



## Electronic Pressure Transmitter HDA 8400

### Description:

The pressure transmitter series HDA 8400 has been specifically developed for the OEM market, e.g. in mobile applications. Like most of our pressure transmitter series, the HDA 8400 is based on a robust and long-life, thin-film sensor.

All parts (sensor and pressure connection) which are in contact with the fluid are made of stainless steel and are welded together. This means that there are no sealing points in the interior of the sensor. The possibility of leakage is excluded.

The pressure transmitters are available in various pressure ranges from 0 .. 500 psi to 0 .. 9000 psi. For integration into modern controls, standard analog output signals are available, e.g. 4 .. 20 mA, 0 .. 5 V, 1 .. 6 V or 0 .. 10 V. Ratiometric output signals are also available.

For the electrical connection, different types of integrated connections are available.

A basic accuracy of max.  $\leq \pm 0.5\%$  FS B.F.S.L., combined with a small temperature drift, ensures a broad range of applications for the HDA 8400.

### Special features:

- Accuracy  $\leq \pm 0.5\%$  FS B.F.S.L.
- Outstanding performance in terms of temperature effect and EMC
- Very compact design
- ECE type approval (E13) (approved for road vehicles)

### Technical data:

Input data	
Measuring ranges	500; 750; 1000; 1500; 3000; 5000; 6000; 9000 psi
Overload ranges	1160; 1740; 2900; 2900; 7250; 11600; 11600; 14500 psi
Burst pressures	2900; 4350; 7250; 7250; 14500; 14500; 29000; 29000 psi
Mechanical connection (Torque value)	SAE 4, 7/16-20 UNF 2A (11 lb-ft; 15 Nm) SAE 6, 9/16-18 UNF 2A (15 lb-ft; 20 Nm) G1/4 A DIN 3852 (15 lb-ft; 20 Nm) each with orifice 0.5 mm
Parts in contact with medium	Mech. conn.: Stainless steel Seal: FPM
Output data	
Output signal	e.g.: 4 .. 20 mA, 0 .. 5 V, 1 .. 6 V, 0 .. 10 V, ratiometric: 0.5 .. 4.5 V for $U_B = 5$ V DC (10 .. 90 % $U_B \pm 5\%$ ), etc.
Accuracy to DIN 16086	$\leq \pm 0.5\%$ FS typ.
Max. setting	$\leq \pm 1\%$ FS max.
Accuracy at min. setting (B.F.S.L.)	$\leq \pm 0.25\%$ FS typ. $\leq \pm 0.5\%$ FS max.
Temperature compensation	$\leq \pm 0.0085\%$ FS / °F typ.
Zero point	$\leq \pm 0.014\%$ FS / °F max.
Temperature compensation Over range	$\leq \pm 0.0085\%$ FS / °F typ. $\leq \pm 0.014\%$ FS / °F max.
Non-linearity at max. setting to DIN 16086	$\leq \pm 0.3\%$ FS max.
Hysteresis	$\leq \pm 0.4\%$ FS max.
Repeatability	$\leq \pm 0.1\%$ FS
Rise time	$\leq 1.5$ ms
Long-term drift	$\leq \pm 0.3\%$ FS typ. / year
Environmental conditions	
Compensated temperature range	-13 .. +185 °F
Operating temperature range <sup>1)</sup>	-40 .. +212 °F / -13 .. +212 °F
Storage temperature range	-40 .. +212 °F
Fluid temperature range <sup>1)</sup>	-40 .. +257 °F / -13 .. +257 °F
CE mark	EN 61000-6-1 / 2 / 3 / 4
us mark <sup>2)</sup>	Certificate No. E318391
Vibration resistance to DIN EN 60068-2-6 at 5 .. 2000 Hz	$\leq 25$ g
Shock resistance to DIN EN 60068-2-27	100 g / 6 ms / half sine 500 g / 1 ms / half sine
Protection class to IEC 60529 to ISO 20653	IP 65, IP 67 (depending on the electrical connection) IP 69 K (depending on the electrical connection)
Other data	
Electrical connection	M12x1, 4 pole AMP DIN 72585 code 1, 3 pole Packard Metri Pack Series 150, 3 pole Deutsch DT 04, 3 pole AMP Superseal, 3 pole. AMP Junior Power Timer, 3 pole Flying leads, 1 m cable length EN175301-803 (DIN 43650), 3 pole
Supply voltage	8 .. 30 V DC 12 .. 30 V DC for output signal 0 .. 10 V 5 V $\pm 5\%$ for ratiometric output signal
for use acc. to UL specification	- limited energy - according to 9.3 UL 61010; Class 2; UL 1310/1585; LPS UL 60950
Residual ripple of supply voltage	$\leq 5\%$
Life expectancy	> 10 million cycles 0 .. 100 % FS
Weight	~ 55 g

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

FS (Full Scale) = relative to complete measuring range

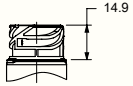
B.F.S.L. = Best Fit Straight Line

1) -13 °F with FPM seal, -40 °F on request

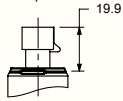
2) Environmental conditions according to 1.4.2 UL 61010-1; C22.2 No 61010-1

## Dimensions:

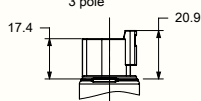
Male connection  
DIN 72585  
3 pole



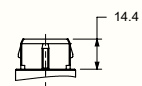
Male connection  
Metri-Pack  
series 150  
3 pole



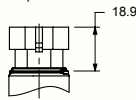
Male connection  
Deutsch DT04  
3 pole



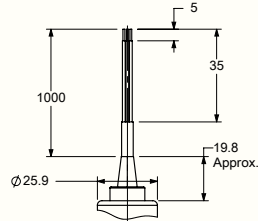
Male connection  
Junior Power Timer  
3 pole



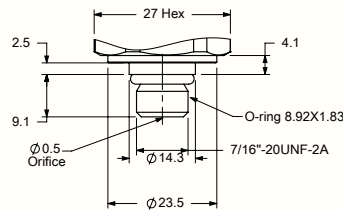
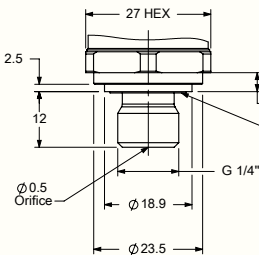
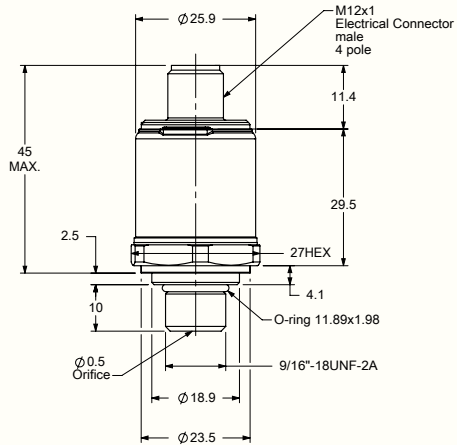
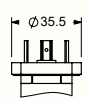
Male connection  
Superseal  
series 1.5  
3 pole



Flying leads



Male connection  
EN175301-803 (DIN 43650)  
3 pole



## 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.

For bar ranges see European Catalog

## Order details:

For exact specification, please contact the Sales Department of HYDAC ELECTRONIC.

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