



Electronic Pressure Transmitter HDA 3700 ATEX Version

Description

For pressure measurement in potentially explosive locations, the pressure transmitter series HDA 3700 is also available in a version for intrinsically safe circuits.

With approval for the following protection classes and applications:

I M1 EEx ia I,
II 1G EEx ia IIC T6 and
II 1/2 G EEx ia IIC T6
almost all requirements with regard to ignition type, error and temperature class are covered.

Like the industrial version of the HDA 3700, the ATEX version is also based on a very accurate and robust pressure sensor. With an accuracy level of typically $\pm 0.25\%$ FS and outstanding data in relation to temperature effect, this series of instruments is very well suited to use in potentially explosive atmospheres.

Special Features

- Accuracy $\leq \pm 0.25\%$ FS typically
Optionally $\leq \pm 0.15\%$ FS
- Protection classes and applications:
I M1 EEx ia I
II 1G EEx ia IIC T6
II 1/2 G EEx ia IIC T6
- Certificate number:
02 ATEX E 257 X
- Output signal 4 .. 20 mA
- Pressure ranges 0 .. 6 bar to 0 .. 600 bar
- Very low temperature error
- Excellent EMC characteristics
- Good long term stability

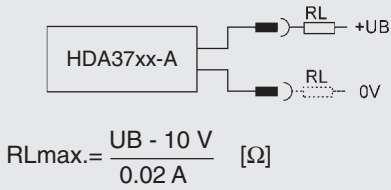
Technical Specifications

Input data	HDA 3700
Measuring ranges	6, 16, 60, 100, 250, 400, 600 bar
Overload pressures	15, 32, 200, 200, 400, 800, 900 bar
Burst pressures	100, 200, 500, 500, 1000, 2000, 2000 bar
Mechanical connection	G1/4 A DIN 3852
Torque rating	approx. 20 Nm
Parts in contact with media	Stainless steel 1.4542, FPM seal
Output data	
Curve deviation at max. setting to DIN16086 (accuracy class)	$\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max.
Curve deviation at min. setting (B.F.S.L.)	$\leq \pm 0.15\%$ FS/10K max. $\leq \pm 0.25\%$ FS max.
Temperature compensation	$\leq \pm 0.08\%$ FS/10K typ.
Zero point	$\leq \pm 0.15\%$ FS/10K max.
Temperature compensation	$\leq \pm 0.08\%$ FS/10K typ.
Over range	$\leq \pm 0.15\%$ FS/10K max.
Linearity at max. setting to DIN 16086	$\leq \pm 0.1\%$ FS typ. $\leq \pm 0.3\%$ FS max.
Hysteresis	$\leq \pm 0.05\%$ FS typ. $\leq \pm 0.1\%$ FS max.
Repeatability	$\leq \pm 0.05\%$ FS
Rise time	≤ 0.5 ms
Long-term drift	$\leq \pm 0.2\%$ FS typ. / year
Ambient conditions	
Nominal temperature range	-25 .. +60 °C
Operating temperature range	-25 .. +60 °C
Storage temperature range	-40 .. +100 °C
CE - mark	EN 61000-6-1, -2, -3 and -4; EN 50014; EN 50020; EN 50284
Vibration resistance to IEC 68-2-6 at 10 ..500 Hz	≤ 20 g (196.2 m/s ²)
Protection class to DIN 40050	IP 65
Data relevant to Ex application	
Supply voltage	12 .. 28 V
Maximum supply current	100 mA
Maximum supply capacity	Up to 26 V: 1 W 26 .. 28 V: 0.8 W
Access capability of the pressure transmitter	≤ 12 nF
Inductivity of the pressure transmitter	0 H
Other data	
Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection	provided
Residual ripple supply voltage	$\leq 5\%$
Life expectancy	> 10 million cycles
Weight	0 .. 100 %FS approx. 180 g

Note: FS (Full Scale) = relative to the full measuring range

Electrical connection

2-conductor 4..20 mA



Note

The load resistance R_L is produced by the measuring resistance inside the evaluation unit and the line resistance of the connection line.

Pin connections

HDA 3744

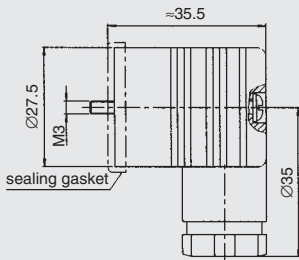
HDA 3745



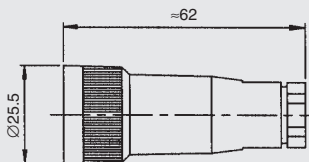
	Pin 1	Pin 2	Pin 3	Pin 4
HDA 3745-A	+UB	0V	free	
HDA 3744-A	free	+UB	0V	free

Electrical accessories

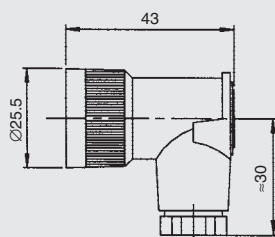
ZBE 01 right-angled connector 3-pole + earth
DIN 43650/ISO 4400



ZBE 02 connector
4 pole Binder series 714M18

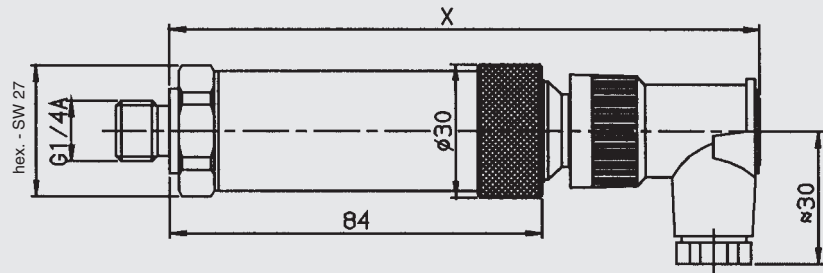


ZBE 03 right-angled connector
4 pole Binder series 714M18



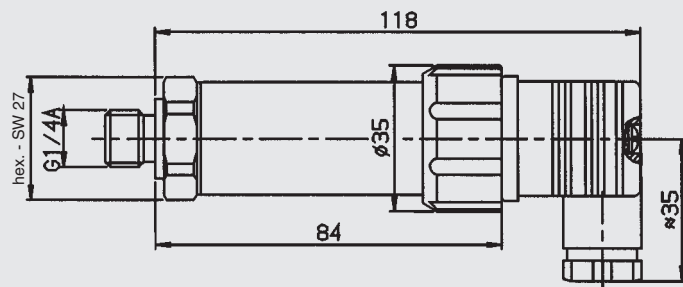
Dimensions

HDA 3744, shown with ZBE 03



Dimension X with right-angled connector ZBE 03: 108 mm
Dimension X with connector ZBE 02: ≈127 mm

HDA 3745, shown with ZBE 01



Model code

HDA 3 7 X X - A - XXX - A 00

Mechanical connection

4 = G 1/4 A DIN 3852, male thread

Electrical connection

4 = Binder plug,
series 714 M18,
4 pole

5 = Plug to DIN 43650,
3-pole + earth

Signal

A = 4 .. 20 mA

Measuring ranges

006, 016, 060, 100, 250, 400, 600 bar

Approval

A = I M1 EEx ia I
II 1G; 1/2G; 2G EEx ia IIC

Modification number

00 standard

Notes

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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