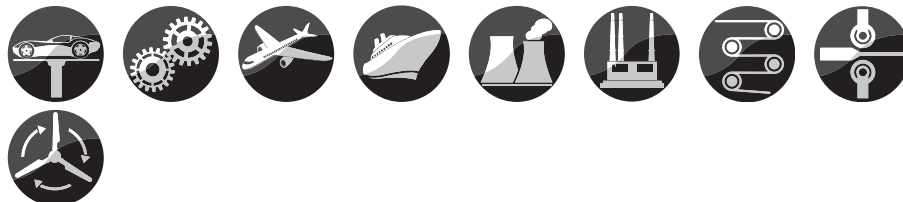


EDS 300 Series Pressure Switch with Display



Applications



Description

The EDS 300 is a compact electronic pressure switch with digital display. Four different output models are available: with one switching point, with two switching points and both models can also have an additional analog output signal 4 to 20 mA.

The switching points and the corresponding hystereses can be adjusted via keys. For optimum adaptation to a particular application, the unit has many additional adjustment parameters, e.g. switching delay times, N/O / N/C function of the outputs.

The main applications of the EDS 300 are pressure and limit indication in hydraulics and pneumatics and anywhere where a high switching frequency or a constant switching accuracy places too high a demand on a mechanical pressure switch.

The unit is ideal for the construction of accumulator charging circuits or pump and compressor controls.

Special Features

- Integrated pressure sensor with thin-film strain gauge on stainless steel membrane
- Compact, robust construction
- Accuracy $\leq \pm 0.5\%$ BFSL
- 3 or 4 digit digital display
- User-friendly push button programming
- Switching points and switchback hystereses can be adjusted independently
- Window function
- Many useful additional functions

Approvals

CE CE mark is a mandatory conformity mark on many products placed on the single market in the European Economic Area

Technical Details

Sensor Specifications	
Measuring ranges - psi	-14.5 to 75, 150, 1000, 3000, 6000, 9000
Overload pressure - psi	290, 290, 2900, 7250, 11600, 14500
Burst pressure - psi	1450, 1450, 7250, 14500, 29000, 29000
Mechanical connection	G1/4A DIN 3852 male (<i>bar ranges only</i>) SAE 4 7/16-20 UNF 2B, female (<i>psi ranges only</i>)
Tightening torque	G1/4: 15 lb-ft (20 Nm) SAE 4: 11 lb-ft (15 Nm)
Parts in contact with media	Stainless steel
Accuracy (B.F.S.L.) including linearity, hysteresis, and repeatability	$\leq \pm 0.5\%$ BFSL
Temperature compensation zero point	$\leq \pm 0.0085\%$ / °F typ. $\leq \pm 0.017\%$ / °F max.
Temperature compensation over range	$\leq \pm 0.0085\%$ / °F typ. $\leq \pm 0.017\%$ / °F max.
Long-term drift	$\leq \pm 0.3\%$ FS typ. / year
Life expectancy	10 million load cycles (0 to 100% FS)
Weight	Approximately 300 g
Output signal	4 to 20 mA, ohmic resistance $\leq 400 \Omega$
Switching Specifications	
Type	PNP transistor output
Repeatability	$\leq \pm 0.5\%$ FS max.
Switching current	Max. 1.2 A per switching output
Switching cycles	≥ 100 million
Reaction time	< 10 ms
Environmental Condition	
Compensated temperature range	14° to 158°F (-10° to 70°C)
Operating temperature range	-13° to 176°F (-25° to 80°C)
Storage temperature range	-40° to 176°F (-40° to 80°C)
Media temperature range	-13° to 176°F (-25° to 80°C)
CE mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance to DIN EN 60068-2-6 at 10 to 500 Hz	$\leq 10g$
Environmental protection	IP 65
Electrical Specifications	
Supply voltage	20 to 32 VDC
Residual ripple supply voltage	$\leq 5\%$
Current consumption	100 mA (<i>plus switching current</i>)
Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection	Standard
Display	4-digit, 7-segment LED red

Model Code

EDS 3 X X - X - XXXX - 400

Mechanical Connection*

- 4 = G1/4A DIN 3852 male (*bar ranges only*)
- 5 = SAE 4 7/16-20 UNF 2B, female (*psi ranges only*)

Electrical Connection*

- 4 = 4 pole plug M18x1, Binder Series (*connector not included*)
- 5 = DIN 43650 / ISO plug, 3 pole + ground (*connector ZBE 01 included*)
- 6 = M12x1 plug, 4 pole (*connector not included*)
- 8 = M12x1 plug, 5 pole (*connector not included*)

Output

- 1 = 1 Switching Output
- 2 = 2 Switching Outputs (*only with electrical connection 6*)
- 3 = 1 Switching Output with 1 analog output (*only with electrical connection 6*)
- 5 = 2 Switching Outputs with 1 analog output (*only with electrical connection 8*)

Pressure Range

For EDS 35X only (SAE 4 7/16-20 UNF2B)
0089 (-14.5 to 75), 0150, 1000, 3000, 6000, 9000 psi

Modification Number

- 400 = standard in psi
- 401 = vacuum in psi

*Other options available upon request

Pin Connections

Binder 714 M18



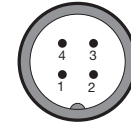
Pin	3X4-2	3X4-3
1	+UB	+U _B
2	0 V	0 V
3	SP 1	SP 1
4	SP 2	analog

DIN 43650



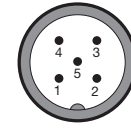
Pin	3X5-1
1	+UB
2	0 V
3	SP 1
4	PE

M12x1, 4 pole



Pin	3X6-1	3X6-2	3X6-3
1	+UB	+U _B	+U _B
2	nc	SP 2	analog
3	0 V	0 V	0 V
4	SP 1	SP 1	SP 1

M12x1, 5 pole

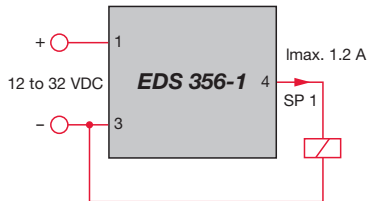


Pin	3X8-5
1	+UB
2	analog
3	0 V
4	SP 1
5	SP 2

Circuit Diagrams

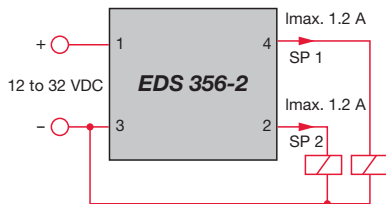
Model EDS 356-1

1 switching output



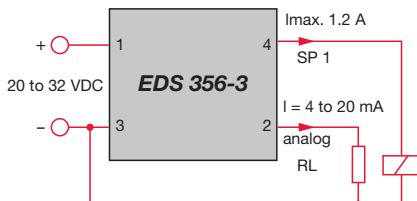
Model EDS 356-2

2 switching outputs



Model EDS 356-3

1 switching output, 1 analog output



Dimensions

