

Industrial Pressure Transducer

Features

- Heavy-duty, rugged construction with 316 and 17-4 stainless steel for superior corrosion resistance
- Up to 23X rating over-pressure protection to protect against pressure hammering and burst pressures
- Advanced digital electronics reduce the effects of EMI/EMC according to IEC 61000 standards and provide excellent long-term stability
- Thermally compensated sensors ensure high accuracy over wide temperature ranges to mitigate thermal errors on sensitive components
- Modular design platform to support fully customizable pressure ranges, mechanical or electrical connections, and other application-specific requirements



Exactly What OEMs Want...Without the Wait

Applications

- General industrial equipment
- Off-highway vehicles
- Pumps and compressors
- Irrigation equipment systems
- Mobile hydraulic equipment
- Medical gas systems

General Specifications

Supply	BT2: 10 VDC BT3: 7 to 33 VDC BT4: 4.5 to 5.5 VDC ratiometric BT5: 8 to 33 VDC BT6: 12 to 33 VDC
Output	BT2: 100 mv/V BT3: 1 to 5 VDC BT4: 0.5 to 4.5 VDC ratiometric BT5: 4 to 20 mA BT6: 0 to 10 VDC
Pressure Range	0 to 6,000 psi (-C Class) 0 to 9,000 psi (-P Class) 0 to 3,000 psi (-W Class)
Operating Temperature	-40 to 212 °F (-40 to 100 °C)
Compensated Temperature Range	-P, -W Class: 0 to 165 °F (-18 to 74 °C) -C Class: 77 to 185 °F (25 to 85 °C)
Accuracy (BFSL@25°C)	-P, -W Class: ± 0.25% FSO -C Class: ± 0.5% FSO
Proof Pressure	2X Pressure range
Zero Offset	± 1% FSO (P,W) ± 2% FSO (C)
Span Offset	± 1% FSO
Lifecycle	1M pressure cycles
Long-Term Stability	± 0.2% FSO (per year, typical)
Response Time	1-5ms Typical
Supply Current	15 mA Maximum

Environmental Specifications

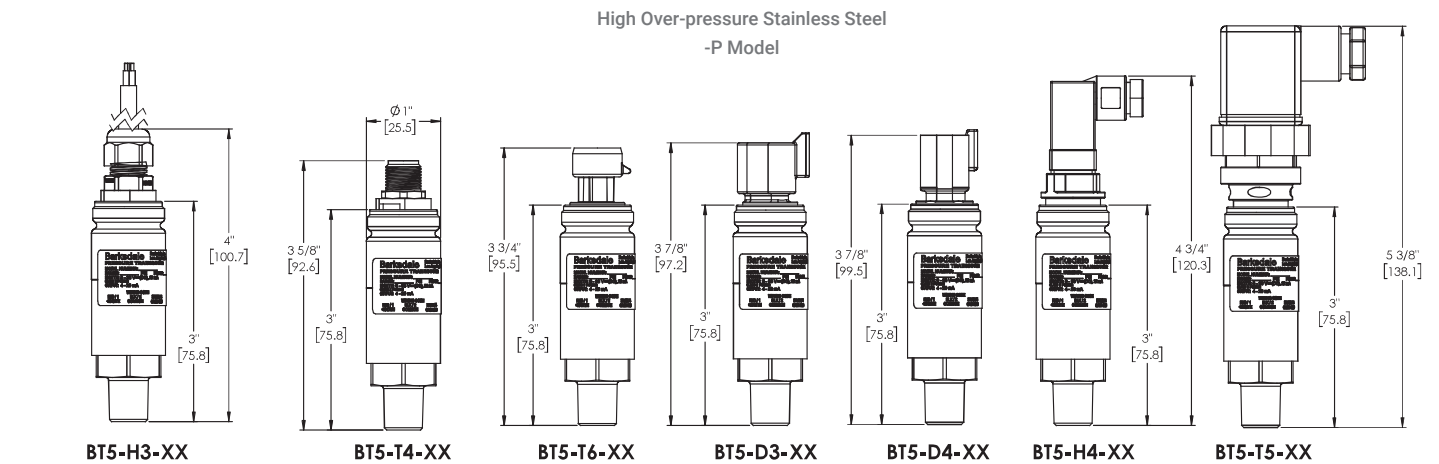
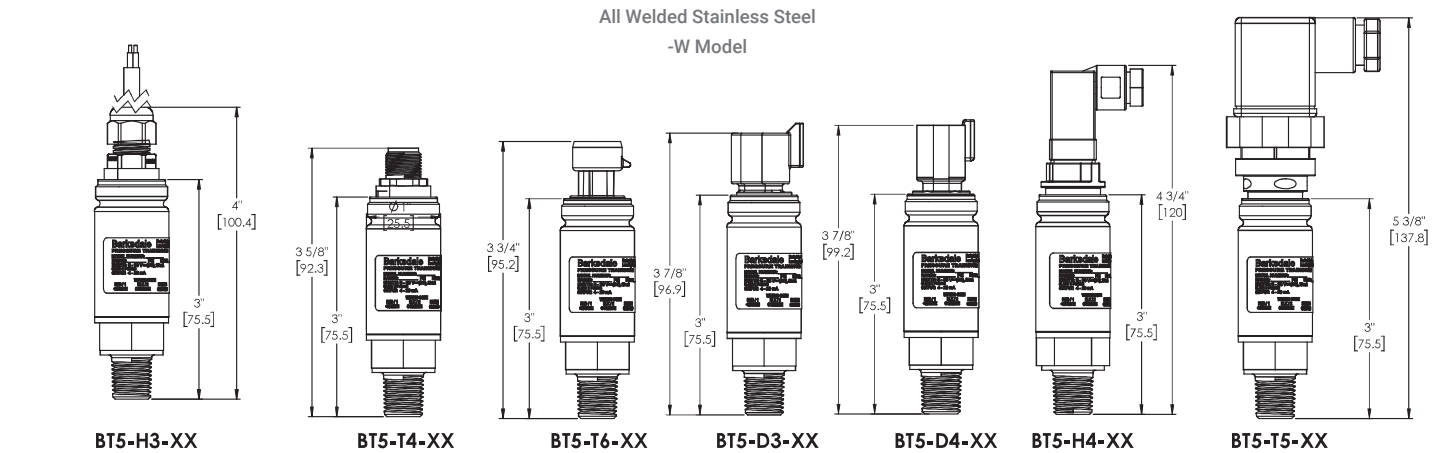
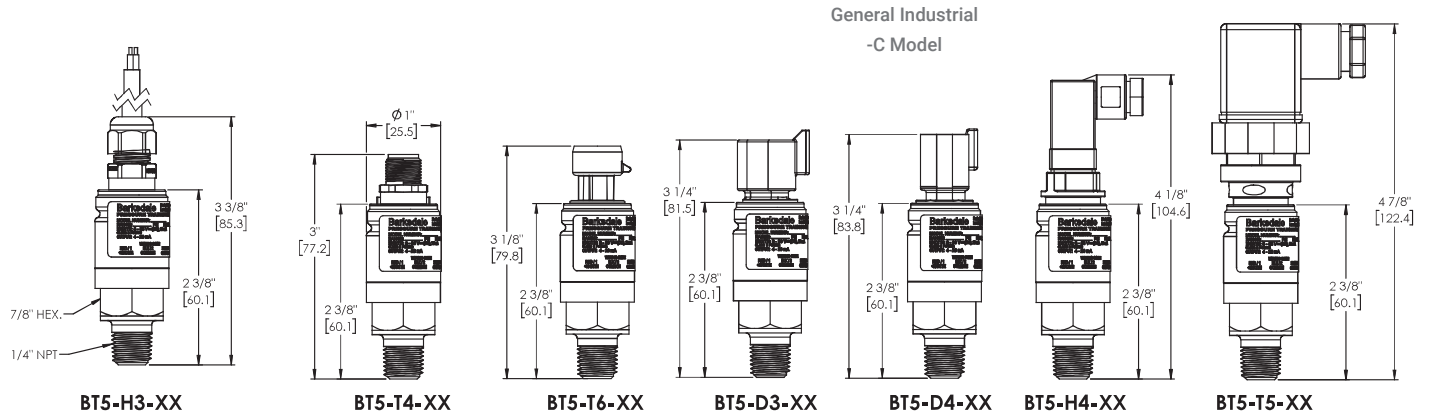
Shock	50 g's, 11 ms, MIL-STD 202 Method 213, Cond. G										
Vibration	15 g's, 10 to 2,000 Hz, MIL-STD 202										
Storage Temperature	-40 to 257 °F (-40 to 125 °C)										
Media Temperature	-40 to 257 °F (-40 to 125 °C)										
Wetted Materials	17-4 PH SS, NBR (-P class) 316 SS, ceramic, Viton® (-C Class) 316 SS all welded construction (-W Class)										
Ingress Protection	IP67 (-H3, -T4) IP65 (-H4, -T5, -T6, -D3, -D4)										
Reverse Polarity and Miswiring Protection	Yes										
Enclosure	NEMA 4X										
Approvals	UL 508, UL 61010-1										
Compliance	REACH, RoHS, CE										
Weight	450 g (approximately)										
EMC/ESD Compliance	IEC 61000-4-2: Electrostatic discharge (ESD) IEC 61000-4-3: Radiated immunity IEC 61000-4-4: Burst (fast transient) IEC 61000-4-5: Surge IEC 61000-4-6: Conducted RF IEC 61326-1: CISPR 16-1 and CISPR 16-2										
Media Compatibility	<table border="0"> <tr> <td>Medical</td> <td>Medical gases* (O₂, air, CO₂, N₂), instrument air</td> </tr> <tr> <td>Pumps</td> <td>Water, hydraulic fluid</td> </tr> <tr> <td>Compressors</td> <td>Compressed air</td> </tr> <tr> <td>HVAC</td> <td>Refrigerants (R-410A)</td> </tr> <tr> <td>Transportation</td> <td>Coolants, diesel fuel, engine oil</td> </tr> </table>	Medical	Medical gases* (O ₂ , air, CO ₂ , N ₂), instrument air	Pumps	Water, hydraulic fluid	Compressors	Compressed air	HVAC	Refrigerants (R-410A)	Transportation	Coolants, diesel fuel, engine oil
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*Requires Z1 Option

Industrial Transducer

BOT Series

Sizes and Dimensions



Industrial Transducer

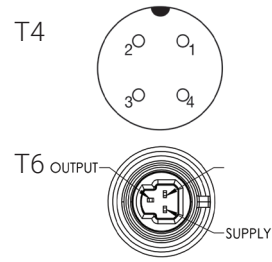
BOT Series

Wiring Code

Electrical Termination			Voltage Output	Current Output
H3	H4 / T4/ T5	Q50	Series BT-2/BT-3/ BT-4/BT-6	Series BT-5
Red	PIN 1	Pin1	+ Excitation	+ Excitation
Black	PIN 2	PIN 3	Common	- Excitation
White	PIN 3	PIN2	+ Output	Not used
Drain	PIN 4	PIN 4	Case Ground	Case Ground

Deutsch Connector PIN Connections (-D3 & -D4 Option)					
Model No.	Connector	PIN A/1	PIN B/2	PIN C/3	PIN D/4
Current	D3	+ Excitation	- Excitation	Earth Ground	N/A
Voltage	D3	+ Excitation	- Excitation	Voltage Output	N/A
Current	D4	- Excitation	+ Excitation	Earth Ground	N/A
Voltage	D4	- Excitation	+ Excitation	Voltage Output	Earth Ground

Pin Out Diagram



Product Configurator Example

BT5	-H3	-05	A	-P2	-P	Q50
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Base Model

BT2	100mV full scale output (10mV/V)
BT3	1-5 VDC analog output
BT4	0.5-4.5 VDC ratiometric analog output
BT5	4-20 mA analog output
BT6	0-10 VDC analog output

Electrical Connection

-H3	PVC jacketed cable 24 AWG (1 meter)
-H4 ¹	Mini-DIN 43650 Type "C" [mating connector NOT included]
-T4 ¹	M12 circular connector
-T5 ¹	Standard DIN 43650 Type 'A' [mating connector NOT included]
-T6 ¹	Aptiv/Delphi Metripack 150 Series
-D3 ¹	3-Pin Deutsch Connector - DT04-3P
-D4 ¹	4-Pin Deutsch Connector - DT04-4P

Pressure Range⁵

-27 ²	0-1 psi	0-0.1 BAR
-25 ²	0-5 psi	0-0.3 BAR
-38 ²	0-7 psi	0-0.5 BAR
-01	0-15 psi	0-1 BAR
-39	0-25 psi	0-1.6 BAR
-21	0-30 psi	0-2 BAR
-40	0-36 psi	0-2.5 BAR
-03	0-50 psi	0-3.5 BAR
-22	0-60 psi	0-4 BAR
-41	0-87 psi	0-6 BAR
-04	0-100 psi	0-7BAR
-05	0-150 psi	0-10 BAR
-06	0-200 psi	0-14 BAR
-42	0-230 psi	0-16 BAR
-07	0-300 psi	0-20 BAR
-43	0-360 psi	0-25 BAR
-08	0-500 psi	0-34.5 BAR
-44	0-580 psi	0-40 BAR
-45	0-725 PSI	0-0.50 BAR
-46	0-870 PSI	0-60BAR
-10	0-1000 PSI	0-69 BAR
-11 ³	0-1500 PSI	0-100 BAR
-12 ³	0-2000 PSI	0-138 BAR
-47 ³	0-2300 PSI	0-160 BAR
-13 ³	0-3000 PSI	0-200 BAR
-48 ³	0-3600 PSI	0-250 BAR
-15 ³	0-5000 PSI	0-345 BAR
-16 ³	0-6000 PSI	0-400 BAR
-17 ^{2,3}	0-8700 PSI	0-600 BAR

Pressure Unit and Type

G	PSI - Gauge pressure (standard)
A ⁴	PSI - Absolute pressure
BG	Bar - Gauge pressure
BA ⁴	Bar - Absolute Pressure (ranges start from 1 Bar)

Process Connection

Blank	1/4" NPT male
-P3	7/16-20 UNF male (JIC 37°)
-P9	G1/4 male (gasket seal)
-P2	7/16-20 SAE #4 ORB
-P7	1/8" NPT male

Accuracy

-C	±0.5% FSO
-P	±0.25% FSO
-W	±0.25% FSO

Options

Blank	Standard
Z1	Cleaned for oxygen service
	Custom Voltage Output
01	1-6 VDC Output
02	0.5 to 4.5 VDC Output (Non-Ratiometric)
Z17	Larger pressure port orifice
A	+6 ft cable
B	+10 ft cable
C	+15 ft cable
S1-S999 ⁵	Special pressure ranges Consult Factory
Q1-Q999	Custom and proprietary options; consult factory
U	UL Approved
Q50	M12 Wiring pinout per European ASAM standard

- Mating connector not included
- Only available with -P model accuracy
- High pressure models includes built-in surge dampener with 0.03in diameter orifice for pressure spike protections. Add -Z17 option for larger pressure orifice 0.125in opening
- Only available on pressure ranges options from 15psi to 300psipressure ports. Add -Z17 for optional 0.125 [3.1] standard opening.
- Add suffix SXXY for special pressure range calibration. XX = significant digits.
Y = number of trailing zeros. Example: 130 psi calibration: add -S131