HYDAC INTERNATIONAL

Pressure Transmitter

HPT 1400 for series applications

Customised version thanks to various electrical and mechanical connections and a large number of output signals.

Relative pressure | **Accuracy 0.5 %**

E13 cULus

Features

- Robust
- Small and compact design
- Road approval E13

Description

As most of our pressure transmitters, HPT 1400 is based on a robust and long-life thin-film sensor.

All of the parts in contact with the fluid (sensor and pressure connection) are made of stainless steel and are welded together. This means, there are no sealing points inside of the sensor. Leakage can therefore be excluded.

The transmitters are available in various pressure ranges from 0..2.5 to 0..600 bar

For implementation into modern controls, there are standard output signals available, e.g. 4..20 mA, 0..5 V or 0..10 V. Ratiometric output signals are available as well.

There are various integrated connectors as well as a diversity of cable solutions available for the electrical connection.

A basic accuracy of ≤ ± 0.5 % FS typical for HPT 1400, combined with low temperature drift, open up a wide range of applications for HPT 1400.

Fields of application

The pressure transmitter series HPT 1400 has been especially designed for series use, e.g. in mobile applications where space is very limited.

Technical details

Input data													
Measurement ranges	bar	2.5	4	6	10	16	25	40	60	100	250	400	600
Overload pressures	bar	5	8	12	20	32	50	80	120	200	500	800	1000
Burst pressure	bar	100	100	100	100	125	125	200	300	500	1250	2000	2000
Mechanical connection [1]				Various threads, i.e.: G 1/4 A ISO 1179-2, external M 14 x 1.5 SAE 6, 9/16-18 UNF 2A < 10 bar: without orifice ≥ 10 bar: with orifice									
Tightening torque, recommended				20 Nm									
Parts in contact with fluid [1]				Mech. connection: stainless steel Seal: FKM									
Output data													
Output signal				Various signals e.g.: 4..20 mA, 0..5 V, 1..6 V, 0..10 V, ratiometric: 0.5..4.5 V at U_B = 5 V DC									
Accuracy acc. to DIN 16086, Terminal based [2]				≤ ± 0.5 % FS typ. ≤ ± 1.0 % FS max.									
Accuracy at minimum value setting (B.F.S.L.)				≤ ± 0.25 % FS typ. ≤ ± 0.5 % FS max.									
Temperature compensation offset				≤ ± 0.015 % FS / °C typ. ≤ ± 0.025 % FS / °C max.									
Temperature compensation span				≤ ± 0.015 % FS / °C typ. ≤ ± 0.025 % FS / °C max.									
Rise time				≤ 1 ms									
Long-term drift				≤ ± 0.3 % FS typ. / year									
Environmental conditions / Approvals / Tests													
Compensated temperature range				-25..+85 °C									
Operating temperature range [3]				-40..+100 °C / -25..+100 °C									
Storage temperature range				-40..+100 °C									
Fluid temperature range [3]				-40..+125 °C / -25..+125 °C									
EMC				2014/30/EU EN 61000-6-1 / -2 / -3 / -4									
CE conformity				Available									
E1 approval				Available acc. to UNECE 10									
cULus approval [4]				Available									
Vibration resistance acc. to DIN EN 60068-2-6 at 10..500 Hz				≤ 25 g									
Shock resistance acc. to DIN EN 60068-2-27				100 g / 6 ms / half sine 500 g / 1 ms / half sine									
Protection type acc. to DIN EN 60529 [5]				IP 67, IP 69, IP 6K9K (depending on the electrical connection) [1]									
Other data													
Supply voltage				8..36 V DC 2-conductor 8(12)..36 V DC 3-conductor -limited energy- acc. to 9.3 UL 61010 Class 2; UL 1310/1585; LPS UL 60950									
Residual ripple of the supply voltage				≤ 5 %									
Current consumption				≤ 25 mA									
Life expectancy				>10 million load cycles (0..100 % FS)									
Weight				~ 45 g									

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

FS (**F**ull **S**cale) = relative to complete measuring range

B.F.S.L. = **B**est **F**it **S**traight **L**ine

[1] Others on request

[2] Including non-linearity, hysteresis, offset and final value deviation

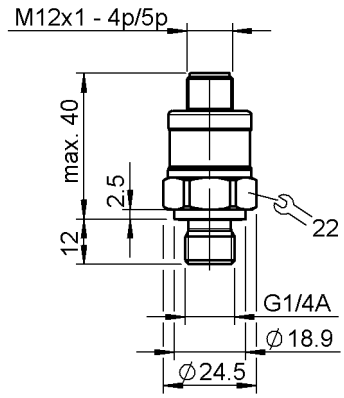
[3] In the standard up to -25 °C with FKM seal, -40 °C on request

[4] Environmental conditions acc. to 1.4.2 UL 61010-1; C22.2 no. 61010-1

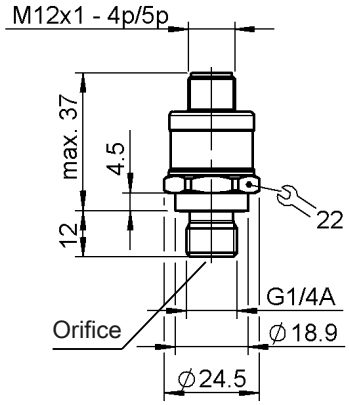
[5] With mounted mating connector in corresponding protection type

Dimensions

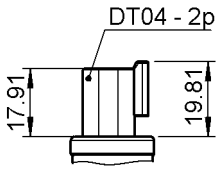
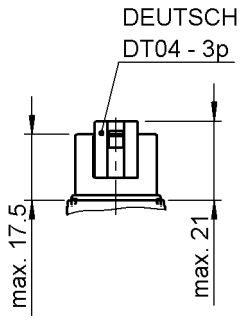
For pressures < 10 bar:

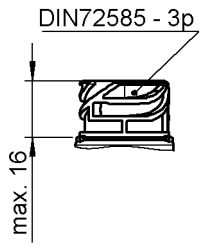
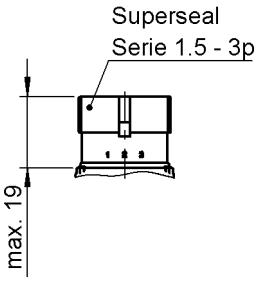


For pressures ≥ 10 bar:



Electrical connection variants e.g.:

Plug connector Deutsch DT04 - 2p.	Plug connector Deutsch DT04 - 2p.
	

Plug connector DIN72585 - 3p.	Plug connector Superseal - 3p.
	

Order details OEM

The pressure transmitter HPT 1000 has been specially developed for OEM customers and is available for minimum order quantities from 500 pcs. per type.
For detailed specification, please do not hesitate to contact our HYDAC ELECTRONIC Sales department.

Note

The information in this brochure relates to the operating conditions and applications described.
For applications and/or operating conditions not described please contact the relevant technical department.
Subject to technical modifications.

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