

HYDAC INTERNATIONAL

2



Pressure Switch EDS 4400



Up to 2 switching outputs

Description:

The programmable electronic pressure switch in the series EDS 4400 was specially developed to combine the advantages of a compact, robust and cost-effective instrument with the benefits of a programmable pressure switch.

The EDS 4400 can be easily programmed using the HYDAC HPG 3000 Programming Unit. Once the programming unit is disconnected from the EDS 4400, the pressure switch retains all the settings. This prevents unauthorised or incorrect adjustment of the settings.

The following parameters can be changed:

- Switch point
- Hysteresis
- Switching direction (N/O / N/C)
- Switching delay times

The EDS 4400 is suitable for high-pressure applications (starting at 40 bar) and has a pressure measurement cell with thin-film strain gauge on a stainless steel membrane.

In contrast to pressure switches which are factory-set acc. to customer requirements and not field-adjustable, the programmable EDS 4400 is highly versatile and replaces a wide range of models. This is advantageous in respect of stock management.

An ATEX version of the EDS 4400 is also available for use in potentially explosive atmospheres.

Technical data:

Input data							
Measuring ranges	bar	40	100	250	400	600	1000
Overload pressures	bar	80	200	500	800	1000	1600
Burst pressure	bar	200	500	1000	2000	2000	3000
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: PNP: max. 1.2 A with 1 switching output max. 1 A each with 2 switching outputs NPN: max. 0.5 A with 1 switching output max. 0.3 A each with 2 switching outputs Switching cycles: > 100 million Switch points/hysteresis: user-programmable with HYDAC Programming Unit HPG 3000 Switch-on and switch-off delay: 8 .. 2000 ms; user-programmable with HYDAC Programming Unit HPG 3000				
Accuracy acc. to DIN 16086, terminal based			≤ ± 0.5 % FS typ. ≤ ± 1 % FS max.				
Temperature compensation, zero point			≤ ± 0.02 % FS / °C typ. ≤ ± 0.03 % FS / °C max.				
Temperature compensation, span			≤ ± 0.02 % FS / °C typ. ≤ ± 0.03 % FS / °C max.				
Repeatability			≤ ± 0.1 % FS max.				
Long-term drift			≤ ± 0.3 % FS typ. / year				
Environmental conditions							
Compensated temperature range			-25 .. +85 °C				
Operating temperature range ¹⁾			-40 .. +85 °C / -25 .. +85 °C				
Storage temperature range			-40 .. +100 °C				
Fluid temperature range ¹⁾			-40 .. +100 °C / -25 .. +100 °C				
CE mark			EN 61000-6-1 / 2 / 3 / 4				
cULus mark ²⁾			Certificate no.: E318391				
Vibration resistance acc. to DIN EN 60068-2-6 at 10 .. 500 Hz			≤ 20 g				
Shock resistance acc. to DIN EN 60068-2-27 (1 ms)			≤ 100 g				
Protection class acc. to DIN EN 60529 ³⁾			IP 67				
Other data							
Supply voltage when applied acc. to UL specifications			8 .. 32 V DC - limited energy - acc. to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950				
Residual ripple of supply voltage			≤ 5 %				
Current consumption			≤ 25 mA with inactive switching outputs ≤ 1.225 A with 1 switching output ≤ 2.025 A with 2 switching outputs				
Weight			~ 145 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

EN 18.067.3/02.18

Setting options:

In conjunction with the HYDAC Programming Unit HPG 3000, all the settings are combined in an easy-to-follow menu.

Setting ranges for the switching outputs:

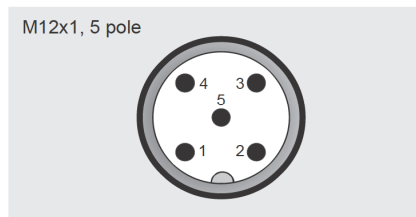
Measuring range in bar	Increment in bar
0 .. 40	0.1
0 .. 100	0.2
0 .. 250	0.5
0 .. 400	1
0 .. 600	1
0 .. 1000	2

The switch point (upper switch value) on all instruments is between 5 % and 100 % of the measuring range and the switch-back point (lower switch value) is between 1 % and 96 % of the measuring range.

	Minimum value in ms	Maximum value in ms
Switch-on delay Ton1/Ton2	8	2040
Switch-off delay ToF1/ToF2	8	2040

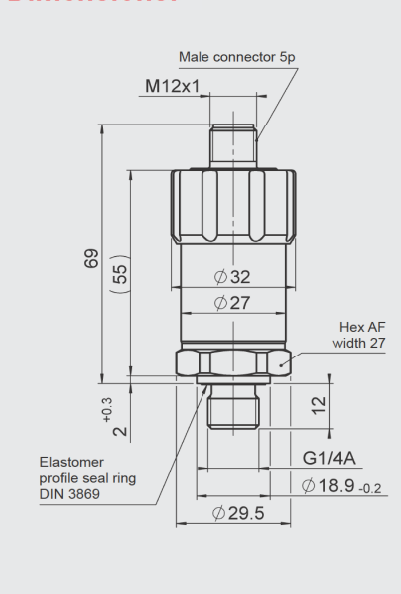
The increment for all instruments is 8 ms.

Pin connections:



Pin	Process connection	HPG connection
1	+U _B	+U _B
2	Out 2	n.c.
3	0 V	0 V
4	Out 1	n.c.
5	n.c.	Comport

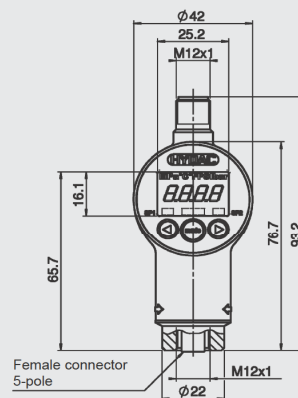
Dimensions:



Programming Unit:

(to be ordered separately)

HPG 3000 - 000
Portable Programming Unit
Part No. 909422



Model code:

EDS 4 4 4 8 - XXXX - X - P X - 000

Mechanical connection

4 = G1/4 A ISO 1179-2

Electrical connection

8 = male M12x1, 5 pole

Measuring ranges in bar

0040; 0100; 0250; 0400; 0600; 1000

Number of switching outputs

1 = 1 switching output
2 = 2 switching outputs

Output technology

P = programmable switching output

Output technology 2

P = PNP switching output
N = NPN switching output

Modification number

000 = standard

Accessories:

Appropriate accessories, such as mating connectors, 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.