



## Pressure Transmitter HDA 4300 Ex applications

Relative pressure

Accuracy 0.5 %

Intrinsically Safe  
IECEX Australia approval



### Description:

The pressure transmitter HDA 4300 IECEx intrinsically safe version has been especially developed for use in potentially explosive atmospheres and is based on the HDA 4000 series.

As with the industrial version, the HDA 4300 with IECEx intrinsically safe approval has the field-proven ceramic measurement cell with thick-layer strain gauge.

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

### Protection types and applications:

Ex ia I Ma  
Ex ia IIC T6 Ga  
Ex ia IIC T6 Ga/Gb  
Ex ia IIC T6 Gb

### Technical data:

#### Input data

Measuring ranges	bar	1	2.5	4	6	10	16	25	40	-1 .. 1
Overload pressures	bar	3	8	12	20	32	50	80	120	3
Burst pressure	bar	5	12	18	30	48	75	120	180	5
Mechanical connection	G1/4 A ISO 1179-2									
Tightening torque, recommended	20 Nm									
Parts in contact with fluid	Sensor:		Ceramic							
	Mech. connection:		1.4301							
	Seal:		FKM/EPDM							

#### Output data

Output signal, permitted load resistance	4 .. 20 mA, 2-conductor $R_{Lmax} = (U_B - 12 V) / 20 \text{ mA [k}\Omega\text{]}$
Accuracy acc. to DIN 16086, terminal based	$\leq \pm 0.5 \%$ FS typ. $\leq \pm 1.0 \%$ FS max.
Accuracy, B.F.S.L.	$\leq \pm 0.25 \%$ FS typ. $\leq \pm 0.5 \%$ FS max.
Temperature compensation	$\leq \pm 0.02 \%$ FS / °C typ.
Zero point	$\leq \pm 0.03 \%$ FS / °C max.
Temperature compensation	$\leq \pm 0.02 \%$ FS / °C typ.
Span	$\leq \pm 0.03 \%$ FS / °C max.
Non-linearity acc. to DIN 16086, terminal based	$\leq \pm 0.5 \%$ FS max.
Hysteresis	$\leq \pm 0.4 \%$ FS max.
Repeatability	$\leq \pm 0.1 \%$ FS
Rise time	$\leq 1.5 \text{ ms}$
Long-term drift	$\leq \pm 0.3 \%$ FS typ. / year

#### Environmental conditions

Compensated temperature range	-25 .. +85 °C
Operating/ambient temperature range	$T_a = -20 \dots +60 \text{ °C}$
Storage temperature range	-40 .. +100 °C
Fluid temperature range <sup>1)2)</sup>	$T_a = -40 \dots +60 \text{ °C} / -20 \dots +60 \text{ °C}$
Vibration resistance acc. to DIN EN 60068-2-6 at 10 .. 500 Hz	$\leq 20 \text{ g}$
Protection class acc. to DIN EN 60529 <sup>3)</sup>	IP 67

#### Relevant data for Ex applications

Supply voltage	12 .. 28 V DC
Max. input current	$I_i = 100 \text{ mA}$
Max. input power	$P_i = 1 \text{ W}$
Connection capacitance of the sensor	$C_i \leq 22 \text{ nF}$
Inductance of the sensor	$L_i = 0 \text{ mH}$
Insulation voltage <sup>4)</sup>	50 V AC, with integrated overvoltage protection acc. to EN 61000-6-2

#### Other data

Residual ripple of supply voltage	$\leq 5 \%$
Current consumption	$\leq 25 \text{ mA}$
Life expectancy	> 10 million cycles, 0 .. 100 % FS
Weight	~ 180 g

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

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

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

<sup>1)</sup> -20 °C with FKM or EPDM seal, -40 °C on request

<sup>2)</sup> With M12x1 male connector, only up to -25 °C

<sup>3)</sup> With mounted mating connector in corresponding protection class

<sup>4)</sup> 500 V AC on request

## Fields of application:

<b>Certificate</b>	IECEX TSA 09.0041X		
<b>Protection types</b>	Ex ia I Ma	Ex ia IIC T6 Ga Ex ia IIC T6 Ga/Gb	Ex ia IIC T6 Gb
	Mining	Gases	Gases
	Protection type: intrinsically safe ia with barrier	Protection type: intrinsically safe ia with barrier	Protection type: intrinsically safe ia with barrier

## Model code:

**HDA 4 3 4 X - A - XXXX - I N 1 - 000 - X 1**

### Mechanical connection

4 = G1/4 A ISO 1179-2

### Electrical connection

5 = male, EN 175301-803, 3 pole + PE (IP 67 mating connector supplied)

6 = male M12x1, 4 pole (mating connector not supplied)

### Output signal

A = 4 ... 20 mA, 2-conductor

### Measuring ranges in bar

01.0; 02.5; 04.0; 06.0; 0010; 0016; 0025; 0040

0001 (-1 ... 1)

### Approval

I = IECEX Australia

### Insulation voltage

N = 50 V AC to housing

### Protection types and applications (code)

1 = Ex ia I Ma

Ex ia IIC T6 Ga

Ex ia IIC T6 Ga/Gb

Ex ia IIC T6 Gb

### Modification number

000 = standard

### Seal material (in contact with fluid)

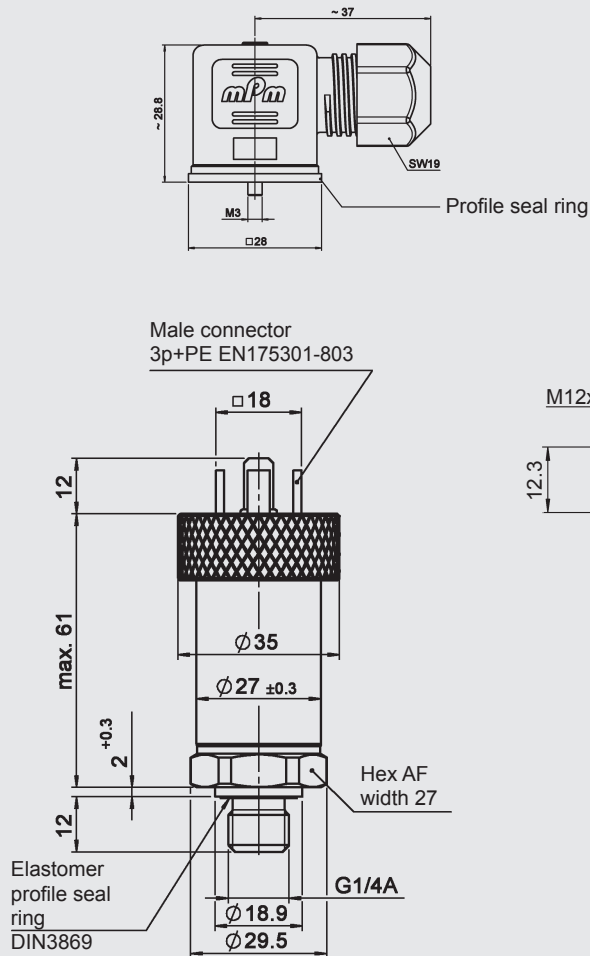
F = FKM seal (e.g. for hydraulic oils)

E = EPDM seal (e.g. for refrigerants)

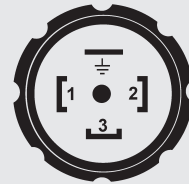
### Connection material (in contact with fluid)

1 = stainless steel

## Dimensions:

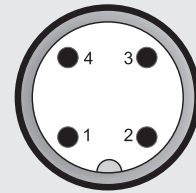


EN 175301-803



Pin	HDA 4345-A
1	Signal +
2	Signal -
3	n.c.
L	Housing

M12x1



Pin	HDA 4346-A
1	Signal +
2	n.c.
3	Signal -
4	n.c.

## 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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