

HYDAC

INTERNATIONAL



Electronic Pressure Switch EDS 505

Description:

The compact construction of the EDS 505 electronic pressure switch makes it ideal for integrating into control designs of machines and systems. Based on a strain gauge pressure measurement cell which is well-established in rugged applications in hydraulics due to its robustness, the unit can adjust, via a potentiometer, the position of a switching point and a switch-back point via the hysteresis depending on the switching point.

The transistor switching output with an output current capacity of 1.2 A can switch valves directly, or feed the switching signal to a PLC input. An LED light on the end of the EDS 505 indicates when the switches have been activated. Since the pressure measurement occurs without moving parts, in contrast to mechanical pressure switches, the switching frequency (≥ 100 million) and vibration resistance are guaranteed.

Special features:

- Compact, robust construction
- LED indicates switch activation
- High cycling resistance
- Possible to adjust the switching point and switch-back point when pressurised and de-pressurised

Technical details:

Input data

Measuring ranges	16; 40; 100; 250; 400; 600 bar
Overload pressures	32; 80; 200; 500; 800; 900 bar
Burst pressure	200; 200; 500; 1000; 2000; 2000 bar
Mechanical connection	G $\frac{1}{4}$ A DIN 3852
Torque value	20 Nm
Parts in contact with the media	Stainless steel, seal: FPM

Output data

Repeatability	$\leq \pm 0.5$ % FS
Temperature drift	$\leq \pm 0.3$ % FS / 10 K zero point $\leq \pm 0.3$ % FS / 10 K range

Switching outputs

Type	PNP transistor output
Switching current	Max. 1.2 A
Switching cycles	≥ 100 million
Reaction time	20 ms

Setting ranges of the switching points	16 bar: 1 .. 16 bar
	40 bar: 3 .. 40 bar
	100 bar: 8 .. 100 bar
	250 bar: 15 .. 250 bar
	400 bar: 30 .. 400 bar
	600 bar: 40 .. 600 bar

Setting ranges of the hystereses	1.5 .. 20 % FS
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Ambient conditions

Nominal temperature range	-10 .. +70 °C
Operating temperature range	-25 .. +85 °C
Storage temperature range	-40 .. +100 °C
Temperature range of fluid	-40 .. +100 °C

CE mark	EN 50081-1, EN 50081-2 EN 50082-1, EN 50082-2
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Vibration resistance:	
to IEC 68-2-6 at 10 .. 500 Hz	≤ 20 g

Shock resistance	50 g / 1 ms
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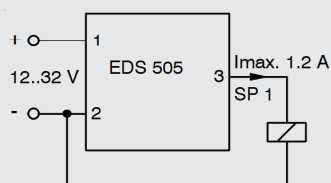
Other data

Supply voltage	12 .. 32 V DC
Current consumption	50 mA
Electrical connection	Plug to DIN 43650 (3 pole + PE)
Safety type	IP 65
Material of housing	Stainless steel
Weight	approx. 260 g

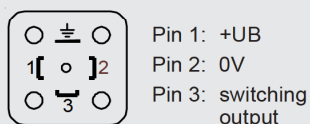
Note: FS (Full Scale) = relative to the full measuring range

Special models on request

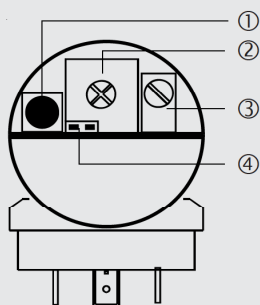
Electrical connection



Pin connections (EDS 505)



Location of the adjustment potentiometers



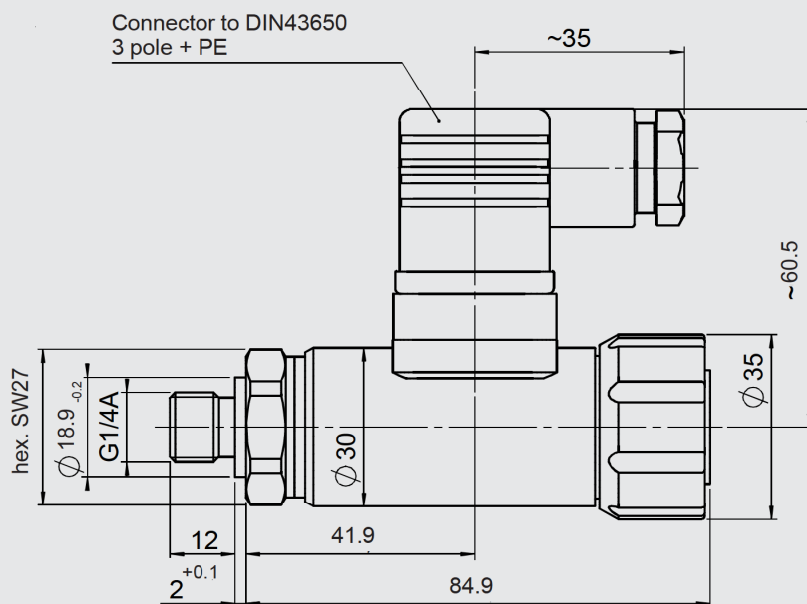
- ① LED
- ② Potentiometer for adjusting the hysteresis
- ③ Potentiometer for adjusting the switching point
- ④ Measurement plug for connecting the measurement cable

Electrical accessories

Using the measurement cable the switching point can be pre-set very accurately by means of voltage measurement.
(Setting accuracy approx. $\pm 1\%$ typ.)

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Dimensions



Model code

EDS 505 - XXX - 4 - X - 000

Measurement ranges in bar

016; 040; 100; 250; 400; 600

Type of connection, mechanical

4 = G1/4 A male thread

Output function

0 = normally open
1 = normally closed

Modification number (determined by manufacturer)

000 Standard