

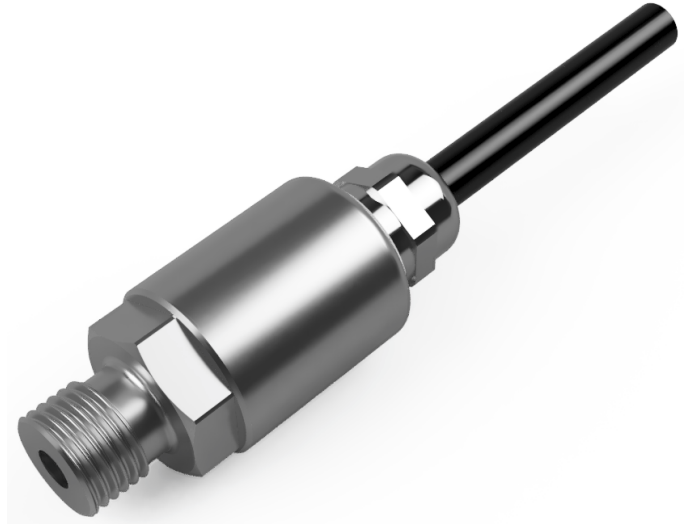
OnlineSensors

info@onlinesensors.co.uk

Titan Series

Model: TPTa

Analogue Pressure Transmitter



Description:

The Titan TPT series of pressure transducers have been developed using a Ceramic (96% Aluminium Oxide Al_2O_3) piezo-resistive sensing element housed in a robust stainless steel housing. It has the option of an integrated Cable outlet or an M12 x 1, 4-Pin connector both offering up to IP67* ingress protection and also standard connectors such as mini DIN & large DIN 43650 right angled connectors. We also have the option of an integrated MIL-C spec or customer specific connectors.

The internal PCB incorporates a versatile microprocessor enabling a range of outputs including 4-20mA, 0-5V, 1-5V, and 0-10V from a 10-32V dc supply. There is also the option of 0.5 to 4.5V (10-90% of supply) output from a 2.7 - 5.5V dc supply ratiometric output which is ideal for low battery powered data logging applications.

| Product Highlights: | Applications include, but not limited to: |
|--|--|
| <ul style="list-style-type: none">• Pressure ranges from 0.5 up to 600 bar• Accuracy $<\pm 0.35\%$ / $<\pm 0.25\%$ / $<\pm 0.10\%$• Ceramic sensor, high corrosion resistance• Various analogue output versions• High level of temperature compensation• Choice of mechanical connections• Cost effective for Industrial and OEM solutions | <ul style="list-style-type: none">• OEM installations• Laboratory & Research testing• Hydraulic & Pneumatic testing• Medical testing / prototyping• Pressure surge detection• Data loggers• Aerospace test and research• Automotive component testing• Academic research |

OnlineSensors

info@onlinesensors.co.uk

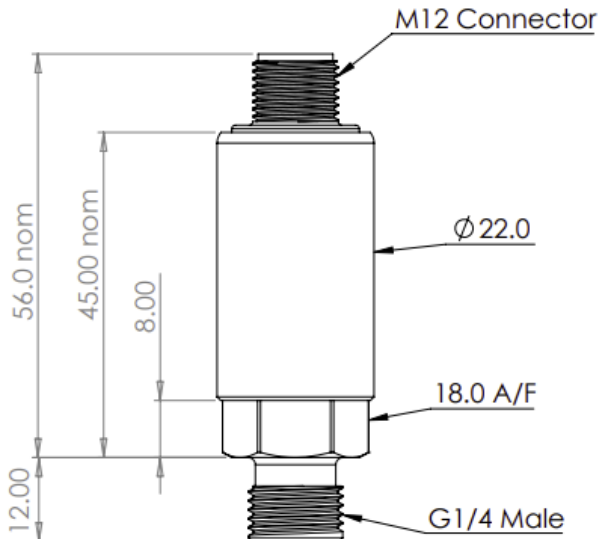
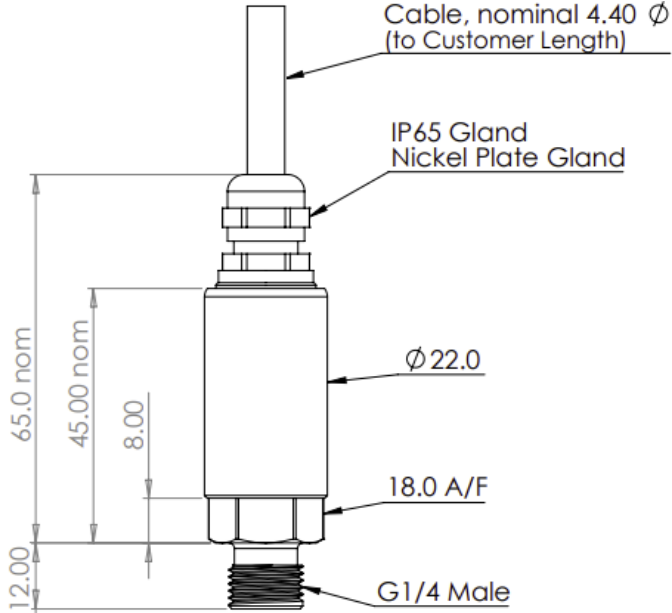
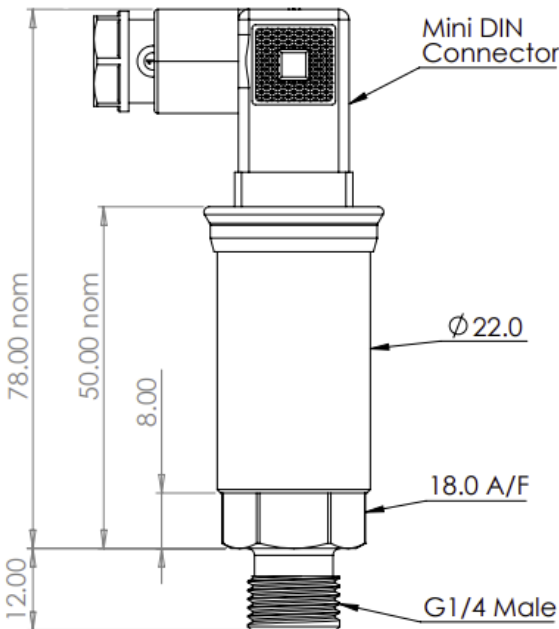
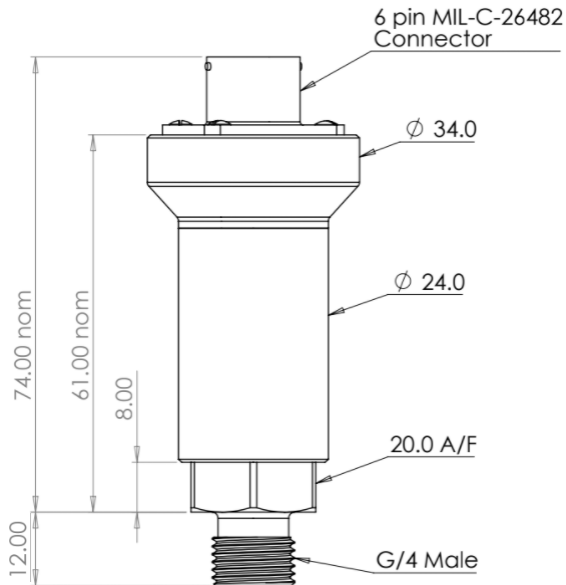
Specification:

| Titan Pressure Transmitter - TPTa | | | |
|-----------------------------------|--|--|---|
| Sensor technology | Piezo-resistive | | |
| Output Versions | 4-20mA (2-wire), 0-5V/1-5V/0-10V (3-wire), 0.5 to 4.5V (3-wire ratiometric) | | |
| Supply voltage | 4-20mA: 10 - 32V dc / 0-5V/1-5V/0-10V: 13 - 32V dc / Ratiometric: 2.7 - 5.5V dc | | |
| Pressure reference | Gauge (standard), Sealed Gauge, Absolute | | |
| Pressure ranges | 0.5, 1, 2, 5, 10, 20, 50, 100, 200, 400, 600 Bar | | |
| Safe over pressure | 1.5 times rated pressure | | |
| Burst Pressure | 3 times rated pressure | | |
| Accuracy NL&H (BFSL) | $\leq \pm 0.35\%$ / $\leq \pm 0.25\%$ / $\leq \pm 0.10\%$ FS | | |
| Long Term Stability | $\leq \pm 0.10\%$ FS | | |
| Response Time (ms) | <10ms | | |
| Ambient temperature | -20 °C to +85 °C | | |
| Media temperature | -40 °C to +125 °C | | |
| Storage temperature | -20 °C to +80 °C | | |
| Temperature effects | Typical thermal zero and span coefficients, TZS: $\pm 0.02\%$ FS/°C, TSS: $< -0.015\%$ /°C | | |
| Setting Errors | Zero & Span setting tolerance: 4-20mA & 0.5 to 4.5V: $< \pm 0.5\%$ / Span 0-5V (Actual calibration is 0.05 to 5.05V): $< \pm 0.5\%$ / Span 1-5V (Actual calibration is 1.05 to 5.05V): $< \pm 0.5\%$ / Span 0-10V (Actual calibration is 0.1 to 10.1V): $< \pm 0.5\%$ / Span | | |
| Media wetted parts | 303 Stainless Steel, Al ₂ O ₃ , Viton | | |
| Permissible media | All fluids compatible with media wetted parts | | |
| Electrical connection | Mini DIN43650 Connector, M12 x 1, 4-pin connector, Cable Outlet with screened PVC cable (IP65), Moulded Cable Outlet with PUR cable (IP67), MIL-C spec connector | | |
| Pressure connection | G $\frac{1}{4}$ " DIN 3852 male & female, $\frac{1}{4}$ " NPT male, 7/16-20 UNF-2A male SAE#4 J514 | | |
| Environmental Protection | M12 connector | Gauge reference ≤ 50 bar: IP65 | Absolute, Sealed Gauge reference or > 50 bar range: IP67 |
| | Cable Outlet | Screened PVC Cable: IP65, Moulded PUR Cable: IP67 | |
| | MIL-C Spec | IP67 | |

OnlineSensors

info@onlinesensors.co.uk

Dimensional Drawings:

| M12 Connector | Cable Outlet |
|---|--|
|  |  |
| Mini Din 43650 Plug & Socket | MIL-C Spec Connector |
|  |  |

OnlineSensors

info@onlinesensors.co.uk

Part Numbering system

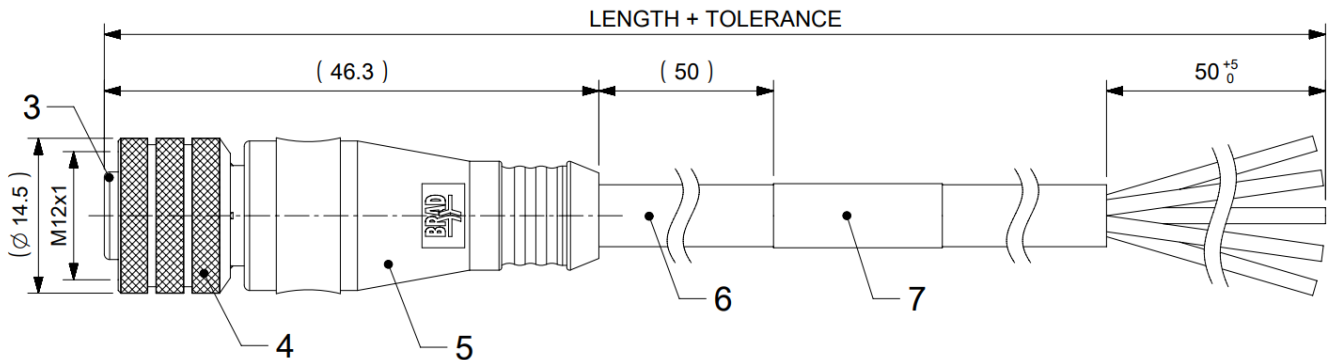
| TPTa - Titan Pressure Transmitter | | | | | | | | | | | | | | |
|--------------------------------------|---|--|---|--|---|---|---|---|---|--|--|---|---|---|
| TPTa - X X - X X - X X X X X X - X X | | | | | | | | | | | | | | |
| Output Type | | | | | | | | | | | | | | |
| 4-20mA (2-wire) | A | | | | | | | | | | | | | |
| 0-5V (3-wire) | B | | | | | | | | | | | | | |
| 1-5V (3-wire) | C | | | | | | | | | | | | | |
| 0-10V (3-wire) | D | | | | | | | | | | | | | |
| 0.5 to 4.5V (3-wire) | E | | | | | | | | | | | | | |
| Accuracy Class | | | | | | | | | | | | | | |
| 0.35% | A | | | | | | | | | | | | | |
| 0.25% | B | | | | | | | | | | | | | |
| 0.10% | C | | | | | | | | | | | | | |
| Electrical Connection | | | | | | | | | | | | | | |
| Connector M12 x 1, 4-pin male | | | A | | | | | | | | | | | |
| Cable Outlet IP66 | | | B | | | | | | | | | | | |
| Moulded Cable IP67 | | | C | | | | | | | | | | | |
| Mini Plug & Socket DIN 43650 | | | D | | | | | | | | | | | |
| MIL-C Spec connector | | | E | | | | | | | | | | | |
| Process Connection | | | | | | | | | | | | | | |
| G1/4" male DIN 3852 | | | | | G | | | | | | | | | |
| G1/4" female DIN 3852 | | | | | F | | | | | | | | | |
| 1/4" NPT male | | | | | N | | | | | | | | | |
| 7/16-20 UNF-2A male SAE#4 J514 | | | | | U | | | | | | | | | |
| Housing Material | | | | | | | | | | | | | | |
| 303 Stainless Steel | | | | | A | | | | | | | | | |
| 316 Stainless Steel | | | | | B | | | | | | | | | |
| PVDF | | | | | C | | | | | | | | | |
| Seal Material | | | | | | | | | | | | | | |
| Viton | | | | | V | | | | | | | | | |
| (Drinking Water Approved) EPDM | | | | | E | | | | | | | | | |
| NBR | | | | | N | | | | | | | | | |
| FFKM (Chemraz) | | | | | C | | | | | | | | | |
| Pressure Range | | | | | | | | | | | | | | |
| 0.5 Bar | | | | | | 0 | 5 | 0 | 0 | | | | | |
| 1 Bar | | | | | | 1 | 0 | 0 | 0 | | | | | |
| 2 Bar | | | | | | 2 | 0 | 0 | 0 | | | | | |
| 5 Bar | | | | | | 5 | 0 | 0 | 0 | | | | | |
| 10 Bar | | | | | | 1 | 0 | 0 | 1 | | | | | |
| 20 Bar | | | | | | 2 | 0 | 0 | 1 | | | | | |
| 50 Bar | | | | | | 5 | 0 | 0 | 1 | | | | | |
| 100 Bar | | | | | | 1 | 0 | 0 | 2 | | | | | |
| 200 Bar | | | | | | 2 | 0 | 0 | 2 | | | | | |
| 400 Bar | | | | | | 4 | 0 | 0 | 2 | | | | | |
| 600 Bar | | | | | | 6 | 0 | 0 | 2 | | | | | |
| 72 Psi (example) | | | | | | P | 0 | 7 | 2 | | | | | |
| 5000 Psi (example) | | | | | | P | 5 | K | 0 | | | | | |
| Pressure Datum | | | | | | | | | | | | | | |
| Gauge | | | | | | | | | | | | G | | |
| Sealed Gauge | | | | | | | | | | | | S | | |
| Absolute | | | | | | | | | | | | A | | |
| Special Options | | | | | | | | | | | | | | |
| None | | | | | | | | | | | | | 0 | 0 |

OnlineSensors

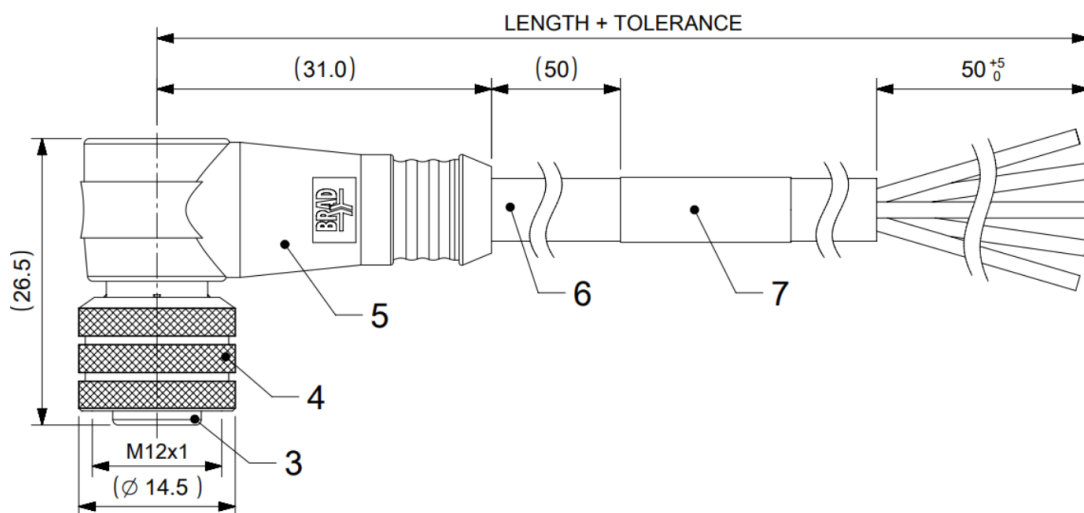
info@onlinesensors.co.uk

Accessories:

Mating M12 cable cordset - Straight



Mating M12 cable cordset - Right-Angled



Temperature Reducing Adaptor

