



# Model TFP-300

## Food and Beverage Industry

### Features

- Measuring ranges from 100mbar to 250bar
- Absolute, gauge and sealed gauge
- Accuracy:  $\pm 0.5\%$  FSO,  $\pm 0.2\%$  FSO (Optional)
- Calibrated and temperature compensated
- Flush diaphragm construction
- Piezoresistive pressure sensor design
- Variety of Pressure & Electrical connections
- Output 4...20mA, 0...10V, 0...5V and ModBus RS485

### Product Overview

TFP-300 is made from high-quality silicon piezoresistive chip. All process connections of the flush diaphragm pressure transmitter are made of stainless steel, fully welded and isolate the process medium from the pressure measuring instrument via a positive seal. The TFP-300 is precision engineered to fit food, pharmaceutical and chemical liquid pressure measurement.

A wide range of process connection and electrical connection options are available to meet almost requirement.

### Applications

- Process Control System
- Food and beverages Industries
- Pharmaceutical Industries
- Dairy Processing Industries
- Paper & Pulp Industries

### Standard Pressure Ranges

| Nominal pressure | gauge | sealed gauge | absolute |
|------------------|-------|--------------|----------|
| -1...0bar        | •     |              |          |
| 0...0.1bar       | •     |              |          |
| 0...0.2bar       | •     |              |          |
| 0...0.35bar      | •     |              | •        |
| 0...0.7bar       | •     |              | •        |
| 0...1bar         | •     |              | •        |
| 0...1.6bar       | •     |              |          |
| 0...2.5bar       | •     |              | •        |
| 0...4bar         | •     |              | •        |
| 0...6bar         | •     |              | •        |
| 0...10bar        | •     | •            | •        |
| 0...16bar        | •     | •            | •        |
| 0...25bar        | •     | •            |          |
| 0...60bar        |       | •            |          |
| 0...100bar       |       | •            |          |
| 0...250bar       |       | •            |          |

Other pressure ranges available. Please consult the factory.

# TFP-300: Flush Diaphragm Pressure Transmitter

## Performance Specifications

| Parameter      | Value       | Units | Notes        |
|----------------|-------------|-------|--------------|
| <b>General</b> |             |       |              |
| Pressure Range | 0-1,...,100 | bar   | 1bar=14.5psi |
| Overpressure   | 1.5xFS      |       |              |

|                               |   |        |                  |
|-------------------------------|---|--------|------------------|
| <b>Environmental</b>          |   |        |                  |
| Operating Temperature Range   | -20to+150(standard),-20to+180(Optional) | °C     | -4 °F to 185 °F  |
| Compensated Temperature Range | -10 to +70                              | °C     | 14 °F to 158 °F  |
| Storage Temperature Range     | -40 to +125                             | °C     | -40 °F to 257 °F |
| Vibration                     | 10                                      | g      | 20 to 2000Hz     |
| Shock                         | 100                                     | g      | 10ms             |
| Cycles                        | 10x10 <sup>5</sup>                      | cycles |                  |

|                                |   |             |             |             |                           |
|--------------------------------|---|-------------|-------------|-------------|---------------------------|
| <b>Electrical @ 25°C(77°F)</b> |   |             |             |             |                           |
| Output Signal                  | 4...20mA  | 0...5Vdc    | 1...5Vdc    | 0...10Vdc   | 0.5...4.5Vdc(ratiometric) |
| Power Supply(Vs)               | 12....36Vdc   | 12....36Vdc | 12....36Vdc | 15....36Vdc | 5Vdc                      |
| Load Resistance                | <(Vs-12)/0.02A (For current output), >10kΩ (For voltage output) |             |             |             |                           |
| Insulation Resistance          | 100MΩ @50Vdc  |             |             |             |                           |

|                                |   |
|--------------------------------|---|
| <b>Physical Specifications</b> |   |
| Media Compatibility            | All media compatible with 316L stainless steel                                    |
| Housing                        | 316 stainless steel, Die cast aluminium flameproof Exd as per IS/IEC 60079-1:2014 |
| Diaphragm (Wetted Part)        | 316L stainless steel  |
| Seal Ring                      | Viton or NBR  |
| Oil Filling                    | Silicone oil  |
| Protection                     | IP65(Standard), IP67 (Only for flameproof enclosure)                              |
| Net Weight                     | Approx.285g   |

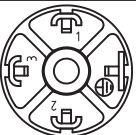
| Parameter           | Minimum | Typical | Maximum | Units     | Notes |
|---------------------|---------|---------|---------|-----------|-------|
| <b>Performance</b>  |         |         |         |           |       |
| Accuracy            | 0.1     | 0.2     | 0.5     | %FSO      | 1,2   |
| Temp Coeff - Zero   |         | ±1.5    | ±2      | %FSO      | 3     |
| Temp Coeff - Span   |         | ±1.5    | ±2      | %FSO      | 3     |
| Long-Term Stability |         | ±0.2    | ± 0.3   | %FSO/year | 1     |


### Notes


1. All values measured at 25°C(77°F)
2. Including non-linearity, hysteresis and repeatability.
3. -10°C to 70°C(14°F to 158°F) with reference to 25°C(77°F).

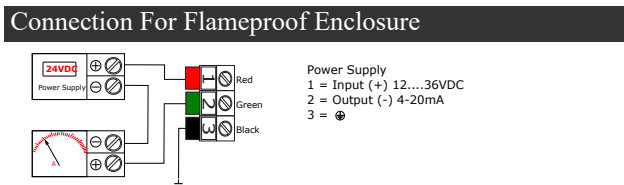
The listed specifications and dimensions are subject to change without prior notice.

### Connection Diagrams

| Connector DIN43650   | 2-wire(current) | 3-wire(voltage) |
|--|-----------------|-----------------|
|  | Supply+ 1       | 1               |
|  | Signal+ 2       | 3               |
|  | Gnd -           | 2               |

| Cable outlet  | 2-wire(current) | 3-wire(voltage) |
|---|-----------------|-----------------|
|  | Supply+ red     | red             |
|   | Signal+ black   | green           |
|   | Gnd -           | black           |

| Connector M12x1(4-pin)  | 2-wire(current) | 3-wire(voltage) |
|---|-----------------|-----------------|
|  | Supply+ 1       | 1               |
|   | Signal+ 2       | 3               |
|   | Gnd -           | 2               |



## Trumen Process Indicator (Model-ILP)

- Dimension: 65 x 45 x 45 mm
- Display: 4 Digit 7 Segment
- Display resolution: 1999 to 9999
- Input: 4-20mA
- Accuracy: mA : 0.5% of span
- Enclosure: ABS



# TFP-300: Flush Diaphragm Pressure Transmitter

## Electrical Connection

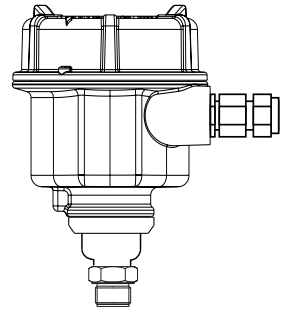
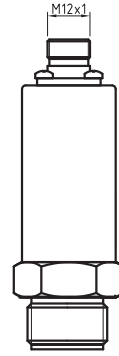
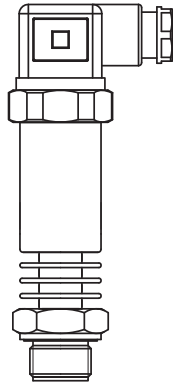
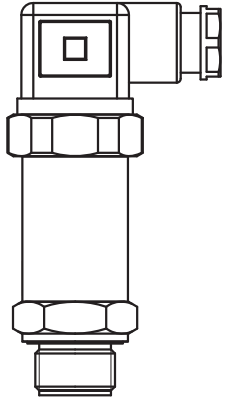
Connector DIN43650  
Operating Temperature Range  
-40 to +85 °C

Connector DIN43650  
Operating Temperature Range  
-40 to +150 °C

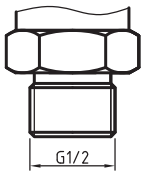
Cable outlet with PVC-cable

M12X2, 4-pin

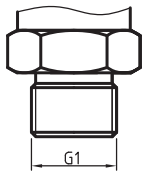
With Flameproof Enclosure



## Mechanical Connection



G1/2



G1

**G1/2**

**G1**

## Ordering Information

| Option1: Model                 |  |
|--------------------------------|--|
| TFP-300                        | Flush Diaphragm Pressure Transmitter   |
| Option2: Pressure Ranges       |  |
| N001                           | -1...0bar 0040 0...4bar 1000 0...100bar  |
| 0001                           | 0...0.1bar 0060 0...6bar 2500 0...250bar   |
| 0003                           | 0...0.35bar 0100 0...10bar PRS Customized Range                                      |
| 0007                           | 0...0.7bar 0160 0...16bar  |
| 0010                           | 0...1bar 0250 0...25bar  |
| 0016                           | 0...1.6bar 0350 0...35bar  |
| 0025                           | 0...2.5bar 0600 0...60bar  |
| Option3: Pressure Type         |  |
| G                              | gauge  |
| A                              | absolute   |
| S                              | sealed gauge   |
| Option4: Output Signal         |  |
| 42                             | 4...20mA   |
| 05                             | 0...5Vdc   |
| 15                             | 1...5Vdc   |
| 10                             | 0...10Vdc  |
| 45                             | 0.5...4.5  |
| 485                            | RS-485   |
| Option5: Accuracy              |  |
| 01                             | 0.5%FSO  |
| 02                             | 0.2%FSO (Optional)   |
| Option6: Electrical Connection |  |
| D                              | Connector DIN43650   |
| C                              | Cable outlet with PVC-cable, length=1.5m   |
| M                              | M12x1, 4-pin DIN Connector With Indicator  |
| HAX                            | With Flameproof Enclosure as per IS/IEC 60079-1:2014; suitable for gas group IIC, T6 |
| Option7: Indicator             |  |
| Ix                             | Without Indicator  |
| I                              | With Indicator   |
| Option8: Mechanical Connection |  |
| G2                             | G1/2(Male)   |
| G                              | G1(Male)   |
| Ns                             | Customized   |
| TFP-300                        | 0010 G 42 01 D Ix G2 Examples of Ordering Code: TFP-300-0010-G-42-01-D-Ix-G2         |