

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 ... 145 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.

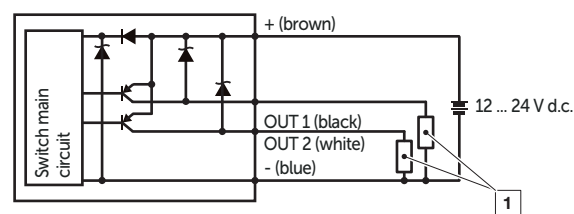
Accessories

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

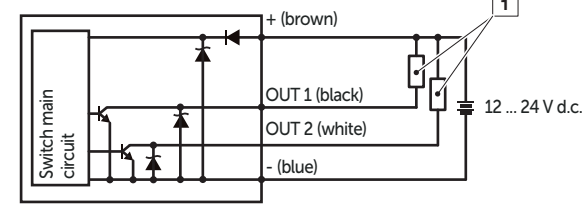
	PIN-No.	Signal	Cable
	1	+ UB	brown
	2	Out 2	white
	3	-	blue
	4	Out 1	black

PNP



1 Load

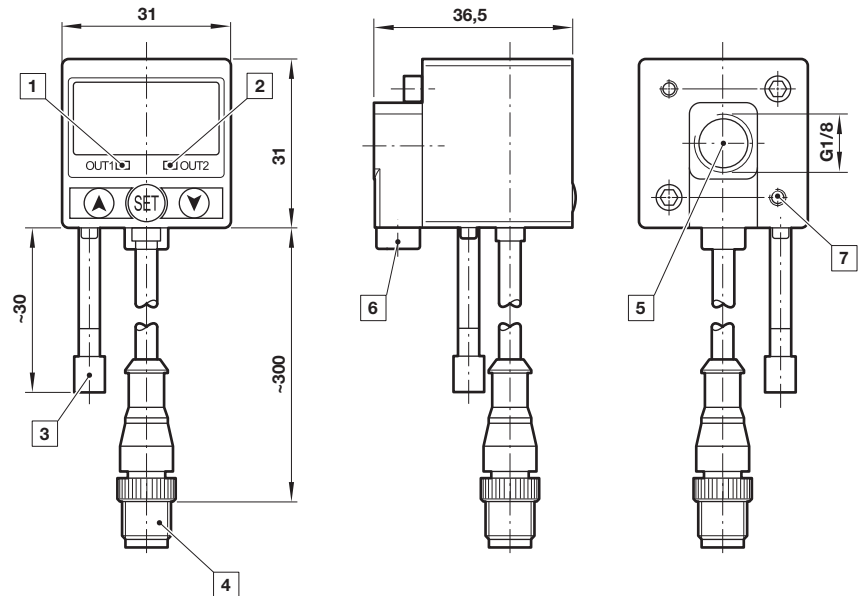
NPN



1 Load

Drawing - Pressure switch

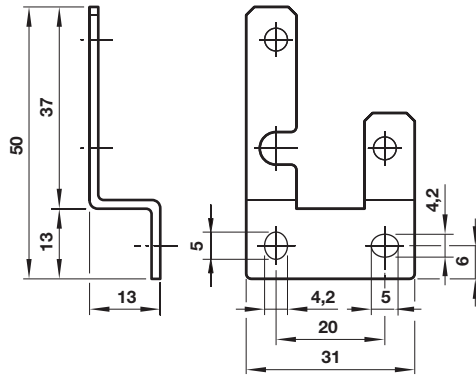
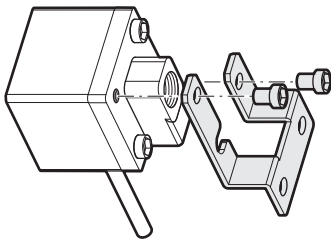
Dimensions in mm
Projection/First angle



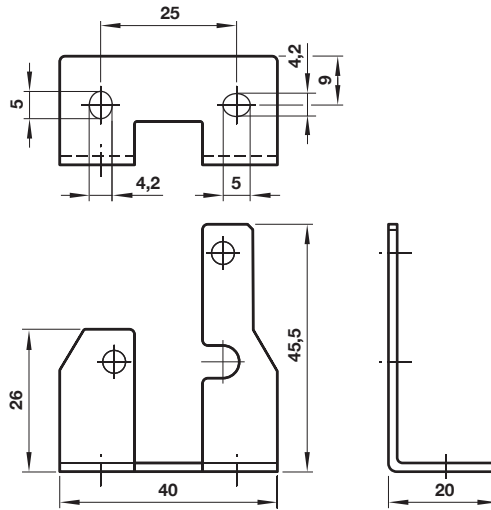
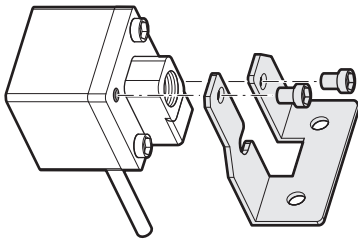
- 1 Switch OUT 1, green LED
- 2 Switch OUT 2, red LED
- 3 Dustproof protector
- 4 Connector M12 x 1
- 5 Inlet port
- 6 Alternative inlet port G1/8 plugged
- 7 Thread for mounting screw

Drawing - Mounting bracket (wall mounting)

Dimensions in mm
Projection/First angle

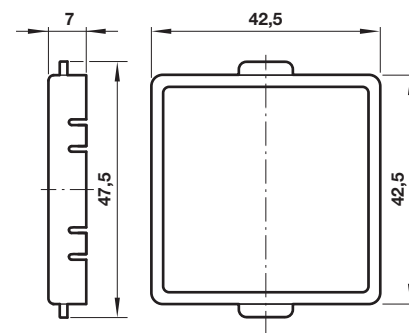
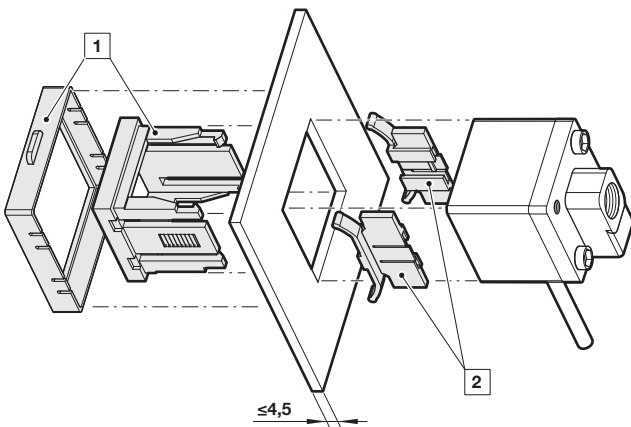


Drawing - Mounting bracket (bottom mounting)



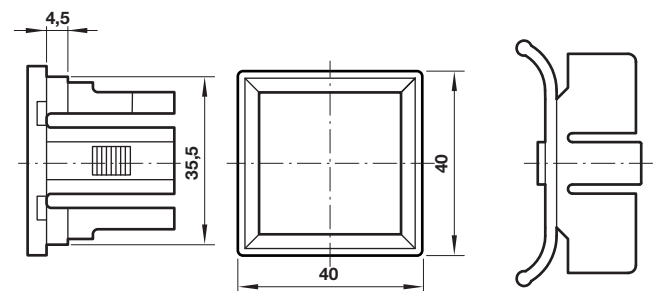
Drawing - Panel mounting kit

Drawing - Front protective lid

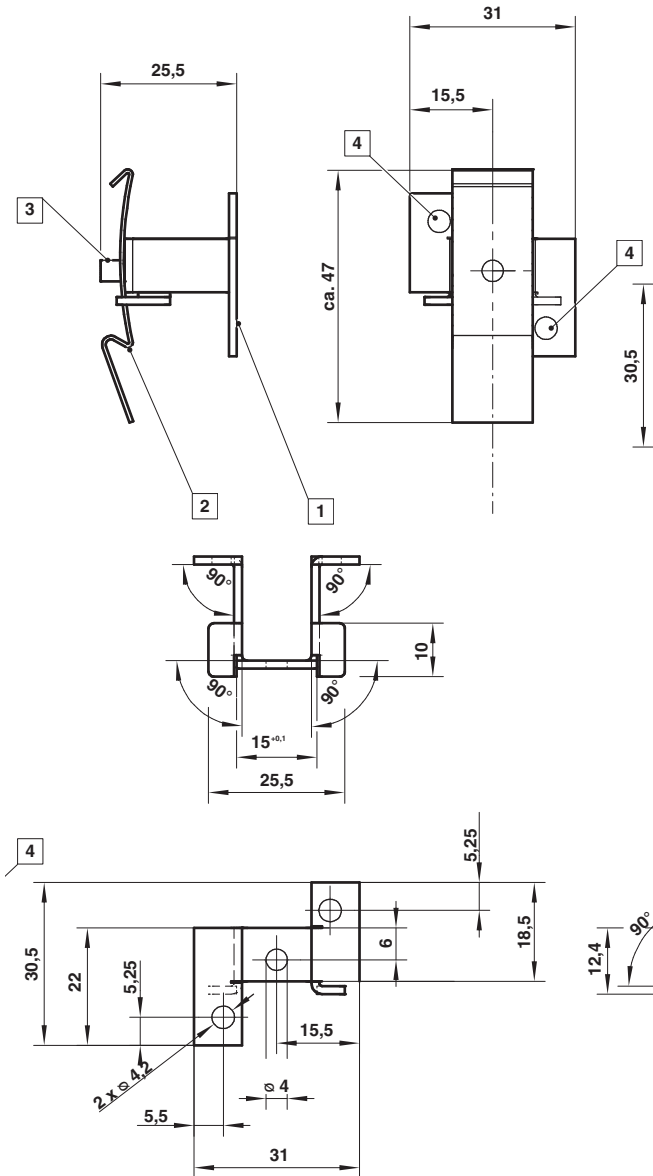


Drawing - Panel adapter

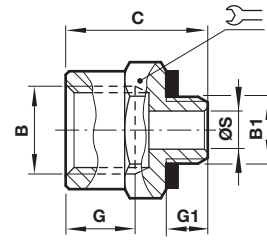
- 1 Front protection lid + Panel adaptor (0860003)
- 2 Safety adaptors (0860002)



Drawing - Mounting (DIN rail clip)



Drawing - Expanding connector



B	B1	C	G	G1	Ø 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)

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under »**Technical features/ data**«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult Norgren Ltd.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.