

P806 SERIES

HEAVY DUTY OEM PRESSURE TRANSMITTER



DESCRIPTION

The P806 Series Pressure transmitters are compact, yet highly durable sensors with pressure ranges from 0 to 30,000 psi and proof pressures up to 45,000 psi. These units have 304 stainless steel housings with 17-4 PH stainless steel wetted parts, allowing for more severe environments and operating temperatures up to +257°F (+125°C). A highly diverse selection of electrical and pressure connections, as well as output signals, allow for customization across a wide range of applications and media.

KEY FEATURES

- Compact design
- Pressure Ranges from 0 to 30,000 psi (0 to 2,200 bar)
- All Stainless Steel Wetted Parts
- Operating Temperature up to +257°F (+125°C)
- Wide Range of Electrical Connectors, Pressure Ports and Outputs available

SPECIFICATIONS

Input

Value

Performance

Long Term Drift	0.2% FS/YR (non-cumulative)
Accuracy	0.25% FS
Thermal Error, Max.	0.83% FS/100°F (1.5% FS/100°C)
Compensated Temperatures	-40°F to +257°F (-40°C to +125°C)
Operating Temperatures	-40°F to +257°F (-40°C to +125°C) for elec. codes B, C, E, G, 6, 8, 9, Y -5°F to +180°F (-20°C to +80°C) for elec. codes F, 3, W
Zero Tolerance	0.5% of span
Span Tolerance	0.5% of span
Response Time	1 ms
Fatigue Life	Designed for more than 100 M cycles

Mechanical Configuration

Pressure Port	See Order Guide, last page
Wetted Parts	17-4 PH Stainless Steel
Housing	304 Stainless Steel
Electrical Connection	See Order Guide, last page
Enclosure	IP67 (IP65 for electrical codes G & W)
Vibration	40G peak to peak sinusoidal, (Random Vibration: 20 to 1000 Hz @ approx. 40G peak per MIL-STD-810E)
Shock	Withstands free fall to IEC 68-2-32 procedure 1
EMC (Radiated Immunity)	100 V/m
Approvals	CE, conforms to European Pressure Directive, Fully RoHS compliant, CRN Registered to ANSI/ASME B31.3, UL recognized files # E219842 & E174228
Weight	1.8 - 5.3 ounces (50 - 150 grams). Configuration dependent.

Voltage

Output (3-wire)	0 V min. to 10 V max. See Order Guide, last page
Supply Voltage	2 Volts above full scale to 30 VDC max @ 4.5 mA (6.5 mA on dual output version)
Source and Sinks	2 mA

Current

Output (2-wire)	4-20 mA
Supply Voltage	8-30 VDC
Maximum Loop Resistance	(Supply Voltage-8) x 50 ohms

Ratiometric

Output	0.5 to 4.5 VDC @ 4 mA (6.5 mA on dual output version)
Supply Voltage	5 VDC ±10%

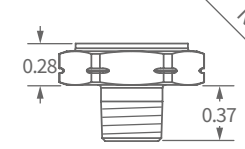
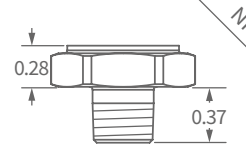
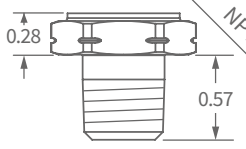
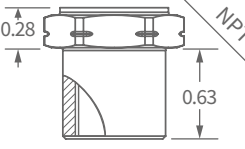
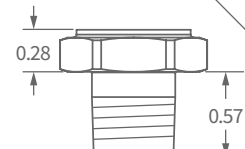
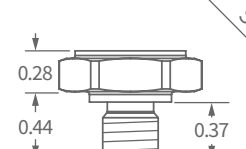
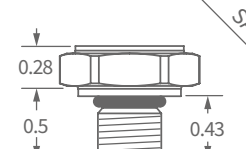
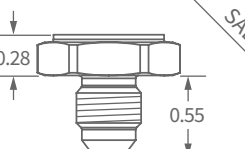
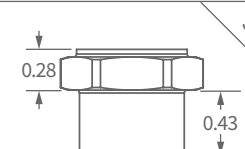
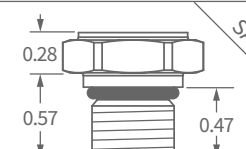
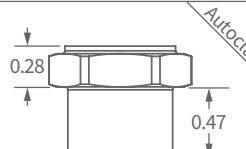
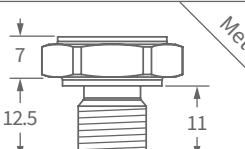
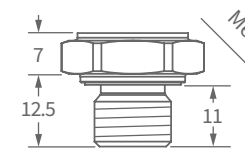
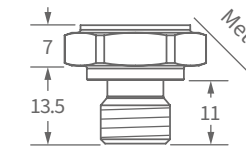
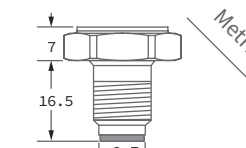
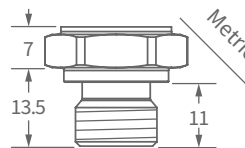
SPUTTERED THIN FILM

Pressure Capability

Pressure Range PSI (Bar)	Proof Pressure (x Full Scale)	Burst Pressure (x Full Scale)
100-300 (7-25)	3.00 x FS	40 x FS
500-1,500 (40-100)	2.00 x FS	20 x FS
2,000-6,000 (160-400)		10 x FS
7,500-9,000 (600)		4 x FS
10,000 (700)		
15,000 (1,000)	1.40 x FS	1.8 x FS
25,000 (1,800)		1.5 x FS
30,000 (2,200)		

Pressure Ports

NPT and SAE Dimensions in Inches. Metric Dimensions in MM.

				
Fitting Code	08 = 1/8" -27 NPT	4D = 1/8" -27 NPTF Dryseal	02 = 1/4" -18 NPT	OE = 1/4" -18 NPT Internal
Torque	2-3 TFFT*	2-3 TFFT*	2-3 TFFT*	2-3 TFFT*
				
Fitting Code	4C = 1/4" -18 NPTF Dryseal	4N = 3/8-24 UNF	1J = 7/16" -20 UNF	04 = 7/16" -20 UNF with 37° Flare
Torque	2-3 TFFT*	18-20 NM	18-20 NM	15-16 NM
				
Fitting Code	1G = SAE 4 Female 7/16" Schraeder	1P = 9/16-18 "Heavy Duty"	6B = Autoclave F250C	01 = G1/4" -19A
Torque	18-20 NM	18-20 NM	18-20 NM	30-35 NM
				
Fitting Code	05 = G1/4" - 19 A Integral Face-Sea	OL = M12 x 1.5	2T = M12x1.5 HP Metal Washer Sea	4J = M14 x 1.5
Torque	30-35 NM	28-30 NM	30-35 NM	30-35 NM

*NPT Threads 2-3 turns from finger tight. Wrench tighten 2-3 turns.

General Notes:

1. The diameter of all cans is 19 mm (0.748")
2. Hex is 22 mm (0.866") Across Flats (A/F) for deep socket mounting
3. O-Ring material, where applicable, is Viton unless otherwise specified.

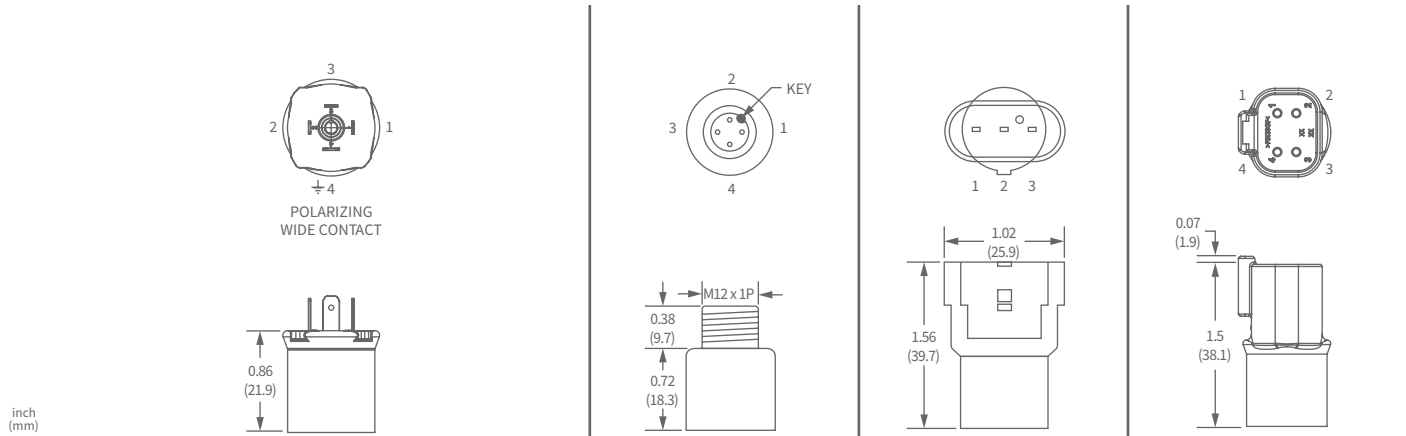
INTEGRAL CONNECTOR VERSIONS

DIN 9.4 mm

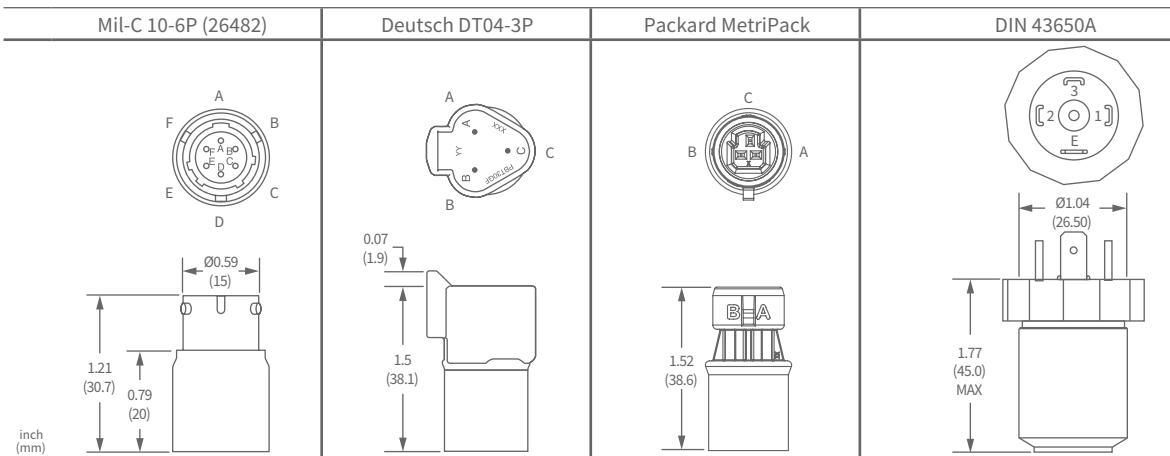
M12 x 1P

Amp Superseal 1.5

Deutsch DT04-4P



Pin #	Code B		Code R		Code E		Code 6		Code 8	
	Voltage Mode	Current Mode	Voltage Mode	Current Mode	Voltage Mode	Current Mode	Voltage Mode	Current Mode	Voltage Mode	Current Mode
1	$V_{out\ 1}$ (pressure)	Do Not Connect	+IN	+IN	+IN	+IN	V_{out}	Do Not Connect	0V	0V
2	+IN	+IN	0V	0V	$V_{out\ 1}$ (pressure)	Do Not Connect	0V	0V	+IN	+IN
3	PE or $V_{out\ 2}$ (temp)*	PE	V_{out}	Do Not Connect	0V	0V	+IN	+IN	PE or $V_{out\ 2}$ (temp)*	PE
4	0V	0V	PE	PE	PE or $V_{out\ 2}$ (temp)*	PE	—	—	$V_{out\ 1}$ (pressure)	Do Not Connect



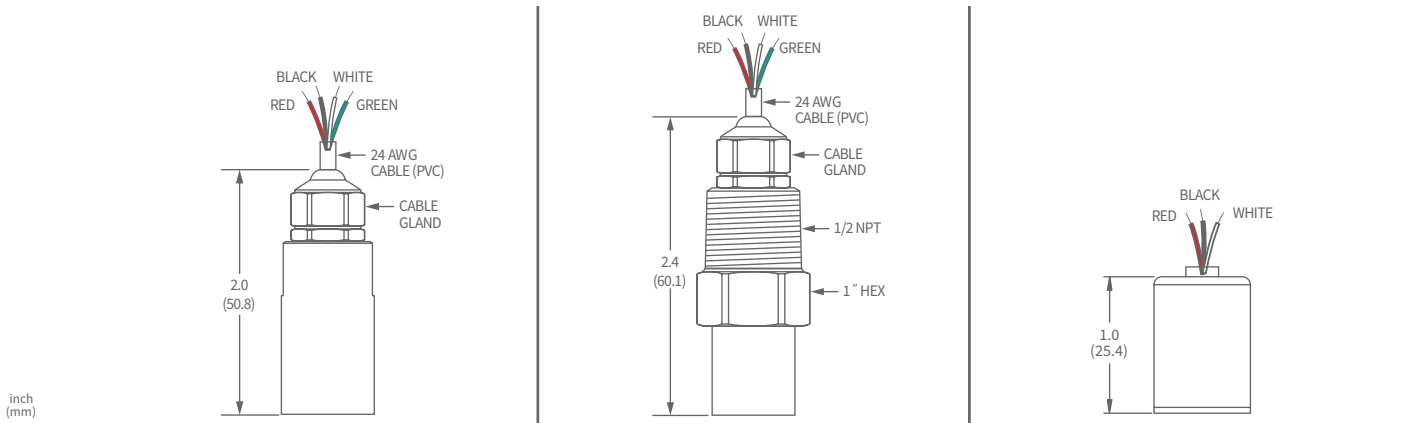
Pin ID	Code C		Code Y		Code 9		Pin #	Code G	
	Voltage Mode	Current Mode	Voltage Mode	Current Mode	Voltage Mode	Current Mode		Voltage Mode	Current Mode
A	+IN	+IN	+IN	+IN	0V	0V	1	+IN	+IN
B	$V_{out\ 1}$ (pressure)	0V	0V	0V	+IN	+IN	2	0V	0V

WIRE & CABLE OPTIONS

Cable

1/2 Conduit Connection

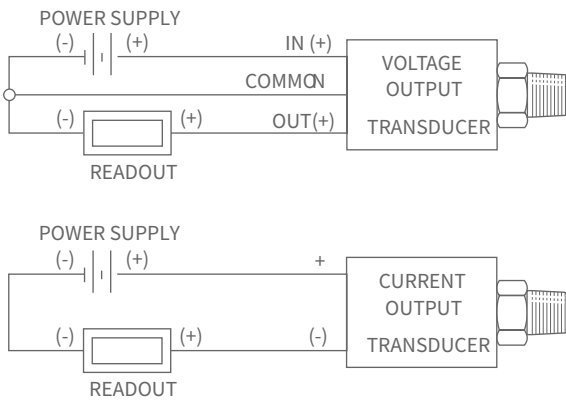
Flying Lead



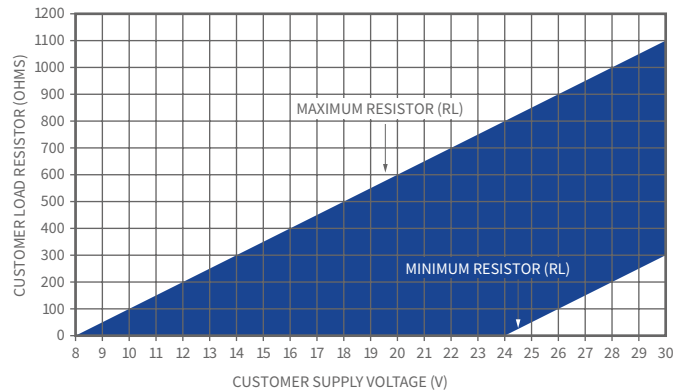
Code F			Code 3		Code W	
Wire Color	Voltage Mode	Current Mode	Voltage Mode	Current Mode	Voltage Mode	Current Mode
Red	+IN	+IN	+IN	+IN	+IN	+IN
Black	0V	0V	0V	0V	0V	0V
White	$V_{out 1}$ (pressure)	Do Not Connect	$V_{out 1}$ (pressure)	Do Not Connect	V_{out}	Do Not Connect
Green	PE or $V_{out 2}$ (temp)*	PE	PE or $V_{out 2}$ (temp)*	PE	—	—

* This pin is used for temperature sensing output when this option is utilized. Other wise, the pin is used for PE.

Wiring Diagram



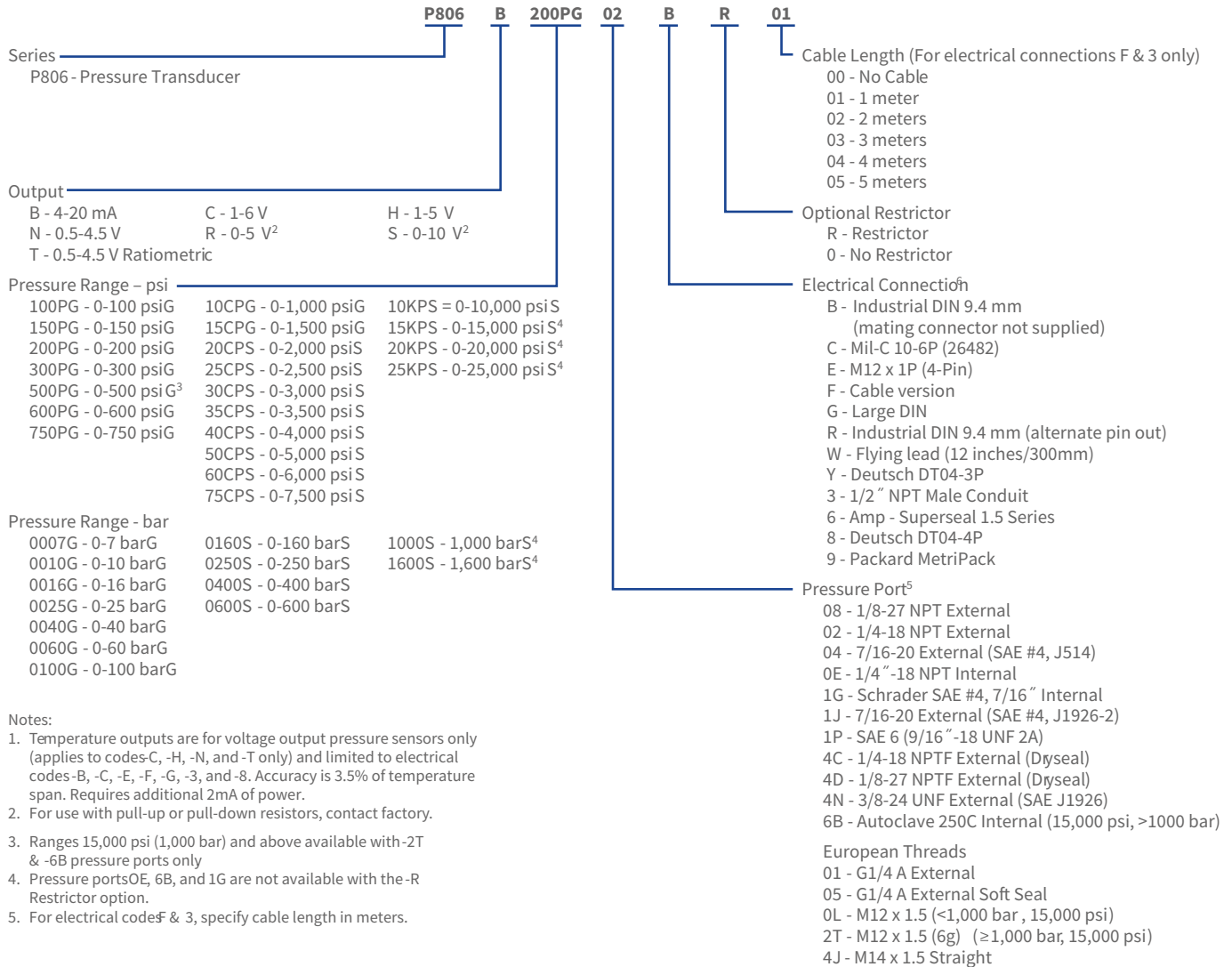
Current Output Mode (Load Resistor Range)



Minimum Resistor Value = $50 * (+V - 24)$ for $+V > 24V$
 Maximum Resistor Value = $50 * (+V - 8)$ for $+V > 8V$

ORDER GUIDE

Use the bold characters from the chart below to construct a product code



Notes:

- Temperature outputs are for voltage output pressure sensors only (applies to codes-C, -H, -N, and -T only) and limited to electrical codes-B, -C, -E, -F, -G, -3, and -8. Accuracy is 3.5% of temperature span. Requires additional 2mA of power.
- For use with pull-up or pull-down resistors, contact factory.
- Ranges 15,000 psi (1,000 bar) and above available with -2T & -6B pressure ports only
- Pressure ports 0E, 6B, and 1G are not available with the -R Restrictor option.
- For electrical codes F & 3, specify cable length in meters.

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