HYDAC INTERNATIONAL

Electronic Pressure Switch EDS 4400 ATEX, CSA, IECEx Flameproof Enclosure

(Minimum order quantity 50 units)

Description:

The electronic pressure switch EDS 4400 with flameproof enclosure and triple approval according to ATEX, CSA and IECEx ensures the instrument is universally suitable for use in potentially explosive environments around the world.
Each device is certified by the three approval organizations and is labelled accordingly. Therefore it is no longer necessary to stock multiple devices with separate individual approvals.
The switching point and switch-back point, the function of the switching output as N/C or N/O and the switching delay are permanently set in accordance with the customer's requirements.
As with the industrial version of the EDS 4400, those with triple approval have a field-proven, all-welded stainless steel measurement cell with thin film strain gauge without internal seals.
Its main applications are in mining and the oil and gas industry, e.g. in underground vehicles, hydraulic power units, blow-out preventers (BOPs), drill drives or valve actuation stations as well as in areas with high dust loads.

Protection types and applications:

cCSAus Explosion Proof - Seal Not Required

Class I Group A, B, C, D, T6, T5
Class II Group E, F, G
Class III
Type 4

ATEX Flame Proof

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

IECEx Flame Proof

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

Special features:

- Accuracy ≤ ± 1.0 % FS typ.
- Certificates:
  ATEX KEMA 10ATEX100 X
  CSA MC 224264
  IECEx KEM 10.0053X
- Robust design
- Very small temperature error
- Excellent EMC characteristics
- Excellent durability

Technical data:

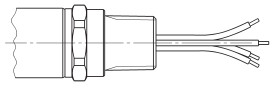
Input data	
Measuring ranges	6; 16; 40; 60; 100; 250; 400; 600; 1000 bar
Overload pressures	15; 32; 80; 120; 200; 500; 800; 1000; 1600 bar
Burst pressure	100; 200; 200; 300; 500; 1000; 2000; 2000; 3000 bar
Mechanical connection [1] (Torque value)	G1/2 A DIN 3852 (40 Nm) G1/4 A DIN 3852 (20 Nm)
Parts in contact with medium	Stainless steel: 1.4542; 1.4571; 1.4435; 1.4404; 1.4301 Seal: FPM
Conduit and housing material	1.4404; 1.4435 (316L)
Output data	
Accuracy to DIN 16086, Max. setting	≤ ± 0.5 % FS typ. ≤ ± 1.0 % FS max.
Repeatability	≤ ± 0.1 % FS max.
Temperature drift	≤ ± 0.03 % FS / °C max. zero point ≤ ± 0.03 % FS / °C max. range
Switch output [2]	1 or 2 PNP transistor switch outputs
Output load	max. 1.2 A on 1 switch output version max. 1 A each on 2 switch output version
Switch points / hysteresis / N/C or N/O function	permanently pre-set acc. to customer spec.
Rising switch point and falling switch point delay	32 ms standard (8 .. 2000 ms pre-set to customer spec.)
Long-term drift	≤ ± 0.3 % FS typ. / year
Environmental conditions	
Compensated temperature range	T5, T130 °C: -25 .. +80 °C T6, T110 °C: -25 .. +60 °C
Operating temperature range [3]	T5, T130 °C: -40 .. +80 °C / -20 .. +80 °C T6, T110 °C: -40 .. +60 °C / -20 .. +60 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range [3]	T5, T130 °C: -40 .. +80 °C / -20 .. +80 °C T6, T110 °C: -40 .. +60 °C / -20 .. +60 °C
CE mark	EN 61000-6-1 / 2 / 3 / 4 EN 60079-0 / 1 / 31
Vibration resistance to DIN EN 60068-2-6 at 10 .. 500 Hz	≤ 20 g
Protection class to IEC 60529 to ISO 20653	IP 65 (Vented Gauge) IP 69K (Sealed Gauge)
Other data	
Voltage supply	12 .. 30 V DC
Current consumption	~ 25 mA (plus switching current)
Residual ripple of supply voltage	≤ 5 %
Life expectancy	> 10 million cycles 0 .. 100 % FS
Weight	~ 300 g

Note: Reverse polarity protection of the supply voltage, overvoltage, override and and short circuit protection are provided.
FS (**F**ull **S**cale) = relative to complete measuring range
[1] Other mechanical connection options available on request
[2] Other output signals available on request
[3] -20 °C with FPM seal, -40 °C on request

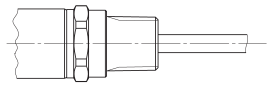
Pin connections:

Pin connections are configured according to customer specification.

Conduit (single cores)



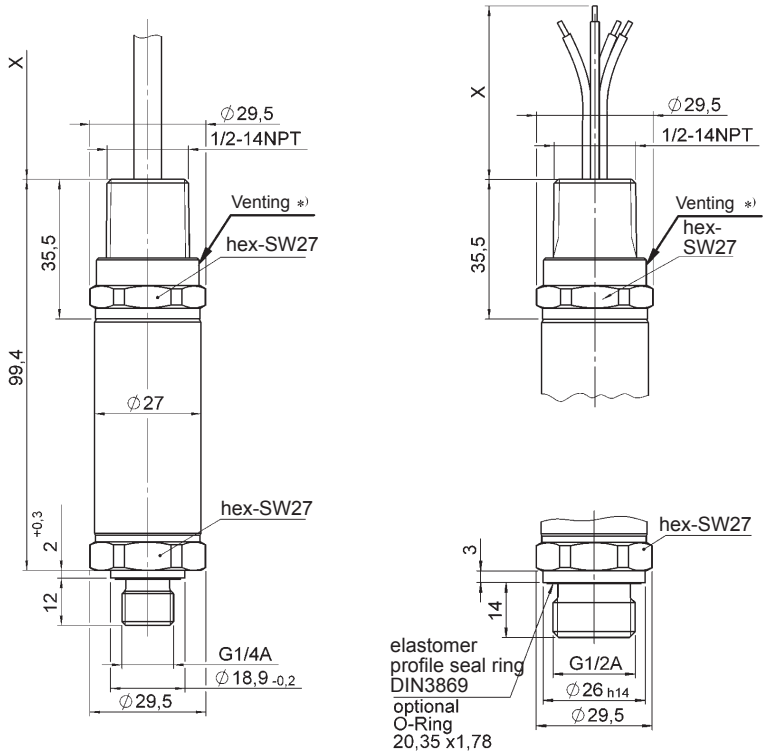
Conduit (flying leads)



Areas of application:

Approvals	cCSAus: Explosion Proof - Seal not required ATEX: Flame Proof IECEx: Flame Proof
Certificate	ATEX KEMA 10ATEX100X CSA MC 224264 IECEx KEM 10.0053X
Applications / Protection types	**cCSAus:** 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 2G Ex d IIC T6, T5 Gb II 2D Ex tb IIIC T110 .. 130 °C Db **IECEx:** Ex d I Mb Ex d IIC T6, T5 Gb Ex tb IIIC T110 .. 130 °C Db

Dimensions:



Note:

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

*) optional, depending on gauge type "Sealed Gauge" / "Vented Gauge"