

## PT180 Series Capillary-Exposed Melt Pressure Transmitter

### Characteristic



- \* Multiple signal output options
- \* Accuracy grade:  $\pm 0.5\%$  F.S
- \* Special diaphragm coating
- \* IP65 ingress protection
- \* 80% internal calibration
- \* Suitable for narrow space application

### Description

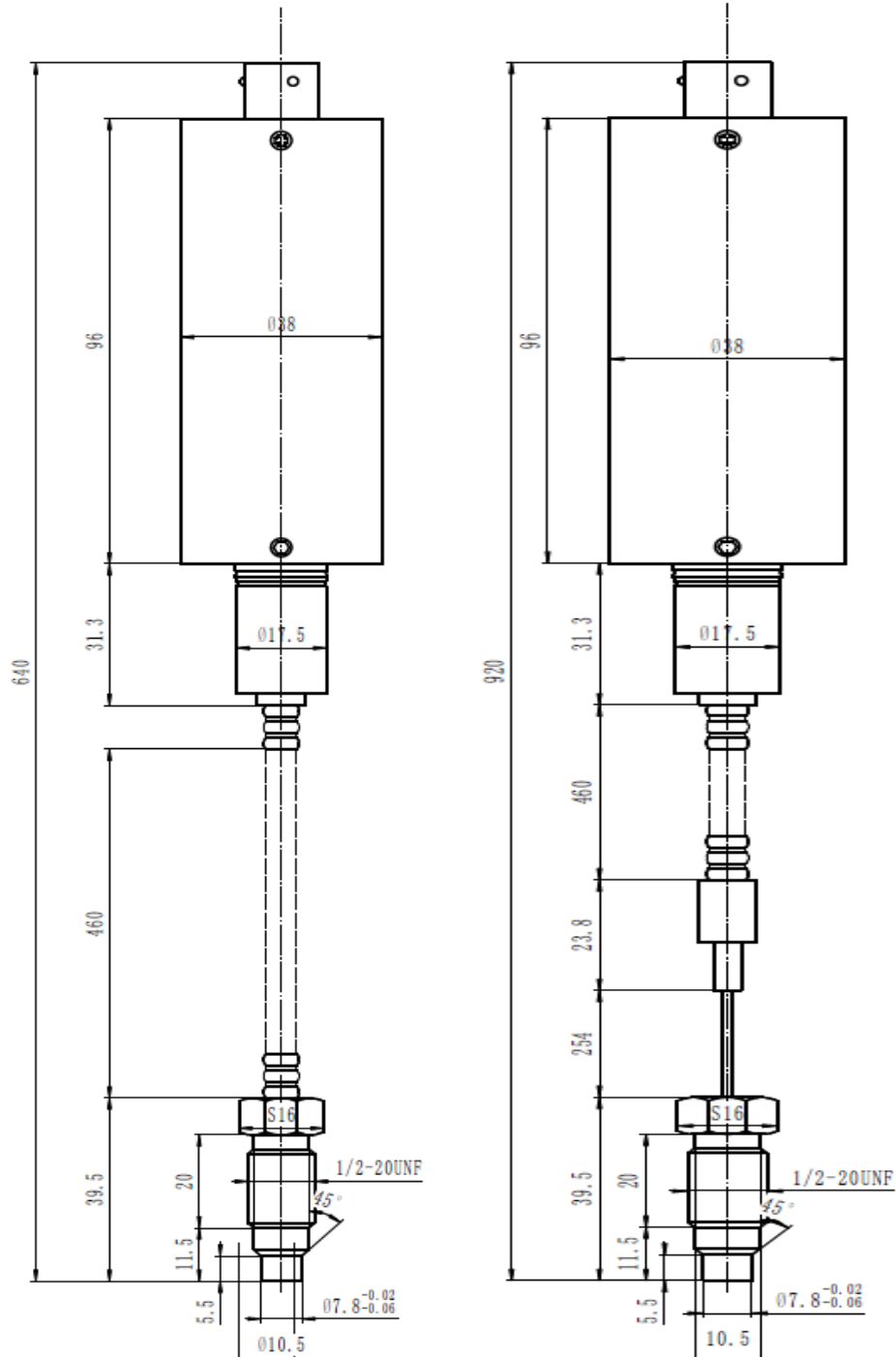
#### Application

Extruder Industry  
Injection Industry

The capillary-exposed melt pressure transmitter is designed for narrow space application, the special diaphragm and highly antiabrasive coating of which enable it to work normally at high temperature of 400°C. It adopts standard threaded connection with 80% internal calibration and is characterized by high stability and long lifespan.

| TECHNICAL PARAMETERS                               |                                                           | MECHANICAL AND SEALING CHARACTERISTICS |                                                                      |
|----------------------------------------------------|-----------------------------------------------------------|----------------------------------------|----------------------------------------------------------------------|
| Power Supply                                       | mV/V: 10 V DC (recommended),<br>mA or V : 24V DC          | Transducer Technology                  | Bonded Wheatstone and Wheatstone bridge                              |
| Signal Output                                      | 3.33mV/V, 0-5V, 0-10V or 4-20mA                           | Diaphragm Temperature                  | 750° F (400°C), at most                                              |
| Accuracy                                           | $\pm 0.25\%$ FS, $\pm 0.5\%$ FS, $\pm 1\%$ FS             | Diaphragm Materials                    | 5 Different Diaphragm Options                                        |
| Repeatability                                      | $\pm 0.2\%$ FS                                            | Progress Connection                    | 1/2 – 20 UNF and<br>M14 × 1.5,<br>M16 × 1.5,<br>M18 × 1.5 Thread     |
| Working Temperature                                | mV/V, mA: 185° F (85°C)                                   | E – connection                         | 5 PIN, 6 PIN, 7 PIN, 8 PIN                                           |
| Overload Ability                                   | 2x FS                                                     | Install Torque                         | 500 in/lbs , at most                                                 |
| Pressure Range (bar)                               | 0-35 Bar---2000Bar                                        | Temperature Transducer (optional)      | E/J/K/PT100 Type<br>Thermocouple Matches With<br>3" Flexible Conduit |
| Pressure Unit                                      | psi, Bar, kPa or MPa                                      | Certification                          | Patented                                                             |
| Zero Adjustment ( $\pm\%$ FS)                      | mV/V: No, mA: $\pm 20\%$                                  | Certification                          | CE Certified                                                         |
| Zero Balance Design ( $\pm\%$ FS)                  | mV/V: $\pm 10\%$ ; mA: $\pm 0.5\%$                        | Recommend Fitting                      |                                                                      |
| Zero Drift (caused by progress temperature change) | 1.5bar/100° F (3bar/100°)                                 | Install Tools                          | Component GJ                                                         |
| Bridge Resistance                                  | mV/V: 345 $\Omega$ , at least                             | 6 Pin E – connection                   | Component CON06                                                      |
| Overload Resistance                                | mA: 1100 $\Omega$ , at most                               | Matching Connection                    |                                                                      |
| Insulation Resistance                              | mV/V: 1000M $\Omega$ @50 Vdc<br>mA: 100M $\Omega$ @50 Vdc | Fix Frame (electric device)            | Spares No.:ZJ, cable Fitting, indicator                              |
| Shunt Calibration (R-Cal)                          | 80% FS $\pm 1\%$ FS                                       |                                        |                                                                      |

## Dimension



## E-Connection

| 6-PIN Connector                                                                     | Current Output Signal (4-20mA) |       |   |   |      |        |
|-------------------------------------------------------------------------------------|--------------------------------|-------|---|---|------|--------|
|  | A                              | B     | C | D | E    | F      |
|                                                                                     | E+                             | E-    |   |   | CAL  | CAL    |
|                                                                                     | Red                            | Black |   |   | Blue | Orange |

| 6-PIN Connector                                                                     | Voltage Output signal (0-5V,0-10V,mV) |       |       |       |      |        |
|-------------------------------------------------------------------------------------|---------------------------------------|-------|-------|-------|------|--------|
|  | A                                     | B     | C     | D     | E    | F      |
|                                                                                     | S+                                    | S-    | E+    | E-    | CAL  | CAL    |
|                                                                                     | Red                                   | Black | White | Green | Blue | Orange |

## Ordering Code

| Series Code        |                                                                      | PT180 |     |    |     |     |       |       |       |  |  |  |     |
|--------------------|----------------------------------------------------------------------|-------|-----|----|-----|-----|-------|-------|-------|--|--|--|-----|
| Pressure Range     | 3.5Mpa 35bar 500psi                                                  | 5C    |     |    |     |     |       |       |       |  |  |  |     |
|                    | 5Mpa 50bar 750psi                                                    | 7.5C  |     |    |     |     |       |       |       |  |  |  |     |
|                    | 7Mpa 70bar 1000psi                                                   | 1M    |     |    |     |     |       |       |       |  |  |  |     |
|                    | 10MPa 100bar 1500psi                                                 | 1.5M  |     |    |     |     |       |       |       |  |  |  |     |
|                    | 20MPa 200bar 3000psi                                                 | 3M    |     |    |     |     |       |       |       |  |  |  |     |
|                    | 35MPa 350bar 5000psi                                                 | 5M    |     |    |     |     |       |       |       |  |  |  |     |
|                    | 50MPa 500bar 7500psi                                                 | 7.5M  |     |    |     |     |       |       |       |  |  |  |     |
|                    | 70MPa 700bar 10000psi                                                | 10M   |     |    |     |     |       |       |       |  |  |  |     |
|                    | 100MPa 1000bar 15000psi                                              | 15M   |     |    |     |     |       |       |       |  |  |  |     |
|                    | 140Mpa 1400bar 20000psi                                              | 20M   |     |    |     |     |       |       |       |  |  |  |     |
|                    | 200Mpa 2000bar 30000psi                                              | 30M   |     |    |     |     |       |       |       |  |  |  |     |
| Process Connection | 1/2-20UNF                                                            |       | 1/2 |    |     |     |       |       |       |  |  |  |     |
|                    | M14x1.5                                                              |       | M14 |    |     |     |       |       |       |  |  |  |     |
| Exposed Capillary  | 0 inches (0mm)                                                       |       |     | 0  |     |     |       |       |       |  |  |  |     |
|                    | 10 inches (254mm)                                                    |       |     | 10 |     |     |       |       |       |  |  |  |     |
| Flexible Length    | 18 inches (460mm)                                                    |       |     |    | /18 |     |       |       |       |  |  |  |     |
|                    | 24 inches (610mm)                                                    |       |     |    | /24 |     |       |       |       |  |  |  |     |
|                    | 30 inches (460mm)                                                    |       |     |    | /30 |     |       |       |       |  |  |  |     |
| Signal Output      | 3.33mV/V                                                             |       |     |    |     | mV  |       |       |       |  |  |  |     |
|                    | 4~20mA                                                               |       |     |    |     | mA  |       |       |       |  |  |  |     |
|                    | 0~10VDC                                                              |       |     |    |     | 10V |       |       |       |  |  |  |     |
|                    | 0~5VDC                                                               |       |     |    |     | 5V  |       |       |       |  |  |  |     |
| E-Connection       | 6-pin standard aviation connector                                    |       |     |    |     |     | Blank |       |       |  |  |  |     |
|                    | 8-pin standard aviation connector                                    |       |     |    |     |     | 8P    |       |       |  |  |  |     |
| Accuracy Grade     | 0.25%                                                                |       |     |    |     |     |       | 2A    |       |  |  |  |     |
|                    | 0.25%                                                                |       |     |    |     |     |       | Blank |       |  |  |  |     |
| Diaphragm Material | 17-4PH (standard)                                                    |       |     |    |     |     |       |       | Blank |  |  |  |     |
|                    | Hastelloy (anti-corrosive type)                                      |       |     |    |     |     |       |       | C2    |  |  |  |     |
|                    | Inconel718 (anti-abrasive)                                           |       |     |    |     |     |       |       | I7    |  |  |  |     |
|                    | 17-4PH thickening diaphragm                                          |       |     |    |     |     |       |       | T2    |  |  |  |     |
| Special Code       | Standard version special or customized versions available on request |       |     |    |     |     |       |       |       |  |  |  | 000 |