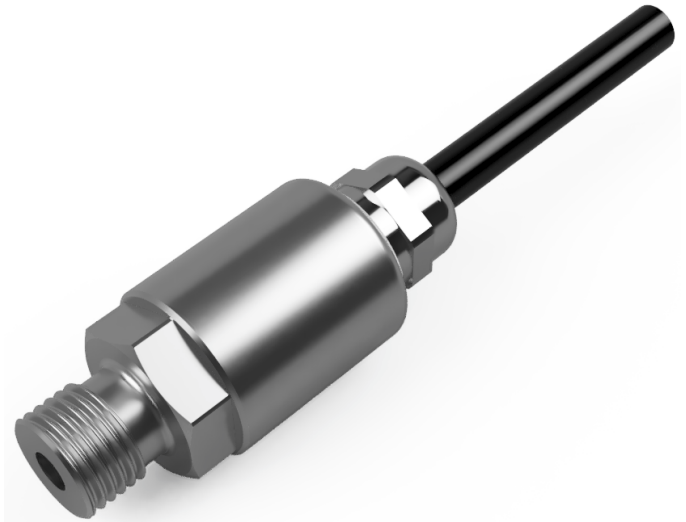# Titan Series

Model: TPTLRd

Low Range Digital
Pressure Sensor

Description:

The Titan TPTLRa series of pressure transducers have been developed using a Stainless Steel piezo-resistive silicon 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.

The internal PCB incorporates a versatile microprocessor enabling a range of digital communications including i2c and SPi from a 2.7 - 5.5V dc supply.

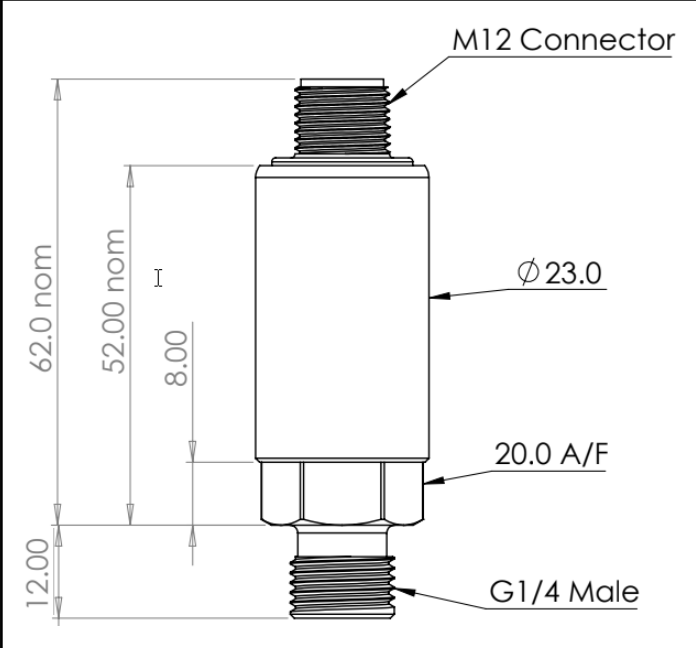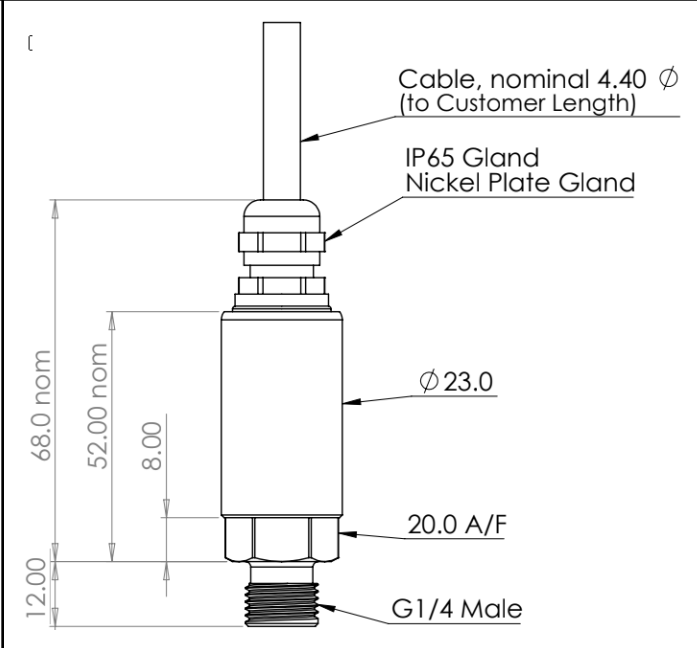| Product Highlights:	Applications include, but not limited to:
● Pressure ranges from 50mbar up to 20 Bar ● Accuracy <±0.25% / <±0.10% ● Responsive stainless steel sensor ● I2c and SPi supported ● High level of temperature compensation ● Choice of mechanical connections ● Cost effective for Industrial and OEM solutions	● OEM installations ● Laboratory & Research testing ● Pneumatic testing ● Medical testing / prototyping ● Data loggers ● Aerospace test and research ● Automotive component testing ● Academic research

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Specification:

Titan Pressure Sensor - TPTLRd		
Sensor technology	Piezo-resistive, Silicon	
Output Versions	I2c, SPi	
Supply voltage	2.7 - 5.5V dc	
Pressure reference	Gauge (Others available on request)	
Pressure ranges	70, 200, 350, 700, 1000mbar 2, 3.5, 7, 10, 20 Bar	
Safe over pressure	1.5 times rated pressure	
Burst Pressure	3 times rated pressure	
Accuracy (NL&H)	≤ ±0.25 % / ≤ ±0.10 % FS (dependant on range)	
Long Term Stability	≤ ±0.10 % FS	
Response Time (ms)	Various Options, Consult Sales	
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: ±0.02 %FS/°C, TSS: <-0.015 %/°C	
Media wetted parts	303 & 316 Stainless Steel, Viton	
Permissible media	All fluids compatible with media wetted parts	
Electrical connection	M12 x 1, 4-pin male connector (mating cable sold separately) Cable Outlet with 0.25m screened PVC cable	
Pressure connection	G¼" DIN 3852 male & female, ¼" 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	IP65	

Dimensional Drawings:

M12 Connector	Cable Outlet

M12 Connector
- M12 Connector
- Ø 23.0
- 20.0 A/F
- G1/4 Male
- 62.0 nom
- 52.00 nom
- 8.00
- 12.00

Cable Outlet
- Cable, nominal 4.40 Ø (to Customer Length)
- IP65 Gland Nickel Plate Gland
- Ø 23.0
- 20.0 A/F
- G1/4 Male
- 68.0 nom
- 52.00 nom
- 8.00
- 12.00

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Part Numbering system

TPTLRd - Titan Low Range Pressure TPTLRd - X X - X X - X X - X X X X X - X X

Output Type		
i2c	A	
SPi	B	

Accuracy Class		
0.25%	A	
0.10%	B	

Electrical Connection		
Connector M12 x 1, 4-pin male	A	
Cable Outlet IP65	B	

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

Seal Material		
Viton	V
(Drinking Water Approved) EPDM	E
NBR	N

Pressure Range				
50mbar	0	0	5	0
200mbar	0	2	0	0
350mbar	0	3	5	0
700mbar	0	7	0	0
1000mbar	1	0	0	0
2 Bar	2	0	0	0
3.5 Bar	3	0	0	0
7 Bar	7	0	0	0
10 Bar	1	0	0	1
20 Bar	2	0	0	1
5 Psi (example)	P	0	0	5
10 Psi (example)	P	0	1	0

Pressure Datum	
Gauge	G

Special Options		
None	0	0

Accessories:

Mating M12 cable cordset - Straight

LENGTH + TOLERANCE

(46.3) (50) 50^{+5}_{0}

3

(Ø 14.5) M12x1

4 5 6 7
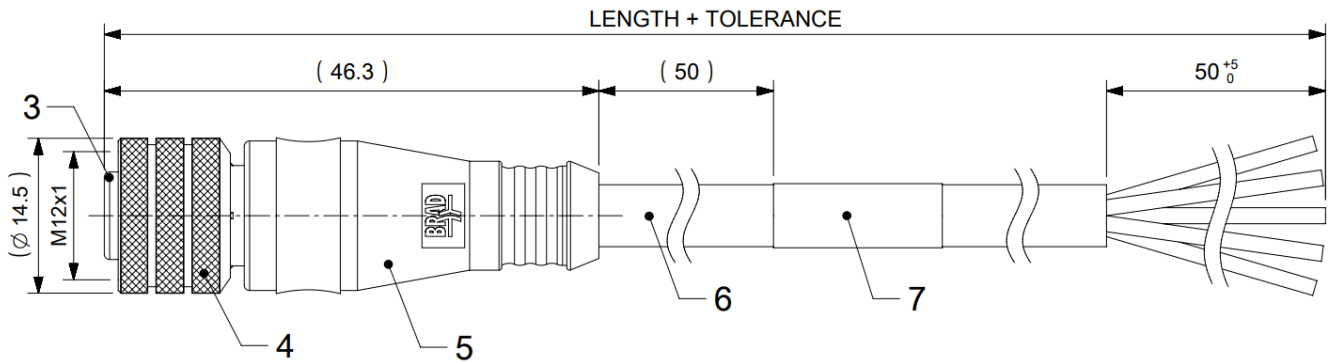
Mating M12 cable cordset - Right-Angled

LENGTH + TOLERANCE

(31.0) (50) 50^{+5}_{0}

(26.5)

5 4 6 7

M12x1

3

(Ø 14.5)
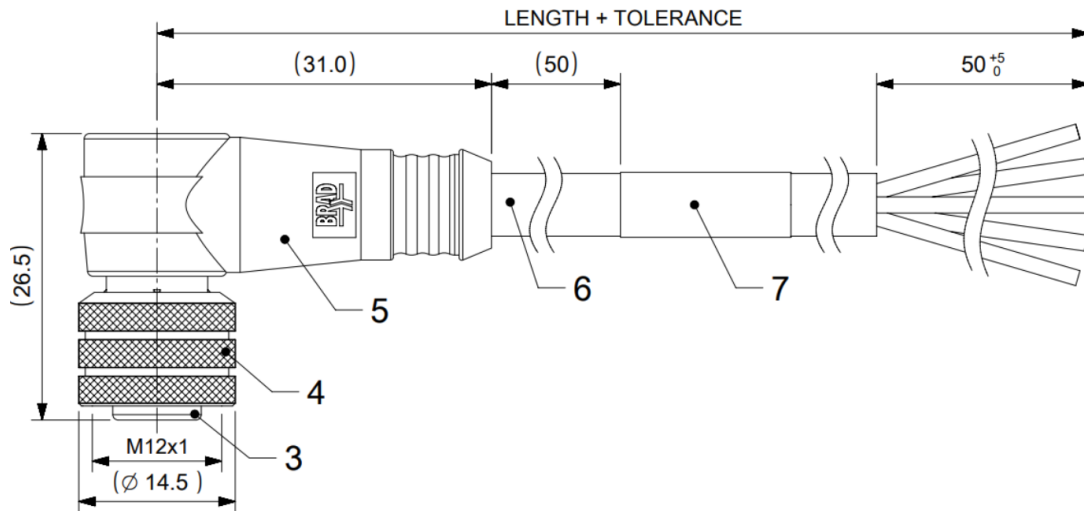
Temperature Reducing Adaptor