



Electronic Pressure Transmitter

HDA 4700
CSA Explosion Proof



Description:

The pressure transmitter HDA 4700 in **CSA Explosion Proof** version has been specially developed for the North American market for use in potentially explosive atmospheres and is based on the HDA 4000 series.

As with the industry model, the HDA 4700 in **CSA Explosion Proof** version has a stainless steel measurement cell with thin-film strain gauge for measuring relative pressure in the high pressure range.

Intended areas of application are, for example, in the oil and gas industry, on gas turbines or in locations with high levels of dust, e.g. in mills.

Protection types and zones:

- Class I
Division 1
Group A, B, C, D, T6, T5 [C, US]
- Class II,
Div. 1
Group E, F, G [C, US]
- Class III [C, US]
- Type 4 [C, US]

Special features:

- Accuracy $\leq \pm 0.25\%$ FS typ.
- Certificate: CSA 1760344
- Output signal 4 .. 20 mA
- Very small temperature error
- Excellent EMC characteristics
- Excellent long-term properties

Technical specifications:

Input data	
Measuring ranges*	-1 .. 9; 6; 16; 60; 100; 250; 400; 600 bar
Overload pressures	20; 15; 32; 120; 200; 500; 800; 1000 bar
Burst pressure	200; 100; 200; 300; 500; 1000; 2000; 2000 bar
Mechanical connection	1/4-18 NPT
Torque value	40 Nm
Parts in contact with medium	Sensor: Stainless steel Mech. connection: < 40 bar 1.4542; 316L ≥ 40 bar 316L; 1.4435; 1.4571; 1.4404 Seal: FPM
Output data	
Output signal, permitted resistance	4 .. 20 mA, 2 conductor $R_{Lmax} = (U_B - 10 V) / 20 \text{ mA} [\text{k}\Omega]$
Accuracy to DIN 16086, Max. setting	$\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max.
Accuracy at min. setting (B.F.S.L.)	$\leq \pm 0.15\%$ FS typ. $\leq \pm 0.25\%$ FS max.
Temperature compensation Zero point	$\leq \pm 0.008\%$ FS / °C typ. $\leq \pm 0.015\%$ FS / °C max.
Temperature compensation Over range	$\leq \pm 0.008\%$ FS / °C typ. $\leq \pm 0.015\%$ FS / °C max.
Non-linearity at max. setting to DIN 16086	$\leq \pm 0.3\%$ FS max.
Hysteresis	$\leq \pm 0.1\%$ FS max.
Repeatability	$\leq \pm 0.05\%$ FS
Rise time	$\leq 1 \text{ ms}$
Long-term drift	$\leq \pm 0.1\%$ FS typ. / year
Ambient conditions	
Compensated temperature range	T6: -25 .. +60 °C T5: -25 .. +80 °C
Operating temperature range	T6: -40 .. +60 °C T5: -40 .. +80 °C
Storage temperature range	-40 .. +100 °C
Fluid temperature range	T6: -25 .. +60 °C T5: -25 .. +80 °C
CSA mark	Certificate No.: CSA 1826717
Vibration resistance to DIN EN 60068-2-6 at 10 .. 500 Hz	$\leq 20 \text{ g}$
Protection class to DIN 40050	IP 67
Other data	
Supply voltage	8 .. 30 V DC
Current consumption	+ 25 mA
Residual ripple of supply voltage	$\leq 5\%$
Life expectancy	> 10 million cycles 0 .. 100 % FS
Weight	approx. 280 g

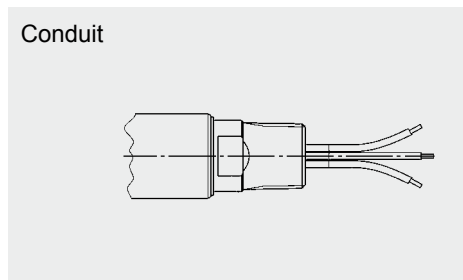
Note: Reverse polarity protection of the supply voltage, excess voltage, override, short circuit protection are provided.

FS (Full Scale) = relative to the complete measuring range

B.F.S.L. = Best Fit Straight Line

* psi pressure ranges on request

Pin connections:



Wire	HDA 4789-A
green	Signal +
white	Signal -
green/yellow	PE

Areas of application:

Protection class	Explosion Proof Gases and Dusts
Certificate	CSA 1826717
Zones / Categories	- Class I Division 1 Group A, B, C, D T6, T5 - Class II Division 1 Group E, F, G - Class III - Type 4
Electrical connection	9

Model code:

HDA 4 7 8 9 - A - XXXX - E 000 XXX

Mechanical connection*

8 = 1/4-18 NPT (male)

Electrical connection

9 = conduit connection thread
(1/2-14 NPT, male)

Signal

A = 4 .. 20 mA, 2 conductor

Pressure ranges in bar

0009 (-1..9); 0006; 0016; 0060; 0100; 0250; 0400; 0600

Approval

E = Explosion Proof

Modification number ***

000 = Standard

Cable length in cm

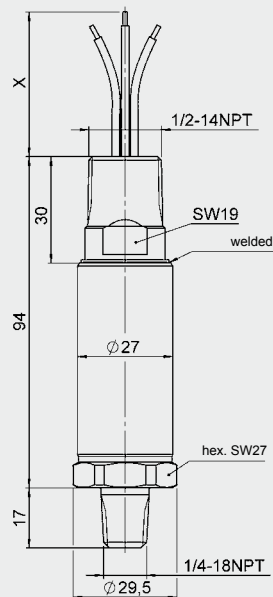
Standard = 122 cm (48 inch)

Notes:

* Devices with other connections are available on request.

** On units with a different modification number, please read the label or the technical amendment details supplied with the unit.

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.

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