



Pressure Transmitter HPT 1400S smart

Relative pressure

Accuracy 0.5%

Added value thanks to:

- Process data
- Condition data
- Smart data

IO-Link

smart

IO-Link

Description:

The new generation of smart sensors is designed to generate further relevant information in addition to the operation data. This ensures the support of dynamic, real-time optimised and self-organising processes, which optimises the availability as well as the resource consumption and reduces operating costs.

The pressure transmitter series HPT 1400S has been specifically developed for series application and for the use in extremely limited space conditions. Like most of our pressure transmitter series, the HPT 1400S is based on a robust and long-life, thin-film sensor.

All of the parts in contact with the fluid (sensor and pressure port) are made of stainless steel and are welded together. This means that there are no sealing points in the interior of the sensor. The risk of leakage has been eliminated.

The transmitters are available providing various pressure ranges.

A basic accuracy of $\leq \pm 0.5\%$ FS, combined with a small temperature drift, opens up a broad range of applications for the HPT 1400S.

IO-Link is the communication between the sensor / actuator (IO-Link device) and an IO-Link master based on a point-to-point interface.

Process data, parameters and diagnostic information of the pressure sensor can be transmitted via a standard cable (SDCI mode).

In addition, the HPT 1400S provides a wide range of additional smart information.

Technical Data:

Input data									
Measuring range	bar	16	25	40	60	100	250	400	600
Overload pressure	bar	50	50	80	120	200	500	800	1000
Burst pressure	bar	125	125	200	300	500	1250	2000	2000
Tightening torque, recommended				20 Nm (see: drawing)					
Parts in contact with fluid				Mechanical connection: stainless steel					
				Seal: FKM					
Output variables									
Output signal		IO-Link V1.1							
Accuracy acc. to DIN 16086		$\leq \pm 0.5\%$ FS typ.							
Max. setting		$\leq \pm 1.0\%$ FS max.							
Accuracy at Min. setting (B.F.S.L)		$\leq \pm 0.25\%$ FS typ.							
		$\leq \pm 0.5\%$ FS max.							
Temperature compensation, zero point		$\leq \pm 0.0125\%$ / °C typ.							
		$\leq \pm 0.025\%$ / °C max.							
Temperature compensation, over range		$\leq \pm 0.0125\%$ / °C typ.							
		$\leq \pm 0.025\%$ / °C max.							
Non-linearity acc. to DIN 16086 terminal based		$\leq \pm 0.3\%$ FS max.							
hysteresis		$\leq \pm 0.4\%$ FS max.							
Repeatability		$\leq \pm 0.1\%$ FS max.							
Long-term drift ¹⁾		$\leq \pm 0.2\%$ FS typ. / year							
Rise time		≤ 1 ms							
Smart Functions									
Operating data logging (resettable as well as persistent over the whole life cycle)		Pressure (Min / max / average value) Operating time i.e. <ul style="list-style-type: none"> - General (hour counter) - Arrhenius value (temp. compensated operating time) 							
Measuring channel-related events		General measuring channel-related operating times Events counter Statistic for the actual use (operation per Measuring range segment / over / undershooting, overload etc.)							
Communication		via IO-Link							
Ambient Conditions									
Compensated temperature range		-25 .. +85° C							
Operating temperature range ¹⁾		-40 .. +100 °C							
Storage temperature range		-40 .. +100 °C							
Fluid temperature range		-40 .. +125 °C							
CE Marked		EN 61000-6-1 / -2 / -3 / -4							
Vibration resistance acc. to IEC 68-2-6 at 10 .. 500Hz		≤ 25 g							
Shock resistance acc. to DIN EN 60068-2-27		100 g / 6 ms / half-sine 500 g / 1 ms / half-sine							
Protection class to IEC 60529 ²⁾		IP 67							
Other data									
Supply voltage		9 .. 35 V DC							
Residual ripple of supply voltage		$\leq 5\%$							
Current consumption 3 conductor		~ 25 mA							
Weight:		~ 45 g							

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

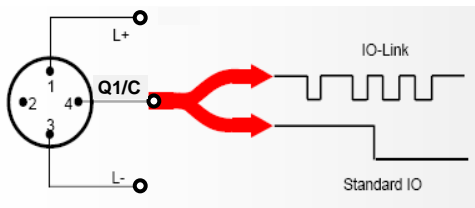
FS (Full Scale) = relative to complete measuring range

¹⁾ in the standard up to -25°C with FKM seal, -40 °C on request

²⁾ With mounted mating connector in corresponding protection class

Pin connections:

M12x1, 4 pole



Pin	Signal	Description
1	L+	+ UB
2		Not allocated
3	L-	0 Volt
4	Q1/C	IO-Link communication

IO-Link interface:

IO-Link specific data

IO-Link revision	V1.1
Transmission Rate, Baud rate	38.4 kBaud (COM2)
Minimum cycle time	2.5 ms
Process data width	16 bit
SIO Mode Supported	Yes
Sensor profile	DMS
M-sequence capability	PREOPERATE = TYPE_0 OPERATE = TYPE_2_2 ISDU supported
IO Device Description (IODD) download at:	https://ioddfinder.io-link.com/#/

Model code:

HPT 14XXS – F31- XXXX – 000

Mechanical connection

4 = G 1/4 A ISO 1179-2 with orifice 0.5 mm
E = M10 x1 ISO 9974-2 with orifice 0.5 mm
T = G1/8 A ISO 1179-2 with orifice 0.5 mm
(max. 250 bar)

Electrical connection

6 = M12x1, 4 pole

Enhanced functions

S = smart

Signal technology

F31 = IO-Link Interface

Pressure ranges in bar

0016; 0025; 0040; 0060; 0100; 0160; 0250; 0400; 0600

Modification Number

000 = standard

Accessories:

Appropriate accessories, such as mating connectors for electrical connection, can be found in the HYDAC ELECTRONIC Product Catalogue.

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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Dimensions:

