Pressure sensor - CIT-F

VARIOHM EUROSENSOR

- **Flush mount stainless steel design**
- **Up to 200 Bar pressure range**
- **High precision - <0.25% F.S**
- **Programmable for zero point (offset), characteristics and output options**
- **Wide choice of output signals**

The CIT-F range of pressure sensors guarantee a wide application field in a high accuracy, rugged and compact design. The stainless steel membrane is completely vacuum-sealed, extremely burst resistant and applicable for all standard media across hydraulics, pneumatics, environmental engineering, process technology, semiconductor technology and automotive engineering.

As part of the stringent manufacturing process, all CIT-F pressure transducers are individually pressure and temperature tested to conform to DIN EN ISO 9001:2008. With compensation and adjustment performed electronically, these pressure transmitters are characterised by a very low total error and excellent long-term stability.

With the precision of modern electronics, the measured data is captured and processed very accurately. The pressure transducers may be user programmed with a handheld device or a PC programming kit. The measuring range and the zero point can be set up through the digital interface. and with permanent magnets, the adjustment of the zero point can easily and securely be adjusted at any time.

Specification

Pressure ranges		bar	0.25, 0.4, 0.6, 1.0, 1.6, 2.5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 200
Over pressure *		bar	Max. 1.5 times / 1.2 times - depending on pressure range
Burst pressure *		bar	2 times / 1.5 times - depending on pressure range
Kind of pressure			gauge pressure, absolute pressure on request
Wetted parts :			Stainless steel
Weight		g	under construction
Supply voltage			12..30 V at 4..20 mA / 14…30 V at 0…10V
Output signals			4…20 mA - 2 wire, 0…5 V - 3 wire, 0…10V - 3 wire, Digital optional, Others on request
Adjustability of zero			Straightforward zero correction by using a magnet or via interface and PC programming kit
Adjustability of span			1:4 with pressure ranges (FS) via interface and software
Adjustability time constant			via interface and software
Accuracy **		% FS	0.3 Optional 0.25 (Including non-linearity, zero point and full scale error, hysteresis, non-linearity and repeatability).Compensation measurement and adjustment for vertical mounting position
Non-linearity ***		% FS	2 BFSL
Repeatability		% FS	0,1
Long-term stability		% FS	0,1 1-year stability at reference conditions
Permissable temperatures	Media temperature	ºC	-20...+ 100 (-20 ... +150) with cooling element
	Ambient temperature	ºC	-20....+ 80
	Storage temperature	ºC	-20....+ 100
Compensated temp. range		ºC	-20…+ 80
Temperature coefficient	zero	% FS	0,15 / 10K
	FS	% FS	0,15 / 10K
CE-conformity	Pressure equipment directive		97/23/EG
	EMC directive		89/336/EEC emission (class B) immunity according to EN61326
	Shock resistance	g	1000 to IEC 60068-2-27 mechanical
	Vibration resistance	g	20 to IEC 60068-2-6 resonance
Wiring protection	Overvoltage	VDC	32
	Short-circuit strength		Out+ / U_B- (for 1s)
	Reverse polarity		U_B+/ U_B-

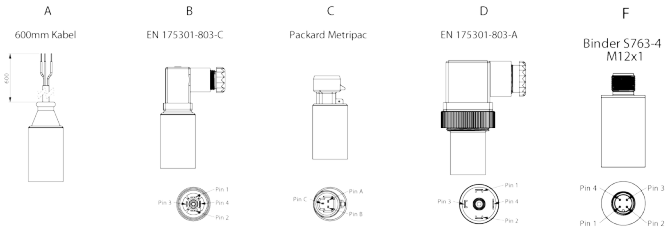
* Others on request
** Special custom design with optional better accuracy on request
*** Integral linearity error (FS = Full Scale, BFSL = Best Fit Straight Line)

VARIOHM HOLDINGS

Pressure Sensor - CIT-F

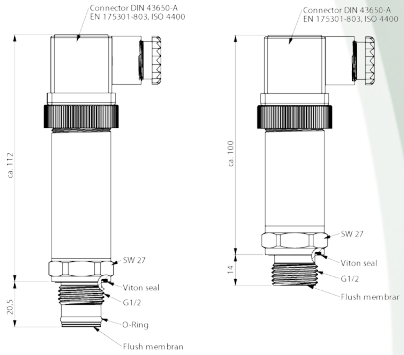
Dimensions and wiring

Electrical connection

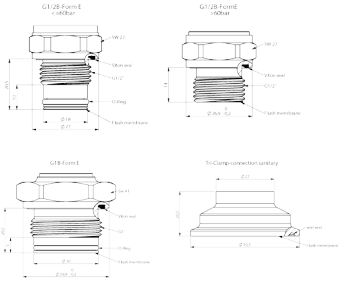


Type		Output	PIN 1	PIN 2	PIN 3	PIN 4
	DIN EN 175301- 803-A and C	0,5 - 4,5V , 1 - 5 V , 0 - 10 V	+ Supply	- Supply	Output +	-
		4..20mA	+ Supply	Current output -	N/A	-
	Round connector M12x1 A	0,5 - 4,5V , 1 - 5 V , 0 - 10 V	+ Supply	N/A	- Supply	Output +
		4..20mA	+ Supply	N/A	Current output -	N/A
		Output	PIN A	PIN B	PIN C	-
	Packard Metripac	0,5 - 4,5V , 1 - 5 V , 0 - 10 V	- Supply	+ Supply	Output +	-
		4..20mA	Current output -	+ Supply	N/A	-
		Output	Red	Black	White	-
	Cable assembly	0,5 - 4,5V , 1 - 5 V , 0 - 10 V	+ Supply	- Supply	Output +	-
		4..20mA	+ Supply	Current output -	N/A	-

Typical dimensions



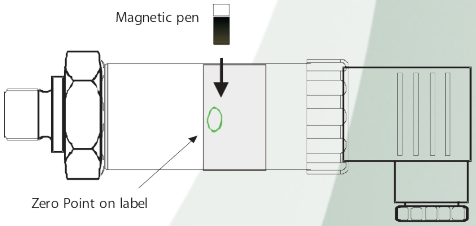
Pressure Connection



Installation

The zero can be set easily with a magnet within ± 10 % of the nominal range.

To correct the zero point, hold a permanent magnet a pin board magnet, for example at the poCITion marked on the pressure transmitter (i.e. a letter in a circle) for ½ to 2 ½ minutes after the power has been switched on. To correct the zero, atmospheric pressure is applied. Offsets for previously set values for initial and ultimate pressures will be corrected automatically by the device. A magnetic field applied outside of this time period has no effect on the setting. The power must be switched off and on before the zero point can be set again.



Safety information

During installation, putting into service and operation of these pressure sensors, it is necessary to observe the relevant safety regulations that are in force in the country of the user (as for example, DIN VDE 0100).

Ordering information

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

Sample Code: CIT-F - 1 - B - A - A -xxxxx

Series	Output Signal	Pressure type	Process Connection	Electrical Connector	Pressure range
CIT-F	1 = 0-10VDC 2 = 4-20mA 3 = 1-5VDC 4 = 0-5VDC 5 = 0.5 - 4.5VDC	B = Gauge V = Vacuum S = Sealed reference	A = G1/2B-Form E B = G1B-Form E C = G1 according to EHEDG (food) D = Tri-Clamp-connection sanitary	A = 600mm standard cable B = DIN EN 175301-803 C C = Packard Metripac D = DIN EN 175301-803 A F = M12x1 4poles	See table below

Custom options available on request

Pressure Range															
Bar	0.25	0.4	0,6	1.0	1.6	2.5	4	6	10	16	25	40	60	160	200
Order Code	00025	00040	00060	00100	00160	00250	00400	00600	01000	016	02500	04000	06000	16000	20000

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Subject to change without notice