Pressure Switch
EDS 4300

Relative pressure | **Programmable**

Up to 2 switching outputs

Description:

The programmable electronic pressure switch in the series EDS 4300 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 4300 can be easily programmed using the HYDAC HPG 3000 Programming Unit. Once the programming unit is disconnected from the EDS 4300, 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 4300 is suitable for low-pressure applications (up to 16 bar) and is equipped with a pressure measurement cell with thick-layer strain gauge on a ceramic membrane.

In contrast to pressure switches which are factory-set acc. to customer requirements and not field-adjustable, the programmable EDS 4300 is highly versatile and replaces a wide range of models. This is advantageous in respect of stock management.

An ATEX version of the EDS 4300 is also available for use in potentially explosive atmospheres.

Technical data:

Input data								
Measuring ranges	bar	1	2.5	6	10	16	-1 .. 1	-1 .. 9
Overload pressures	bar	3	8	20	32	50	3	32
Burst pressure	bar	5	12	30	48	75	5	48
Mechanical connection				G1/4 A ISO 1179-2				
Tightening torque, recommended				20 Nm				
Parts in contact with fluid				Mech. connection: Stainless steel Sensor cell: Ceramic Seal: FKM/EPDM (as per model code)				
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 (**F**ull **S**cale) = 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:

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
-1 .. 1	0.01
0 .. 1	0.002
0 .. 2.5	0.005
0 .. 6	0.01
-1 .. 9	0.02
0 .. 10	0.02
0 .. 16	0.05

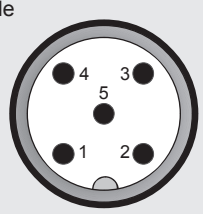
The switch point (upper switch value) on all instruments is between 5 % and 100 % of the measuring range and the switch-back point (lower switch value) is between 1 % and 96 % of the measuring range.

	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.

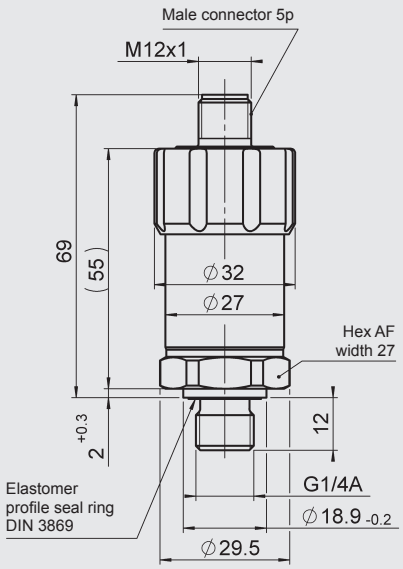
Pin connections:

M12x1, 5 pole



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

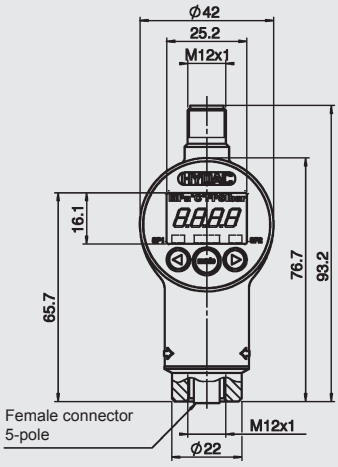
Dimensions:



Programming Unit:

(to be ordered separately)

HPG 3000 – 000
Portable Programming Unit
Part No. 909422



Model code:

EDS 4 3 4 8 – XXXX – X – P X – 000 – X 1

Mechanical connection
4 = G1/4 A ISO 1179-2

Electrical connection
8 = male M12x1, 5 pole

Measuring ranges in bar
01.0; 02.5; 06.0; 0010; 0016
0001(-1 .. 1); 0009(-1 .. 9)

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

Seal material (in contact with fluid)
F = FKM seal (e.g. for hydraulic oils)
E = EPDM seal (e.g. for water or refrigerants)

Connection material (in contact with fluid)
1 = stainless steel

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.