3100 Series and 3200 Heavy Duty Series

Compact OEM Pressure Transmitters

- Exceptional Long Term Stability
- 0–100 psi to 0–30,000 psi Ranges (0–7 bar to 0–2,200 bar)
- High Proof Pressures with All Stainless Steel Wetted Parts
- Broad Choice of Outputs, Electrical Connectors, and Pressure Ports
- Dual Pressure and Temperature Sensing option

3100 and 3200 Series offer high levels of stability and reliability with proven sputtered thin film technology and unbeatable price performance ratio in a small package size. A broad choice of electrical and pressure connections allow stock configurations to suit most applications without modification.

Specifications

Performance	
Long Term Drift	0.2% FS/YR (non-cumulative)
Accuracy	
3100	0.25% FS
3200	0.25% FS for >1000 psi (60 bar) 0.50% FS for <1000 psi (60 bar)
Thermal Error	
3100	0.83% FS/100°F (1.5% FS/100°C)
3200	2% FS/100°C for <1000 psi (60 bar)
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, E, G, 6, 8, 9, Y –5°F to +180°F (–20°C to +80° C) for elec. code W
Zero Tolerance	
3100	0.5% of span
3200	0.50% of span for >1000 psi (60 bar) 1.00% of span for <1000 psi (60 bar)
Span Tolerance	
3100	0.5% of span
3200	0.50% of span for >1000 psi (60 bar) 1.00% of span for <1000 psi (60 bar)
Response Time	1 ms
Fatigue Life	Designed for more than 100 M cycles
Mechanical Configuration	
Pressure Port	See under “How to Order,” last page
Wetted Parts	17-4 PH Stainless Steel
Housing	304 Stainless Steel
Electrical Connection	See under “How to Order,” last page
Enclosure	IP67 (IP65 for electrical codes G & W)
Vibration	40 G peak to peak sinusoidal, (Random Vibration: 20 to 1000 Hz @ approx. 40 G 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 under “How to Order,” 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) × 50 ohms
Ratiometric	
Output	0.5–4.5 VDC @ 4 mA (6.5 mA on dual output version)
Supply Voltage	5 VDC ±10%

Integral Connector Versions

Wire Options

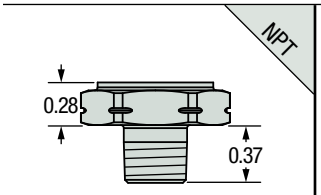
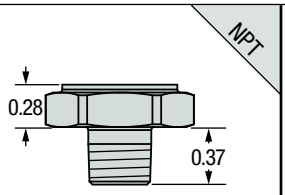
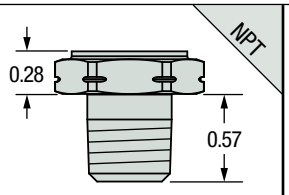
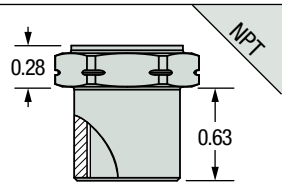
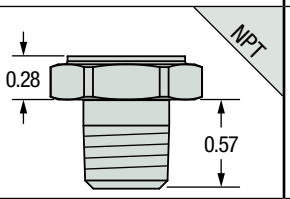
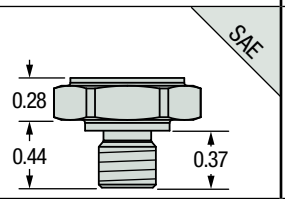
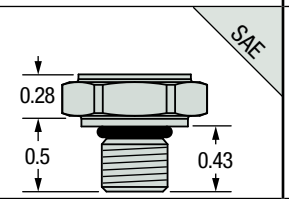
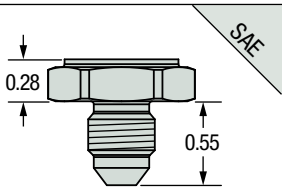
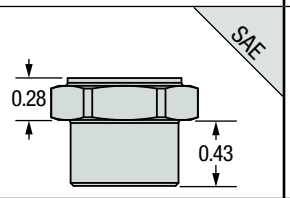
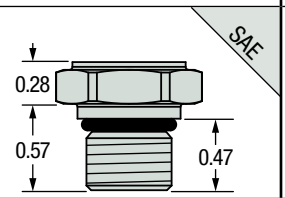
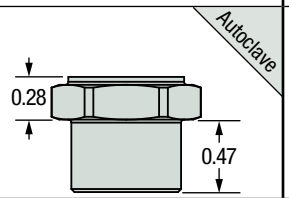
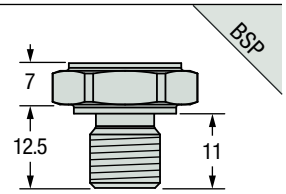
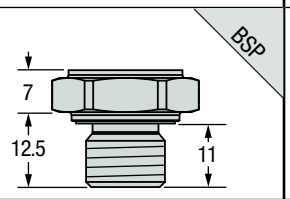
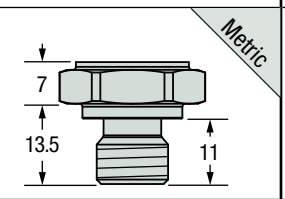
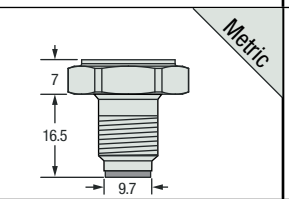
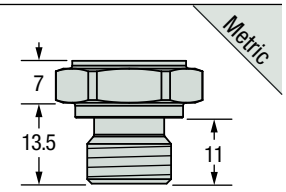
PRESSURE TRANSDUCERS

Pressure Capability

Pressure Range psi (bar)	Proof Pressure (× Full Scale)		Burst Pressure (× Full Scale)	
	3100	3200	3100	3200
100–300 (7–25)	3.00 × FS	3.00 × FS	40 × FS	
500–1,500 (40–100)	2.00 × FS		20 × FS	
2,000–6,000 (160–400)			10 × FS	
7,500–9,000 (600)			4 × FS	10 × FS
10,000 (700)				>60,000 psi (4,000 bar)
15,000 (1,000)		2.50 × FS		
25,000 (1,800)	1.40 × FS		1.8 × FS	
30,000 (2,200)		—	1.5 × FS	—

Pressure Ports

NPT, SAE, and BSP dimensions in inches. Metric dimensions in millimeters.

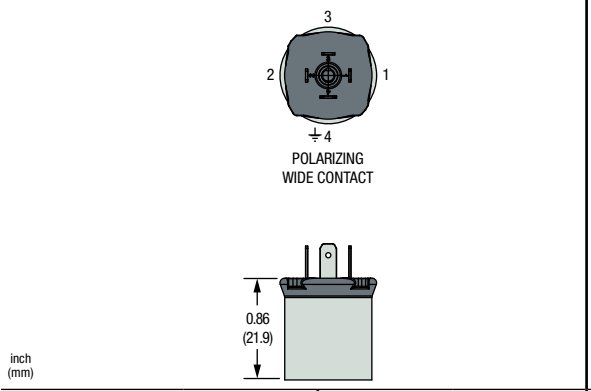
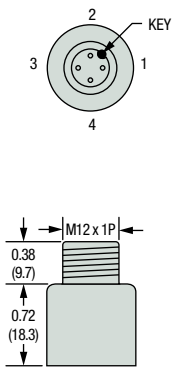
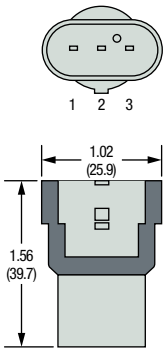
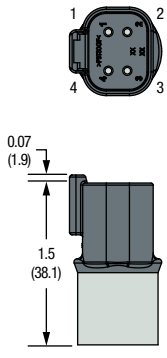
				
Fitting Code	**08** = 1/8-27 NPT	**4D** = 1/8-27 NPTF Dryseal	**02** = 1/4-18 NPT	**0E** = 1/4-18 NPT Internal
Torque	2–3 TFFT*	2–3 TFFT*	2–3 TFFT*	2–3 TFFT*
				
Fitting Code	**4C** = 1/4-18 NPTF Dryseal	**4N** = 3/8-24 UNF	**1J** = 7/16-20 UNF	**04** = 7/16-20 UNF with 37° Flare
Torque	2–3 TFFT*	18–20 NM	18–20 NM	15–16 NM
				
Fitting Code	**1G** = Schrader SAE 4 Female, 7/16″	**1P** = 9/16-18 “Heavy Duty”	**6B** = Autoclave F250C	**01** = G1/4-19 A
Torque	18–20 NM	18–20 NM	18–20 NM	30–35 NM
				
Fitting Code	**05** = G1/4-19 A Integral Face-Seal	**0L** = M12 × 1.5	**2T** = M12 × 1.5 HP Metal Washer Seal	**4J** = M14 × 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.

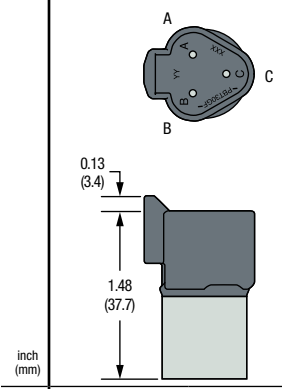
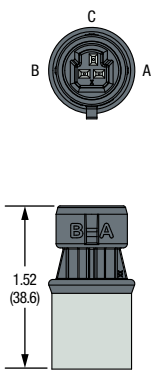
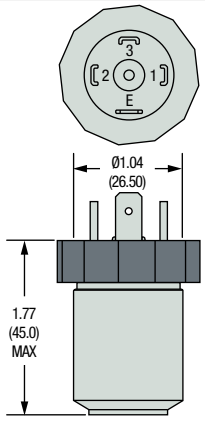
General Notes:

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 Options

DIN 9.4 mm	M12 × 1P	Amp Superseal 1.5	Deutsch DT04-4P
			

	Code B		Code R		Code E		Code 6		Code 8	
Pin #	**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

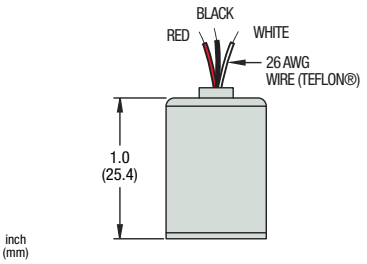
Deutsch DT04-3P	Packard Metri-Pack	DIN 43650A
		

	Code Y		Code 9			Code G	
Pin ID	**Voltage Mode**	**Current Mode**	**Voltage Mode**	**Current Mode**	**Pin #**	**Voltage Mode**	**Current Mode**
A	+IN	+IN	0V	0V	**1**	+IN	+IN
B	0V	0V	+IN	+IN	**2**	0V	0V
C	V_{out}	Do Not Connect	V_{out}	Do Not Connect	**3**	$V_{out}1$ (pressure)	Do Not Connect
E	—	—	—	—	**E**	PE or $V_{out}2$ (temp)*	PE

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

Wire Options

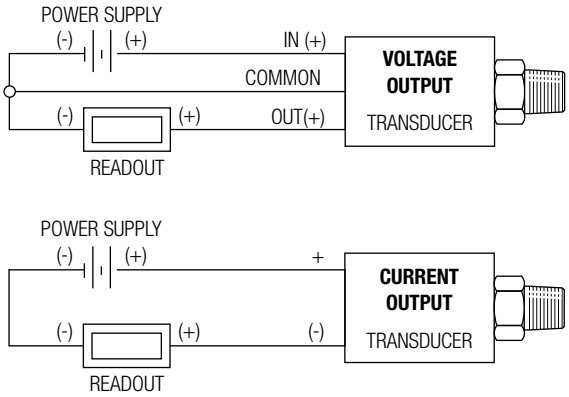
Flying Lead



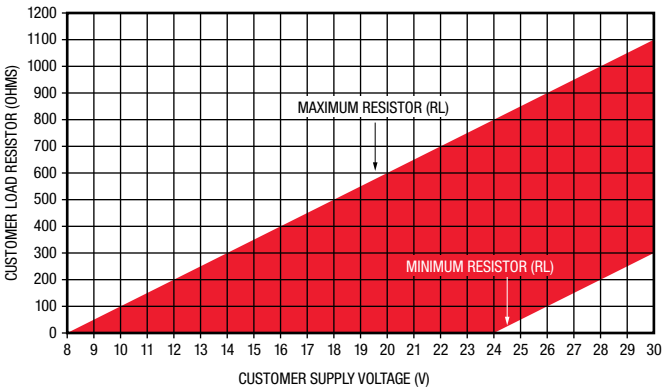
Code W

Voltage Mode	Current Mode
+IN	+IN
0V	0V
V_{out}	Do Not Connect
—	—

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

Note: Mating connectors available upon request - contact factory.

How to Order

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

XXXX X XXXXX XX X X

Series
- **3100 / 3200** - Pressure Transducer Combination Pressure and Temperature[1]
- **3101 / 3201** - Temp. Output Range –40°C to 125°C
- **3102 / 3202** - Temp. Output Range 0°C to 100°C
- **3103 / 3203** - Temp. Output Range 0°C to 80°C

Output
- **B** - 4–20 mA
- **C** - 1–6 V
- **H** - 1–5 V
- **N** - 0.5–4.5 V
- **R** - 0–5 V[2]
- **S** - 0–10 V[2]
- **T** - 0.5–4.5 V Ratiometric

Pressure Range – psi
- **100PG** - 0–100 psiG
- **150PG** - 0–150 psiG
- **200PG** - 0–200 psiG
- **300PG** - 0–300 psiG
- **500PG** - 0–500 psiG[3]
- **600PG** - 0–600 psiG
- **750PG** - 0–750 psiG
- **10CPG** - 0–1,000 psiG
- **15CPS** - 0–1,500 psiS
- **20CPS** - 0–2,000 psiS
- **25CPS** - 0–2,500 psiS
- **30CPS** - 0–3,000 psiS
- **35CPS** - 0–3,500 psiS
- **40CPS** - 0–4,000 psiS
- **50CPS** - 0–5,000 psiS
- **60CPS** - 0–6,000 psiS
- **75CPS** - 0–7,500 psiS
- **10KPS** = 0–10,000 psiS
- **15KPS** - 0–15,000 psiS[4]
- **20KPS** - 0–20,000 psiS[4]
- **25KPS** - 0–25,000 psiS[4]
- **32KPS** - 0–32,000 psiS[4]

Pressure Range - bar
- **0007G** - 0–7 barG
- **0010G** - 0–10 barG
- **0016G** - 0–16 barG
- **0025G** - 0–25 barG
- **0040G** - 0–40 barG
- **0060G** - 0–60 barG
- **0100S** - 0–100 barS
- **0160S** - 0–160 barS
- **0250S** - 0–250 barS
- **0400S** - 0–400 barS
- **0600S** - 0–600 barS
- **1000S** - 1,000 barS[4]
- **1600S** - 1,600 barS[4]
- **2200S** - 2,200 barS[4]

Optional Restrictor
- **R** - Restrictor
- **0** - No Restrictor

Electrical Connection
- **B** - Industrial DIN 9.4 mm (mating connector not supplied)
- **E** - M12 × 1P (4-Pin)
- **G** - Large DIN
- **R** - Industrial DIN 9.4 mm (alternate pin out)
- **W** - Flying lead (12 inches/300mm)
- **Y** - Deutsch DT04-3P
- **6** - Amp - Superseal 1.5 Series
- **8** - Deutsch DT04-4P
- **9** - Packard Metri-Pack

Pressure Port[5]
- **08** - 1/8-27 NPT External
- **02** - 1/4-18 NPT External
- **04** - 7/16-20 External (SAE #4, J514)
- **0E** - 1/4-18 NPT Internal
- **1G** - Schrader SAE #4, 7/16″ Internal
- **1J** - 7/16-20 External (SAE #4, J1926-2)
- **1P** - SAE 6 (9/16-18 UNF 2A)
- **4C** - 1/4-18 NPTF External (Dryseal)
- **4D** - 1/8-27 NPTF External (Dryseal)
- **4N** - 3/8-24 UNF External (SAE J1926)
- **6B** - Autoclave 250C Internal (15,000 psi, >1000 bar)

European Threads
- **01** - G1/4 A External
- **05** - G1/4 A External Soft Seal
- **0L** - M12 × 1.5 (<1,000 bar, 15,000 psi)
- **2T** - M12 × 1.5 (6g) (≥1,000 bar,15,000 psi)
- **4J** - M14 × 1.5 Straight

Notes:
1. Temperature outputs are for voltage output pressure sensors only (applies to codes **-C**, **-H**, **-N**, and **-T** only) and limited to electrical codes **-B**, **-E**, **-G**, and **-8**. Accuracy is 3.5% of temperature span. Requires additional 2 mA of power.
2. For use with pull-up or pull-down resistors, contact factory.
3. **500PG** - 0–500 psiG not available as 3200 Series in output code **-B** (4–20 mA) and **-S** (0–10V).
4. Ranges 15,000 psi (1,000 bar) and above available with **-2T** and **-6B** pressure ports only.
5. Pressure ports **0E**, **6B**, and **1G** are not available with the **-R** Restrictor option.