



Pressure Switch EDS 4400 Ex series applications

Relative pressure

Factory-set

Flameproof enclosure
ATEX, CSA, IECEx, triple approval
Customised designs thanks to diverse
electrical and mechanical connections
Up to 2 switching outputs



Description:

The electronic pressure switch EDS 4400 with flameproof enclosure and triple approval acc. to ATEX, CSA and IECEx ensures the instrument is universally suitable for use in potentially explosive atmospheres worldwide.

Each instrument is certified by the three approvals organizations and is labelled accordingly. Therefore there is no longer any need to stock multiple devices with separate individual approvals. 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 of the EDS 4400, those with triple approval have a proven, fully-welded sensor cell with a thin-film strain gauge on a stainless steel membrane without internal seal.

The main fields of application are in mining and the oil and gas industry, e.g. in underground vehicles, hydraulic assemblies, blow-out preventers (BOPs), drill drives or valve actuation stations and in locations with high dust contamination.

Protection types and applications:

cCSA_{us}

Explosionproof - Seal not required
Class I Group A, B, C, D, T6, T5
Class II Group E, F, G
Class III
Type 4

ATEX

Flameproof
I M2 Ex d I Mb
II 2G Ex d IIC T6, T5 Gb
II 2D Ex tb IIIC T110 .. 130 °C Db

IECEx

Flameproof
Ex d I Mb
Ex d IIC T6, T5 Gb
Ex tb IIIC T110 .. 130 °C Db

Technical data:

Input data

Measuring ranges	bar	6	16	40	60	100	250	400	600	1000
Overload pressures	bar	15	32	80	120	200	500	800	1000	1600
Burst pressure	bar	100	200	200	300	500	1000	2000	2000	3000
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									
Conduit, housing material	1.4435; 1.4404									

Output data

Switching output ¹⁾	1 or 2 PNP transistor outputs: PNP Switching current: max. 1.2 A with 1 switching output max. 1 A each with 2 switching outputs Switching cycles: > 100 million Switch points/hysteresis: 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. ≤ ± 1.0 % FS max.
Temperature compensation	≤ ± 0.02 % FS / °C typ.
Zero point	≤ ± 0.03 % FS / °C max.
Temperature compensation	≤ ± 0.02 % FS / °C typ.
Span	≤ ± 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 / ambient temperature range ²⁾³⁾	T6, T110 °C: Ta = -40 .. +60 °C / -20 .. +60 °C T5: Ta = -40 .. +80 °C / -20 .. +80 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range ²⁾³⁾	T6, T110 °C: Ta = -40 .. +60 °C / -20 .. +60 °C T5: Ta = -40 .. +80 °C / -20 .. +80 °C

CE mark

	EN 61000-6-1 / 2 / 3 / 4 EN 60079-0 / 1 / 31
Vibration resistance acc. to DIN EN 60068-2-6 at 10 .. 500 Hz	≤ 10 g
Protection class acc. to DIN EN 60529 ISO 20653	IP 65 (Vented Gauge), IP 69 (Sealed Gauge) IP 6K9K (Sealed Gauge)

Other data

Supply voltage	12 .. 30 V DC
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	~ 300 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⁾ NPN switching outputs on request

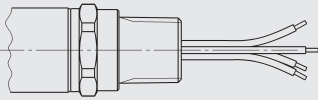
²⁾ T130 °C with Ta = -40 .. +80 °C / -20 .. +80 °C with electrical connection
single leads possible

³⁾ -20 °C with FKM seal, -40 °C on request

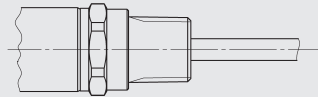
Pin connections:

Pin connections are configured acc. to customer specification.

Conduit (single leads)



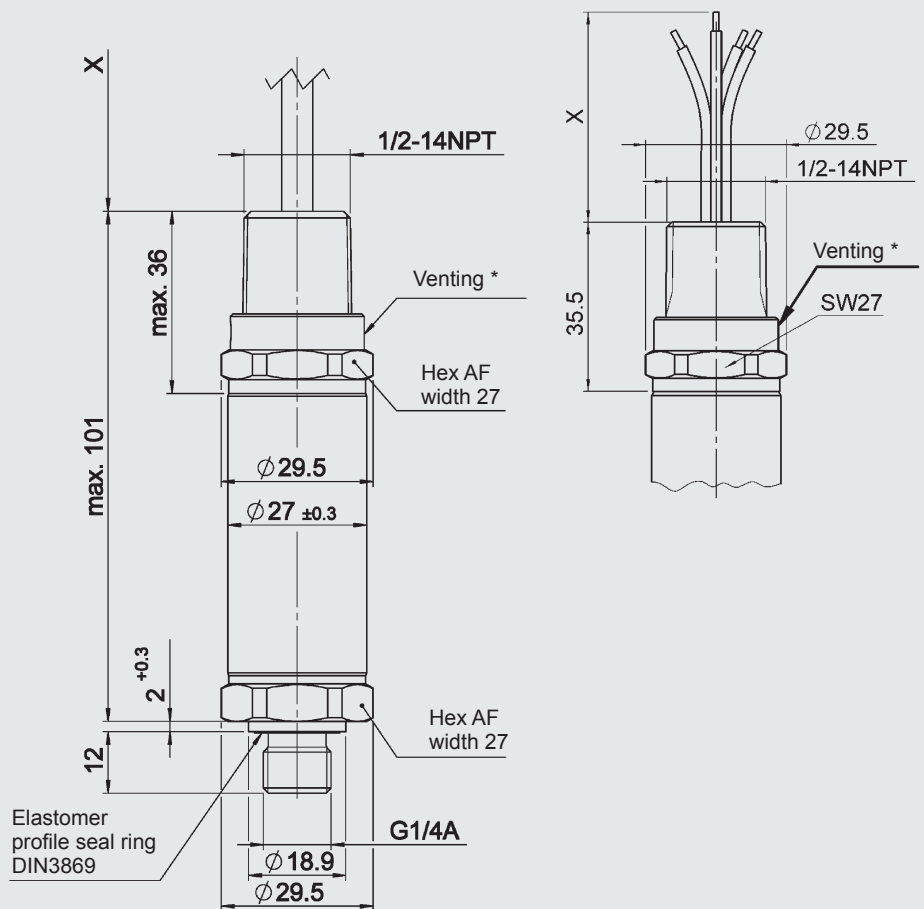
Conduit (jacketed cable)



Fields of application:

	Single leads Electrical connection "9"	Jacketed cable Electrical connection "G"
CSA	Explosionproof (seal not required)	
ATEX	Flameproof	
IECEX	Flameproof	
cCSA_{us}	Class I Group A, B, C, D, T6, T5 Class II Group E, F, G Class III Type 4	
ATEX	I M2 Ex d I Mb	II Mb
	II 2G Ex d IIC T6, T5 Gb	II 2D Ex tb IIIC T110 °C Db
IECEX	Ex d I Mb Ex d IIC T6, T5 Gb	
	Ex tb IIIC T110 .. 130 °C Db	Ex tb IIIC T110 °C Db

Dimensions:



* Optional depending on type "Sealed Gauge" / "Vented Gauge"

Order details:

The electronic pressure switch EDS 4400 with triple approval has been specially developed for OEM customers and is available for minimum order quantities of 50 units 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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