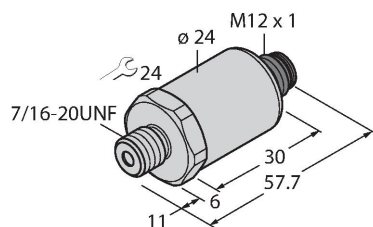


# PT3000PSIG-2005-U6-H1141

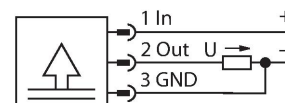
## Pressure Transmitter – Ratiometric Output (3-Wire)



### Features

- Fully welded metal measuring cell
- Pressure range 0...3000 psi rel.
- 5 VDC  $\pm$  10 %
- Ratiometric output 10...90 %
- Process connection 7/16" UNF (SAE) male thread
- Plug-in device, M12  $\times$  1

### Wiring diagram



### Functional principle

The pressure sensors in the PT...-2000 product series operate with a fully welded metal measuring cell in various pressure ranges of up to -1...1000 bar in 2-, 3- or even 4-wire technology. Depending on the sensor variant, the processed signal is available as an analog output signal (4...20 mA, 0...10 V, 0...5 V, 1...6 V, ratiometric) or as a digital IO-Link process parameter. The IO-Link sensor variants also have two independently configurable switching outputs. In addition to the standard variants, there are special sensors for uses such as ATEX areas or for oxygen applications. A wide range of process connections and electrical connections offer a high degree of flexibility in a wide range of applications.

### Technical data

|                                           |                                              |
|-------------------------------------------|----------------------------------------------|
| Type                                      | PT3000PSIG-2005-U6-H1141                     |
| ID no.                                    | 100002923                                    |
| Medium temperature                        | -40...+135 °C                                |
| <b>Pressure range</b>                     |                                              |
| Relative pressure bar                     | 0...206.84 bar rel.                          |
|                                           | 0...3000 psi                                 |
|                                           | 0...20.68 MPa                                |
| Admissible overpressure                   | $\leq$ 750 bar                               |
| Burst pressure                            | $\geq$ 1500 bar                              |
| Response time                             | < 2 ms, typ. 1 ms                            |
| Long-term stability                       | $\pm$ 0.25 % FS, according to IEC EN 60770-1 |
| <b>Power supply</b>                       |                                              |
| Operating voltage                         | 4.5...5.5 VDC                                |
| Current consumption                       | $\leq$ 7 mA                                  |
| Short-circuit/reverse polarity protection | yes / yes                                    |
| Insulation class                          | III                                          |
| Output 1                                  | Analog output                                |
| Output function                           | ratiom. 10...90%                             |
| <b>Analog output</b>                      |                                              |
| Voltage output                            | 0.5...4.5 V                                  |
| Load                                      | $\leq$ 100 nF / $>$ 10 k $\Omega$            |
| Resolution                                | $<$ $\pm$ 0.1 % FS                           |
| Accuracy LHR                              | $\pm$ 0.3 % FS BSL                           |

## Technical data

|                                                |                                                                                                                    |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Housing material                               | Stainless-steel/Plastic, 1.4404 (AISI 316L)/polyacrylamide 50 % GF UL 94 V-0                                       |
| Process connection                             | 7/16"-20 UNF                                                                                                       |
| Pressure connection material                   | Stainless steel 1.4404 (AISI 316L)                                                                                 |
| Pressure transducer material                   | Stainless steel 1.4435 (AISI 316L)                                                                                 |
| Wrench size pressure connection / coupling nut | 24                                                                                                                 |
| Max. tightening torque of housing nut          | 20 Nm                                                                                                              |
| Electrical connection                          | Connector, M12 × 1                                                                                                 |
| Protection class                               | IP67                                                                                                               |
| Ambient temperature                            | -30...+85 °C                                                                                                       |
| Storage temperature                            | -50...+100 °C                                                                                                      |
| Shock resistance                               | 100 g, 11 ms, half sinusoidal curve, all 6 directions, free fall from 1 m onto concrete (6x) , acc. to IEC 68-2-27 |
| Vibration resistance                           | 20 g, 15...2000 Hz, 15...25 Hz with amplitude +/- 15 mm, 1 octave/minute all 3 directions, 50 continuous loads     |
| Approvals                                      | UL                                                                                                                 |
| Reference conditions acc. to IEC 61298-1       |                                                                                                                    |
| Temperature                                    | 15...+25 °C                                                                                                        |
| Atmospheric pressure                           | 860...1060 hPa abs.                                                                                                |
| Humidity                                       | 45...75 % rel.                                                                                                     |
| Auxiliary power                                | 24 VDC                                                                                                             |
| Temperature behaviour                          |                                                                                                                    |
| MTTF                                           | 1564 years acc. to SN 29500 (Ed. 99) 40 °C                                                                         |
| Included in delivery                           | FKM O-ring special (1 pc)                                                                                          |

## Technical data

|                         |                                        |
|-------------------------|----------------------------------------|
| Type                    | PT3000PSIG-2005-U6-H1141               |
| ID no.                  | 100002923                              |
| Pressure range          |                                        |
| Relative pressure bar   | 0...206.84 bar rel.                    |
|                         | 0...3000 psi                           |
|                         | 0...20.68 MPa                          |
| Admissible overpressure | ≤ 750 bar                              |
| Burst pressure          | ≥ 1500 bar                             |
| Response time           | < 2 ms, typ. 1 ms                      |
| Long-term stability     | 0.25 % FS, according to IEC EN 60770-1 |

## Technical data

|                                                 |                                                                                                                                    |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power supply</b>                             |                                                                                                                                    |
| Operating voltage                               | 4.5...5.5 VDC                                                                                                                      |
| Current consumption                             | ≤ 7 mA                                                                                                                             |
| Short-circuit/reverse polarity protection       | yes / yes                                                                                                                          |
| Protection type and class                       | IP67 / III                                                                                                                         |
| Insulation voltage                              | 750 VDC                                                                                                                            |
| <b>Outputs</b>                                  |                                                                                                                                    |
| Output 1                                        | Analog output                                                                                                                      |
| Output function                                 | ration. 10...90%                                                                                                                   |
| <b>Analog output</b>                            |                                                                                                                                    |
| Voltage output                                  | 0.5...4.5 V                                                                                                                        |
| Load                                            | ≤ 100 nF/>10 kΩ                                                                                                                    |
| Resolution                                      | <± 0.1 % FS                                                                                                                        |
| Accuracy LHR                                    | ± 0.3 % FS BSL                                                                                                                     |
| <b>Temperature behaviour</b>                    |                                                                                                                                    |
| Medium temperature                              | -40...+135 °C                                                                                                                      |
| Temperature coefficient                         | ± 0.2 % of full scale/10 K                                                                                                         |
| <b>Ambient conditions</b>                       |                                                                                                                                    |
| Ambient temperature                             | -30...+85 °C                                                                                                                       |
| Storage temperature                             | -50...+100 °C                                                                                                                      |
| Vibration resistance                            | 20 g, 15...2000 Hz, 15...25 Hz with amplitude +/- 15 mm, 1 octave/minute all 3 directions, 50 continuous loads, acc. to IEC 68-2-6 |
| Shock resistance                                | 100 g, 11 ms, half sinusoidal curve, all 6 directions, free fall from 1 m onto concrete (6x) , acc. to IEC 68-2-27                 |
| <b>Housing</b>                                  |                                                                                                                                    |
| Housing material                                | Stainless-steel/Plastic, 1.4404 (AISI 316L)/polyacrylamide 50 % GF UL 94 V-0                                                       |
| Pressure connection material                    | Stainless steel 1.4404 (AISI 316L)                                                                                                 |
| Pressure transducer material                    | Stainless steel 1.4435 (AISI 316L)                                                                                                 |
| Process connection                              | 7/16"-20 UNF                                                                                                                       |
| Wrench size pressure connection / coupling nut  | 24                                                                                                                                 |
| Electrical connection                           | Connector, M12 × 1                                                                                                                 |
| Max. tightening torque of housing nut           | 20 Nm                                                                                                                              |
| <b>Reference conditions acc. to IEC 61298-1</b> |                                                                                                                                    |
| Temperature                                     | 15...+25 °C                                                                                                                        |
| Atmospheric pressure                            | 860...1060 hPa abs.                                                                                                                |

## Technical data

|                      |                                            |
|----------------------|--------------------------------------------|
| Humidity             | 45...75 % rel.                             |
| Auxiliary power      | 24 VDC                                     |
| Approvals            | UL                                         |
| MTTF                 | 1564 years acc. to SN 29500 (Ed. 99) 40 °C |
| Included in delivery | FKM O-ring special (1 pc)                  |