

Electronic pressure switch EDS 10



3

- 4-digit LED display
- Display can be rotated and tilted to any position
- 2 PNP switching outputs
- Accuracy $\leq \pm 0.35$ % at 400 mbar and higher
- Possible measuring ranges from 100 mbar to 600 bar



Application Main application areas comprise monitoring of gaseous or liquid media in plant and mechanical engineering. The pressure switch lends itself to pneumatic or hydraulic systems requiring high switching accuracy. The display can be rotated and tilted to practically any position so that the device can be used under adverse mounting conditions.

Description The device uses a piezo-resistive stainless steel measuring cell. The 4-digit LED display of the pressure switch EDS 10 can be rotated by 330° and tilted by 300°. The switching points (switching hysteresis) can be set with two keys via the menu. The status of the switching outputs is indicated by an LED each. At a nominal pressure of ≥ 1 , the pressure switch is vacuum-tight without limitations.

Technical specifications

Display

4-digit, 7-segment, LED display, red
 (-1,999 ... +9,999, visible area 22.5 x 10.5 mm)
 4 LEDs for switchable pressure units
 (bar, mbar, psi, MPa)
 Status indication switching output
 Switching output 1: green LED
 Switching output 2: yellow LED

Supply voltage

DC 18 – 30 V

Current input

< 40 mA

Switching outputs

2 x PNP (SIO mode), max. 200 mA
 Delay time: 0 to 50 s
 Repeatability: $\leq \pm 0.1\%$ FSO
 Switching cycles: $> 100 \times 10^8$
 Switching frequency: max. 200 Hz

Material

Housing: Plastic (PA 6.6)
 Highly impact-resistant
 and corrosion-resistant
 Diaphragm: Stainless steel 316 L
 Seal: FKM (Viton), wetted part
 Pressure connection: Stainless steel 316 L

Measuring accuracy

Deviation from characteristic curve as
 per IEC 60770
 Limit point calibration (non-linearity, hysteresis,
 repeatability)
 $\leq \pm 0.35$ % FSO
 (measuring ranges ≤ 0.4 bar = $\leq \pm 0.5$ % FSO)
 Long-term stability $\leq \pm 0.3$ % FSO / year

Measuring ranges

Relative pressure: 0 / 100 mbar to 0 / 600 bar
 Vacuum-tight without limitations at
 nominal pressure ≥ 1 bar
 Absolute pressure: 0 / 400 mbar to 0 / 600 bar

Overpressure safety

At least 2 x FS, except
 0 / 600 bar, overload = 1000 bar
 Burst pressure at least 3 x FS

Operating temperature range

Medium: -40 / +125 °C
 Ambient: -40 / +85 °C
 Storage: -40 / +100 °C

Process connection

G 1/2 (DIN 3852)

Electrical connection

Connector M 12 x 1 (4-pin), metal

Degree of protection

IP 67 (EN 60529)

CE conformity

EMC Directive: 2014/30/EU
 Pressure Equipment Directive: 2014/68/EU
 (module A)*
 * Applies to devices with a maximum permissible
 overpressure of > 200 bar only

Options

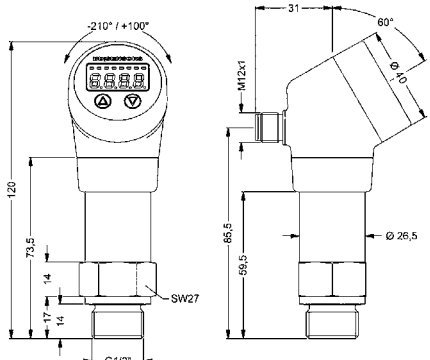
- Other process connections
- Seal material (EPDM)
- Other switching and analogue outputs

Electronic pressure switch EDS 10

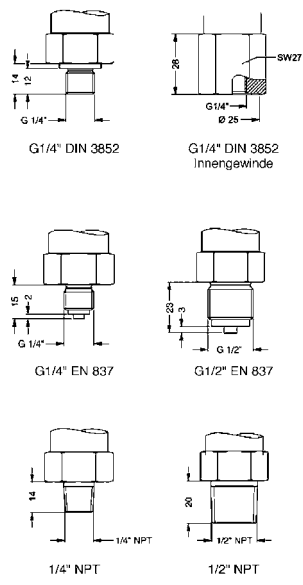


Dimensions (mm) and electrical connections

EDS 10

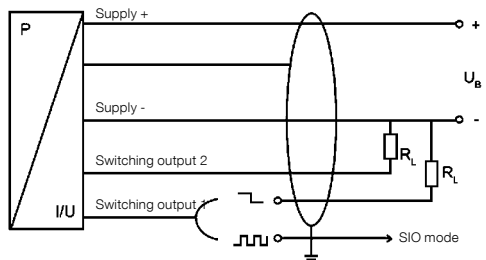


EDS 10, process connections

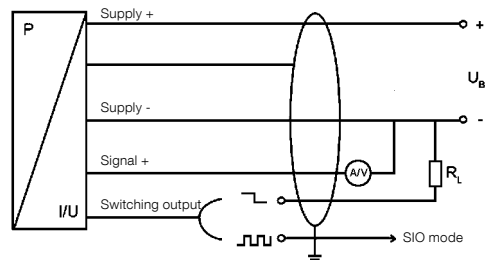


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Wiring diagram
3-wire system (SIO with switching output)



Wiring diagram
3-wire system (SIO with analogue output)



Pin assignment table

Electrical connections	M 12 x 1 (4-pin) Metal (without ana- logue output)	M 12 x 1 (4-pin) metal (with ana- logue output)
Supply +	1	1
Supply -	3	3
Signal +	-	2
Communication/switching out- put 1	4	4
Switching output 2	2	-
Shield	Pressure connection	Pressure connection

Electronic pressure switch EDS 10



Ordering data

DG: H, PG: 4

Price €

1 Electronic pressure switch

33405 EDS 10

2 Pressure type

- R** Relative
- A** Absolute (possible for 0.4 bar and higher)

3 Output

- 01** 2 x PNP (SIO mode)
- 02** 2 x NPN (SIO mode)
- 11** Analogue output 4–20 mA + 1 x PNP (SIO mode)
- 12** Analogue output 4–20 mA + 1 x NPN (SIO mode)

4 Measuring range in bar

- 100** -1 / 0
- 102** -1 / +1.5
- 103** -1 / +3
- 104** -1 / +5
- 007** 0 / 0.10
- 008** 0 / 0.16
- 009** 0 / 0.25
- 010** 0 / 0.40
- 108** 0 / 0.60
- 109** 0 / 1.0
- 110** 0 / 1.6
- 111** 0 / 2.5
- 112** 0 / 4.0
- 113** 0 / 6.0
- 114** 0 / 10
- 115** 0 / 16
- 116** 0 / 25
- 117** 0 / 40
- 118** 0 / 60
- 119** 0 / 100
- 120** 0 / 160
- 121** 0 / 250
- 122** 0 / 400
- 123** 0 / 600

5 Process connection

- 01** G½ (DIN 3852)
- 02** G½B (EN 837-1)
- 03** G¼ (DIN 3852)
- 04** G¼B (EN 837-1)
- 05** G¼ (DIN 3852) female thread
- 06** ½-14 NPT
- 07** ¼-18 NPT

6 Seal

- 1** FKM
- 3** EPDM

Ordering code

Example: 0/10 bar,
G½B (DIN 3852)

33405

R

01

114

01

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