

- **High media resistance, no internal seals**
- **Signal conditioning with ASIC**
- **High integration density**
- **Vacuum-tight and elastomer-free**
- **Flexible for customised requirement**
- **PMI Technology**

The EPT8100 series is a rugged pressure transmitter for low to medium pressure application. The well proven modular design is based on piezoresistive media isolated measurement technology. The resistive oil filled sensing element uses latest ASIC circuitry for signal processing.

Main Features

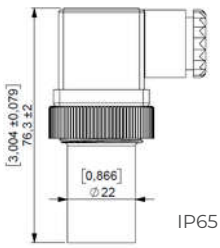
- Pressure ranges: 0,06 bar – 10 bar
- Wetted parts: stainless steel 1,4404 (316L)
- Response time: 1ms
- Accuracy (25 °C): ≤ 0.5 % FS after limit-point calibration
- Construction as an absolute pressure sensor and sealed reference sensor is possible from 100 mbar

Technical Specifications												
Input Parameters												
Pressure ranges												
Nominal pressure in bar	0,06	0,1	0,16	0,25	0,4	0,6	1	1,6	2,5	4	6	10
Nominal pressure in PSI	0,87	1,45	2,32	3,63	5,8	8,7	14,5	23,2	36,26	58,01	87,02	145,04
Over pressure	0,7	3,5	3,5	3,5	10	10	10	35	35	35	40	40
Burst Pressure	10	20	20	20	40	40	40	50	50	50	60	60
Pressure type	Gauge, sealed reference, absolute											
Tightening torque	Typ. 25 Nm; max. 50 Nm											
Wetted parts	Stainless steel 1.4404 (316L)											
Body material	Stainless steel											
Output Parameters												
Output signal	4...20 mA			0...5 V			0...10 V			ratiometric 0.5...4.5 V		
Supply voltage	10...32 V			8...32 V			12...32 V			ratiometric 5 V DC ± 10 %		
Load resistance	<(Vsupply - 10)V/0.02 A			≥ 4,7 kOhm			≥ 4,7 kOhm			≥ 4,7 kOhm		
MTTFd value	99 years			115 years			115 years			122 years		
Response time	Typ. 1 ms; max. 2 ms											

Technical Specifications	
Performance Characteristics	
Accuracy (25 °C)	≤ ±0.5 % FS after limit-point calibration
Overall accuracy (-5 °C...85 °C)	≤ ±0.1 % FS / 10 K after limit-point calibration
Long-term stability	≤ 0.1 % FS per year in referential conditions
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]
Shock resistance	IEC 60068-2-31
Vibration	20 g to IEC 60068-2-6
Protection class	depending on electrical connection, see drawing of electrical connectors
Electrical Protection	
Reverse polarity	Yes
Dielectric strength	HV typ. 50 V DC, max. 100 V DC
Short-circuit protection	KS Out+/UB- (for 1s)
CE-Conformity	
EMV guideline	2014 / 30 / EU acc. to DIN EN 61326-1, DIN EN 61326-2-3
RoHS guideline	2011/65/EU
Other	
Weight	~ 100 g
Lifetime cycles	> 100 million

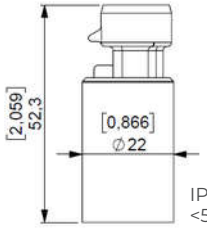
Electrical Connection

EN 175301-803-A



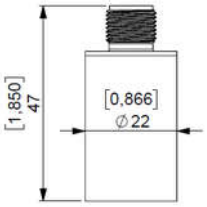
IP65

Packard Metri-Pack



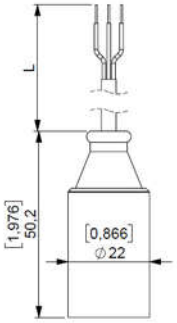
IP67
<50 bar IP65

M12x1 (S763)



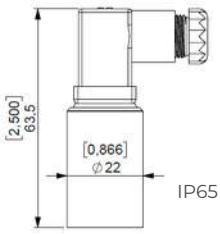
IP67

Cable Output



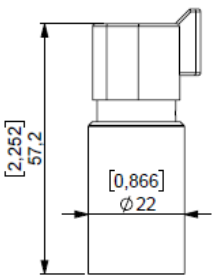
IP67

EN 175301-803-C



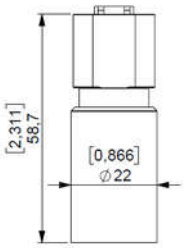
IP65

DT04-3P



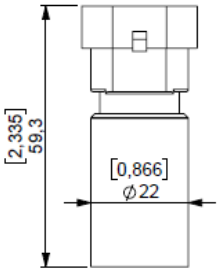
IP67

DT04-4P



IP67

AMP superseal 1.5



IP67

IP Rating applies with connected mating connector and correctly installed.

Wiring

Type		Output	PIN 1	PIN 2	PIN 3	
	DIN EN 175301-803-A	0...5 V / 0...10 V / 0,5...4,5V	Output +	- Supply	V out	
		4...20 mA	Current output +	Current output -	N/A	
	Packard Metri-Pack	Output	PIN A	PIN B	PIN C	
		0...5 V / 0...10 V / 0,5...4,5V	- Supply	+ Supply	V out	
		4..20 mA	Current output -	+ Supply	N/A	
	M12x1 (S763)	Output	PIN 1	PIN 2	PIN 3	PIN 4
		0...5 V / 0...10 V / 0,5...4,5V	+ Supply	V out	- Supply	N/A
		4..20 mA	+ Supply	N/A	Current output -	N/A
	DIN EN 175301-803-C	Output	PIN 1	PIN 2	PIN 3	
		0...5 V / 0...10 V / 0,5...4,5V	Output +	- Supply	V out	
		4...20 mA	Current output +	Current output -	N/A	
	DT04-3P	Output	PIN A	PIN B	PIN C	
		0...5 V / 0...10 V / 0,5...4,5V	+ Supply	- Supply	V out	
		4...20 mA	+ Supply	Current output -	N/A	
	DT04-4P	Output	PIN 1	PIN 2	PIN 3	PIN 4
		0...5 V / 0...10 V / 0,5...4,5V	- Supply	+ Supply	N/A	V out
		4...20 mA	Current output -	+ Supply	N/A	N/A
	AMP Superseal	Output	PIN 1	PIN 2	PIN 3	
		0...5 V / 0...10 V / 0,5...4,5V	V out	- Supply	Output +	
		4...20 mA	N/A	Current output -	+ Supply	
	Cable output	Output	Red	Black	White	
		0...5 V / 0...10 V / 0,5...4,5V	+ Supply	- Supply	V out	
		4...20 mA	+ Supply	- Supply	GND	

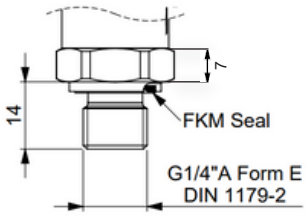
Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non compliance can result in serious injure and/or damage to the equipment.

WARNING:

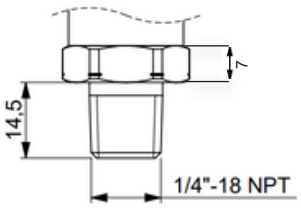
Variohm Eurosensor reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate tests, that the product issuitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.

Process Connections

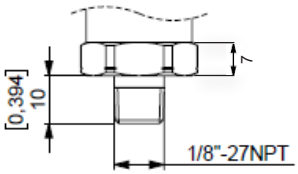
Option "A"



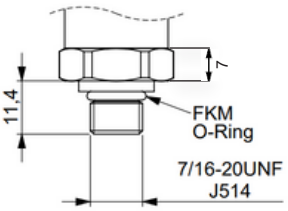
Option "B"



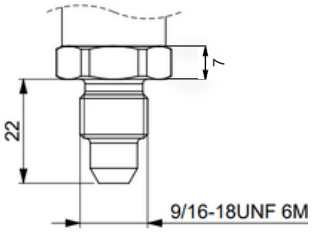
Option "C"



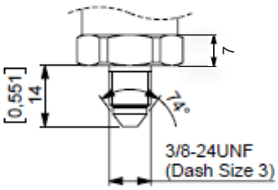
Option "D"



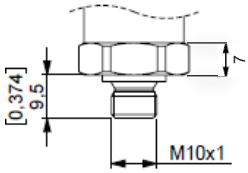
Option "E"



Option "H"



Option "M10"



Customized Solutions

An indisputable advantage of the products from Variohm Eurosensor is that in addition to the specified parameters, a variety of specific customer requests can be implemented:

- Other process and electrical connections available in a wide range of options
- Analog output signals can be customized upon request.

Feel free to ask us. We are ready to implement individual solutions for you.

Ordering information

The following models are typically available from stock:

EPT8100-M10-00400-A-5-C

EPT8100-C-00400-A-5-C

EPT8100-C-00400-A-4-C

EPT8100-A-00400-A-4-C

Ordering information

Sample Code EPT8100 - A - 00160 - A - 5 - F

Port Configuration	
A	G 1/4" Form E Male
B	1/4 " NPT Male
C	1/8 " NPT Male
D	7/16-20 UNF 2A Male
E	9/16"-18 UNF Male
H	3/8x24 UNF Male (Dash Size 3)
M10	M10x1 Male

Pressure ranges in bar

See table below*

Pressure Type	
A	Absolute pressure
B	Gauge pressure
S	Sealed reference

Output signal	
1	0...10 V
2	4...20 mA
4	0...5 V
5	0.5...4.5 V ratiometric (with 5 V supply voltage)

Electrical Connection	
A	600 mm cable
B	Miniature EN175301-803-C connector
C	Packard Metripac connector
D	Standard EN175301-803-A connector
F	M12x1 Round connector
G	AMP Superseal 3Pin
H	Deutsch DT 04-3P
J	Deutsch DT 04-4P

*** Pressure ranges in bar**

Order code	00006	00010	00016	00025	00040	00060	00100	00160	00250	00400	00600	01000
Nominal Pressure	0,06	0,1	0,16	0,25	0,4	0,6	1	1,6	2,5	4	6	10
Over pressure	0,7	3,5	3,5	3,5	10	10	10	35	35	35	40	40
Burst pressure	10	20	20	20	40	40	40	50	50	50	60	60

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: -40 ... +125 °C [-40 ... +257 °F]

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

Approved according to the European Directive EC79/2009