Pressure sensor - CIT-F

VARIOHM EUROSENSOR

- **Flush mount stainless steel design**
- **Up to 1000 Bar pressure range**
- **High precision ≤ 0.35% BFSL**
- **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 measuring range can be set up through the digital interface, and with permanent magnets the zero point can be easily and securely adjusted at any time.

Specification

Pressure ranges		bar	0.1, 0.16, 0.25, 0.4, 0.6, 1.0, 1.6, 2.5, 4, 6, 10, 16, 25, 40, 60, 100, 160, 250, 400, 600, 1000,	
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	
Wetted parts :			Stainless steel	
Weight		g	app. 200	
Supply voltage			10...32V-> 4-20mA 12-32VDC-> 0...10V 8...32VDC-> 0...5V	
Output signals			4…20 mA - 2 wire. 0…5 V - 3 wire. 0…10V - 3 wire. Others on request	
Adjustability of zero			Straightforward zero correction by using a magnet	
Accuracy **		% FS	0.45% limit point / 0.35% BFSL (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	0.1% BFSL	
Repeatability		% FS	0.1	
Long-term stability		% FS	0.1 1-year stability at reference conditions	
Permissable temperatures	Media temperature	°C	-20...+ 100	
	Ambient temperature	°C	-20....+ 80	
	Storage temperature	°C	-20....+ 100	
Compensated temp. range		°C	-20...+ 80	
Temperature coefficient	zero	% FS	0.15 / 10K	
	FS	% FS	0.15 / 10K	
CE-conformity	Pressure equipment directive		2014/68/EU	
	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-	

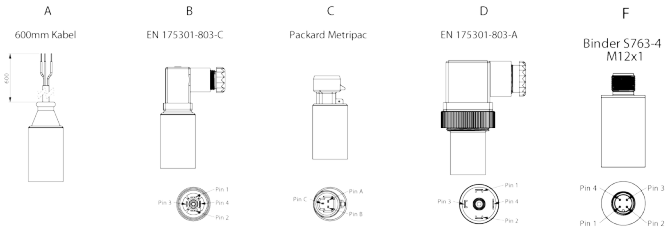
* Others on request
** Special custom design with optional better accuracy on request
*** Integral linearity error (FS = Full Scale. BFSL = Best Fit Straight Line)

VARIOHM HOLDINGS

Pressure Sensor - CIT-F

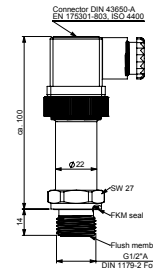
Dimensions and wiring

Electrical connection

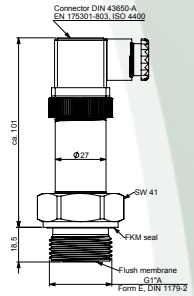


Type		Output	PIN 1	PIN 2	PIN 3	PIN 4
	DIN EN 175301- 803-A and C	0.5 - 4.5V . 1 - 5 V . 0 - 10 V	+ Supply	- Supply	Output +	-
		4..20mA	+ Supply	Current output -	N/A	-
	Round connector M12x1 A	0.5 - 4.5V . 1 - 5 V . 0 - 10 V	+ Supply	N/A	- Supply	Output +
		4..20mA	+ Supply	N/A	Current output -	N/A
		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



Option A = 0.1...<60bar

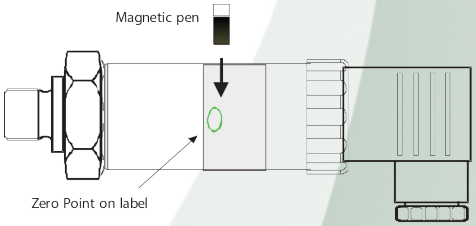


Option B = 100 bar...1000 bar

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 position 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 max. 60bar B = G1B-Form E	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	0,1	0,16	0.25	0.4	0,6	1.0	1.6	2.5	4	6	10	16	25	40	60	160	250	400	600	1000
Order Code	00010	00016	00025	00040	00060	00100	00160	00250	00400	00600	01000	016	02500	04000	06000	16000	25000	40000	60000	100000

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