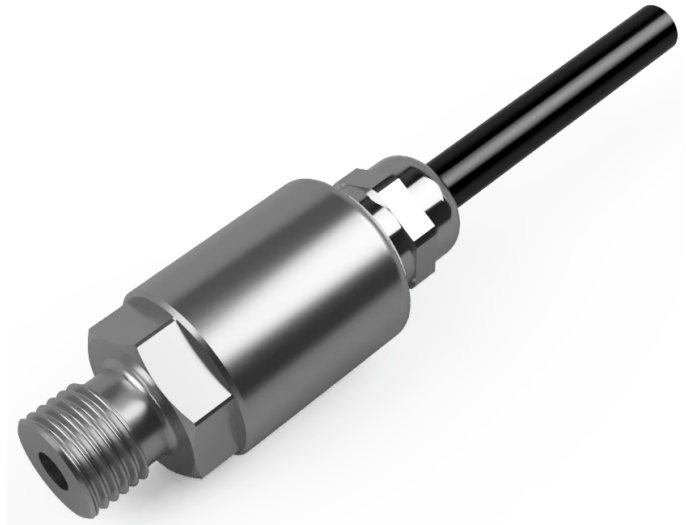


Titan Series

Model: TPT

Pressure Transducer



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 uses passive components to ensure the low power consumption is maintained, ideal for battery powered applications. Being passive also makes it suitable for applications that require a fast dynamic measurement of pressure with natural frequency response up to 75kHz. Outputs include raw mV/V, rationalised 2mV/V, 3mV/V or 10mV/V and 20mV/V which can be powered from 2 - 30V dc supply.

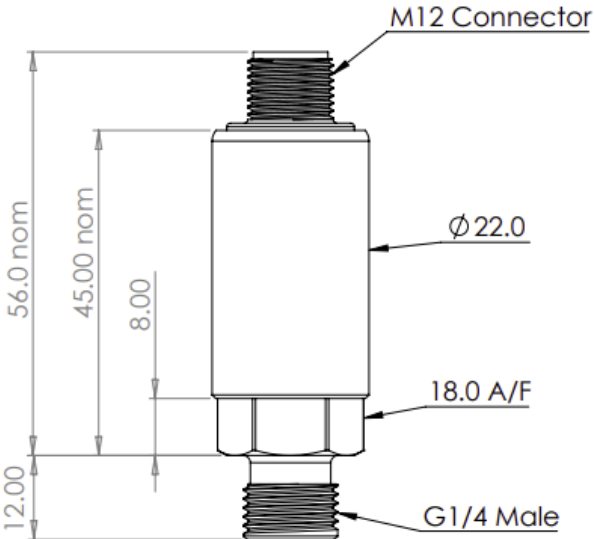
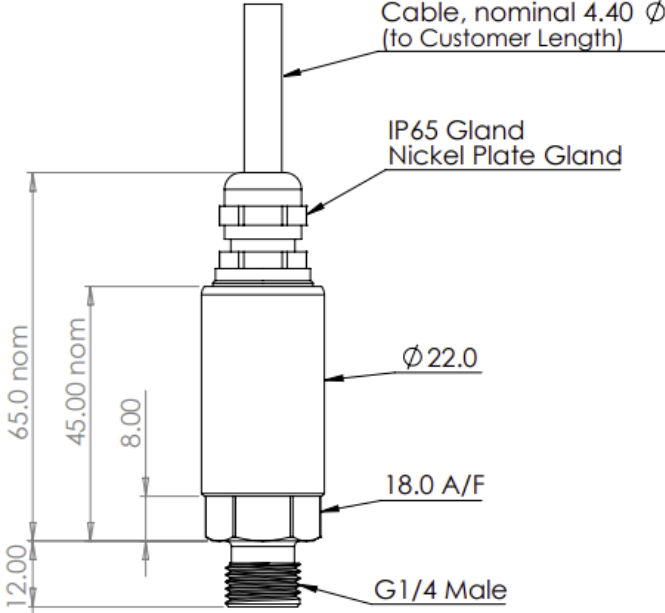
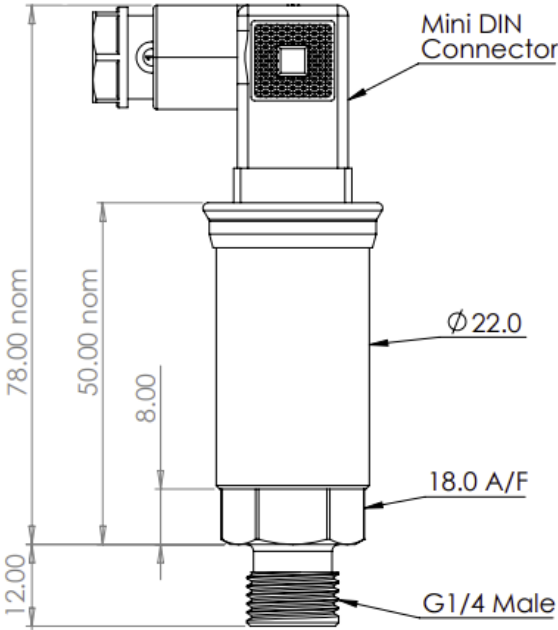
Product Highlights:	Applications include, but not limited to:
<ul style="list-style-type: none"> • Pressure ranges from 0.5 up to 600 bar • Accuracy $<\pm 0.35\%$ / $<\pm 0.25\%$ / $<\pm 0.10\%$ • Ceramic sensor, high corrosion resistance • Passive millivolt output • High resistance, low power consumption • Naturally high frequency response from 1kHz up to 75kHz • Choice of mechanical connections • Cost effective for 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

Specification:

Titan Pressure Transducer - TPT			
Sensor technology	Piezo-resistive		
Output Versions	mV/V, 2mV/V, 3mV/V, 10mV/V, 20mV/V		
Supply voltage	2 - 30V 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)	$\leq \pm 0.35\%$ / $\leq \pm 0.25\%$ / $\leq \pm 0.10\%$ FS (dependant on range)		
Long Term Stability:	$\leq \pm 0.10\%$ FS		
Frequency Response	Various kHz, dependant on capsule range		
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		
Media wetted parts	303 Stainless Steel, Al ₂ O ₃ , Viton, EPDM, NBR		
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	G1/4" DIN 3852 male & female, 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	

Millivolt Sensitivity Table												
Range	Bar	0.5	1	2	5	10	20	50	100	200	400	600
Sensitivity	mV/V	1.4-2.4	2.0-3.6	2.0-3.5	2.3-4.0	3.4-6.0	2.4-4.0	4.0-6.0	3.0-4.8	2.5-3.9	3.1-4.8	3.1-4.8

Dimensional Drawings:

M12 Connector	Cable Outlet
 <p>M12 Connector</p> <p>56.00 nom</p> <p>45.00 nom</p> <p>8.00</p> <p>Ø 22.0</p> <p>18.0 A/F</p> <p>G1/4 Male</p> <p>12.00</p>	 <p>Cable, nominal 4.40 Ø (to Customer Length)</p> <p>IP65 Gland Nickel Plate Gland</p> <p>65.00 nom</p> <p>45.00 nom</p> <p>8.00</p> <p>Ø 22.0</p> <p>18.0 A/F</p> <p>G1/4 Male</p> <p>12.00</p>
Mini Din 43650 Plug & Socket	MIL-C Spec Connector
 <p>Mini DIN Connector</p> <p>78.00 nom</p> <p>50.00 nom</p> <p>8.00</p> <p>Ø 22.0</p> <p>18.0 A/F</p> <p>G1/4 Male</p> <p>12.00</p>	

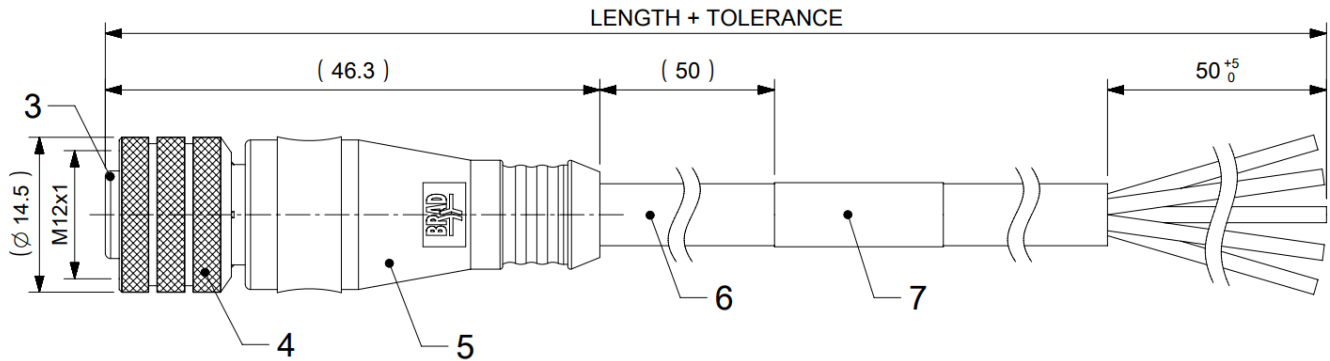


Part Numbering system

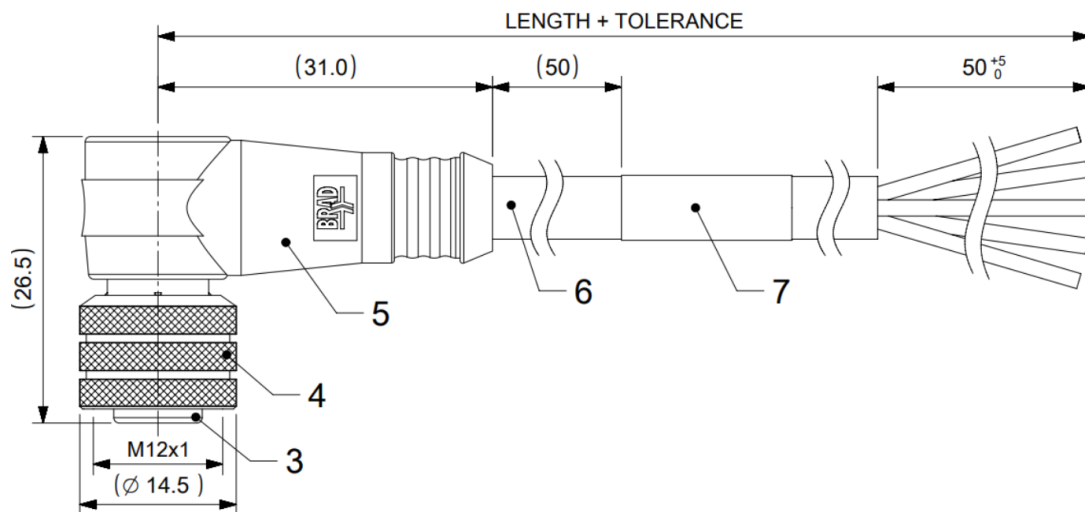
TPT - Titan Pressure Transducer													
TPT	-	X	X	-	X	X	-	X	X	-	X	X	X
Output Type													
mV/V		A											
2mV/V		B											
3mV/V		C											
10mV/V		D											
20mV/V		E											
Accuracy Class													
0.35%		A											
0.25%		B											
(Dependant on pressure range) 0.1%		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	2				
20 Bar						2	0	0	2				
50 Bar						5	0	0	2				
100 Bar						1	0	0	3				
200 Bar						2	0	0	3				
400 Bar						4	0	0	3				
600 Bar						6	0	0	3				
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	

Accessories:

Mating M12 cable cordset - Straight



Mating M12 cable cordset - Right-Angled



Temperature Reducing Adaptor

