TPF

PRESSURE TRANSDUCER 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*
- *Protection level: IP65*
- *Available in intrinsic safety version EEia IIC T6*

Series TPF transducers with flush measurement diaphragm 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 and in plastics processing, up to a temperature of 120°C, and in other applications in which the means of measurement must not stagnate in cavities.

The selection of highly stable electronic components and ultrasonic checking of materials guarantee the absence of inclusions and defects on the primary reaction mechanics, assuring a highly reliable product.

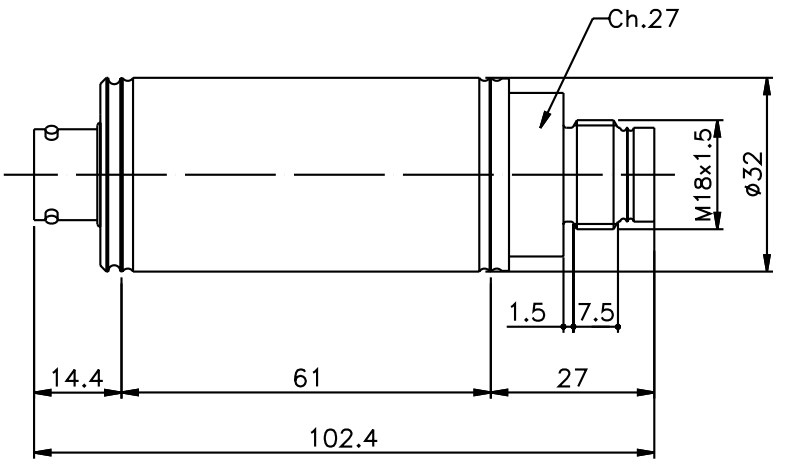
TECHNICAL DATA

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 (**2**) (20 sec. without degradation of the specific)	2 times Full Scale (max. 2000bar / 30000psi)
Resistance to bursting	3 times Full Scale (max. 2000bar / 30000psi)
Measurement principle	Metal strain gauge glued (4 active branches)
Resistance of measurement bridge	350 (± 2%) Ohm
Power supply	10 (max 15) Vdc/ac RMS
Resistance of isolation	>1000 MΩ to 50Vdc
Nominal pressure signal	3 (± 1%) mV/V (200...1000bar / 3000...15000 psi) 2 (± 1%) mV/V (50...160bar / 750...1500 psi) 1,5 (± 1%) mV/V (10...40bar / 150...500 psi)
Ambient pressure signal	±1% FSO
Calibration signal	80% ± 1%
Compensated temperature range	-20...+100°C / -4...+212°F
Permitted temperature range ---------- Option cable F:	-30...+120°C / -22...+248°F ---------- -30...+100°C / -22...+212°F
Thermal drift in compensated range (zero - cal. - sens.)	ranges > 50bar (750psi) ±0,02% FSO/°C / ±0,01% FSO/°F ranges ≤ 50bar (750psi) ±0,03% FSO/°C / ±0,02% FSO/°F
Materials in contact with measurement fluid	17- 4 PH stainless steel
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

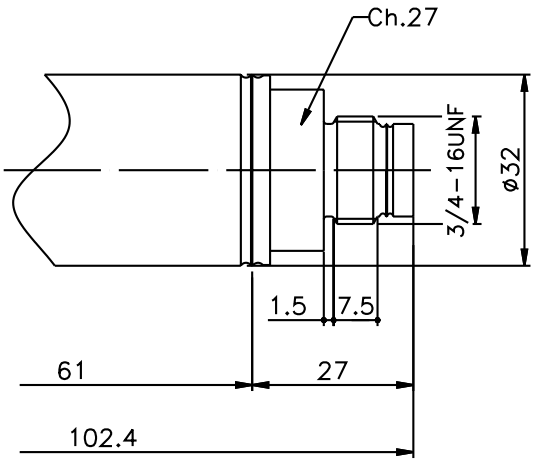
FSO = Full Scale Output
1 BFSL (Best Fit Straight Line) method
2 tested for more than 1000 strokes with single duration <2msec.

MECHANICAL DIMENSIONS - Process connections

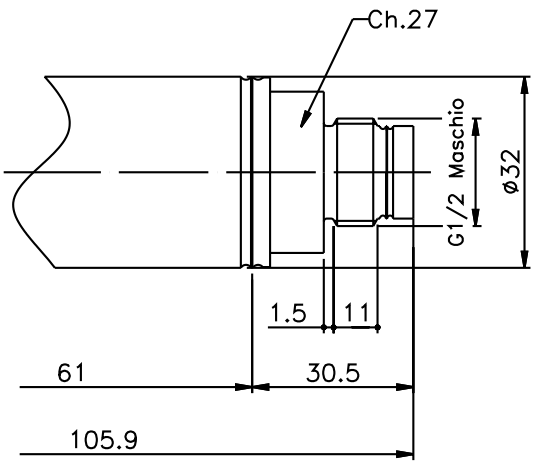
Connection
M18 x 1.5
(code **G**)



Connection
3/4” - 16 UNF
(code **L**)



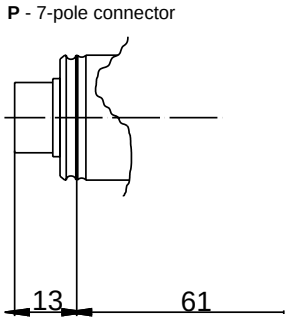
Connection
1/2” G maschio
(code **M**)



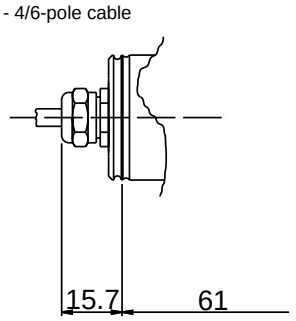
ATTENTION: For installation, use a maximum locking torque of 40Nm.

MECHANICAL DIMENSIONS - Connectors

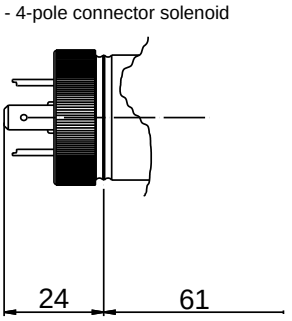
P - 7-pole connector



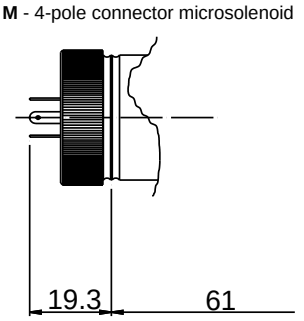
F - 4/6-pole cable



E - 4-pole connector solenoid

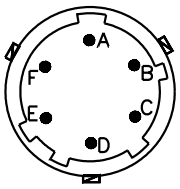


M - 4-pole connector microsolenoid



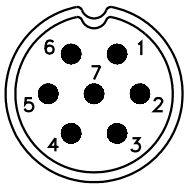
ELECTRICAL CONNECTIONS - Connectors

V - 6-pole connector



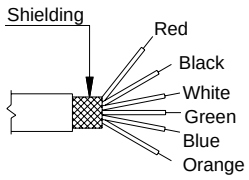
Male Connector
VPT02A10-6PT2

P - 7-pole connector



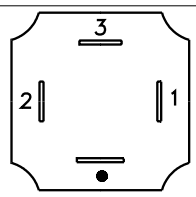
Male Connector
09-0127-09-07

F - 6-pole cable



F - Shielded cable 6 x 0,25 - 1m.

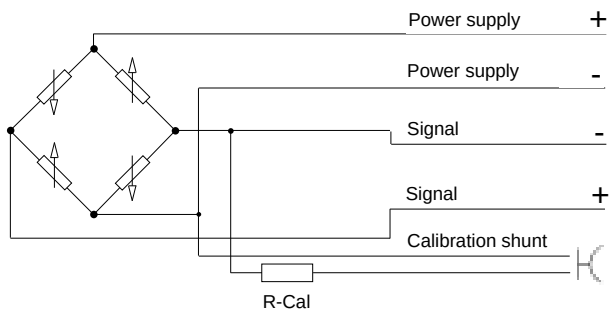
E - 4-pole connector solenoid
M - 4-pole connector microsolenoid



E - Solenoid 400DIN 46350A-ISO 4400
M - Microsolenoid 400 DIN 46350B-ISO 4400

ELECTRICAL CONNECTIONS - connection diagrams

mV/V output



Code **V**	Code **P**	Code **F**	Code **E/M**
C	1	White	3
D	2	Green	⏚
B	4	Black	2
A	3	Red	1
E - F	5 - 6	Blue/orange	*Not available*
	7		

The cable sheathing is connected to the transducer body

ACCESSORIES ON REQUEST

Connectors

Connection V
Female cable connector Prot. IP66 **CON 300**
Connection P
Female cable connector Prot. IP40 **CON 320**
Female cable connector 90° Prot. IP40 **CON 322**
Female cable connector Prot. IP67 **CON 321**

Connection E
Connector 3 poles + ground DIN43650A ISO4400 **CON 006**
Prot. IP65
Connection M
Connector 3 poles + ground DIN43650B ISO4400 **CON 008**
Prot. IP65

ORDER CODE

Pressure transducer **TPF** ☐ ☐ ☐☐☐☐ ☐ ☐

PROCESS CONNECTIONS	
Standard	
M18 x 1.5	**G**
On request	
3/4"-16 UNF	**L**
1/2" G male	**M**

ELECTRICAL CONNECTIONS	
Standard	
6-pole connector	**V**
On request	
7-pole connector	**P**
6-pole shielded cable	**F**
4-pole connector solenoid	**E**
4-pole connector microsolenoid	**M**

Mechanical and/or electrical characteristics differing from standard may be arranged on request

EXPLOSION-PROOF VERSION	
EX	Certification EEx ia IIC T6

PRESSURE RANGE				
	bar			**psi**
B01D	0..10		**P15D**	0..150
B16U	0..16		**P03C**	0..300
B02D	0..20		**P05C**	0..500
B25U	0..25		**P75D**	0..750
B03D	0..30		**P15C**	0..1500
B35U	0..35		**P03M**	0..3000
B04D	0..40		**P05M**	0..5000
B05D	0..50		**P75C**	0..7500
B06D	0..60		**P10M**	0..10000
B01C	0..100		**P15M**	0..15000
B16D	0..160			
B02C	0..200			
B25D	0..250			
B35D	0..350			
B04C	0..400			
B05C	0..500			
B06C	0..600			
B07C	0..700			
B01M	0..1000			

Ex.: **TPF - G - V - B02C**
Transducer: output signal 3 mV/V, pressure fitting M18x1.5 flush diaphragm, pressure range 200 bar, 6-pole Veam connector

Ex.: **TPF - G - V - B01D - EX**
Transducer: output signal 1.5 mV/V, pressure fitting M18x1.5 flush diaphragm, pressure range 10 bar, 6-pole Veam connector, explosion-proof version

GEFRAN

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cod. 85921 -11/01