

### ME0



The rigid stem configuration makes installation fast and easy

### ME1



The flexible configuration is designed for applications requiring further thermal isolation or where installation would be otherwise difficult or impractical

### ME2



The pressure / temperature configuration requires only one mounting hole for the measurement of both process values

### ME3



The exposed capillary configuration is ideal to fit in space-restricted locations

### Main features

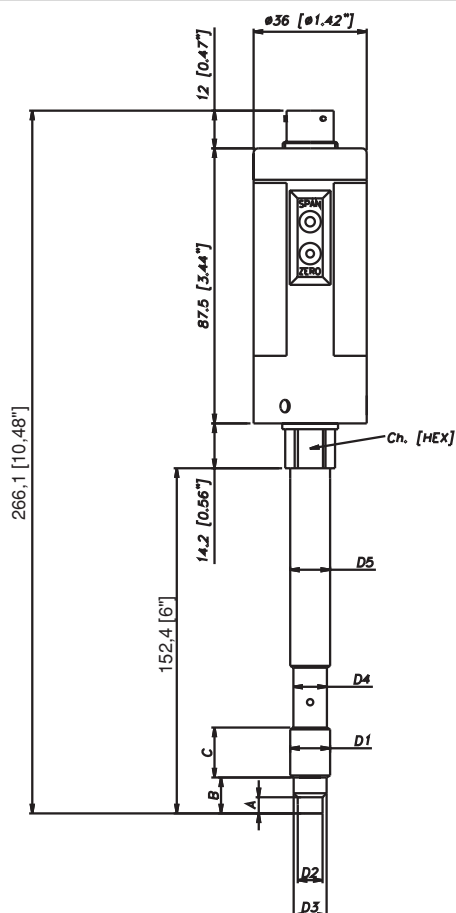
- Pressure ranges from:  
0-35 to 0-2000 bar / 0-500 to 0-30000 psi
- Strain gage Wheatstone bridge
- Accuracy :  
<±0.25% FSO (H); <±0.5% FSO (M)
- Internally generated 80% calibration signal (R-Cal)
- Fluid-filled system for temperature stability
- Fully interchangeable with all existing brands
- Grade of protection: IP65 (6-pin connector version)
- 1/2-20UNF, M18x1.5 standard threads ; other types available on request
- Standard diaphragm is 15-5 PH stainless steel with Armoloy coating
- 17-7 PH corrugated diaphragm with TiN coating (Titanium Nitride) for ranges below 100bar-1500psi
- Other diaphragms available on request

### TECHNICAL SPECIFICATIONS

|                                                                             |                                                                                                                                        |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Nominal accuracy including Linearity, Repeatability, Hysteresis             | <b>H</b> <±0.25%FSO (100...2000 bar)<br><b>M</b> <±0.5%FSO (35...2000 bar)                                                             |
| Resolution                                                                  | Infinite                                                                                                                               |
| Measurement range                                                           | 0..35 to 0..2000bar<br>0..500 to 0..30000psi                                                                                           |
| Maximum overpressure                                                        | 2 x FS<br>1.5 x FS above 1000bar/15000psi                                                                                              |
| Measurement principle                                                       | Strain gage Wheatstone bridge                                                                                                          |
| Supply voltage                                                              | 12-30Vdc                                                                                                                               |
| Maximum current consumption                                                 | 20mA                                                                                                                                   |
| Isolation resistance (at 50Vdc)                                             | >1000 MOhm                                                                                                                             |
| Full Scale Output (FSO)                                                     | 20mA                                                                                                                                   |
| Zero balance                                                                | 4mA                                                                                                                                    |
| Signals adjustment :<br>Nominal pressure<br>Ambient pressure                | 5% FSO<br>min. 10 bar (150psi)                                                                                                         |
| Maximum load                                                                | see diagram (page 3)                                                                                                                   |
| Response time (10 to 90% FSO)                                               | ~ 8ms                                                                                                                                  |
| Output noise (RMS 10-400Hz)                                                 | < 0.05% FSO                                                                                                                            |
| Calibration signal                                                          | 80% FSO                                                                                                                                |
| Protection against output shortcircuit and supply voltage inverted polarity | YES                                                                                                                                    |
| Protection against output voltage spikes                                    | YES<br>according to 89/336/EEC                                                                                                         |
| Strain gauge housing compensated temperature range                          | 0...+76°C<br>32...170°F                                                                                                                |
| Maximum housing temperature range                                           | -30...+85°C<br>-22...185°F                                                                                                             |
| Thermal drift in compensated range Zero/Calibr./Sens.                       | < 0.02%FSO/°C<br>< 0.01%FSO/°F                                                                                                         |
| Diaphragm maximum temperature                                               | 400°C<br>750°F                                                                                                                         |
| Zero drift due to change in process temperature                             | 0.02 bar/°C<br>15 psi/100°F                                                                                                            |
| Material in contact with process medium                                     | - Standard<br>15-5 PH with Armoloy coating<br>17-7 PH corrugated diaphragm with Titanium Nitride coating for ranges <100 bar (1500psi) |
| Thermocouple (model ME2)                                                    | STD : type "J" (isolated junction)                                                                                                     |
| Protection degree (with 6-pin mating connector)                             | IP65                                                                                                                                   |
| Electrical connections                                                      | 6-pin Conn. VPT07RA10-6PT (PT02A-10-6P)<br>8-pin Conn. PC02E-12-8P                                                                     |

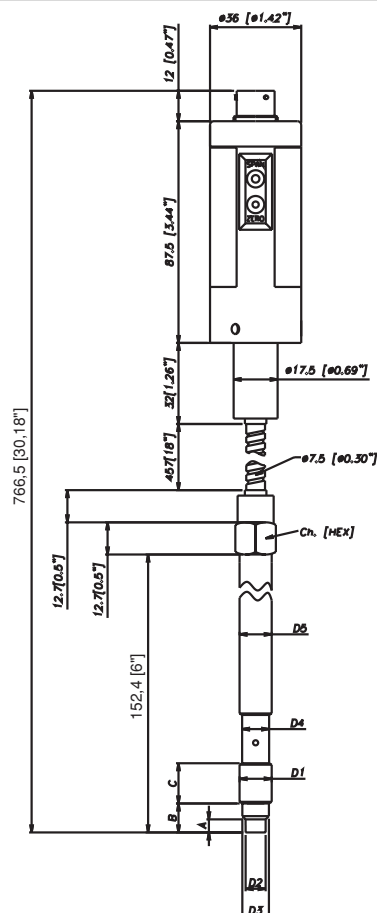
FSO = Full Scale Output (output signal at nominal pressure)

# MECHANICAL DIMENSIONS



ME0

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

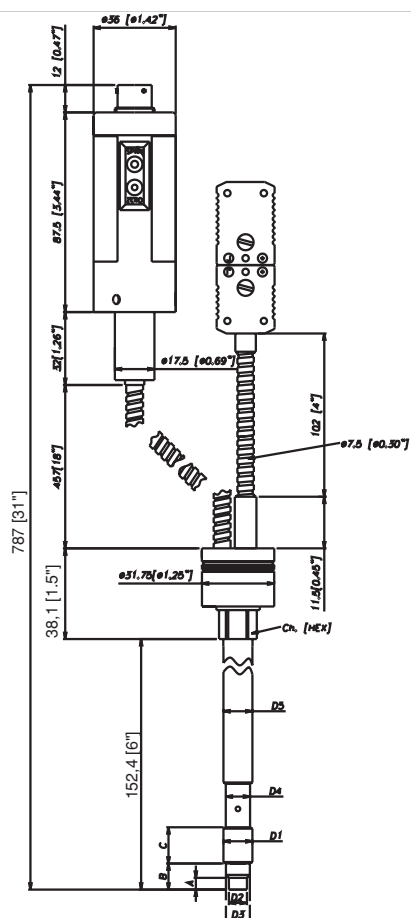


ME1

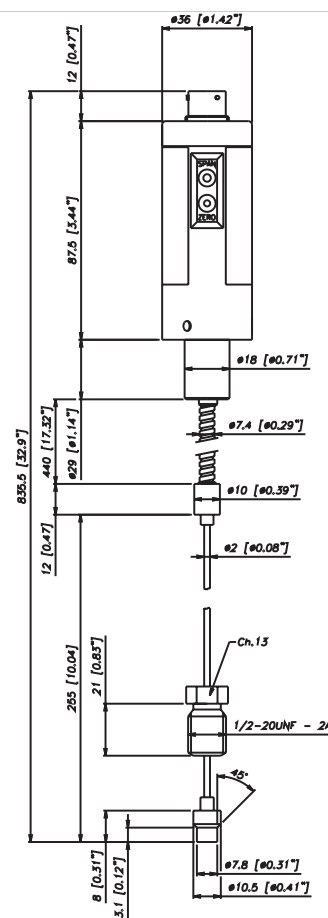
| D1          | M18x1,5                                      |
|-------------|----------------------------------------------|
| D2          | $\phi 10 -0.05$<br>[ $\phi 0.394$ " -0.002 ] |
| D3          | $\phi 16 -0.08$<br>[ $\phi 0.63$ " -0.003 ]  |
| D4          | $\phi 16 -0.4$<br>[ $\phi 0.63$ " -0.016 ]   |
| D5          | $\phi 18$<br>[ $\phi 0.71$ " ]               |
| A           | $6 -0.26$<br>[ $0.24$ " -0.01 ]              |
| B           | $14.8 -0.4$<br>[ $0.58$ " -0.016 ]           |
| C           | $19$<br>[ $0.75$ " ]                         |
| Ch<br>[Hex] | $19$<br>[ $3/4$ " ]                          |

**NOTE :**  
Dimensions refer to rigid  
stem length option "4"  
(153mm - 6")

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



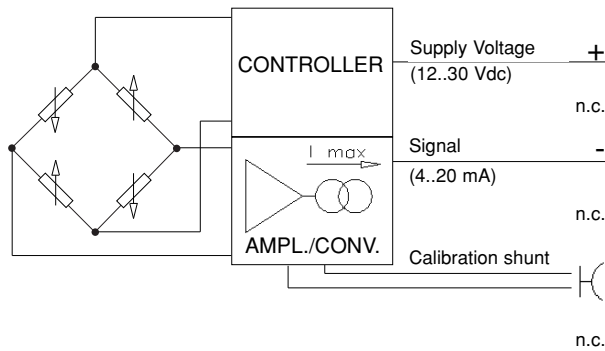
ME2



ME3

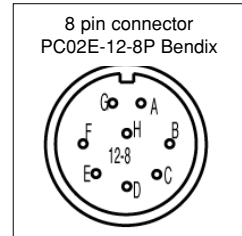
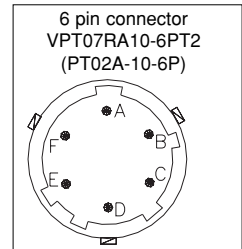
## ELECTRICAL CONNECTIONS

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

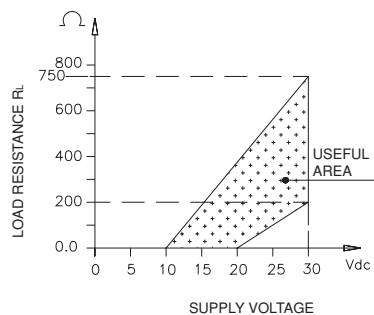


| 6-pin | 8-pin |
|-------|-------|
| A     | B     |
| C     | A     |
| B     | D     |
| D     | C     |
| E - F | E - F |
|       | G - H |

Shield drain wire is tied to connector via cable clamp

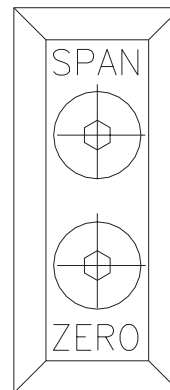


### LOAD DIAGRAM FOR CURRENT OUTPUT



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.

### ADJUSTMENTS



ZERO and SPAN adjustment can be made by trimpots inside the transmitter body and accessible after removing the two protection screws.

**Span is factory set and should not be adjusted.**

## ACCESSORIES

### Connectors

6-pin mating connector (IP65 protection degree)  
8-pin mating connector

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

### Accessories

Mounting bracket  
Dummy plug for 1/2-20UNF  
Dummy plug for M18x1.5  
Drill kit for 1/2-20UNF  
Drill kit for M18x1.5  
Cleaning kit for 1/2-20UNF  
Cleaning kit for M18x1.5

### Thermocouple for ME2 model

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

CON300  
CON307

C08WLS  
C15WLS  
C25WLS  
C30WLS  
E08WLS  
E15WLS  
E25WLS  
E30WLS  
consult factory

SF18  
SC12  
SC18  
KF12  
KF18  
CT12  
CT18

TTER 718

### Cable color code

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

## ORDER CODE

**M** - - - - - - - - - **000**

| OUTPUT SIGNAL |          |
|---------------|----------|
| 4...20mA      | <b>E</b> |

| VERSION               |          |
|-----------------------|----------|
| Rigid stem            | <b>0</b> |
| Rigid stem + flexible | <b>1</b> |
| With thermocouple     | <b>2</b> |
| Exposed capillary     | <b>3</b> |

| CONNECTOR            |          |
|----------------------|----------|
| Standard             |          |
| 6 pin                | <b>6</b> |
| 8 pin                | <b>8</b> |
| Available on request |          |
| NPT                  | <b>N</b> |

| ACCURACY CLASS                                  |          |
|-------------------------------------------------|----------|
| <b>0.25% FSO</b><br>(ranges ≥ 100 bar/1500 psi) | <b>H</b> |
| <b>0.5% FSO</b>                                 | <b>M</b> |

| RANGE       |             |              |             |
|-------------|-------------|--------------|-------------|
| bar         |             | psi          |             |
| <b>35</b>   | <b>B35U</b> | <b>500</b>   | <b>P05C</b> |
| <b>50</b>   | <b>B05D</b> | <b>750</b>   | <b>P75D</b> |
| <b>70</b>   | <b>B07D</b> | <b>1000</b>  | <b>P01M</b> |
| <b>100</b>  | <b>B01C</b> | <b>1500</b>  | <b>P15C</b> |
| <b>200</b>  | <b>B02C</b> | <b>3000</b>  | <b>P03M</b> |
| <b>350</b>  | <b>B35D</b> | <b>5000</b>  | <b>P05M</b> |
| <b>500</b>  | <b>B05C</b> | <b>7500</b>  | <b>P75C</b> |
| <b>700</b>  | <b>B07C</b> | <b>10000</b> | <b>P10M</b> |
| <b>1000</b> | <b>B01M</b> | <b>15000</b> | <b>P15M</b> |
| <b>1400</b> | <b>B14C</b> | <b>20000</b> | <b>P20M</b> |
| <b>2000</b> | <b>B02M</b> | <b>30000</b> | <b>P30M</b> |

000 = Standard version  
Special or customized versions  
available on request

| FLEXIBLE LENGTH<br>(mm / inches) |            |
|----------------------------------|------------|
| <b>Standard (ME0)</b>            |            |
| <b>0</b>                         | none       |
| <b>Standard (ME1, ME2)</b>       |            |
| <b>D</b>                         | 457mm 18"  |
| <b>E</b>                         | 610mm 24"  |
| <b>F</b>                         | 760mm 30"  |
| <b>Standard (ME3)</b>            |            |
| <b>L</b>                         | 711mm 28"  |
| <b>Available on request</b>      |            |
| <b>A</b>                         | 76mm 3"    |
| <b>B</b>                         | 152mm 6"   |
| <b>C</b>                         | 300mm 12"  |
| <b>G</b>                         | 914mm 36"  |
| <b>H</b>                         | 1067mm 42" |
| <b>I</b>                         | 1220mm 48" |
| <b>J</b>                         | 1372mm 54" |
| <b>K</b>                         | 1520mm 60" |

| RIGID STEM LENGTH<br>(mm / inches) |             |
|------------------------------------|-------------|
| <b>Standard (ME0, ME1, ME2)</b>    |             |
| <b>4</b>                           | 153mm 6"    |
| <b>5</b>                           | 318mm 12.5" |
| <b>Standard (ME3)</b>              |             |
| <b>0</b>                           | none        |
| <b>Available on request</b>        |             |
| <b>1</b>                           | 38mm 1.5"   |
| <b>2</b>                           | 50mm 2"     |
| <b>3</b>                           | 76mm 3"     |
| <b>6</b>                           | 350mm 14"   |
| <b>7</b>                           | 400mm 16"   |
| <b>8</b>                           | 456mm 18"   |

| THREAD                      |                                        |
|-----------------------------|----------------------------------------|
| <b>Standard</b>             |                                        |
| <b>1</b>                    | 1/2 - 20 UNF                           |
| <b>4</b>                    | M18 x 1.5                              |
| <b>Available on request</b> |                                        |
| <b>2</b>                    | M10 x 1<br>(ranges ≥ 200 bar/3000 psi) |
| <b>3</b>                    | M14 x 1.5                              |

### Examples

#### **ME2-6-M-B07C-1-4-D-000**

Melt pressure transmitter with type "J" thermocouple, 4..20 mA output, 6-pin connector, 1/2-20UNF thread, 700bar full scale, 0.5 % accuracy class, 153 mm (6") rigid stem, 457mm (18") flexible capillary.

#### **ME0-8-M-P03M-1-4-0-000**

Melt pressure transmitter, rigid stem, 4..20 mA output, 8-pin connector, 1/2-20UNF thread, 3000psi full scale, 0.5 % accuracy class, 153 mm (6") rigid stem

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



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