Pressure Switch
EDS 4400 Ex series applications

Relative pressure | **Factory-set**

Intrinsically Safe
ATEX approval
Customised designs thanks to diverse electrical and mechanical connections
1 switching output

Description:

The pressure switch EDS 4400 in ATEX version has been specially developed for use in potentially explosive atmospheres and is based on the EDS 4000 series.

The switch point and switch-back point, the function of the switching outputs as N/C or N/O and the switching delay are factory-set acc. to customer requirement (not field-adjustable).

As with the industry model, the EDS 4400 in ATEX version has a measurement cell with thin-film strain gauge on a stainless steel membrane for measuring relative pressure in the high pressure range.

The main fields of application are in the oil and gas industry, in mining and in locations with high dust contamination.

Protection types and applications:

I	M1	Ex ia	I	
II	1G	Ex ia	IIC	T4, T5, T6
II	1/2G	Ex ia	IIC	T4, T5, T6
II	2G	Ex ia	IIC	T4, T5, T6
II	1D	Ex iaD	20	T100 °C

Technical data:

Input data						
Measuring ranges	bar	60	100	250	400	600
Overload pressures	bar	120	200	500	800	1000
Burst pressure	bar	300	500	1000	2000	2000
Mechanical connection		G1/4 A ISO 1179-2				
Tightening torque, recommended		20 Nm				
Parts in contact with fluid		Stainless steel: 1.4542; 1.4571; 1.4435; 1.4404; 1.4301, 1.4548 Seal: FKM				
Output data						
Switching output		1 transistor output: PNP Switching current: during operation: I_{max} ≤ 34 mA Switching cycles: > 100 million Switch point/switch-back point: acc. to customer specification Switch-on and switch-off delay: 32 ms standard (8 .. 2000 ms acc. to customer spec.)				
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				
Long-term drift		≤ ± 0.3 % FS typ. / year				
Environmental conditions						
Compensated temperature range		-25 .. +85 °C				
Operation, ambient, fluid temperature range		T6: Ta = -20 .. +60 °C T5, T4, T100: Ta = -20 .. +70 °C				
Storage temperature range		-40 .. +100 °C				
CE mark		EN 61000-6-1 / 2 / 3 / 4 EN 60079-0 / 11 / 26 EN 61241-0 / 11 EN 50303				
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 [1]		IP 67				
Relevant data for Ex applications						
		I M1 II 1G, 1/2G, 2G			**II 1 D**	
Supply voltage		14 .. 28 V DC				
Max. input current		100 mA			93 mA	
Max. input power		0.7 W			0.65 W	
Max. internal capacity		33 nF			33 nF	
Max. internal inductance		0 mH			0 mH	
Insulation voltage to housing [2]		50 V AC, with integrated overvoltage protection acc. to EN 61000-6-2				
Approved intrinsic safety barriers		Pepperl & Fuchs: Z 787 Telematic Ex STOCK: MTL 7087				
Other data						
Residual ripple of supply voltage		≤ 5 %				
Weight		~ 150 g				

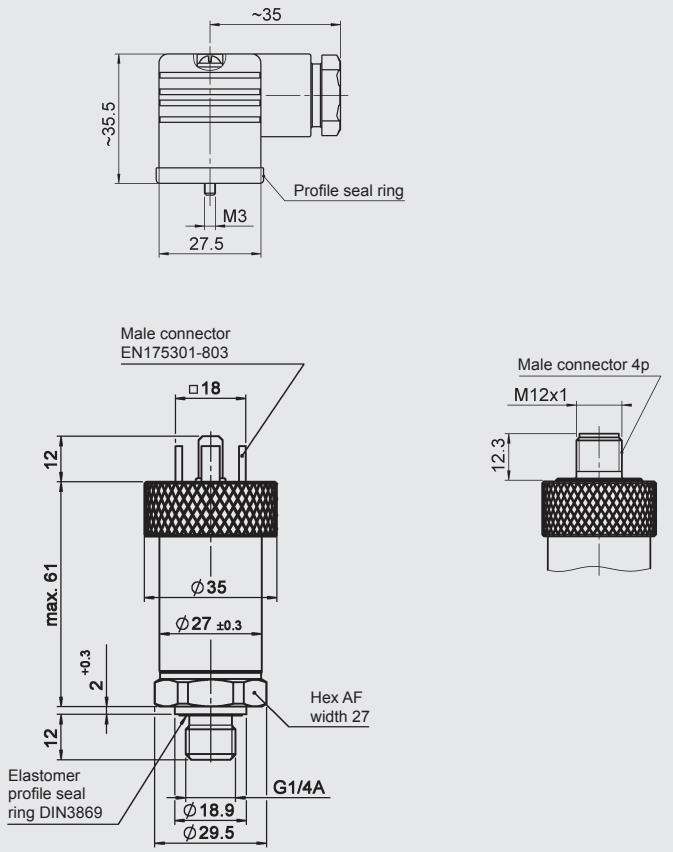
Note: Reverse polarity protection of the supply voltage, overvoltage, override and short circuit protection are provided.
FS (**F**ull **S**cale) = relative to complete measuring range

[1] With mounted mating connector in corresponding protection class
[2] 500 V AC on request

Fields of application:

Protection type	I M1 Ex ia I	II 1G Ex ia IIC T4, T5, T6	II 2G Ex ia IIC II 1/2G Ex ia IIC T4, T5, T6	II 1D Ex iaD 20 T100 °C
Certificate	DEKRA EXAM BVS 07 ATEX E 041 X			
Application fields	Group I Category M1 Mining Protection type: intrinsically safe ia with barrier	Group II Category 1G Gases Protection type: intrinsically safe ia with barrier For use in Zone 0, 1, 2	Group II Category 2G, 1/2G Gases Protection type: intrinsically safe ia with barrier For use in Zone 1, 2 For mounting to Zone 0	Group II Category 1D Dusts Protection type: intrinsically safe ia with barrier For use in Zone 20, 21, 22 For mounting to Zone 20

Dimensions:



Order details:

The electronic pressure switch EDS 4400 in ATEX version has been specially developed for OEM customers and is available for minimum order quantities of 50 pieces per type. For precise specifications, please contact the Sales Department of HYDAC ELECTRONIC.

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.

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