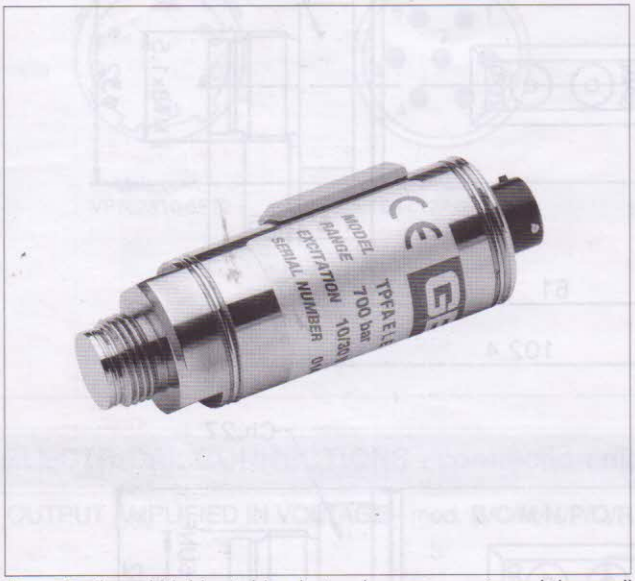
GEFRAN

TPFA

PRESSURE TRANSMITTER WITH FLUSH MEASUREMENT DIAPHRAGM



Main features

- *Pressure range:*
  0 ... 10; 0 .. 1000 bar / 0 ... 150; 0 ... 15000 psi
- *Precision class:*
  0.3% beyond 50 bar; 0.6% up to 50 bar
- *Entirely in stainless steel*
- *Internally generated calibration signal*
- *Output signal:*
  0.1 ... 5.1Vdc / 0.1 ... 10.1Vdc;
  4 ... 20mA two wires;
  1 ... 5Vdc / 1 ... 10Vdc / 1 ... 6Vdc / 0 ... 5Vdc / 0 ... 10Vdc
- *Protection level: IP65*

Series TPFA transmitters with flush measurement diaphragm with output signal amplification system are designed to check the pressure of high-viscosity fluids, which cannot be done with normal transducers with internal measurement chamber.
They are used in the food industry, where the means of measurement must not stagnate in cavities.
The selection of highly stable electronic components and the availability of output signals in voltage and current make series TPFA transmitters suitable for applications in which the signal has to be transmitted over long distances or in smart control and checking systems.

TECHNICAL DATA

Output signal	VOLTAGE B/C/M/N/P/Q/R	CURRENT E
Precision class (1)	< 0,3% FSO 0/60..0/1000 bar < 0,6% FSO 0/10..0/50 bar	
Resolution	Infinite	
Pressure range	from 0...10 to 0...1000 bar / from 0...150 to 0...15000 psi	
Max. applicable pressure (without degradation of the specific) (2)	3 times Full Scale (max. 2000 bar)	
Resistance to bursting	4 times Full Scale (max. 2000 bar)	
Measurement principle	Metal strain gauge glued (4 active branches)	
Power supply	15...30Vdc	10...30Vdc
Max. absorption on power supply (3)	40mA	20mA
Resistance of isolation at 50Vdc	> 1000MΩ	
Nominal pressure signal: ± 0,5% FS	**B** 5,1Vdc **C** 10,1Vdc **M/P** 5Vdc **N/Q** 10Vdc **R** 6Vdc	20mA
Ambient pressure signal: ± 0,5% FS	**B/C** 0,1Vdc **M/N** 0Vdc **P/Q/R** 1Vdc	4mA
Calibration signal	80% ± 1%FS	
Nominal pressure signal control	± 5% FSO	
Ambient pressure signal control	± 5% FSO	
Max. permitted load	1mA	diagr.
Max. response time (0...90% FSO) **L** **V**	4ms 1ms	8ms 4ms
Noise at output (RMS 10-400Hz)	< 0,05% FSO	
Output short circuit protection and reverse power polarity	YES	
Output pulse overvoltage protection	YES	
Compensated temperature range	0...70°C / 32...158°F	
Permitted temperature range	-30...85°C / -22...185°F	
Thermal drift in compensated range (zero - cal. - sens.)	< ±0,02%FSO/°C / < ±0,01%FSO/°F	
Materials in contact with measurement fluid	17-4PH stainless steel	
Outer case material	AISI 304 stainless steel	
Protection level	IP65	
Process connections	Standard: M18x1.5; on request: 3/4-16UNF, 1/2"G male	
Electrical connections	6-pole connector; other connectors on request	

FSO = Full Scale Output
1 BFSL (Best Fit Straight Line) method
2 tested for more than 1000 strokes with single duration <2msec.
3 with 30 V power supply, max. load and calibration signal on.