EC79 EC406

- **Innovative stainless steel measuring cell with two-chip technology (P2P)**
- **High media resistance, no internal seals, without weld**
- **Compact design, high integration**
- **With EC79 and EC406 approval for use with hydrogen**
- **Customising possible**

The piezoresistive pressure transmitter (without oil reservoir) is based on a new type of two-chip technology (P2P), which enables the highest demands on robustness and performance such as stability, vibration/ shock resistance. The OEM series was specially designed for use in harsh environmental conditions, such as those that prevail in the off-road sector. Other application areas are transportation, renewable energies, special purpose vehicles and machine engineering. Customer-specific adaptations are possible.

P2P INSIDE

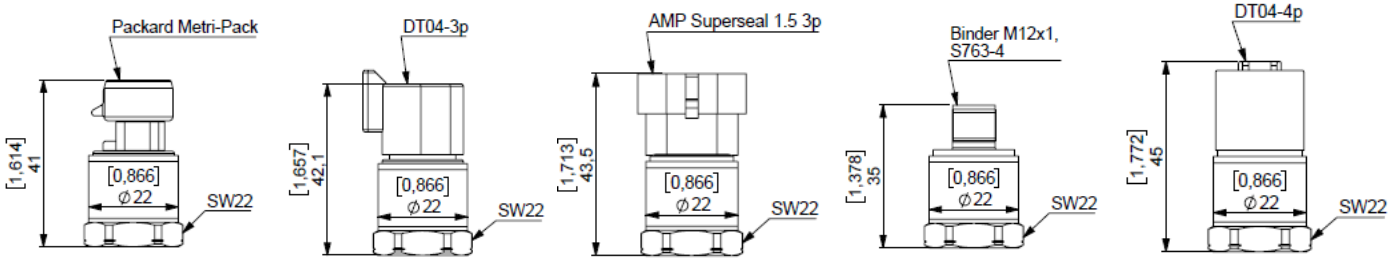
The ruggedness, stability, vibration and shock resistance of sensor EPT92H2 are achieved by the new P2P Technology used in its manufacture. This technology belongs to the strain gauge technologies. The innovative difference to the competition is the use of two full bridges, which are interconnected in such a way that undesirable external force influences on the sensor signal (e.g. torques during installation) are largely compensated. A monolithic steel body without any welding and without any oil-filled cavities is used for this purpose.

Sensors made with P2P Technology are:

- Well suited for harsh environments and critical environments
- Suitable for: vacuum, gases, chemicals, hydraulic, hydrogen
- Long term stability with high accuracy
- No material fatigue due to embrittlement and permeation
- Provides a wide range of custom solutions

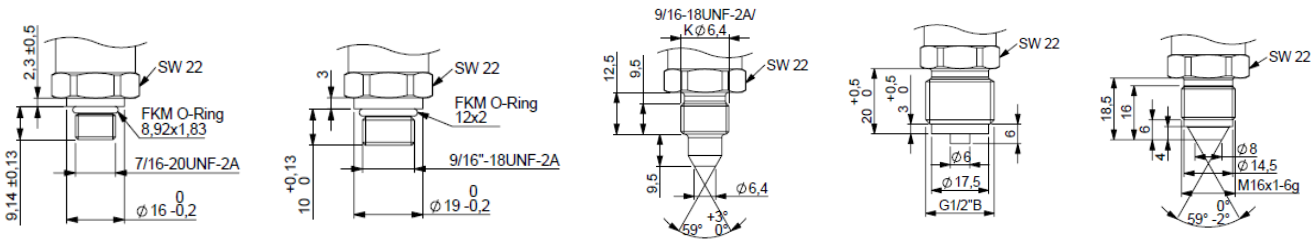
Specifications									
Performance									
Pressure ranges									
Nominal pressure in bar	10	25	60	100	160	250	400	700	1000
Nominal pressure in PSI	145	363	870	1450	2321	3626	5802	10153	14504
Over pressure	20	50	120	200	320	500	800	1200	1400
Burst pressure	30	100	250	500	750	1000	1400	1800	2000
Accuracy	≤ 0.5 % FS after limit-point calibration (≤ 0,35% FS BFSL) at 25 °C								
Overall accuracy	1,50 % over -5 °C...85 °C								
Long-term stability	≤ 0.1 % FS per year in referential conditions								
Shock resistance	1000 g to IEC 60068-2-31								
Vibration resistance	20 g to IEC 60068-2-6								
Environment									
Ambient temperature	- 40...+ 105 °C [-40 ... +221 °F]; - 40...+ 125 °C [-40 ... +257 °F] for ratiometric output								
Medium temperature	- 40...+ 125 °C [-40 ... +257 °F]; - 40...+ 125 °C [-40 ... +302 °F] for ratiometric output								
Storage temperature	- 40...+ 125 °C [-40 ... +257 °F]								
CE-Conformity									
EMV guideline	2014 / 30 / EU acc. to DIN EN 61326-1, DIN EN 61326-2-3								
RoHS guideline	2011/65/EU								
Output Parameters									
Output signal	4...20 mA			0,5...4,5 V			ratiometric 0,5...4,5 V		
Supply voltage	10...32 V			8...32 V			ratiometric 5V DC ± 10 %		
Electrical connection	various elec. connections - see ordering information								
Response time	1 ms								
Reverse polarity	YES								
Dielectric strength	HV 350 V DC								
Short-circuit strength	KS Out+ / UB- (for 1s)								
Mechanic									
Mechanical connections	various threads - see ordering information								
Tightening torque	Typ. 25 Nm; max. 50 Nm								
Wetted parts	stainless steel 1.4404/316L								
Body material	stainless steel 1.4301/AISI 304								
Protection class	IP 65/IP 67 (depending on electrical connection)								
Weight	~ 50 g								
Lifetime	> 10 million cycles								

Dimensions in mm



Process connections

Option "D" Option "P" Option "O" Option "G1/2B" Option "M16"



Wiring

Typ		Output	PIN A	PIN B	PIN C	
	Packard Metripac	0,5 - 4,5V	- Suppy	+ Supply	V/I out	
		4...20 mA	Current output -	+ Supply	N/A	
		Output	PIN 1	PIN 2	PIN 3	PIN 4
	Round connector M12 x 1	0,5 - 4,5V	+ Supply	V/I out	- Supply	N/A
		4...20 mA	+ Supply	N/A	Current output -	N/A
		Output	PIN A	PIN B	PIN C	
	DT04-3P	0,5 - 4,5V	+ Supply	- Supply	V/I out	
		4...20 mA	+ Supply	Current output -	N/A	
		Output	PIN 1	PIN 2	PIN 3	PIN 4
	DT04-4P	0,5 - 4,5V	- Supply	+ Supply	N/A	V/I out
		4...20 mA	Current output -	+ Supply	N/A	N/A
		Output	PIN A	PIN B	PIN C	
	AMP Superseal	0,5 - 4,5V	V/I out	- Supply	Output +	
		4...20 mA	N/A	Current output -	+ Supply	

Ordering information

(Please use the characters in the chart below to construct your product code)

Sample code EPT92H2 - D - 10000 - B - 5 - C

Series

EPT92H2

Port configuration

O	9/16 UNF with Conus seal
P	9/16 UNF with FKM seal
D	7/16 UNF with FKM seal
M16	M16x1 with Conus seal
G1/2B	G1/2"B manometer port

Pressure range

Please use code from table below*

Pressure unit

B	Gauge pressure
V	Vacuum and bi-directional

Output signal

2	4...20 mA
4	0,5...4,5 V (with 8...32 V supply)
5	0,5...4,5 VDC (with 5V supply, ratiometric)

Electrical interface

C	Packard Metripac
F	M12x1 round connector, 4P, plastic
G	AMP Superseal 3Pin
H	Deutsch DT 04-3P
J	Deutsch DT 04-4P

Pressure range

Bar	10	25	60	100	160	250	400	700	1000
Order code	01000	02500	06000	10000	16000	25000	40000	70000	100000

The EPT92H2 series is backed by a 1 Year Warranty. The purchaser is responsible for compatibility of the media, functional adequacy and correct installation of the transmitter.

Transport, packaging and storage

Transport

Check the pressure transmitter for any damage that may have been caused during transportation. Obvious damage must be reported immediately.

Packaging and storage

Do not remove packaging until just before mounting.
Keep the packaging as it will provide optimum protection during transport (e.g. change in installation site, sending for repair).

Permissible conditions at the place of storage:

- Storage temperature: See "Specifications" table

Dismounting, return and disposal

Dismounting

Physical injuries and damage to property and the environment caused by hazardous media Upon contact with hazardous media (e.g. oxygen, acetylene, flammable or toxic substances), harmful media (e.g. corrosive, toxic, carcinogenic, radioactive), and also with refrigeration plants and compressors, there is a danger of physical injuries and damage to property and the environment.

- Should a failure occur, aggressive media with extremely high temperature and under high pressure or vacuum may be present at the instrument.
- Wear the requisite protective equipment.

Dismounting the instrument

- Depressurise and de-energise the pressure transmitter.
- Disconnect the electrical connection.
- Unscrew the pressure transmitter with a spanner using the spanner flats.

Approvals certificate

CE Compliance: EMC directive 2014 / 30 / EU according in EN 61326-2-3

RoHS guideline: 2011/65/EU

EC79 and EC406 approval for use with hydrogen