



Pressure Switch EDS 8000

Relative pressure

Display



Up to 2 switching outputs

Description:

EDS 8000 is an electronic pressure switch in compact design which is simple to adjust. Models with one or two transistor outputs (PNP or NPN) are available.

The switch points are set using the two keys and a four-digit display. During operation the switching position is indicated by either a red or a green backlight in the display.

For optimum adaptation to a particular application, the instrument has many additional adjustment parameters, e.g. switching delay times, N/O / N/C function of the outputs.

EDS 8000 is available in various pressure ranges between 0 .. 25 bar and 0 .. 600 bar.

The main applications of the EDS 8000 are to indicate pressures and limits in hydraulics and pneumatics, or any application where high switching frequency or constant switching accuracy would overburden a mechanical pressure switch.

Technical data:

Input data

Measuring ranges	bar	25	40	100	250	400	600
Overload pressures	bar	80	80	200	500	800	1000
Burst pressure	bar	200	200	500	1000	2000	2000

Mechanical connection G1/4 A ISO 1179-2

Tightening torque, recommended 20 Nm

Parts in contact with fluid Mech. connection: Stainless steel
Seal: FKM

Output data

Switching outputs 1 or 2 transistor outputs PNP or NPN
Switching current: max. 250 mA per output
Switching cycles: > 100 million

Accuracy acc. to DIN 16086, terminal based $\leq \pm 0.5\%$ FS typ.
 $\leq \pm 1\%$ FS max.

Temperature compensation, zero point $\leq \pm 0.02\%$ FS / °C typ.
 $\leq \pm 0.03\%$ FS / °C max.

Temperature compensation, span $\leq \pm 0.02\%$ FS / °C typ.
 $\leq \pm 0.03\%$ FS / °C max.

Repeatability $\leq \pm 0.5\%$ FS max.

Reaction time < 10 ms

Long-term drift $\leq \pm 0.25\%$ FS max. / year

Environmental conditions

Compensated temperature range -25 .. +85 °C

Operating temperature range¹⁾ -40 .. +100 °C / -25 .. +100 °C

Nominal temperature range of display (read-out) -15 .. +70 °C

Storage temperature range -40 .. 85 °C

Fluid temperature range¹⁾ -40 .. +125 °C / -25 .. +125 °C

CE mark EN 61000-6-1 / 2 / 3 / 4

cULus mark²⁾ Certificate no.: E318391

Vibration resistance acc. to DIN EN 60068-2-6 (0 .. 500 Hz) approx. 10 g

Shock resistance acc. to DIN EN 60068-2-27 (11 ms) approx. 50 g

Protection class acc. to DIN EN 60529³⁾ IP 67

Other data $\leq 5\%$

Supply voltage 9.6 .. 32 V DC
when applied acc. to UL specifications - limited energy - acc. to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950

Residual ripple of supply voltage

Current consumption max. 0.535 A total
max. 35 mA (with inactive switching output)

Display 4-digit, LED, 7-segment,
height of digits 4.5 mm

Weight ~ 70 g

Note: Reverse polarity protection of the supply voltage, overvoltage, override and short circuit protection are provided.

FS (Full Scale) = relative to complete measuring range

¹⁾ -25 °C with FKM seal, -40 °C on request

²⁾ Environmental conditions acc. to 1.4.2 UL 61010-1; C22.2 No 61010-1

³⁾ With mounted mating connector in corresponding protection class

Setting options:

All the terms and symbols used for setting the EDS 8000 as well as menu structure comply with the specifications of the German Engineering Federation Standard (VDMA 24574-1) for pressure switches. The EDS 8000 is easy and convenient to set up using the two buttons.

Setting ranges for the switching outputs:

Measuring range in bar	Lower limit of RP / FL in bar	Upper limit of SP / FH in bar
0 .. 25	0.25	25.00
0 .. 40	0.4	40.0
0 .. 100	1.0	100.0
0 .. 250	2.5	250.0
0 .. 400	4	400
0 .. 600	6	600

Measuring range in bar	Min. difference betw. RP and SP & FL and FH	Increment* in bar
0 .. 25	0.25	0.05
0 .. 40	0.4	0.1
0 .. 100	1.0	0.2
0 .. 250	2.5	0.5
0 .. 400	4	1
0 .. 600	6	1

* All ranges given in the table can be adjusted by the increments shown.

SP = switch point

RP = switch-back point

FL = pressure window lower value

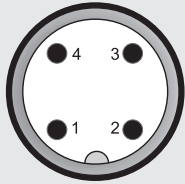
FH = pressure window upper value

Additional functions:

- Switching mode of the switching outputs adjustable (switch point function or window function)
- Switching direction of the switching outputs adjustable (N/C or N/O function)
- Switch-on and switch-off delay adjustable from 0.00 .. 99.99 seconds
- Display filter for smoothing the display value during pressure pulsations
- Pressure can be displayed in bar, psi, MPa

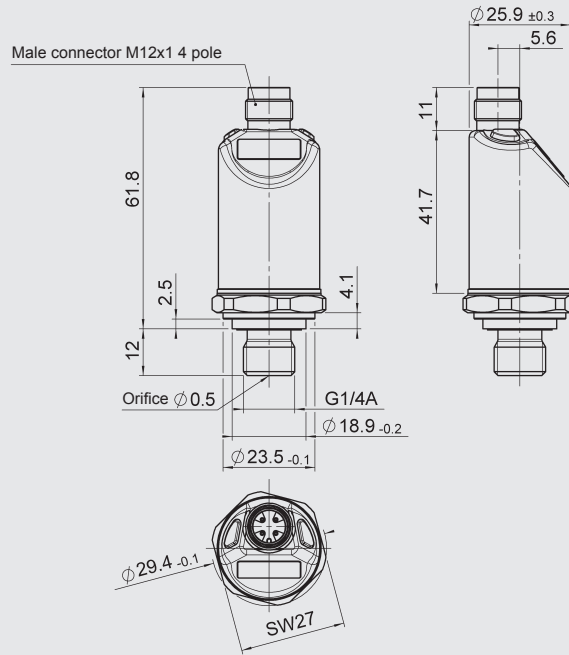
Pin connections:

M12x1, 4 pole



Pin	EDS 8446-1	EDS 8446-2
1	+U _B	+U _B
2	n.c.	SP2
3	0 V	0 V
4	SP1	SP1

Dimensions:



Model code:

EDS 8 4 4 6 - X - XXXX - X00

Mechanical connection

4 = G 1/4 A ISO 1179-2

Electrical connection

6 = male M12x1, 4 pole
(mating connector not supplied)

Output

1 = 1 switching output
2 = 2 switching outputs

Measuring ranges in bar

0025; 0040; 0100; 0250; 0400; 0600

Modification number

000 = standard
N00 = version with NPN switching outputs

Accessories:

Appropriate accessories, such as mating connectors and mechanical adapters, can be found in the Accessories brochure.

Note:

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

HYDAC ELECTRONIC GMBH
Hauptstr. 27, 66128 Saarbrücken
Germany
Telephone +49 (0)6897 509-01
Fax +49 (0)6897 509-1726
e-mail: electronic@hydac.com
Internet: www.hydac.com