



The CE series of Gefran, are pressure transmitters for using in High temperature environment. The main characteristic of this series is the capability to read temperature of the media up to 400°C. The constructive principle is based on the hydraulic transmission of the pressure. The fluid-filled system assures the temperature stability. The physical measure is transformed in a electrical measure by means the strain-gauge technology.

MAIN FEATURES

- Pressure ranges from:
0-100 to 0-1000 bar / 0-1500 to 0-15000 psi
- Accuracy: < ±0.5% FSO (M)
- Fluid-filled system for temperature stability
- Mercury filling volume:
CE0 (30mm³); CE1, CE2 (40mm³)
- 1/2-20UNF standard threads; other types available on request
- Autozero function on board
- Standard diaphragm is 15-5 PH stainless steel with TiN coating

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 housing. The procedure is permitted only with pressure at zero.

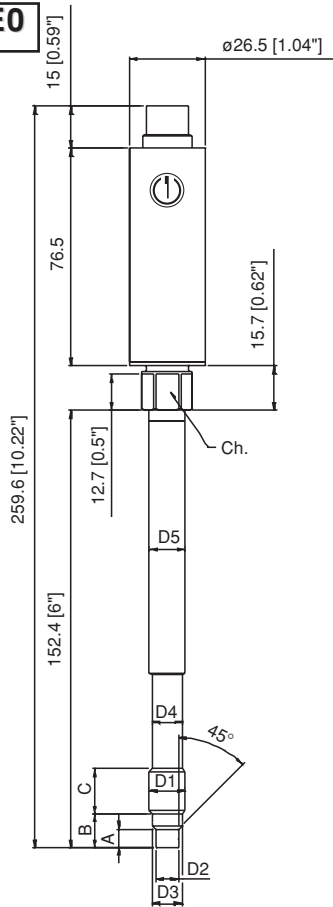
TECHNICAL SPECIFICATIONS

| | |
|---|--|
| Accuracy (1) | M <±0.5%FSO (100...1000 bar) |
| Resolution | Infinite |
| Measurement range | 0..100 to 0..1000bar 0..1500 to 0..15000psi |
| Maximum overpressure (without degrading performances) | 1.5 x FS above |
| Measurement principle | Extensimetric |
| Power supply | 10...30Vdc |
| Maximum current absorption | 32mA |
| Insulation resistance (at 50Vdc) | >1000 MOhm |
| Output signal Full Scale (FSO) | 20mA |
| Zero balance (tolerance ± 0.25% FSO) | 4mA |
| Zero signals adjustment (tolerance ± 0.25% FSO) | "Autozero" function |
| Span adjustment within ± 5% FSO | See Manual |
| Maximum allowed load | See diagram |
| Response time (10...90% FSO) | ~ 1ms |
| Output noise (RMS 10-400Hz) | < 0.025% FSO |
| Calibration signal | 80% FSO |
| Output short circuit ingress and reverse polarity protection | YES |
| Compensated temperature range | 0...+85°C |
| Operating temperature range | -30...+105°C |
| Storage temperature range | -40...+125°C |
| Thermal drift in compensated range: Zero / Calibration / Sensibility | < 0.02% FSO/°C |
| Diaphragm maximum temperature | 400°C / 750°F |
| Zero drift due to change in process temperature (zero) | < 0.04 bar/°C |
| Standard material in contact with process medium | Diaphragm: • 15-5 PH with TiN coating Stem: • 17-4 PH |
| Thermocouple (model CE2) | STD: type "J" (isolated junction) |
| Protection degree (with 6-pole female connector) | IP62 |

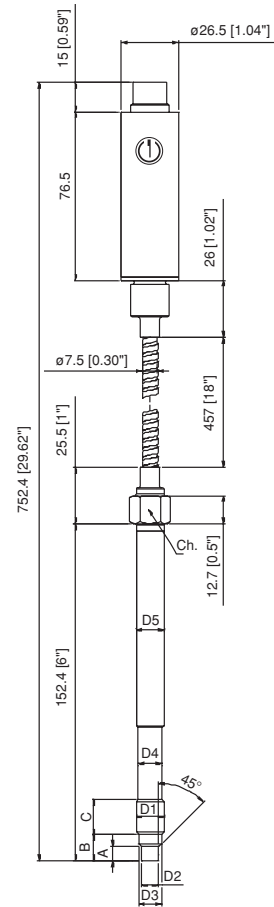
FSO = Full scale output : (1) BFSL method (Best Fit Straight Line); includes combined effects of Non-Linearity, Hysteresis and Repeatability.

MECHANICAL DIMENSIONS

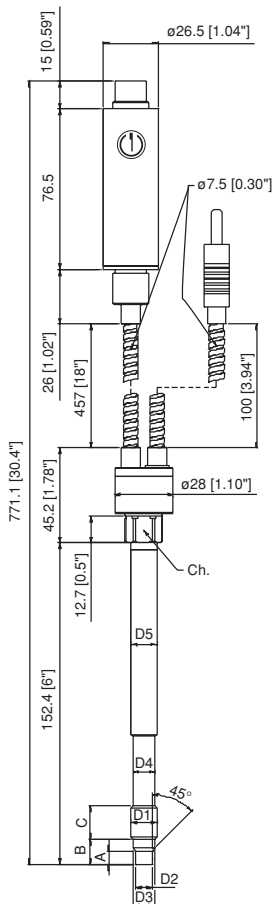
CE0



CE1



CE2



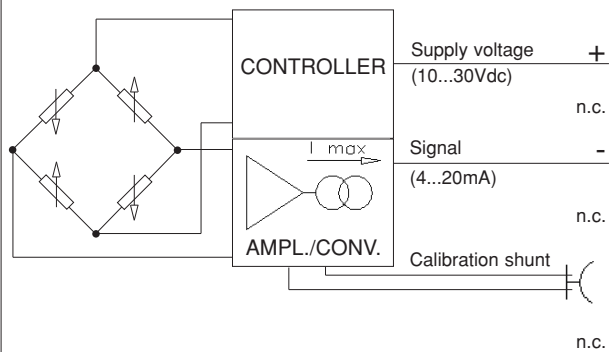
| D1 | 1/2 - 20UNF |
|-------------|--|
| D2 | $\phi 7.8 - 0.05$ [$\phi 0.31$ " - 0.002] |
| D3 | $\phi 10.5 - 0.025$ [$\phi 0.41$ " - 0.001] |
| D4 | $\phi 10.67$ [$\phi 0.42$ "] |
| D5 | $\phi 12.7$ [$\phi 0.5$ "] |
| A | 5.56 - 0.26 [0.22" - 0.01] |
| B | 11.2 [0.44"] |
| C | 15.74 [0.62"] |
| Ch [Hex] | 16 [5/8"] |

NOTE : dimensions refer to rigid stem length option "4" (153 mm – 6")

WARNING : For installation use a maximum tightening torque of 56 Nm (500 in-lb)

ELECTRICAL CONNECTIONS

CURRENT OUTPUT (4...20mA, two wires)



MAGNETIC AUTOZERO

6-pin

A

C

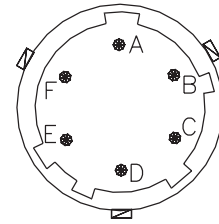
B

D

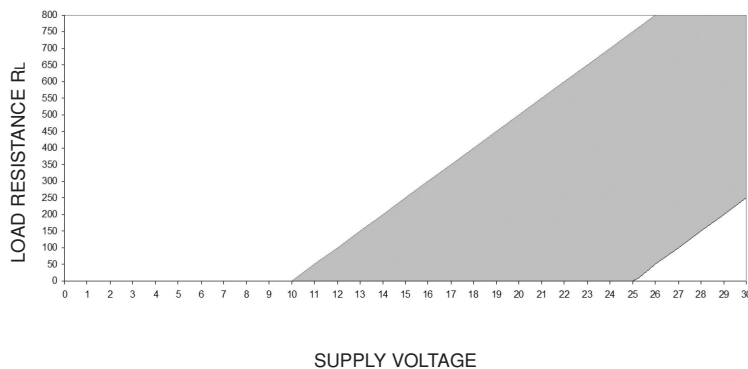
E - F

Shield drain wire is tied to connector via cable clamp

6 pin connector
VPT07RA10-6PT2
(PT02A-10-6P)

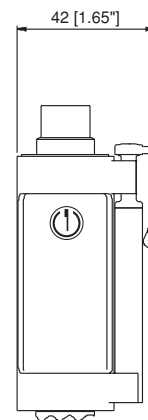


LOAD DIAGRAM



The diagram shows the optimum ratio between the load and supply voltage of the 4...20mA transmitter. For a correct use, choose any combination of load resistance and supply voltage, in the shaded area.

AUTOZERO FUNCTION



The Autozero function is activated through a magnetic contact (external magnet supplied with the sensor). See the manual for a complete Autozero function explanation.

ACCESSORIES

Connectors

6-pin mating connector (IP62 protection degree)

CON300

Extension cables

6-pin connector with 8m (25ft) cable
6-pin connector with 15m (50ft) cable
6-pin connector with 25m (75ft) cable
6-pin connector with 30m (100ft) cable

C08WLS
C15WLS
C25WLS
C30WLS

Other lengths

consult factory

Accessories

Mounting bracket
Dummy plug for 1/2-20UNF
Drill kit for 1/2-20UNF
Cleaning kit for 1/2-20UNF
Fixing pen clip
Autozero pen

SF18
SC12
KF12
CT12
PKIT309
PKIT312

Thermocouple for CE2 model

Type "J" (153mm - 6" stem)

TTER 601

Cable color code

| Conn. | Wire |
|-------|--------|
| A | Red |
| B | Black |
| C | White |
| D | Green |
| E | Blue |
| F | Orange |

ORDER CODE

C - - - - - - - - - - 000

| OUTPUT SIGNAL | |
|---------------|---|
| 4...20mA | E |

| CONFIGURATION | |
|-----------------------|---|
| Rigid stem | 0 |
| Rigid stem + flexible | 1 |
| With thermocouple | 2 |

| CONNECTOR | |
|-----------|---|
| Standard | |
| 6 pin | 6 |

| ACCURACY CLASS | |
|----------------|---|
| 0.5% FSO | M |

| RANGE | | | |
|-------|------|-------|------|
| bar | | psi | |
| 100 | B01C | 1500 | P15C |
| 200 | B02C | 3000 | P03M |
| 350 | B35D | 5000 | P05M |
| 500 | B05C | 7500 | P75C |
| 700 | B07C | 10000 | P10M |
| 1000 | B01M | 15000 | P15M |

000= Standard version
Special or customized versions available on request

| | |
|---|-------------------|
| - | Magnetic autozero |
|---|-------------------|

| FLEXIBLE LENGTH (mm / inches) | | |
|----------------------------------|-------|-----|
| Standard (CE0) | | |
| 0 | none | |
| Standard (CE1, CE2) | | |
| D | 457mm | 18" |

| RIGID STEM LENGTH (mm / inches) | | |
|------------------------------------|-------|-------|
| Standard (CE0, CE1, CE2) | | |
| 4 | 153mm | 6" |
| 5 | 318mm | 12.5" |

| THREAD | |
|----------|--------------|
| Standard | |
| 1 | 1/2 - 20 UNF |

Examples

CE2-6-M-B07C-1-4-D-000

Melt pressure transmitter with type "J" thermocouple, 4...20mA output, 6-pin connector, 1/2-20UNF thread, 700 bar full scale, 0,5% accuracy class, 153 mm (6") rigid stem, 457mm (18") flexible capillary.

Electrical installation requirements and Conformity certificate are available on our web site: www.gefran.com

GEFRAN reserves the right to make any kind of design or functional modification at any moment without prior notice.