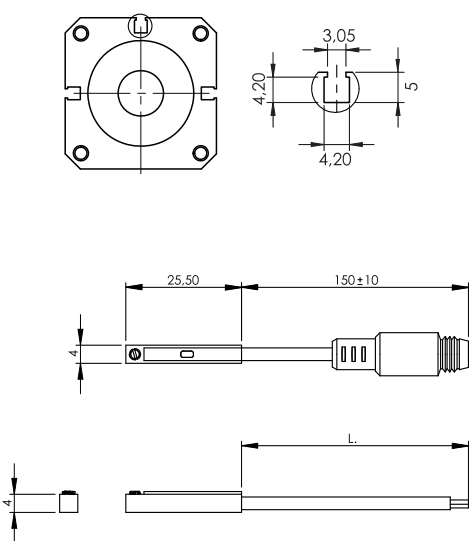
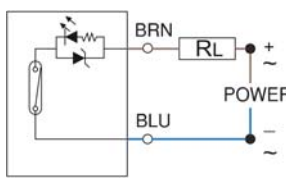
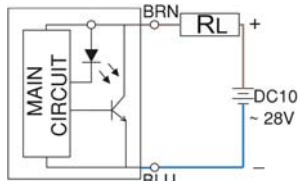
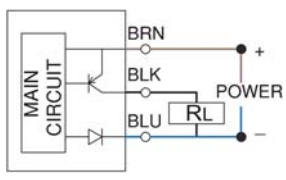
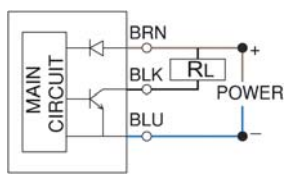
### Dimension (unit mm)



## Proximity switches **ST01** series

PROXIMITY SWITCH FOR CYLINDER WITH SQUARE GROOVES 4X4MM

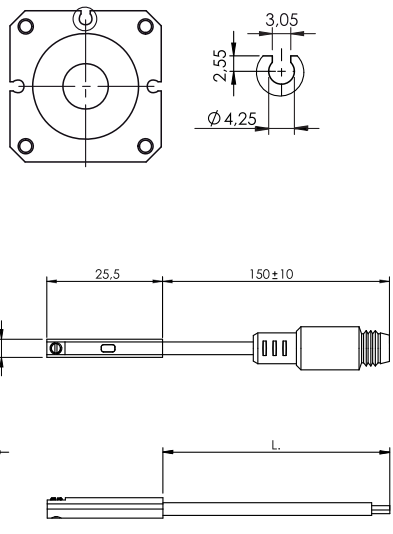
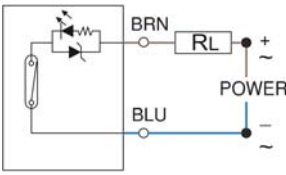
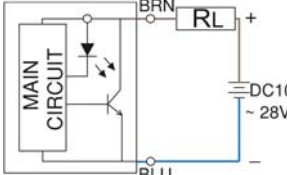
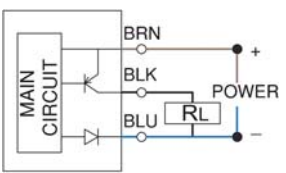
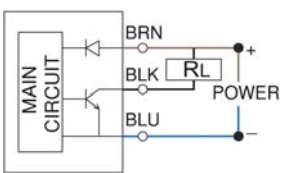


Product description	Reed 2 wire N/O	Solid state output 2 wire
Housing material	PA Black	PA Black
Number of contacts	2	2
Cable type	PUR GREY Ø 2,8mm	PUR GREY Ø 2,8mm
Order no.	<b>ST01R2PK2200</b>	<b>ST01H2PK2200</b>
Other standard types	<b>ST01R2PK2500</b>	<b>ST01H2PK2500</b>
cable length 5m	<b>ST01R2PK2M8</b> (rated voltage only 5-50V)	<b>ST01H2PK2M8</b>
M8		
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-120V AC/DC	10-28V DC
Current max.	100 mA max.	4-40mA max.
Power max.	10W	1,5 W
Voltage drop max.	3,5V	3,5V
LED colour	RED	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
		
		
Product description	PNP 3 wire N/O	NPN 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	3	3
Cable type	PUR BLACK Ø 2,8mm	PUR BLACK Ø 2,8mm
Order no.	<b>ST01H3PK3200</b>	<b>ST01H4PK3200</b>
Other standard types	<b>ST01H3PK3500</b>	<b>ST01H4PK3500</b>
cable length 5m	<b>ST01H3PK3M8</b>	<b>ST01H4PK3M8</b>
M8		
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-30V DC	5-30V DC
Current max.	200 mA max.	200 mA max.
Power max.	6W	6W
Voltage drop max.	1V	1V
LED colour	GREEN	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
Notes		

## Proximity switches ST02 series

PROXIMITY SWITCH FOR CYLINDER WITH ROUND GROOVES Ø4MM



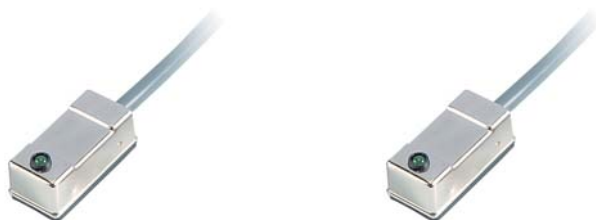
Product description	Reed 2 wire N/O	Solid state output 2 wire
Housing material	PA Black	PA Black
Number of contacts	2	2
Cable type	PUR GREY Ø 2,8mm	PUR GREY Ø 2,8 mm
Order no.	<b>ST02R2PK2200</b>	<b>ST02H2PK2200</b>
Other standard types	<b>ST02R2PK2500</b>	<b>ST02H2PK2500</b>
cable length 5m	<b>ST02R2PK2M8</b> (rated voltage only 5-50V)	<b>ST02H2PK2M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-120V AC/DC	10-28V DC
Current max.	100 mA max.	4-40mA max.
Power max.	10W	1,5 W
Voltage drop max.	3,5V	3,5V
LED colour	RED	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
		
		
Product description	PNP 3 wire N/O	NPN 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	3	3
Cable type	PUR GREY Ø 2,8mm	PUR GREY Ø 2,8 mm
Order no.	<b>ST02H3PK3200</b>	<b>ST02H4PK3200</b>
Other standard types	<b>ST02H3PK3500</b>	<b>ST02H4PK3500</b>
cable length 5m	<b>ST02H3PK3M8</b>	<b>ST02H4PK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-30V DC	5-30V DC
Current max.	200 mA max.	200 mA max.
Power max.	6W	6W
Voltage drop max.	1V	1V
LED colour	GREEN	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
Notes		

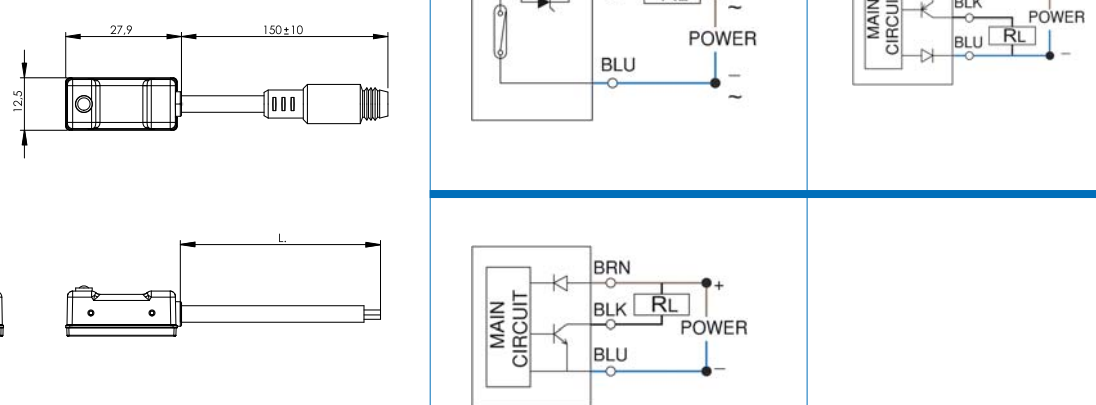
Proximity switches for magnetic cylinders



## Proximity switches **ST04** series

PROXIMITY SWITCH WITH METAL HOUSING  
FOR PNEUMATIC AND HYDRAULIC CYLINDERS



Product description	Reed 2 wire N/O	PNP 3 wire N/O
Housing material		
Number of contacts	2	3
Cable type	PVC GREY Ø 3,9mm	PVC GREY Ø 4mm
Order no.	<b>ST04R6PK2200</b>	<b>ST04H3PK3200</b>
Other standard types	<b>ST04R6PK2500</b>	<b>ST04H3PK3500</b>
cable length 5m	<b>ST04R6PK2M8</b> (rated voltage only 5-50V)	<b>ST04H3PK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-240V AC/DC	5-30V DC
Current max.	100 mA max.	200 mA max.
Power max.	10W	6W
Voltage drop max.	3,5V	1,5V
LED colour	GREEN	GREEN
Mounting	With bracket or clamp	With bracket or clamp
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
Drawing		
Product description	NPN 3 wire N/O	
Housing material		
Number of contacts	3	
Cable type	PVC GREY Ø 4mm	
Order no.	<b>ST04H4PK3200</b>	
Other standard types	<b>ST04H4PK3500</b>	
cable length 5m	<b>ST04H4PK3M8</b>	
Temperature range	min -10°C max 70°C	
Rated voltage	5-30V DC	
Current max.	200 mA max.	
Power max.	6W	
Voltage drop max.	1,5V max.	
LED colour	RED	
Mounting	With bracket or clamp	
Fixing screw torque	With accuracy	
Protection class (EN 60529)	IP67	
Notes		

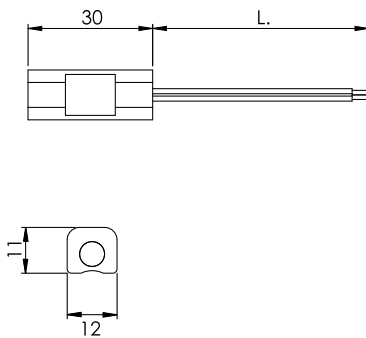
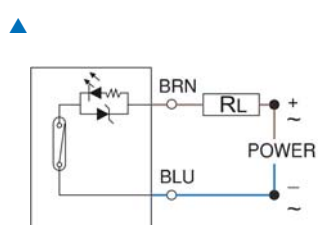
Proximity switches for magnetic cylinders

## Proximity switches **ST05** series

PROXIMITY SWITCH FOR HIGH TEMPERATURE

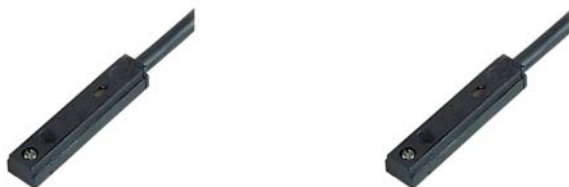


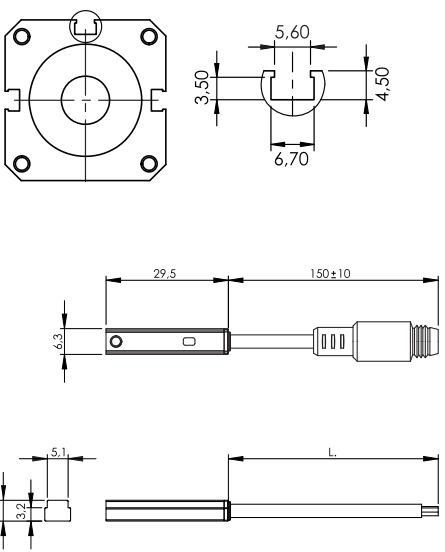
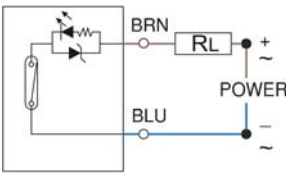
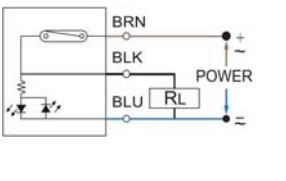
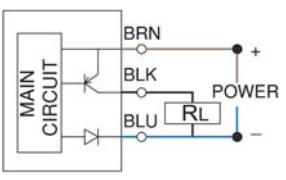
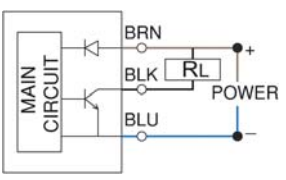
Proximity switches for magnetic cylinders

Product description		Reed 2 wire N/O
Housing material		Al (Stainless steel available)
Number of contacts		2
Cable type		TEFLON BLACK Ø 3 mm
Order no.		<b>ST05Z1TK2500</b>
Other standard types	cable length 10 M8	<b>ST05Z1TK210X</b>
Temperature range		min -10°C max 140°C
Rated voltage		5 - 240V AC/DC
Current max.		500 mA max.
Power max.		10W
Voltage drop max.		0,5V
LED colour		-
Mounting		only with bracket or clamp
Fixing screw torque		With accuracy
Protection class (EN 60529)		IP67
<b>Drawing</b> 		

## Proximity switches ST06 series

PROXIMITY SWITCH FOR T-SLOT CYLINDER



Product description	Reed 2 wire N/O	Reed 3 wire N/O
Housing material	PA black	PA black
Number of contacts	2	3
Cable type	PVC BLACK Ø 3mm	PVC BLACK Ø 3mm
Order no.	<b>ST06R6CK2200</b>	<b>ST06R3CK3200</b>
Other standard types	<b>ST06R6CK2500</b>	<b>ST06R3CK3500</b>
cable length 5m	<b>ST06R6CK2M8</b> (rated voltage only 5~50V)	<b>ST06R3CK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-240V AC/DC	10 - 30V AC/DC
Current max.	100 mA max.	500 mA max.
Power max.	10W	10W
Voltage drop max.	3,5V	0,1V
LED colour	RED	YELLOW
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
		
		
Product description	PNP 3 wire N/O	NPN 3 wire N/O
Housing material	PA black	PA black
Number of contacts	3	3
Cable type	PVC BLACK Ø 3,3mm	PVC BLACK Ø 3,3 mm
Order no.	<b>ST06H3CK3200</b>	<b>ST06H4CK3200</b>
Other standard types	<b>ST06H3CK3500</b>	<b>ST06H4CK3500</b>
cable length 5m	<b>ST06H3CK3M8</b>	<b>ST06H4CK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	10-30V DC	10-30V DC
Current max.	100 mA max.	100 mA max.
Power max.	3W	3W
Voltage drop max.	1,5V max.	1,5V max.
LED colour	YELLOW	RED
Mounting	With bracket or clamp	With bracket or clamp
Fixing screw torque	Slot screw	Slot screw
Protection class (EN 60529)	IP67	IP67
Notes		

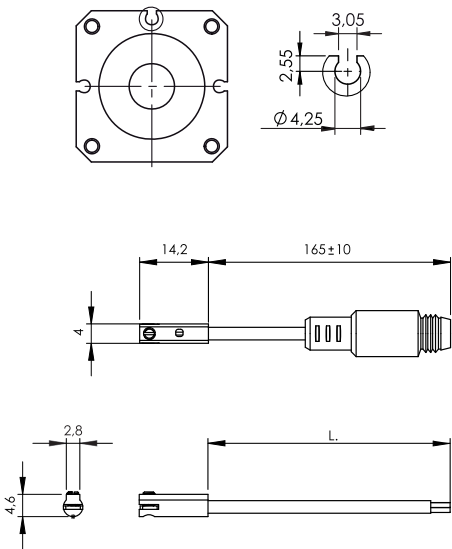
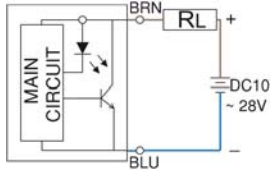
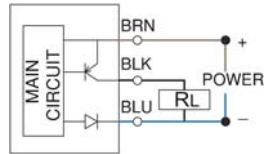
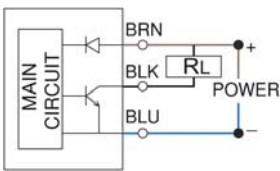
Proximity switches for magnetic cylinders

## Proximity switches **ST07** series

MIRCO PROXIMITY SWITCH FOR CYLINDER WITH ROUND GROOVES Ø4MM



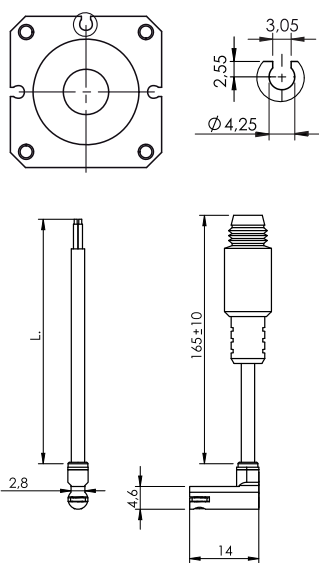
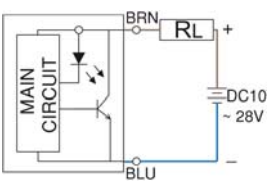
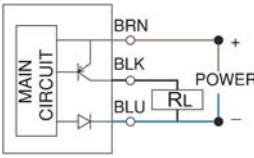
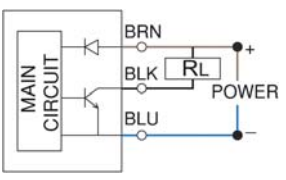
Proximity switches for magnetic cylinders

Product description	Solid state output 2 wire	PNP 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	PVC BLACK Ø 2,6mm	PVC BLACK Ø 2,6mm
Order no.	<b>ST07H2CK2200</b>	<b>ST07H3CK3200</b>
Other standard types	<b>ST07H2CK2500</b>	<b>ST07H3CK3500</b>
	<b>ST07H2CK2M8</b>	<b>ST07H3CK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	10~28V DC	4,5-28V DC
Current max.	4-20 mA max.	50mA max.
Power max.	0,6W	1,5 W
Voltage drop max.	3,5V	0,5V
LED colour	RED	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
		
		
Product description	NPN 3 wire N/O	
Housing material	PA Black	
Number of contacts	3	
Cable type	PVC BLACK Ø 2,6mm	
Order no.	<b>ST07H4CK3200</b>	
Other standard types	<b>ST07H4CK3500</b>	
	<b>ST07H4CK3M8</b>	
Temperature range	min -10°C max 70°C	
Rated voltage	4,5-28V DC	
Current max.	50mA max.	
Power max.	1,5 W	
Voltage drop max.	0,5V	
LED colour	RED	
Mounting	Slot screw	
Fixing screw torque	With accuracy	
Protection class (EN 60529)	IP67	
Notes		

## Proximity switches **ST08** series

MIRCO PROXIMITY SWITCH FOR CYLINDER WITH  
ROUND GROOVES Ø4MM WITH VERTICAL OUTPUT



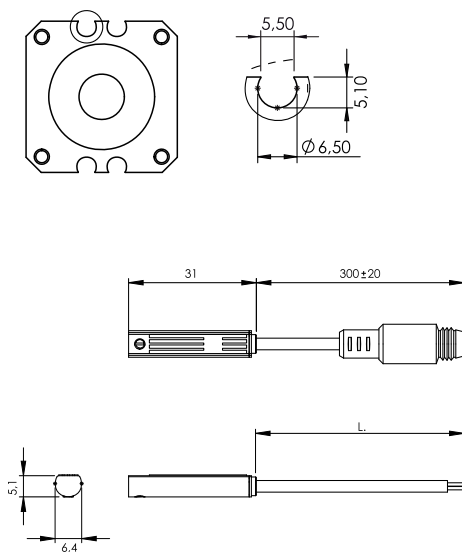
Product description	Solid state output 2 wire	PNP 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	PVC BLACK Ø 2,6mm	PVC BLACK Ø 2,6mm
Order no.	<b>ST08H2CK2200</b>	<b>ST08H3CK3200</b>
Other standard types	ST08H2CK2500	ST08H3CK3500
	ST08H2CK2M8	ST08H3CK3M8
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	10-28V DC	4,5-28V DC
Current max.	4~20 mA max.	50mA max.
Power max.	0,6W	1,5 W
Voltage drop max.	3,5V	0,5V
LED colour	RED	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
		
		
Product description	NPN 3 wire N/O	
Housing material	PA Black	
Number of contacts	3	
Cable type	PVC BLACK Ø 2,6mm	
Order no.	<b>ST08H4CK3200</b>	
Other standard types	ST08H4CK3500	
	ST08H4CK3M8	
Temperature range	min -10°C max 70°C	
Rated voltage	4,5-28V DC	
Current max.	50mA max.	
Power max.	1,5 W	
Voltage drop max.	0,5V	
LED colour	RED	
Mounting	Slot screw	
Fixing screw torque	With accuracy	
Protection class (EN 60529)	IP67	
Notes		

Proximity switches for magnetic cylinders

## Proximity switches **ST09** series

PROXIMITY SWITCH FOR CYLINDER WITH ROUND GROOVES Ø6.5MM

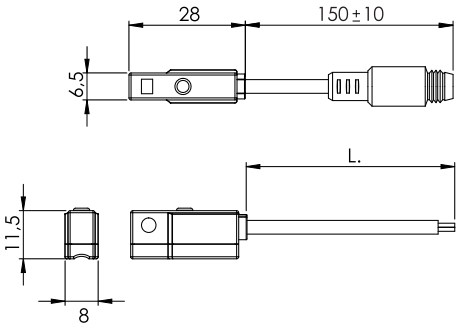
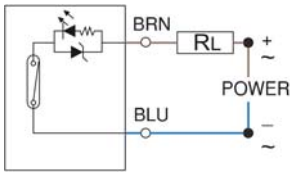
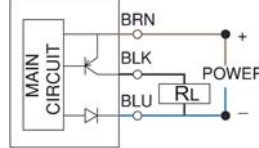
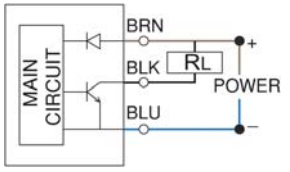


Product description	Reed 2 wire N/O	PNP 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	PUR GREY Ø 2,8mm	PUR BLACK Ø 2,8mm
Order no.	<b>ST09R6PK2200</b>	<b>ST09H3PK3200</b>
Other standard types	<b>ST09R6PK2500</b>	<b>ST09H3PK3500</b>
	<b>ST09R6PK2M8</b> (rated voltage only 5-50V)	<b>ST09H3PK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-240V AC/DC	10-30V DC
Current max.	100 mA max.	100mA max.
Power max.	10W	3W
Voltage drop max.	2,5V	1,5V
LED colour	RED	YELLOW
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
Product description	NPN 3 wire N/O	
Housing material	PA Black	
Number of contacts	3	
Cable type	PUR BLACK Ø 2,8mm	
Order no.	<b>ST09H4PK3200</b>	
Other standard types	<b>ST09H4PK3500</b>	
	<b>ST09H4PK3M8</b>	
Temperature range	min -10°C max 70°C	
Rated voltage	10-30V DC	
Current max.	100mA max.	
Power max.	3W	
Voltage drop max.	1,5V	
LED colour	RED	
Mounting	Slot screw	
Fixing screw torque	With accuracy	
Protection class (EN 60529)	IP67	
Notes		

## Proximity switches **ST10** series

PROXIMITY SWITCHES FOR ROUND CYLINDER



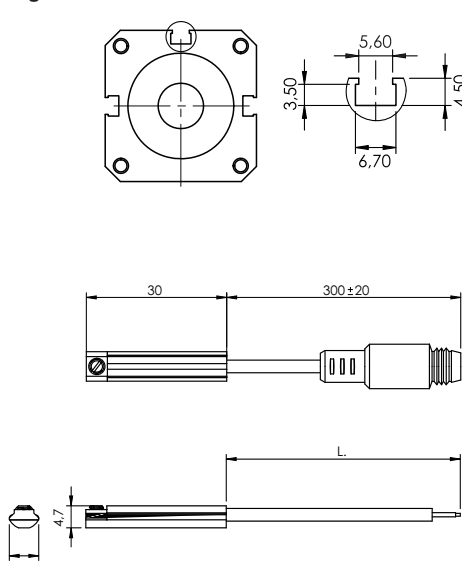
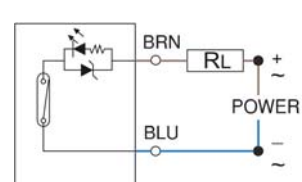
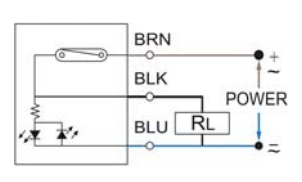
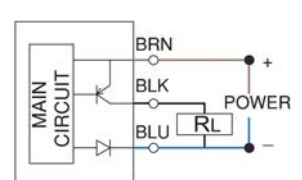
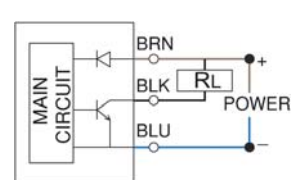
Product description	Reed 2 wire N/O	PNP 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	PVC GREY Ø 3,3mm	PVC BLACK Ø 3,3mm
Order no.	<b>ST10R6CK2200</b>	<b>ST10H3CK3200</b>
Other standard types	<b>ST10R6CK2500</b>	<b>ST10H3CK3500</b>
	cable length 5m	
	M8	
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-240V AC/DC	5-28V DC
Current max.	100 mA max.	50mA max.
Power max.	10W	1,5W
Voltage drop max.	2,5V	1,5V
LED colour	RED	GREEN
Mounting	Slot screw	Slot screw
Fixing screw torque	Only with bracket	Only with bracket
Protection class (EN 60529)	IP67	IP67
Drawing		
		
		
Product description	NPN 3 wire N/O	
Housing material	PA Black	
Number of contacts	3	
Cable type	PVC BLACK Ø 3,3mm	
Order no.	<b>ST10H4CK3200</b>	
Other standard types	<b>ST10H4CK3500</b>	
	cable length 5m	
	M8	
Temperature range	min -10°C max 70°C	
Rated voltage	5-28V DC	
Current max.	50mA max.	
Power max.	1,5W	
Voltage drop max.	1,5V	
LED colour	RED	
Mounting	Slot screw	
Fixing screw torque	Only with bracket	
Protection class (EN 60529)	IP67	
Notes		

Proximity switches for magnetic cylinders

## Proximity switches **ST11** series

PROXIMITY SWITCH FOR CYLINDER WITH T-GROOVES  
(HEIGHT 3.5MM)

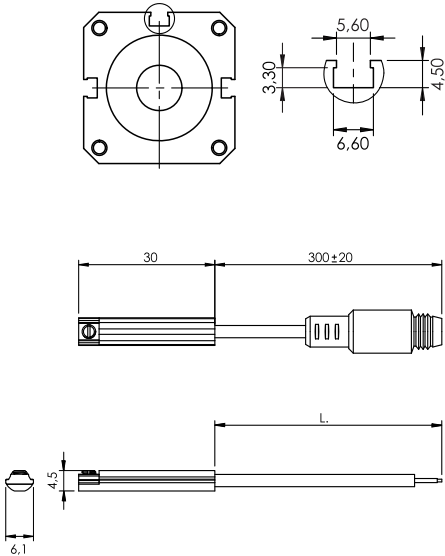
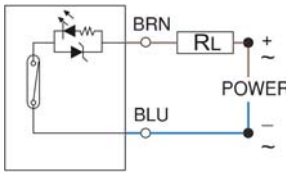
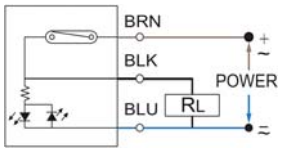
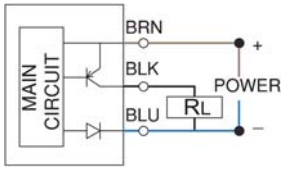
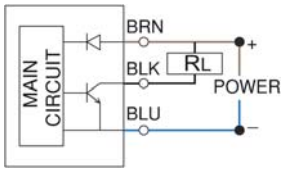


Product description	Reed 2 wire N/O	Reed 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	PUR GREY Ø 3mm	PUR BLACK Ø 3mm
Order no.	<b>ST11R6PK2200</b>	<b>ST11R3PK3200</b>
Other standard types	<b>ST11R6PK2500</b>	<b>ST11R3PK3500</b>
cable length 5m	<b>ST11R6PK2M8</b> (rated voltage only 5-50V)	<b>ST11R3PK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-240V AC/DC	10-30V AC/DC
Current max.	100 mA max.	500mA max.
Power max.	10W	10W
Voltage drop max.	3V	0,1V
LED colour	RED	YELLOW
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
		
		
Product description	PNP 3 wire N/O	NPN 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	3	3
Cable type	PUR BLACK Ø 3mm	PUR BLACK Ø 3mm
Order no.	<b>ST11H3PK3200</b>	<b>ST11H4PK3200</b>
Other standard types	<b>ST11H3PK3500</b>	<b>ST11H4PK3500</b>
cable length 5m	<b>ST11H3PK3M8</b>	<b>ST11H4PK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	10-30V DC	10-30V DC
Current max.	200mA max.	200mA max.
Power max.	6W	6W
Voltage drop max.	1,5V	1,5V
LED colour	YELLOW	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
Notes	Version available: Solid state 2 Wire, Reed N/C and PNP N/C	

## Proximity switches **ST12** series

PROXIMITY SWITCH FOR CYLINDER WITH T-GROOVES  
(HEIGHT 3.3MM)



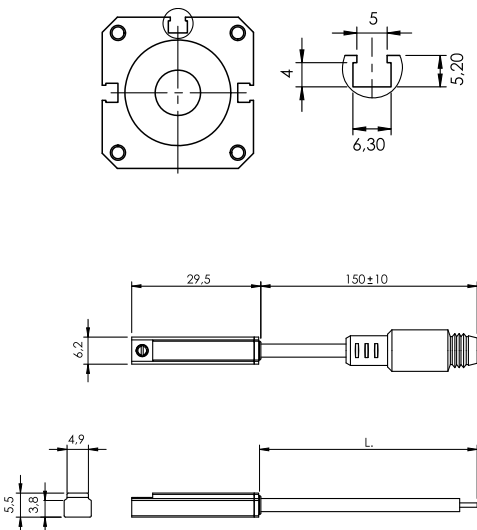
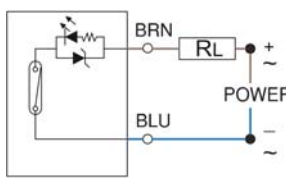
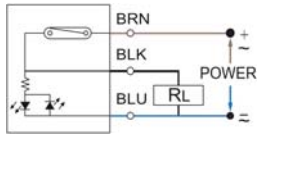
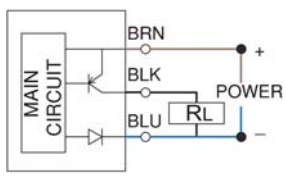
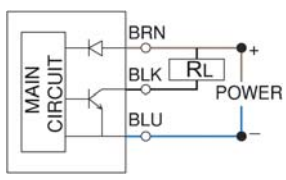
Product description	Reed 2 wire N/O	Reed 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	PUR GREY Ø 3mm	PUR BLACK Ø3mm
Order no.	<b>ST12R6PK2200</b>	<b>ST12R3PK3200</b>
Other standard types	<b>ST12R6PK2500</b>	<b>ST12R3PK3500</b>
	cable length 5m	
	M8	
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-240V AC/DC	10-30V AC/DC
Current max.	100 mA max.	500mA max.
Power max.	10W	10W
Voltage drop max.	3V	0,1V
LED colour	RED	YELLOW
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
Drawing		
		
		
Product description	PNP 3 wire N/O	NPN 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	3	3
Cable type	PUR BLACK Ø 3mm	PUR BLACK Ø 3mm
Order no.	<b>ST12H3PK3200</b>	<b>ST12H4PK3200</b>
Other standard types	<b>ST12H3PK3500</b>	<b>ST12H4PK3500</b>
	cable length 5m	
	M8	
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	10-30V DC	10-30V DC
Current max.	200mA max.	200mA max.
Power max.	6W	6W
Voltage drop max.	1,5V	1,5V
LED colour	YELLOW	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
Notes	Version available: Solid state 2 Wire, Reed N/C and PNP N/C	

Proximity switches for magnetic cylinders

## Proximity switches **ST13** series

PROXIMITY SWITCH FOR CYLINDER WITH T-GROOVES

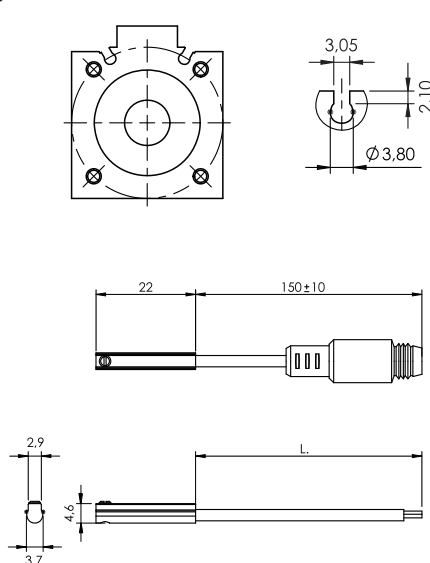
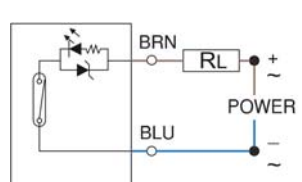
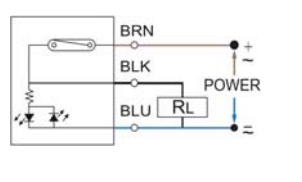
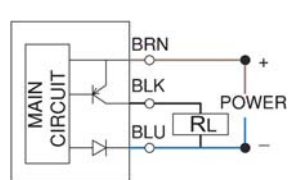
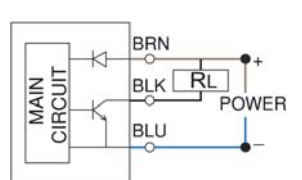


Product description	Reed 2 wire N/O	Reed 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	PUR BLACK Ø 3mm	PUR BLACK Ø 3mm
Order no.	<b>ST13R6PK2200</b>	<b>ST13R3PK3200</b>
Other standard types	<b>ST13R6PK2500</b>	<b>ST13R3PK3500</b>
	<b>ST13R6PK2M8</b> (rated voltage only 5-50V)	<b>ST13R3PK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-240V AC/DC	10-30V DC
Current max.	100 mA max.	500mA max.
Power max.	10W	10W
Voltage drop max.	3,5V	0,1V
LED colour	RED	YELLOW
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
		
		
Product description	PNP 3 wire N/O	NPN 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	3	3
Cable type	PUR BLACK Ø 3mm	PUR BLACK Ø 3mm
Order no.	<b>ST13H3PK3200</b>	<b>ST13H4PK3200</b>
Other standard types	<b>ST13H3PK3500</b>	<b>ST13H4PK3500</b>
	<b>ST13H3PK3M8</b>	<b>ST13H4PK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	10-30V DC	10-30V DC
Current max.	100mA max.	100mA max.
Power max.	3W	3W
Voltage drop max.	1,5V	1,5V
LED colour	YELLOW	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
Notes		

## Proximity switches **ST14** series

PROXIMITY SWITCH FOR CYLINDER WITH ROUND GROOVES Ø3.7 MM

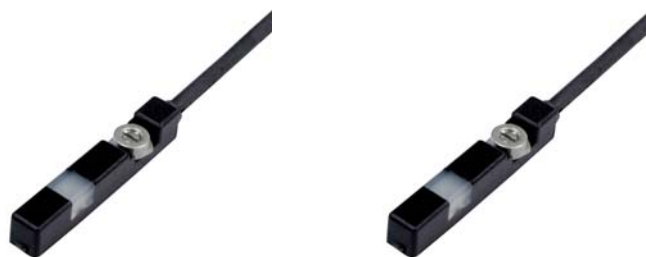


Product description	Reed 2 wire N/O	Reed 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	PUR GREY Ø 2,5 mm	PUR GREY Ø 2,5mm
Order no.	<b>ST14R2PK2200</b>	<b>ST14R3PK3200</b>
Other standard types	<b>ST14R2PK2500</b>	<b>ST14R3PK3500</b>
	cable length 5m	
	M8	
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-120V AC/DC	10-30V DC
Current max.	100 mA max.	500mA max.
Power max.	10W	10W
Voltage drop max.	3,5V	0,1V
LED colour	YELLOW	YELLOW
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
		
		
Product description	PNP 3 wire N/O	NPN 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	3	3
Cable type	PUR GREY Ø 2,5 mm	PUR GREY Ø 2,5mm
Order no.	<b>ST14H3PK3200</b>	<b>ST14H4PK3200</b>
Other standard types	<b>ST14H3PK3500</b>	<b>ST14H4PK3500</b>
	cable length 5m	
	M8	
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	10-30V DC	10-30V DC
Current max.	200mA max.	200mA max.
Power max.	6W	6W
Voltage drop max.	0,5V	0,5V
LED colour	YELLOW	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
Notes		

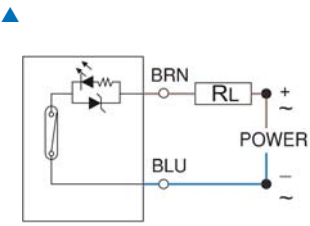
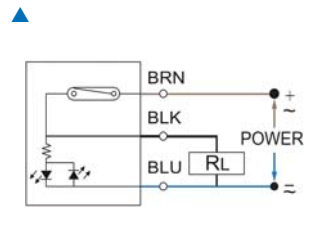
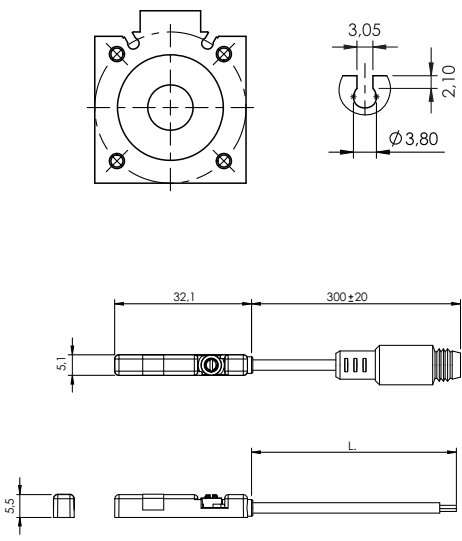
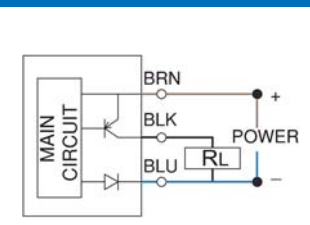
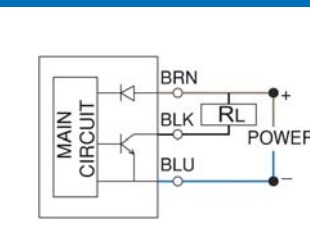
Proximity switches for magnetic cylinders

## Proximity switches **ST15** series

PROXIMITY SWITCH FOR CYLINDER WITH T-GROOVES



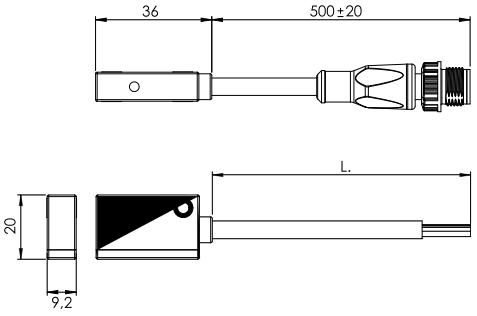
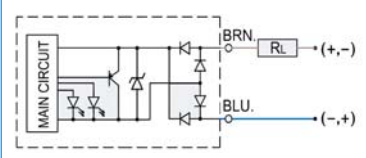
Proximity switches for magnetic cylinders

Product description	Reed 2 wire N/O	Reed 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	PUR BLACK Ø 2,5mm	PUR BLACK Ø 2,5mm
Order no.	<b>ST15R6PK2200</b>	<b>ST15R3PK3200</b>
Other standard types	<b>ST15R6PK2500</b>	<b>ST15R3PK3500</b>
	<b>ST15R6PK2M8</b> (rated voltage only 5-50V)	<b>ST15R3PK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	5-240V AC/DC	10-30V DC
Current max.	100 mA max.	500mA max.
Power max.	10W	10W
Voltage drop max.	3V	0,1V
LED colour	RED	YELLOW
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
<b>Drawing</b>		
		
Product description	PNP 3 wire N/O	NPN 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	3	3
Cable type	PUR BLACK Ø 2,5mm	PUR BLACK Ø 2,5mm
Order no.	<b>ST15H3PK3200</b>	<b>ST15H4PK3200</b>
Other standard types	<b>ST15H3PK3500</b>	<b>ST15H4PK3500</b>
	<b>ST15H3PK3M8</b>	<b>ST15H4PK3M8</b>
Temperature range	min -10°C max 70°C	min -10°C max 70°C
Rated voltage	10-30V DC	10-30V DC
Current max.	200mA max.	200mA max.
Power max.	6W	6W
Voltage drop max.	1,5V	1,5V
LED colour	YELLOW	RED
Mounting	Slot screw	Slot screw
Fixing screw torque	With accuracy	With accuracy
Protection class (EN 60529)	IP67	IP67
Notes		

# Proximity switches **ST16** series

PROXIMITY SWITCH WELD-FIELD IMMUNE



Product description		Solid state output
Housing material		PA Black
Number of contacts		2
Cable type		PVC GREY Ø 5,4mm
Order no.		<b>ST16H2CK2200</b>
Other standard types	cable length 4m	<b>ST16H2CK2400</b>
	M12	<b>ST16H2CK2M12</b>
Temperature range		min -10°C max 70°C
Rated voltage		10-28V AC/DC
Current max.		5~50 mA max.
Power max.		1,5W
Voltage drop max.		5V
LED colour		GREEN
Mounting		Slot screw
Fixing screw torque		With accuracy
Protection class (EN 60529)		IP67
<b>Drawing</b>  		

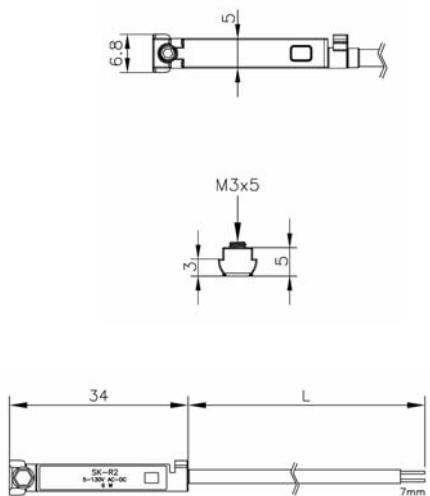
Proximity switches for magnetic cylinders

## Proximity switches **SK** series

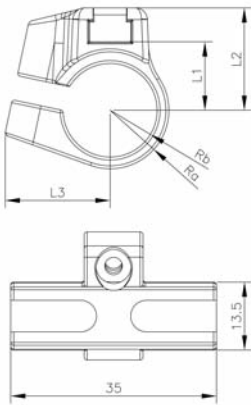
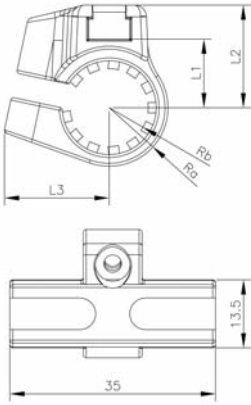
PROXIMITY SWITCH FOR CYLINDER WITH T-GROOVES



Proximity switches for magnetic cylinders

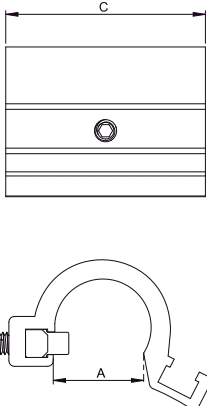
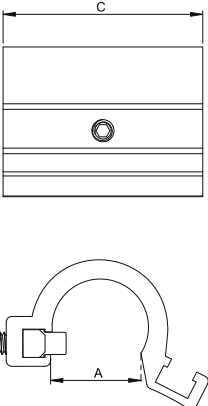
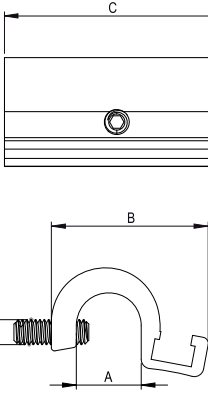
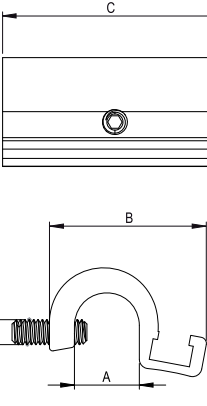
Product description	Reed 2 wire N/O	Reed 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	2	3
Cable type	CEI 2022 II O.R. grey RAL7035	CEI 2022 II O.R. grey RAL7036
Order no.	<b>SKR2C01200</b>	<b>SKR3C01200</b>
Other standard types	<b>SKR2C01500</b>	<b>SKR3C01500</b>
M8	<b>SKR2P01M8</b> (rated voltage only 5-50V)	<b>SKR3P01M8</b>
Temperature range	min -5°C max 70°C	min -5°C max 70°C
Rated voltage	5-130V AC/DC	5-30 V AC/DC
Current max.	200 mA	500 mA
Power max.	10 W	6 W
Voltage drop max.	3V	0,1V
LED colour	YELLOW	YELLOW
Mounting	hexagonal headless M3 screw	hexagonal headless M3 screw
Fixing screw torque	max. 0,15 N/m	max. 0,15 N/m
Protection class (EN 60529)	IP67	IP67
Drawing		
Product description	PNP 3 wire N/O	NPN 3 wire N/O
Housing material	PA Black	PA Black
Number of contacts	3	3
Cable type	CEI 2022 II O.R. grey RAL7035	PUR BLACK Ø 2,5mm
Order no.	<b>SKH2C01200</b>	<b>SKH4C01200</b>
Other standard types	<b>SKH2C01500</b>	<b>SKH4C01500</b>
M8	<b>SKH2P01M8</b>	<b>SKH4P01M8</b>
Temperature range	min -5°C max 70°C	min -5°C max 70°C
Rated voltage	30 V DC	10-30V DC
Current max.	200mA max.	200mA max.
Power max.	4W	6W
Voltage drop max.	0,7 V	1,5V
LED colour	YELLOW	YELLOW
Mounting	hexagonal headless M3 screw	hexagonal headless M3 screw
Fixing screw torque	max. 0,15 N/m	max. 0,15 N/m
Protection class (EN 60529)	IP67	IP67
Notes		

FASTENING SYSTEMS INDEX	PAG
<b>Fastening systems for SK series</b>	Locking bands and brackets .....30-31
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<b>Fastening systems for ST04/ST10 series</b>	Locking bands .....33
<b>Fastening systems for ST06/ST11/ST12/ST15 series</b>	Brackets .....34
<b>Fastening systems for ST11 series</b>	Locking bands .....35

Sensor series	SK	SK	
Description	Locking bands SK for aluminium micro cylinders ISO 6432 with M3 stainless steel nut and stainless steel hexagonal screw	Locking bands SK for inox micro cylinders ISO 6432 with M3 stainless steel nut and stainless steel hexagonal screw	
Housing colour	black	black	
Order no. (Cylinder bore)	bore 8 Order no. <b>SA08</b>	Order no. <b>SF08</b>	
	bore 10 Order no. <b>SA10</b>	Order no. <b>SF10</b>	
	bore 12 Order no. <b>SA12</b>	Order no. <b>SF12</b>	
	bore 16 Order no. <b>SA16</b>	Order no. <b>SF16</b>	
	bore 20 Order no. <b>SA20</b>	Order no. <b>SF20</b>	
	bore 25 Order no. <b>SA25</b>	Order no. <b>SF25</b>	
	suitable for bores 32 to 63		
	suitable for bores 80 to 100		
Drawing			
Technical data			
Mounting	Hexagonal M3 stainless steel screw	Hexagonal M3 stainless steel screw	
Fixing screw torque	max. 0,5 N/m	max. 0,5 N/m	
Dimension	o. no= L1 L2 L3 Rb Ra SA08= 9 16 14 4,7 8 (mm) SA10= 9 16 15,5 5,5 9,5 (mm) SA12= 12 17,5 17 6,7 11,5 (mm) SA16= 13 18,5 20,5 8,7 13,5 (mm) SA20= 15 20,5 21,5 10,5 15,5 (mm) SA25= 17 23 22,5 13,5 18 (mm)	o. no= L1 L2 L3 Rb Ra SF08= 9 16 14 4,7 7,5 (mm) SF10= 9 16 15,5 5,5 8 (mm) SF12= 12 17,5 17 6,7 10 (mm) SF16= 13 18,5 20,5 8,7 12 (mm) SF20= 15 20,5 21,5 10,5 14 (mm) SF25= 17 23 22,5 13,5 16,5 (mm)	
Material			
Housing material	PA6 GF	PA6 GF	
Packaging			
Minimum quantity	100 pieces	100 pieces	
Number of boxes suitable:	1 box	all types	
Approximate weight per box	1 Kg	1 Kg	
Box dimension	29 x 15 x 18 cm	29 x 15 x 18 cm	
Notes			

## Fastening systems for SK series

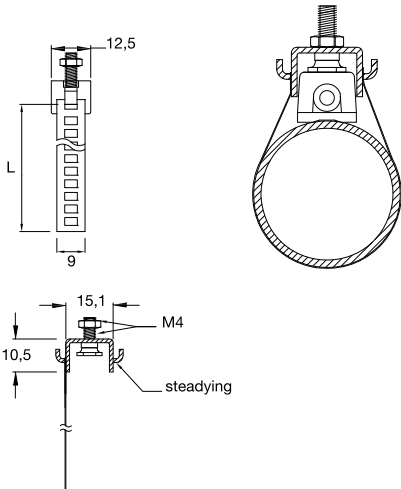
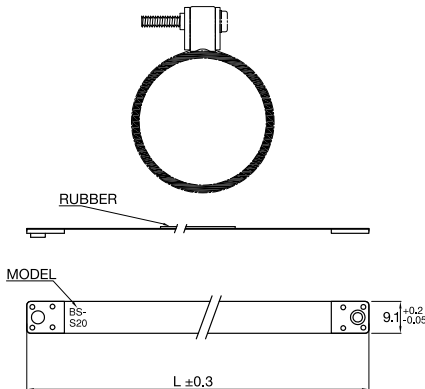
### BRACKETS

SK	SK	SK	SK
Brackets SK for ISO 15552/VDMA24562 cylinders	Brackets SK for ISO 15552/VDMA24562 cylinders	Brackets SK for tie rods CNOMO cylinder	Brackets SK for tie rods CNOMO cylinders
1 screw M4x6 and 1 screw M3x6	1 screw M4x6	1 screw M5x8 and 1 screw M3x6	1 screw M5x8
Order no. <b>SCF32</b>	Order no. <b>SCF80</b>	Order no. <b>SCD32</b>	Order no. <b>SCD80</b>
			
Hexagonal M4 stainless steel screw max. 0,5 N/m max. 0,5 N/m	Hexagonal M4 stainless steel screw max. 0,5 N/m max. 0,5 N/m	Hexagonal M4 stainless steel screw max. 0,5 N/m max. 0,5 N/m	Hexagonal M4 stainless steel screw max. 0,5 N/m max. 0,5 N/m
o. no = A; B; C	o. no = A; B; C	o. no = A; B; C	o. no = A; B; C
SCF32 = 12,1; 10,4; 36 (mm)	SCF80 = 16,3; 15; 36 (mm)	SCD32 = 7,9; 22,7; 36 (mm)	SCD80 = 10,4; 25,2; 36 (mm)
aluminium	aluminium	aluminium	aluminium
100 pieces	100 pieces	100 pieces	100 pieces
all types	all types	all types	all types
2 Kg	2 Kg	2 Kg	2 Kg
29 x 15 x 18 cm	29 x 15 x 18 cm	29 x 15 x 18 cm	29 x 15 x 18 cm

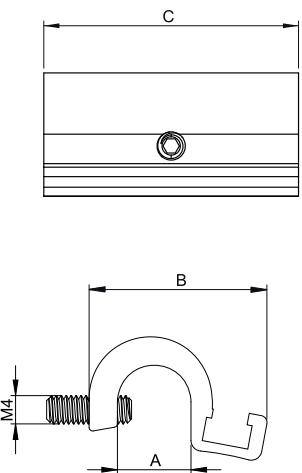
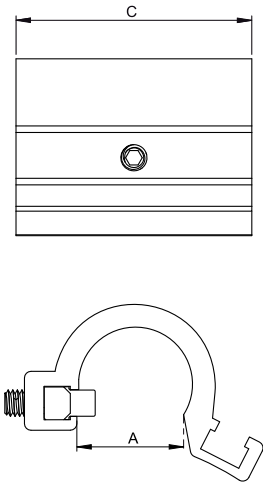
Fastening systems for SK series

Sensor series	ST04/ST05	ST04/ST05
Description	Brackets for tie rods CNOMO cylinders 1 screw M4x10 and 1 screw M2,6	Brackets for ISO 15552 / VDMA24562 cylinders 1 screw M4x10 and 1 screw M2,6x6
Housing colour	Silver	Silver
Order no. (Cylinder bore; order no.)	bore 6 ; Order no. <b>STD T6</b> bore 8 ; Order no. <b>STD T8</b> bore 10 ; Order no. <b>STD T10</b> bore 12 ; Order no. <b>STD T12</b> bore 14 ; Order no. <b>STD T14</b> bore 16 ; Order no. <b>STD T16</b>	bore 32/40 ; Order no. <b>STD M32</b> bore 50/63 ; Order no. <b>STD M50</b> bore 80 ; Order no. <b>STD M80</b> bore 100 ; Order no. <b>STD M100</b> bore 125 ; Order no. <b>STD M125</b> bore 150 ; Order no. <b>STD M163</b>
Drawing		
Technical data		
Mounting	Hexagonal M2,6 stainless steel screw	Hexagonal M2,6 stainless steel screw
Fixing screw torque	max. 0,5 N/m	max 0,15 N/m
Dimension	o. no =   A;     B;   C;   D	o. no       =      A;     B
	STD T6 = 19,1; 31,3; 7,3; 12 (mm)	STD M32     =   11,5;  10,4 (mm)
	STD T8   = 18,4; 33,5; 9,5; 12 (mm)	STD M50     =   14,10; 13,5 (mm)
	STD T10 = 16,7; 35,7; 11,2; 12 (mm)	STD M80     =  15,54;   15 (mm)
	STD T12 = 20; 35,5; 11,5; 12 (mm)	STD M100    =   16,3;   16 (mm)
	STD T14 = 24; 38,0; 13,5; 12 (mm)	STD M125    =   19,8;  18,7 (mm)
	STD T16 = 24; 40,0; 15,5; 12 (mm)	STD M150    =   26,5; 25,65 (mm)
Material		
Housing material	Aluminium	aluminium
Packaging		
Minimum quantity	100 pieces	100 pieces
Number of boxes suitable:	all types	all types
Approximate weight per box	1 Kg	2 Kg
Box dimension		

## LOCKING BANDS

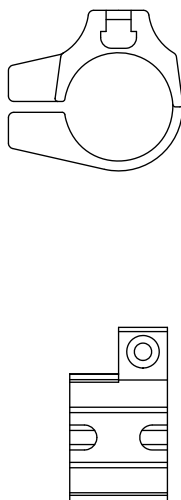
	<b>ST04</b>	<b>ST10</b>
	Locking bands for round cylinder	Locking bands for round cylinder
	Order no. for Ø 6 to Ø 125 cylinder: <b>STBU125</b>	diam 6 mm    Order no. <b>STES06</b> Stainless Steel
	Order no. for Ø 6 to Ø 250 cylinder: <b>STBU250</b>	diam 8 mm    Order no. <b>STES08</b> Stainless Steel
		diam 10 mm    Order no. <b>STES10</b> Stainless Steel
		diam 12 mm    Order no. <b>STES12</b> Stainless Steel
		diam 16 mm    Order no. <b>STES16</b> Stainless Steel
		diam 20 mm    Order no. <b>STES20</b> Stainless Steel <b>STE A20</b> Aluminium
		diam 25 mm    Order no. <b>STES25</b> Stainless Steel <b>STE A25</b> Aluminium
		diam 30 mm    Order no. <b>STE A30</b> Aluminium
		diam 32 mm    Order no. <b>STES32</b> Stainless Steel <b>STE A32</b> Aluminium
		diam 40 mm    Order no. <b>STES40</b> Stainless Steel <b>STE A40</b> Aluminium
		diam 50 mm    Order no. <b>STE A50</b> Aluminium
		diam 63 mm    Order no. <b>STE A63</b> Aluminium
		diam 80 mm    Order no. <b>STE A80</b> Aluminium
		
	Hexagonal M4 stainless steel screw max. 0,5 N/m	
	AISI 316	
	100 pieces	
	all types	
	1 Kg	

# Fastening systems for ST04/ST10 series

Sensor series	ST6/ST11/ST12/ST15	ST6/ST11/ST12/ST15
Description	Brackets for tie rods CNOMO cylinders	Brackets for ISO 15552 / VDMA24562 cylinders
Housing colour	Silver	Silver
Order no. (Cylinder bore ; Order no.)	bore 6     ;   Order no. <b>STCT06</b>	bore 32/40   ;   Order no. <b>STCM32</b>
	bore 8     ;   Order no. <b>STCT08</b>	bore 50/63   ;   Order no. <b>STCM50</b>
	bore 14   ;   Order no. <b>STCT14</b>	bore 80      ;   Order no. <b>STCM80</b>
	bore 20   ;   Order no. <b>STCT20</b>	bore 100     ;   Order no. <b>STCM100</b>
		bore 125     ;   Order no. <b>STCM125</b>
Drawing		
Technical data		
Mounting	Hexagonal M4 stainless steel screw	Hexagonal M4 stainless steel screw
Fixing screw torque	max. 0,5 N/m	max. 0,5 N/m
Dimension	o. no   =   A;   B;   C STCT06 = 7,9; 22,7; 25 (mm) STCT08 = 10,4; 25,2; 25 (mm) STCT14 = 15,1; 30; 25 (mm) STCT20 = 20,6; 35,4; 25 (mm)	o. no   =   A;   B;   C STCM32 = 12,1; 10,4; 25 (mm) STCM50 = 15,9; 13,5; 25 (mm) STCM80 = 16,3; 15; 25 (mm) STCM100 = 17,9; 16; 25 (mm) STCM125 = 19,7; 18,7; 25 (mm)
Material		
Housing material	Aluminium	Aluminium
Packaging		
Minimum quantity	100 pieces	100 pieces
Number of boxes suitable	all types	all types
Approximate weight per box	1 Kg	1 Kg
Box dimension	29 x 15 x 18 cm	29 x 15 x 18 cm

## Fastening systems for **ST11** series

### LOCKING BANDS

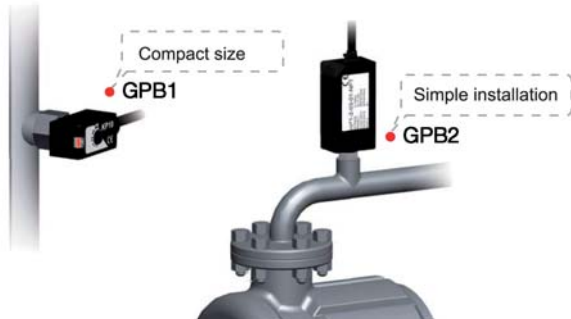
	ST11	ST11			
	Locking bands for round cylinder				
	Black				
	suitable for bores 32 to 63 ; Order no. <b>SCM32</b>	diam 9,3 mm	Order no. <b>STA1</b>	diam 26,3 mm	Order no. <b>STA13</b>
		diam 11,3 mm	Order no. <b>STA2</b>	diam 27 mm	Order no. <b>STA14</b>
		diam 12 mm	Order no. <b>STA3</b>	diam 29 mm	Order no. <b>STA15</b>
		diam 13,3 mm	Order no. <b>STA4</b>	diam 30 mm	Order no. <b>STA16</b>
		diam 14 mm	Order no. <b>STA5</b>	diam 33,6 mm	Order no. <b>STA17</b>
		diam 16 mm	Order no. <b>STA6</b>	diam 36 mm	Order no. <b>STA18</b>
		diam 17,3 mm	Order no. <b>STA7</b>	diam 41,6 mm	Order no. <b>STA19</b>
		diam 18 mm	Order no. <b>STA8</b>	diam 45 mm	Order no. <b>STA20</b>
		diam 20 mm	Order no. <b>STA9</b>	diam 52,4 mm	Order no. <b>STA21</b>
		diam 21,3 mm	Order no. <b>STA10</b>	diam 55 mm	Order no. <b>STA22</b>
		diam 22 mm	Order no. <b>STA11</b>	diam 65,4 mm	Order no. <b>STA23</b>
		diam 24 mm	Order no. <b>STA12</b>	diam 68 mm	Order no. <b>STA24</b>
					
	M3 screw				
	PA6 GF				
	100 pieces				
	all types				
	2 Kg				
	29 x 15 x 18 cm				

Fastening systems for ST11 series



PRESSURE SWITCHES	PAG
PRESSURE SWITCHES	application.....38
PRESSURE SWITCHES	caution.....39
GPB1 series	 compact pressure switch with plug-in or thread-in fitting for non-corrosive and non flammable gas .....40
GPB2 series	 with hysteresis adjustable, for non-corrosive and non flammable gas .....40
GPB3 series	 with hysteresis adjustable, IP40 for air, non corrosive and non flammable gas .....42
GPB4 series	 with hysteresis adjustable, IP65 for air, non corrosive and non flammable gas .....44
GPB5 series	 with hysteresis adjustable, IP40 for air, non corrosive and non flammable gas .....46
GPM6/7 series	 pressure gage, IP65 for filtered air, non corrosive and non flammable gas .....46

## > 1 DETECTION OF LINE PRESSURE



## > 2 PRESSURE DISPLAY OF LINE PRESSURE

Digital display, easy readout  
Replace traditional analog gauge



## > 3 PRESSURE DISPLAY AND CONTROL OF PNEUMATIC EQUIPMENT

Two switch outputs and one analog output: 1-5V  
Hysteresis adjustable



## > 4 PRESSURE DISPLAY AND CONTROL OF PRESSURE IN RESERVOIR TANK

Programmable pressure unit:  
8 types IP65 enclosure,  
dust-proof and splash-proof



## > 5 PRESSURE DISPLAY AND CONTROL OF PRESS MACHINE

Two switch outputs and one analog output: 1-5V  
High display accuracy:  $\pm 0,2\%$  F.S.



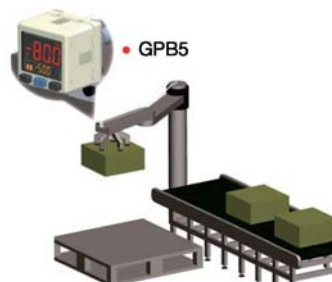
## > 6 LEAKAGE TEST

2-color digital display,  
easy readout



## > 7 OPERATION OF SUCTION PADS, TRANSPORT

3-color digital LCL display, easy readout  
2 NPN or 2 PNP output  
Analog output: 1-5V or 4-20mA



## > 8 PRESSURE DISPLAY OF F.R.L. UNIT

Battery type switch  
Digital display  
IP65

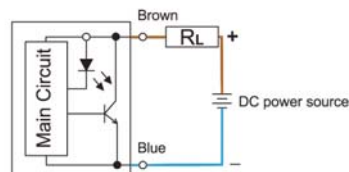


## Pressure switches

### APPLICATION AND CAUTION

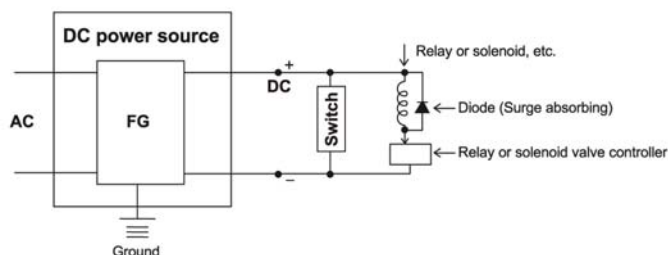
➤ **1** When using a 2-wire type pressure switch (KP-101/102), please make sure it is connected to a proper resistance load. Otherwise excessive current will damage the switch permanently.

➤ **2** When using a 2-wire type pressure switch (KP-101/102), only connect it to a DC power source, and aware of proper connection.

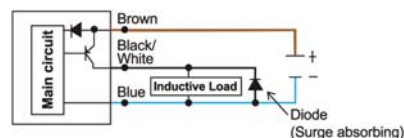
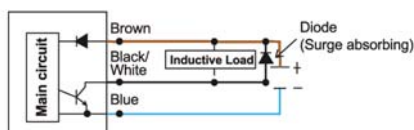
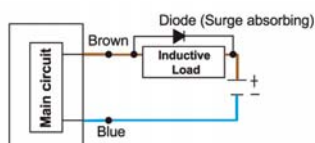


➤ **3** To improve stability of the pressure switch and the whole circuit in general it is recommended to properly ground the DC power source.

If the same power source for the pressure switch is used with other inductive loads (such as relay or solenoid), attach a circuit protection diode or surge suppressor to prevent damages to the pressure switch.



➤ **4** When using with inductive load (such as relay or solenoid), please install a protection circuit parallel to the load to prolong the service life of pressure switch. If using with DC inductive load, install a diode across the load to remove surge, but polarity must be observed or damages to pressure switch may occur.



➤ **5** Before installation or removal, please make sure the power is OFF, line pressure has been released, to avoid personnel injuries and damages to the pressure switch or other losses.

➤ **6** Please properly ground all noise inducing equipment (such as induction motor), avoid noise affect the pressure switch normal operation.

➤ **7** Do not use corrosive gases or liquids as pressure media.

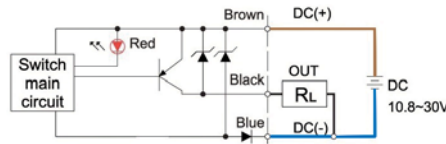
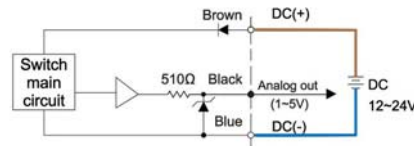
Pressure switches - caution

## Pressure switch **GPB1** series

COMPACT PRESSURE SWITCH WITH PLUG-IN OR THREAD-IN FITTING,  
FOR NON-CORROSIVE AND NON-FLAMMABLE GAS



# Pressure switches

Product description				
Type	GPB1B5 _ _ _ _	GPB1D5 _ _ _ _	GPB1B6 _ _ _ _	GPB1C6 _ _ _ _
Pressure range	0 to -101,3 kPa	0 to 0,6 MPa	0 to -101,3 kPa	0 to 1,0 MPa
Withstand pressure	0,6 MPa	1,5 MPa	0,2 MPa	1,5 MPa
Accuracy	±3% F.S. of detected pressure @ 25°C		±2% F.S. of detected pressure @ 25°C	
Rated voltage	12 to 24 V DC (±10% ripple voltage)			
Output type	PNP		Analog	
Current consumption max.	Open collector 2 outputs, max current load: 80 mA		1 to 5V ± 1% F.S.	
	10 mA			
	<div><p><b>PNP Output</b></p></div> <div><p><b>Analog Output</b></p></div>			
Output short circuit protection	yes		no	
Response time	1,5 ms max			
Repeatability	± 1% F.S.		-	
Hysteresis	3% F.S. max.		-	
Function indicator	Red LED turns ON		-	
Enviromental condition				
Temperature operation range	min. 0°C ; max. 50°C (No condensation or freezing)			
Temperature storage range	min. -20°C ; max. 60°C (No condensation)			
Ambient humidity range	Operation/Storage: 35 to 85 % RH			
Vibration	Total amplitude 1,5mm, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X,Y and Z			
Shock	980m/s²(100G), 3 times each direction of X,Y and Z			
Protection class (EN 60529)	IP40 when correctly assembled			
Cable type	oil - resistance (0,18mm²)			
Weight	approx. 50g (with 2m lead wire)			

### How to order

#### Pressure range

**B** (0 to -101,3 kPa)

**C** (C\* - 0 to 1,0 MPa)

**D\*** (0 to 0,6 MPa)

#### Type

**GPB1**

#### Output

**5** (PNP)

**6** (Analog, 1-5V)

#### Pressure port

**A** (1/8 PT - M5)

**B** (1/8 PT - M5)

**C** (1/8GAS - M5)

**D** (Ø 4 mm)

**E** (Ø 6 mm)

**F** (M5x0,8)

#### Connection

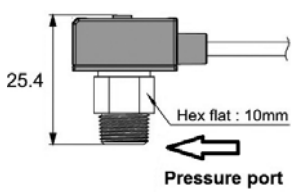
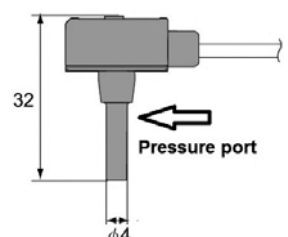
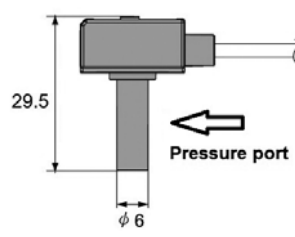
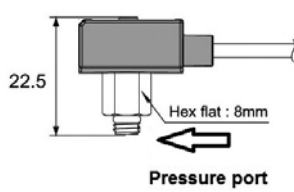
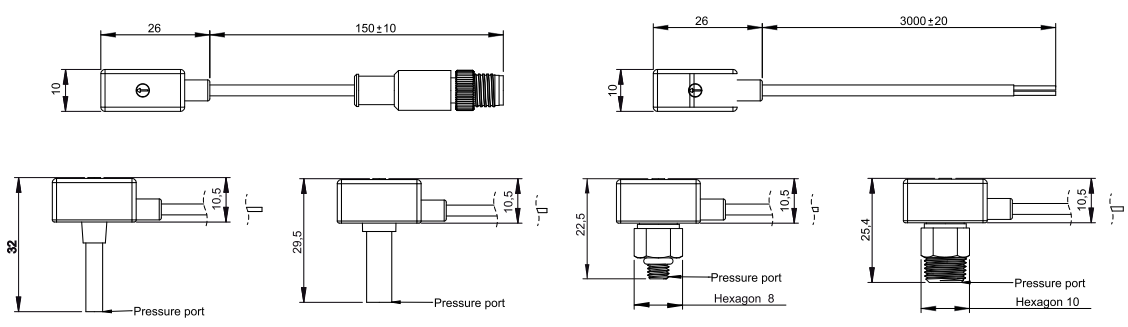
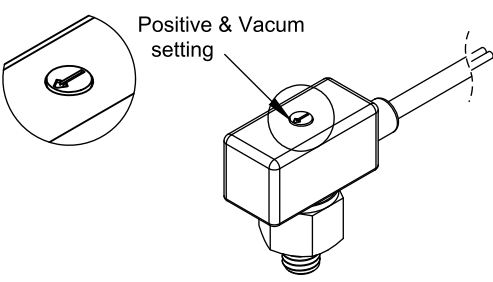
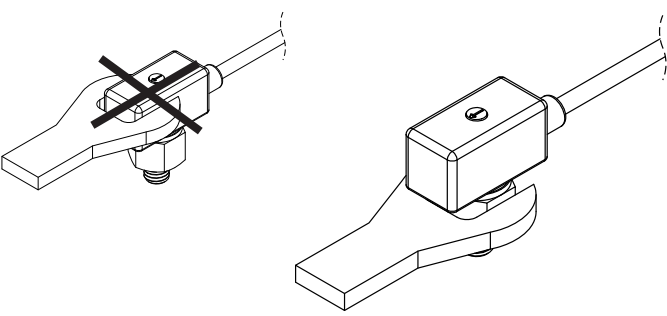
**C02** (2 m)

**M08** (M8)

\* Pressure range "D" available only with PNP output

## Pressure switch **GPB1** series

COMPACT PRESSURE SWITCH WITH PLUG-IN OR THREAD-IN FITTING,  
FOR NON-CORROSIVE AND NON-FLAMMABLE GAS

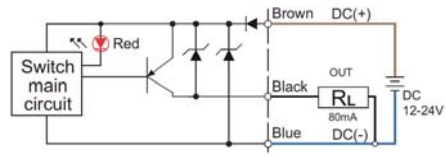
Pressure port option			
Option A / B / C	Option D	Option E	Option F
<b>Dimension</b> 			
			
<b>How to set pressure</b> <p>Use the pressure setting trimmer to set "ON" pressure.          Totate clockwise to increase pressure set point.          Rotate counter-clockwise to decrease pressure setpoint.          Use appropriate size screwdriver for the setting trimmers.          Gently turn the screwdriver to make adjustments.          To prevent damage to the pressure setting trimmer, DO NOT force the trimmer when it comes to a stop</p> 			
<b>Installation precaution</b> <p>When mounting, always use the wrench on the metallic area near the pressure port.          Never apply a wrench to the plastic body, it will damage the sensor.          Over lightening may cause damages the port thread, mounting bracket and pressure sensor. Under ightening may result loosen or leakage.          Apply pressure and power after installation and make necessart adjustments and inspect any possible signs of leakage to ensure proper installation.</p> 			

## Pressure switch **GPB2** series

WITH HYSTERESIS ADJUSTABLE, FOR NON-CORROSIVE AND NON-FLAMMABLE GAS



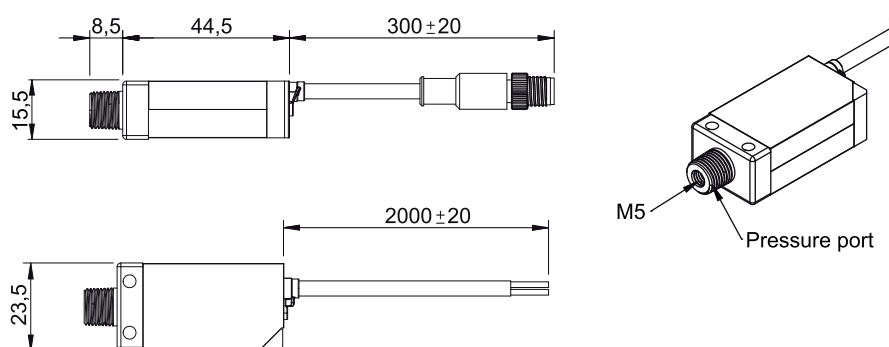
# Pressure switches

Product description			
Type	GPB2A5 _ _ _ _	GPB2B5 _ _ _ _	GPB2C5 _ _ _ _
Pressure range	-100,0 to +100,0 kPa	0,0 to -101,3 kPa	0,000 to 1,000 MPa
Withstand pressure	300 kPa	300 kPa	1,5 MPa
Accuracy	±1% F.S. of detected pressure @ 25°C ± 3°C		
Rated voltage	12 to 24 V DC (±10% ripple voltage)		
Output type	PNP		
Current consuption max.	Open collector 1 outputs, max current load: 80 mA		
Withstand voltage	21 mA max.		
Insulation resistance	1000V AC in 1 min. (at 500V DC, between case and lead cable)		
	50Mohm min. (at 500V DC, between case and lead cable)		
<div></div>			
Output short circuit protection	yes		
Response time	5 ms max		
Repeatability	± 1% F.S.		
Hysteresis	1 to 10 % of setting pressure (adjustable)		
Function indicator	red LED turns on		
Enviromental condition			
Temperature operation range	min. 0°C ; max. 50°C (No condensation or freezing)		
Temperature storage range	min. -20°C ; max. 60°C (No condensation)		
Ambient humidity range	Operation/Storage: 35 to 85 % RH		
Vibration	Total amplitude 1,5mm, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X,Y and Z		
Shock	980m/s² (100G), 3 times each direction of X,Y and Z		
Protection class (EN 60529)	IP40 when correctly assembled		
Cable type	oil - resistance (0,18mm²)		
Weight	approx. 60g		
How to order			
<div><div>Type</div><div>GPB2</div><div><div>Pressure range</div><div>A (-100,0 to +100,0 kPa)</div><div>B (0,0 to -101,3 kPa)</div><div>C (0,000 to 1,000 MPa)</div></div><div><div>Output</div><div>5 (1 x PNP)</div></div><div><div>Pressure port (thread)</div><div>A (1/8 PT - M5)</div><div>B (1/8NPT - 10-32UNF)</div><div>C (1/8GAS - M5)</div></div><div><div>Connection</div><div>C03 (3 m)</div><div>M08*(M8 connector)</div></div></div>			

## Pressure switch GPB2 series

WITH HYSTERESIS ADJUSTABLE, IP65 FOR AIR, NON-CORROSIVE AND NON-FLAMMABLE GAS

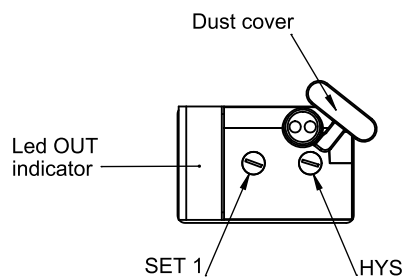
### Dimension / connection



### How to set pressure:

Remove dust cover to make any adjustments. Replace dust cover when finished to prevent foreign object from entering. Pressure setting trimmer (SET) is for setting the output (ON) pressure. Rotate SET trimmer counter-clockwise to increase (Pressure or Vacuum) the ON point. Rotate clockwise will decrease the setting pressure.

Hysteresis setting trimmer (HYS) is for changing the hysteresis. Rotate trimmer counter-clockwise to increase the range 1 - 1. Use appropriate size screwdriver for the setting trimmers. Gently turn the screwdriver to make adjustments. Do not force the trimmer when it comes to a stop to prevent damage to the setting trimmer.



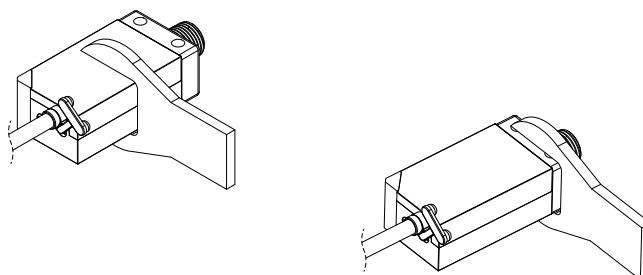
### Installation precautions

When mounting, always use the wrench on the metallic area near the pressure port. Never apply a wrench to the plastic body, it will damage the sensor.

Over tightening may cause damages to the port thread, mounting bracket and pressure sensor.

Under tightening may result loosen or leakage.

Apply pressure and power after installation and make necessary adjustments and inspect any possible signs of leakage to ensure proper installation.

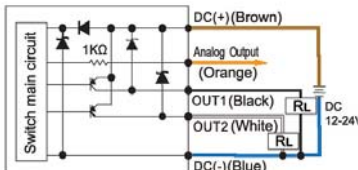
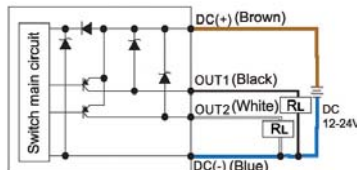


## Pressure switch GPB3 series

WITH HYSTERESIS ADJUSTABLE, IP40 FOR AIR, NON-CORROSIVE  
AND NON-FLAMMABLE GAS



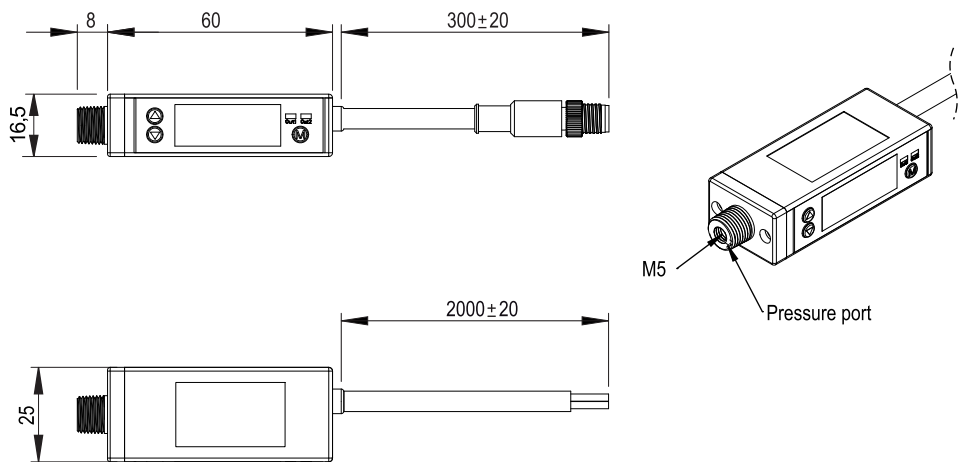
## Pressure switches

Product description			
Type	GPB3A_ _ _ _	GPB3B_ _ _ _	GPB3C_ _ _ _
Pressure range	-100,0 to +100,0 kPa	0,0 to -101,3 kPa	0,000 to 1,000 MPa
Withstand pressure	300 kPa	300 kPa	1,5 MPa
Set pressure resolution			
	kPa	0,1	0,1
	MPa	-	-
	kgf/cm2	0,001	0,001
	bar	0,001	0,01
	psi	0,01	0,01
	inHg	0,1	0,1
	mmHg	1	-
	mmH2O	0,1	-
Accuracy	±2% F.S. ±1 digit of detected pressure @ 25°C ± 3°C		
Rated voltage	12 to 24 V DC (±10% ripple voltage)		
Output type			
	PNP	Open collector 2 outputs, max current load: 80 mA	
	Analog	1 to 5V ± 2,5% F.S.	
Current consuption max.	1 to 5V ± 5% F.S.	60 mA	
	<div><div><b>PNP Output &amp; Analog Output</b></div><div><b>PNP Output</b></div></div>		
Output short circuit protection	yes		
Response time	2.5 ms max (anti-chattering selection:24ms, 192 and 768)		
Repeatability	± 0,2% F.S. ± 1 digit		
Hysteresis			
	Hysteresis mode	Adjustable	
	Window comparator mode	Fixed ( 3 digit)	
Function indicator	OUT1 = Green ; OUT2 = Red		
Enviromental condition			
	Temperature operation range	min. 0°C ; max. 50°C (No condensation or freezing)	
	Temperature storage range	min. -20°C ; max. 60°C (No condensation)	
	Ambient humidity range	Operation/Storage: 35 to 85 % RH	
	Vibration	Total amplitude 1,5mm, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X,Y and Z	
	Shock	980m/s²(100G), 3 times each direction of X,Y and Z	
	Protection class (EN 60529)	IP40	
Cable type	oil - resistance (0,15mm²)		
Weight	approx. 67g (with 2m lead wire), Approx. 35g (with male connector)		
How to order	<div><div><div>Type</div><div>GPB3</div><div></div><div></div><div></div><div></div><div></div></div><div><div><div>Pressure range</div><div>A (-100,0 to +100,0 kPa)</div><div>B (0,0 to -101,3 kPa)</div><div>C (0,000 to 1,000 MPa)</div></div><div><div>Output</div><div>1 (2 x PNP + 1x 1-5V)</div><div>2 (2 x PNP)</div></div><div><div>Pressure port (thread)</div><div>A (1/8 PT - M5</div><div>B (1/8NPT - 10-32UNF)</div><div>C (1/8GAS - M5)</div></div><div><div>Connection</div><div>C02 (2 m)</div><div>M08*(M8 connector)</div></div></div></div> <div><div>* option "M08" available only with output option "2"</div><div>** option "M12" available on request</div></div>		

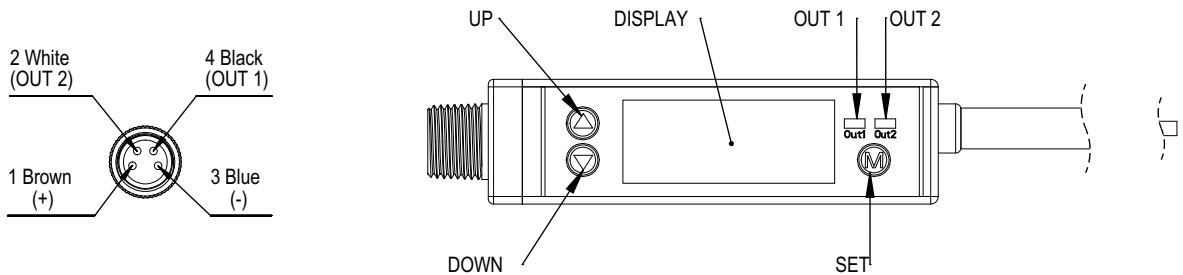
# Pressure switch GPB3 series

WITH HYSTERESIS ADJUSTABLE, IP40 FOR AIR, NON-CORROSIVE  
AND NON-FLAMMABLE GAS

## Dimension



## Panel instruction



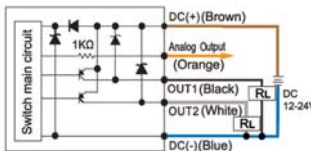
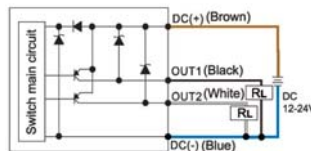
Button UP	Use this button to change setting mode and pre-set final desired value
Button SET	Change setting mode and pre-set final desired value
Button DOWN	Use this button to change setting mode and pre-set final desired value
Switch OUT1	Green LED
Switch OUT2	Red LED
Display	Pressure value display

## Pressure switch GPB4 series

WITH HYSTERESIS ADJUSTABLE, IP65 FOR AIR, NON-CORROSIVE AND  
NON-FLAMMABLE GAS



## Pressure switches

Product description			
Type	GPB4A _ _ _ _	GPB4B _ _ _ _	GPB4C _ _ _ _
Pressure range	-100,0 to +100,0 kPa	0,0 to -101,3 kPa	0,000 to 1,000 MPa
Withstand pressure	300 kPa	300 kPa	1,5 MPa
Set pressure resolution			
	kPa 0,1	0,1	-
	MPa -	-	0,001
	kgf/cm2 0,001	0,001	0,01
	bar 0,001	0,001	0,01
	psi 0,01	0,01	0,1
	inHg 0,1	0,1	-
	mmHg 1	1	-
	mmH2O 0,1	0,1	-
Accuracy	±2% F.S. ±1 digit of detected pressure @ 25°C ± 3°C		
Fluid	Air, Non-corrosive/Non-flammable gas		
Rated voltage	12 to 24 V DC (±10% ripple voltage)		
Output type			
	PNP	Open collector 2 outputs, max current load: 80 mA	
	Analog	1 to 5V ± 2,5% F.S.	
Current consuption max.	1 to 5V ± 5% F.S.	55 mA	
	<div><div><b>PNP Output &amp; Analog Output</b></div><div></div></div> <div><div><b>PNP Output</b></div><div></div></div>		
Output short circuit protection	yes		
Response time	2.5 ms max (anti-chattering selection: 24ms, 192 and 7689		
Repeatability	± 0,2% F.S. ± 1 digit		
Hysteresis			
	Hysteresis mode	Adjustable	
	Window comparator mode	Fixed ( 3 digit)	
Function indicator	OUT1 = Green ; OUT2 = Red		
Enviromental condition			
	Temperature operation range	min. 0°C ; max. 50°C (No condensation or freezing)	
	Temperature storage range	min. -20°C ; max. 60°C (No condensation)	
	Ambient humidity range	Operation/Storage: 35 to 85 % RH	
	Vibration	Total amplitude 1,5mm, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X,Y and Z	
	Shock	980m/s²(100G), 3 times each direction of X,Y and Z	
	Protection class (EN 60529)	IP65 when correctly assembled	
Cable type	oil - resistance (0,15mm²)		
Weight	approx. 105g (with 2m lead wire), Approx. 71g (with male connector)		
How to order			

Type

GPB4

Pressure range

A (-100,0 to +100,0 kPa)

B (0,0 to -101,3 kPa)

C (0,000 to 1,000 MPa)

Output

1 (2 x PNP + 1x 1-5V)

2 (2 x PNP)

Pressure port (thread)

A (1/8 PT - M5)

B (1/8NPT - 10-32UNF)

C (1/8GAS - M5)

Connection

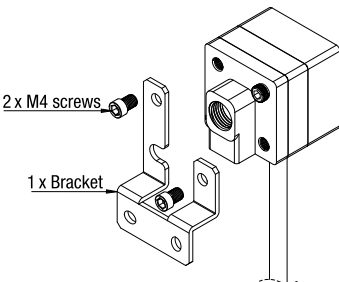
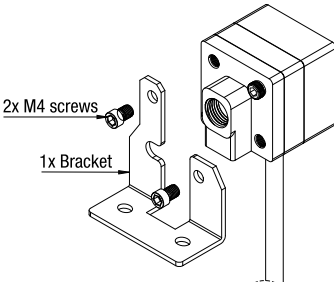
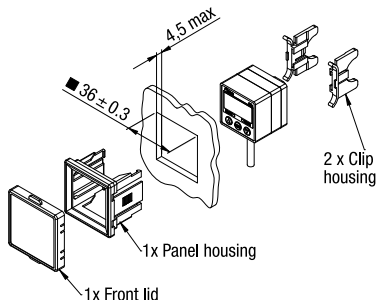
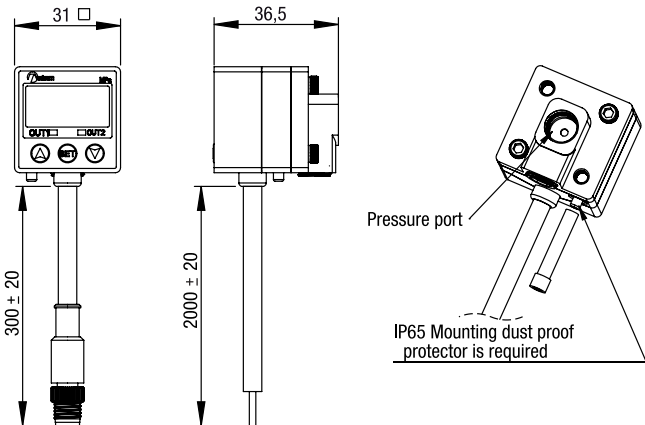
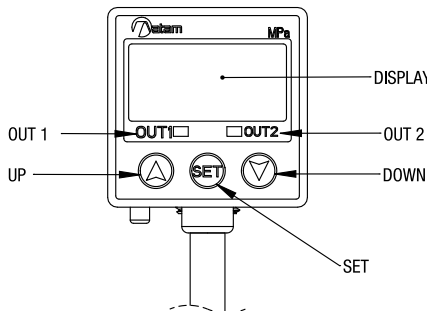
C02 (2 m)

M08\*(M8 connector)

\* option "M8" available only with output option "2" / \*\* option "M12" available on request

# Pressure switch **GPB4** series

WITH HYSTERESIS ADJUSTABLE, IP65 FOR AIR, NON-CORROSIVE AND NON-FLAMMABLE GAS

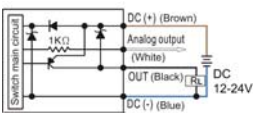
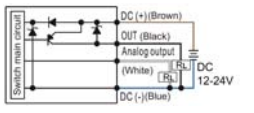
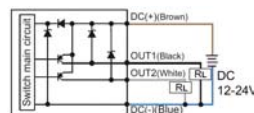
Other accessory options		
Order no. GPA4S	Order no. GPA4L	Order no. GPA4P
Vertical mounting brackets	Base mounting brackets	Panel adapter
		
<div>Dimension</div> <div></div> <div>unit (mm)</div>		
<div>Panel instruction</div> <div></div>		
Button UP	Use this button to change setting mode and pre-set final desired value	
Button SET	Change setting mode and pre-set final desired value	
Button DOWN	Use this button to change setting mode and pre-set final desired value	
Switch OUT1	Green LED	
Switch OUT2	Red LED	
Display	Pressure value display	

## Pressure switch GPB5 series

WITH HYSTERESIS ADJUSTABLE, IP40 FOR AIR, NON-CORROSIVE  
AND NON-FLAMMABLE GAS



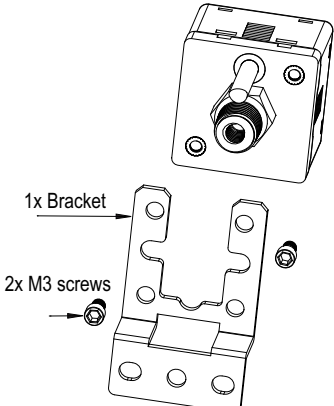
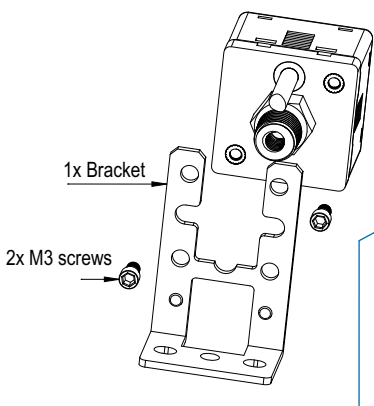
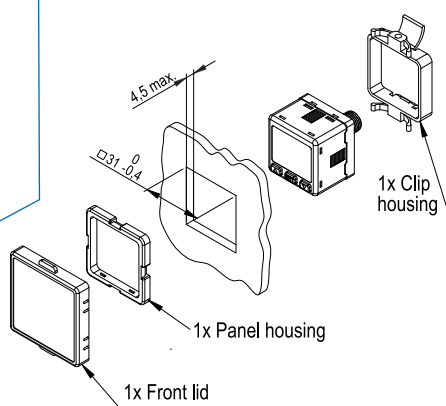
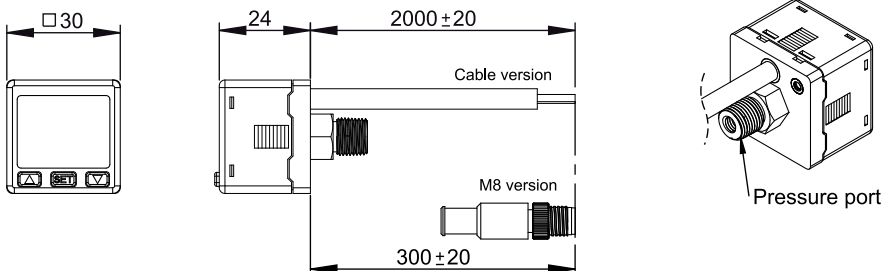
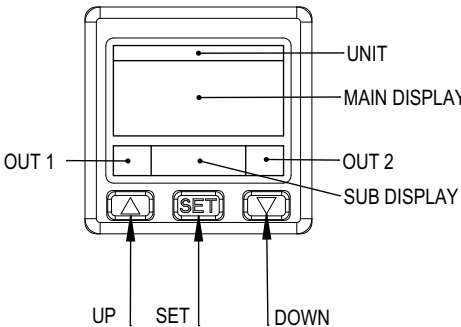
### Pressure switches

Product description			
Type	GPB5A _ _ _ _	GPB5B _ _ _ _	GPB5C _ _ _ _
Pressure range	-100,0 to +100,0 kPa	0,0 to -101,3 kPa	0,000 to 1,000 MPa
Withstand pressure	300 kPa	300 kPa	1,5 MPa
Set pressure resolution			
	kPa	0,1	-
	MPa	-	0,001
	kgf/cm2	0,001	0,01
	bar	0,001	0,01
	psi	0,01	0,1
	inHg	0,1	-
	mmHg	1	-
Accuracy	±2% F.S. ±1 digit of detected pressure @ 25°C ± 3°C		
Rated voltage	12 to 24 V DC (±10% ripple voltage)		
Output type			
	PNP	Open collector 2 outputs, max current load: 125 mA	
	Analog (voltage output)	1 to 5V ± 2,5% F.S.	
	Analog (current output)	4 to 20mA ± 2,5% F.S.	
Current consumption max.	40 mA		
	<div>PNP + Analog (Voltage) Output (1-5V)</div> <div></div>		
	<div>PNP + Analog (Current) Output (4-20 mA)</div> <div></div>		
	<div>PNP Output</div> <div></div>		
Output short circuit protection	yes		
Response time	2.5 ms max (anti-chattering selection: 25ms, 100ms, 250ms, 500ms, 1000ms, 1500ms)		
Repeatability	± 0,2% F.S. ± 1 digit		
Hysteresis			
	One point set mode	Adjustable	
	Hysteresis mode		
	Window comparator mode		
Function indicator	OUT1 = Green ; OUT2 = Red		
Environmental condition			
	Temperature operation range	min. 0°C ; max. 50°C (No condensation or freezing)	
	Temperature storage range	min. -10°C ; max. 60°C (No condensation)	
	Ambient humidity range	Operation/Storage: 35 to 85 % RH	
	Vibration	Total amplitude 1,5mm, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X,Y and Z	
	Shock	100m/s²(10G), 3 times each direction of X,Y and Z	
	Protection class (EN 60529)	IP40 when correctly assembled	
Cable type	oil - resistance (0,15mm²)		
Weightapprox.	105g (with 2m lead wire), Approx. 71g (with male connector)		
How to order	<div>Type • <div>GPB5</div></div> <div><div>Pressure range</div><div>A (-100,0 to +100,0 kPa)</div><div>B (0,0 to -101,3 kPa)</div><div>C (0,000 to 1,000 MPa)</div></div> <div><div>Output</div><div>2 (2 x PNP)</div><div>3 (1 x PNP + 1 x 1-5V)</div><div>4 (1 x PNP + 1 x 4-20 mA)</div></div> <div><div>Pressure port (thread)</div><div>A (1/8 PT - M5)</div><div>B (1/8NPT - 10-32UNF)</div><div>C (1/8GAS - M5)</div></div> <div><div>Connection</div><div>C02 (2 m)</div><div>M08*(M8 connector)</div></div>		
* option "M8" available only with output option "2"			

\* option "M8" available only with output option "2"

# Pressure switch **GPB5** series

WITH HYSTERESIS ADJUSTABLE, IP40 FOR AIR, NON-CORROSIVE  
AND NON-FLAMMABLE GAS

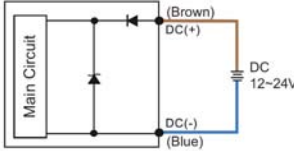
Other accessory options		
Order no. <b>GPA5S</b>	Order no. <b>GPA5L</b>	Order no. <b>GPA5P</b>
Vertical mounting brackets	Base mounting brackets	Panel adapter
		
Dimension / connection		
 <p style="text-align: right;">unit (mm)</p>		
Panel instruction		
		
<b>UNIT</b>	Pressure Unit display section	
<b>MAIN Display</b>	2 Color main display	
<b>SUB Display</b>	Setting mode sub display section	
<b>OUT1</b>	Output 1 indicator	
<b>OUT2</b>	Output 2 indicator	
<b>Button UP</b>	Use this button to change setting mode and pre-set final desired value	
<b>Button SET</b>	Change setting mode and pre-set final desired value	
<b>Button DOWN</b>	Use this button to change setting mode and pre-set final desired value	

## Pressure switch **GPM6/7** series

PRESSURE GAGE, IP65 FOR FILTERED AIR, NON-CORROSIVE  
AND NON-FLAMMABLE GAS

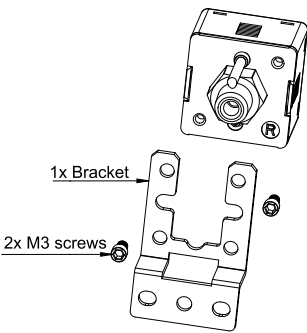
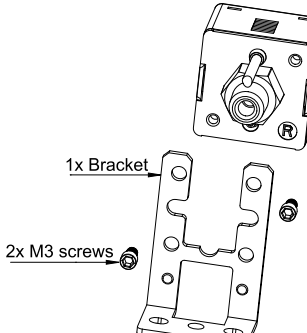
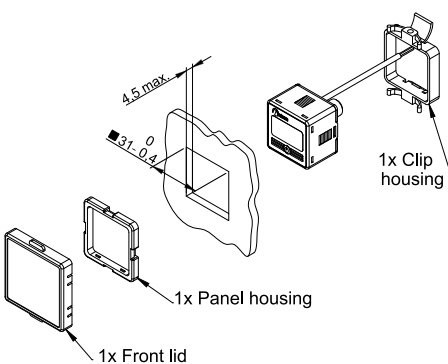
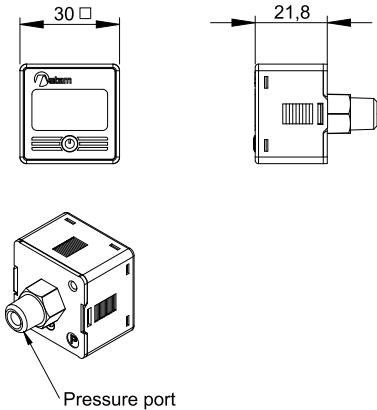
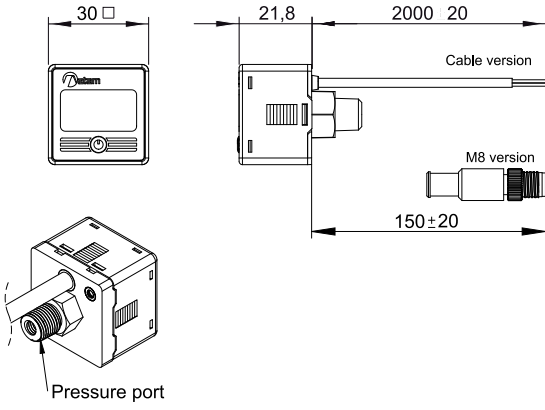
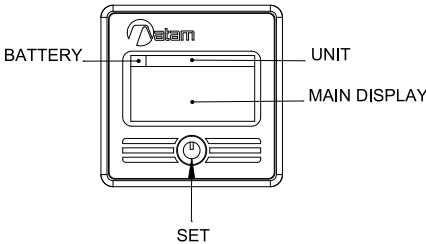


### Pressure switches

Product description					
Type	GPM6B0 _ _ _	GPM6E0 _ _ _	GPM7B0 _ _ _	GPM7E0 _ _ _	
Pressure range	0,0 to -101 kPa		0,000 to + 1,0 MPa	0,0 to -101 kPa	- 0,000 to 1,000 MPa
Withstand pressure	300 kPa		1,5 MPa	300kPa	1,5 MPa
Set pressure resolution					
kPa	1	-	1	-	
MPa	-	0,001	-	0,001	
kgf/cm2	-	0,01	0,01	0,01	
bar	0,01	0,01	0,01	0,01	
psi	0,1	0,1	0,1	0,1	
inHg	-	-	-	-	
mmHg	-	-	-	-	
Indicator Accuracy	±2% F.S. ±1 digit of detected pressure @ 25°C ± 3°C				
Rated voltage	By battery (CR2032 lithium, 1 year, 5 times/day) replaceable		12 to 24 V DC (±10% ripple voltage)		
Back light	yes		-		
Turn-on interval	Display turn off after 60 sec.				
Pressure unit	psi, bar, mmHg, kPa user sel.	psi, bar, kgf/cm2, MPa user sel.	psi, bar, kgf/cm2, kPa user sel.	psi, bar, kgf/cm2, MPa user sel.	
Sampling rate	2 Hz (2 times/sec)				
Current consumption max.			10mA		
<div><div></div><div></div><div></div></div> <p>Pressure display only, no switch output function.</p>					
Repeatability	± 1% F.S. ± 1 digit	± 0,2% F.S. ± 1 digit	± 1% F.S. ± 1 digit	± 0,2% F.S. ± 1 digit	
Hysteresis					
One point set mode	-				
Hysteresis mode					
Window comparator mode					
LCD Display	3 1/2 digit LCD display, 7 segment				
Enviromental condition					
Temperature operation range	min. 0°C ; max. 50°C (No condensation or freezing)				
Temperature storage range	min. -10°C ; max. 60°C (No condensation)				
Ambient humidity range	Operation/Storage: 35 to 85 % RH				
Vibration	Total amplitude 1,5mm, 10Hz-55Hz-10Hz scan for 1 minute, two hours each direction of X,Y and Z				
Shock	100m/s²(10G), 3 times each direction of X,Y and Z				
Protection class (EN 60529)	IP65 when correctly assembled				
Cable type	oil - resistance (0,15mm²)				
Weight	approx. 40g		approx. 60g (with 2m lead wire), approx. 40g (with male connector)		
How to order					
<div><div>Type</div><div>GPM6/7</div><div><div>Pressure range</div><div>B (0,0 to -101 kPa)</div><div>E (0,000 to + 1,000 MPa)</div></div><div><div>Output</div><div>0 (no output)</div></div><div><div>Pressure port (thread)</div><div>A (1/8 PT - M5)</div><div>B (1/8NPT - 10-32UNF)</div><div>C (1/8GAS - M5)</div></div><div><div>Connection</div><div>000 (no connection)</div><div>C02* (2mt)</div><div>M08*(M8 connector)</div></div></div>					
* option available only for GPM7					

Pressure switch **GPM6/7** series

PRESSURE GAGE, IP65 FOR FILTERED AIR, NON-CORROSIVE  
AND NON-FLAMMABLE GAS

Other accessory options		
Order no. <b>GPA5S</b>	Order no. <b>GPA5L</b>	Order no. <b>GPA5P</b>
Vertical mounting brackets	Base mounting brackets	Panel adapter
		
Dimension <b>GPM6</b>		Dimension <b>GPM6</b>
		
Panel instruction		
		
<b>BATTERY</b>	Battery level (on GPM6)	
<b>UNIT</b>	Pressure Unit display section	
<b>MAIN Display</b>	Main display with pressure value	
<b>Button SET</b>	Change setting pressure unit/turn on display (on GPM6)	

