



The "IMPACT" series of Gefran, are pressure transmitters, without transmission fluid, for using in High temperature environment (350°C).

Medium pressure is transferred directly to the sensitive silicon element via a thick diaphragm.

Strain is transduced by a micro-worked silicon structure (MEMS).

The operating principle is piezoresistive.

"IMPACT" is Gefran's exclusive series of high-temperature pressure sensors that use the piezoresistive principle. The main characteristic of "IMPACT" sensors is that they do not contain any transmission fluid.

The sensitive element, directly positioned behind the contact membrane, is realised in silicon through microprocessing techniques.

The micro structure includes the measurement membrane and piezoresistors.

The minimum deflection required by the sensitive element makes it possible to use very robust mechanics.

The process contact membrane can be up to 15 times thicker than the membrane used in traditional Melt sensors.

ADVANTAGES

- Total compatibility with the European RoHS Directive
- High strength
- Long life
- Working temperature: up to 350°C
- Excellent read stability over time
- Fast response time

MAIN FEATURES

- Pressure ranges:
0-100 to 0-1000 bar / 0-1500 to 0-15000 psi
- Accuracy: $< \pm 0.25\%$ FSO (H); $< \pm 0.5\%$ FSO (M)
- Standard threading 1/2-20UNF, M18x1.5
- Other types of diaphragms are available on request
- Autozero function on board / external option
- 15-5 PH stainless steel diaphragm GTP+ coated

AUTOZERO FUNCTION

All signal variations in the absence of pressure can be eliminated by using the Autozero function.

This function is activated by closing a magnetic contact located on the transmitter electronics or by an external contact.

The procedure is allowed only at zero pressure.

The Autozero function should be activated **ONLY** when the sensor is completely installed on the system.

TECHNICAL SPECIFICATIONS

Accuracy (1)	H $< \pm 0.25\%$ FSO M $< \pm 0.5\%$ FSO
Resolution	16 Bit
Measurement range	0..100 to 0..1000bar 0..1500 to 0..15000ps
Maximum overpressure (without degrading performances)	1.5 x FS (maximum pressure 1200bar/17400psi)
Measurement principle	Piezoresistive
Power supply	13...30Vdc
Maximum current absorption	23 mA (40 mA with optional relay)
Output signal Full Scale FSO	20mA
Zero balance (tolerance $\pm 0.25\%$ FSO)	4mA
Zero signals adjustment (tolerance $\pm 0.25\%$ FSO)	"Autozero" function
Response time (10...90% FSO)	8ms
Output noise (RMS 10-400Hz)	$< 0.025\%$ FSO
Calibration signal	80% FSO
Supply reverse polarity protection	Yes
Compensated temperature range housing	0...+85°C
Operating temperature range housing	-30...+85°C
Storage temperature range housing	-40...+125°C
Maximum diaphragm temperature	350°C / 660°F
Zero signal variation due to process temperature variation in range (20-350°C)	$< \pm 1,2\%$ FSO
Span signal variation due to process temperature variation in range (20-350°C)	$< \pm 1\%$ FSO
Std contact diaphragm with process	15-5 PH GTP+
Thermocouple (model IE2)	STD: type "J" (isolated junction) type "K" (on request)
Protection degree (with 6-pole female connector)	IP65
Electrical connection	Conn. 6-pin VPT07RA10-6PT (PT02A-10-6P) Conn. 8-pin (Binder) M16 DIN/EN45326 (09-0173-00-08)

FSO = Full scale output (1) BFSL method (Best Fit Straight Line): includes combined effects of Non-Linearity, Hysteresis and Repeatability.