

51D

Pneumatic electronic pressure switch



- > Port size: G1/8
- > System pressure (unit bar, psi, Mpa, KPa, kgf/cm², mmHg, InHg or mmH₂O) selectable
- > High accuracy and resolution
- > Switching status indicated by LED
- > Output: 2 x PNP or 2 x NPN
- > Versions with analogue output signal on request



Technical features

Medium:

Compressed air, filtered, lubricated or non-lubricated

Pressure range:

-1 ... 10 bar (-14,5 ... 14,5 psi)
-1 ... 1 bar (-14,5 ... 14,5 psi)

Display:

3 1/2 digit LED

Mounting position:

Optional

Repeatability (switch output):

≤ ±0,2% of full scale (FS) ±1 digit
- without temperature sensitivity

Response time:

±2,5 ms

Shockproof:

100 g (980 m/s²), xyz

Vibrationproof:

88 g, 10 - 55 Hz, xyz

Degree of protection acc. to

DIN 40050:
IP65 (with mounted dust proof protector)

Weight:

83g

Temperature sensitivity:

≤ 2% of full scale (FS) of detected pressure (+25°C, +77°F)

Ambient/Media temperature:

0 ... +50°C (32 ... +122°F)

Storage temperature:

-20 ... +60°C (-4 ... +140°F)

No condensation or freezing

Air supply must be dry enough

to avoid ice formation at

temperature below +2°C (+35°F)

FS = full scale

Materials:

Body: PC

Electronical parameters

Electrical connection:

M12 x 1

Power supply:

12 ... 24 V d.c.

24 V d.c. (PNP) maximum

30 V d.c. (NPN) maximum

Residual voltage:

≤ 1 V (load current 80 mA)

Permissible residual ripple:

10% or less (P-P)

Current consumption:

≤ 50 mA

Load current:

80 mA maximum (with output short circuit protection)

Switching mode:

PNP or NPN

Indicator:

Green LED (OUT1),

Red LED (OUT2)

Insulation resistance:


50 MΩ min (at 500 V d.c.

(between case and lead wire))

Electromagnetic compatibility:

According to EN 61326-1

Technical data

Symbol	Port size	Switching pressure range (bar) (psi)		Over pressure *1) (bar) (psi)		Output signal	Model
	G1/8	-1 ... 10	-14,5 ... 145	15	217	2 x PNP	0860810
	G1/8	-1 ... 10	-14,5 ... 145	15	217	2 x NPN	0860815
	G1/8	-1 ... 1	-14,5 ... 14,5	3	43	2 x PNP	0860820
	G1/8	-1 ... 1	-14,5 ... 14,5	3	43	2 x NPN	0860825

*1) Short-term pressure peaks are not allowed to exceed this limit value during operation. Operative utilization of the limit value is not permitted. The limit value corresponds to the maximum testing pressure.

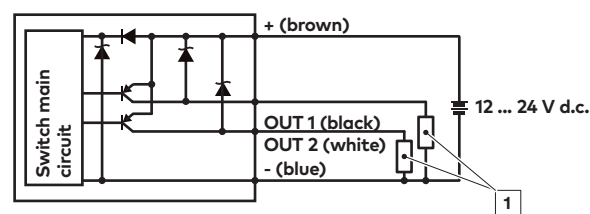
Accessories

Mounting bracket (wall mounting) Page 3 0860000	Mounting bracket (bottom mounting) Page 3 0860001	Panel mounting kit Page 3 0860002 + 0860003	Mounting (DIN rail clip) Page 4 0860007	ISO G - Expanding connector G1/8 ... G1/4 Page 4 160231828
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Electrical connection M12 x 1

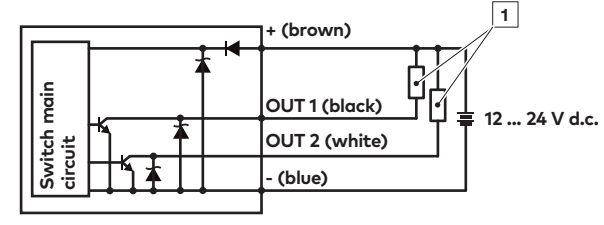
	PIN-No.	Signal	Cable
	1	+ UB	brown
	2	Out 2	white
	3	-	blue
	4	Out 1	black

PNP



1 Load

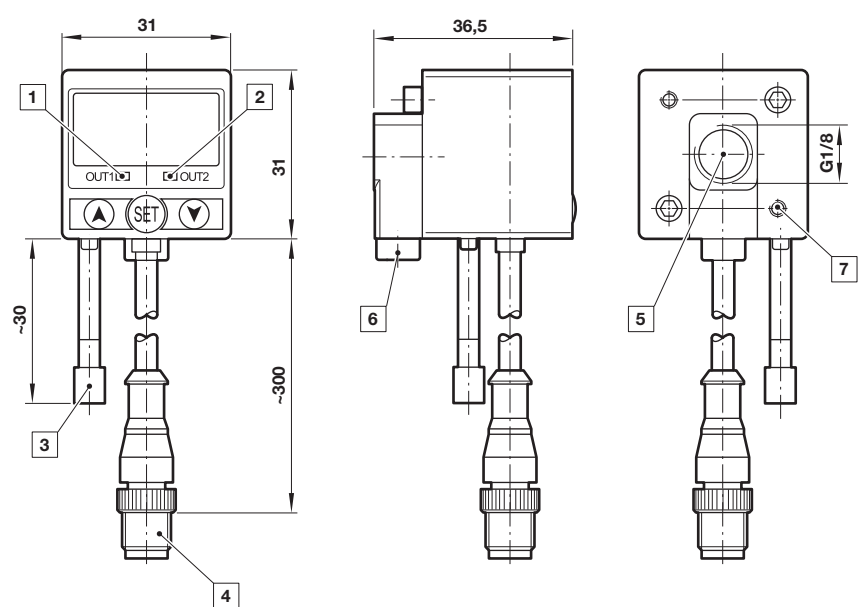
NPN



1 Load

Drawing - Pressure switch

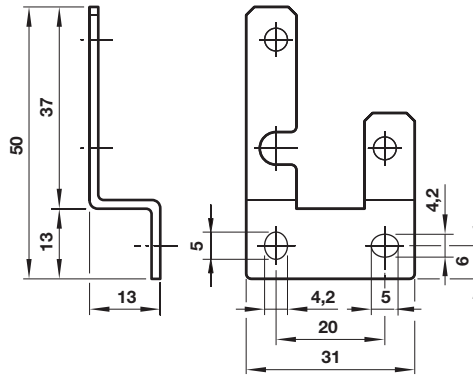
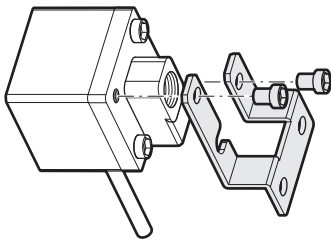
Dimensions in mm
Projection/First angle



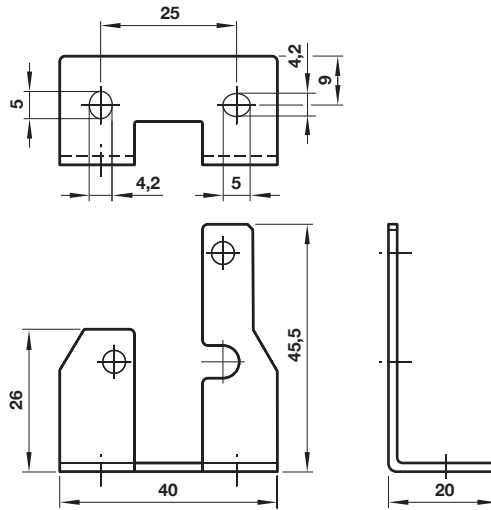
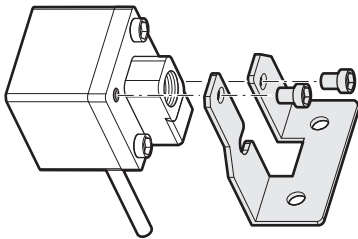
- 1 Switch OUT 1, green LED
- 2 Switch OUT 2, red LED
- 3 Dustproof protector
- 4 Connector M12 x 1
- 5 Inlet port
- 6 Alternative inlet port G1/8 plugged
- 7 Thread for mounting screw

Drawing - Mounting bracket (wall mounting)

Dimensions in mm
Projection/First angle

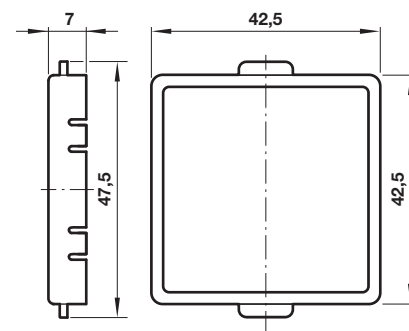
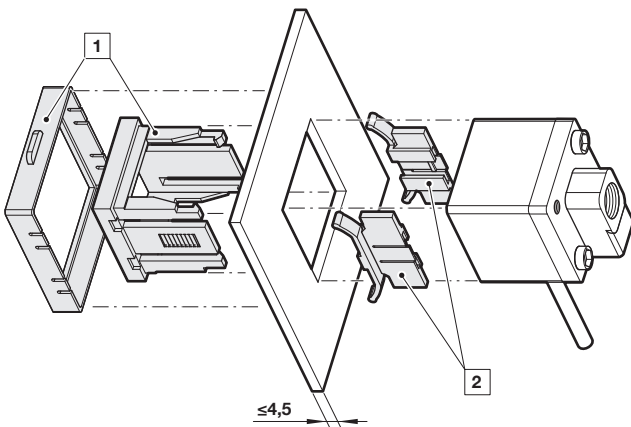


Drawing - Mounting bracket (bottom mounting)

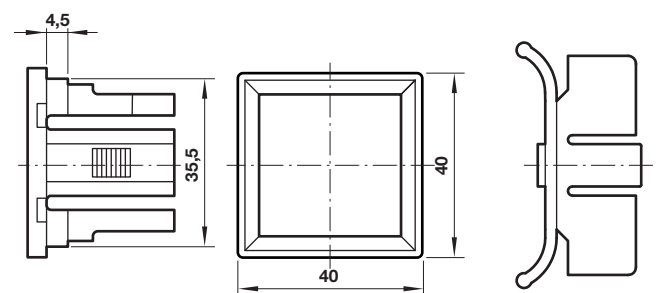


Drawing - Panel mounting kit

Drawing - Front protective lid

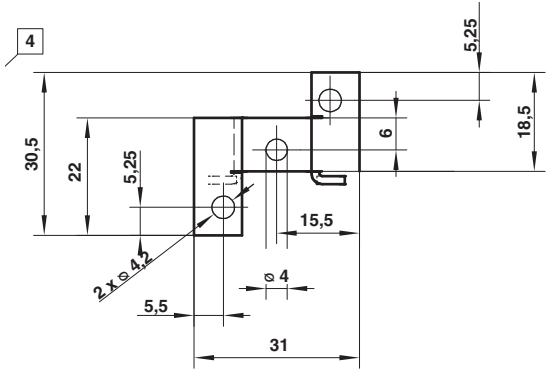
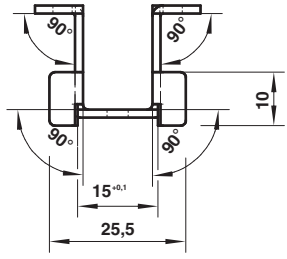
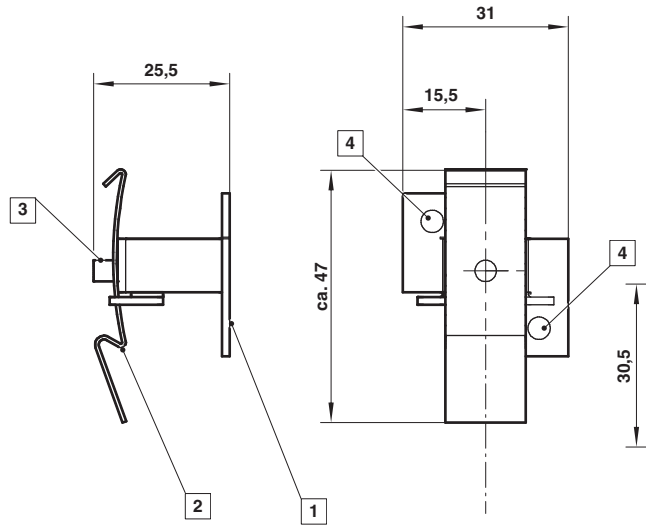


Drawing - Panel adapter

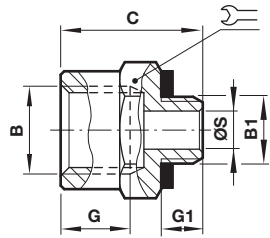


- 1 Front protection lid + Panel adaptor (0860003)
- 2 Safety adaptors (0860002)

Drawing - Mounting (DIN rail clip)



Drawing - Expanding connector



B	B1	C	G	G1	$\varnothing S$		Model
G1/4	G1/8	20,5	12	6	5,5	17	160231828

- 1 Mounting angel
- 2 DIN-Mounting bracket
- 3 Fastening screw
- 4 Fastening screw (pressure switch)

