

3100 Series and 3200 Heavy Duty Series Compact OEM Pressure Transmitters

- ▶ 0-100 psi to 0-30,000 psi ranges (0-7 bar to 0-2,200 bar)
- High Proof Pressures
- Broad Choice of Outputs
- ▶ RoHS Compliant

For OEMs that need consistent high levels of performance, reliability and stability the 3100 and 3200 Series sputtered thin film units offer unbeatable price performance ratio in a small package size. They feature all-stainless steel wetted parts, a broad selection of electrical and pressure connections, and wide choice of electrical outputs to allow stock configurations suitable for most applications without modification. At the heart of both these series is a sputter element that also provides exceptional temperature specifications. Plus, our manufacturing process for the 3100 and 3200 Series include the latest automated equipment, producing the most consistent and best price to performance sensor on the market today.

Additionally, 3200 Series transmitters feature thicker diaphragms and a pressure restrictor to withstand the rigors of cavitations or extreme pressure spikes, delivering years of reliable and stable performance in pulsating applications.

The compact construction of both these series makes them ideal for installation where space is at a premium.

Specifications

Performance	
Long Term Drift	0.2% FS/YR (non-cumulative)
Accuracy	
3100	0.25% FS
3200	0.5% 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)
Zero Tolerance	
3100	0.5% of span
3200	1% FS for <1000 psi (60 bar)
Span Tolerance	
3100	0.5% of span
3200	1% FS for <1000 psi (60 bar)
Response Time	1 ms
Response Time Fatigue Life	1 ms Designed for more than 100 M cycles
Fatigue Life	
Fatigue Life Mechanical Configuration	Designed for more than 100 M cycles
Fatigue Life Mechanical Configuration Pressure Port	Designed for more than 100 M cycles See under "How to Order," last page
Fatigue Life Mechanical Configuration Pressure Port Wetted Parts	Designed for more than 100 M cycles See under "How to Order," last page 17-4 PH Stainless Steel
Fatigue Life Mechanical Configuration Pressure Port Wetted Parts Electrical Connection	Designed for more than 100 M cycles See under "How to Order," last page 17-4 PH Stainless Steel See under "How to Order," last page IP67 (IP65 for electrical code G) 40G peak to peak sinusoidal,
Fatigue Life Mechanical Configuration Pressure Port Wetted Parts Electrical Connection Enclosure	Designed for more than 100 M cycles See under "How to Order," last page 17-4 PH Stainless Steel See under "How to Order," last page IP67 (IP65 for electrical code G) 40G peak to peak sinusoidal, (Random Vibration: 20 to 1000 Hz @ approx. 40G
Fatigue Life Mechanical Configuration Pressure Port Wetted Parts Electrical Connection Enclosure Vibration	Designed for more than 100 M cycles See under "How to Order," last page 17-4 PH Stainless Steel See under "How to Order," last page IP67 (IP65 for electrical code G) 40G peak to peak sinusoidal, (Random Vibration: 20 to 1000 Hz @ approx. 40G peak per MIL-STD-810E)
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Fatigue Life Mechanical Configuration Pressure Port Wetted Parts Electrical Connection Enclosure Vibration Shock	Designed for more than 100 M cycles See under "How to Order," last page 17-4 PH Stainless Steel See under "How to Order," last page IP67 (IP65 for electrical code G) 40G peak to peak sinusoidal, (Random Vibration: 20 to 1000 Hz @ approx. 40G peak per MIL-STD-810E) Withstands free fall to IEC 68-2-32 procedure 1 100 V/m CE, conforms to European Pressure Directive,
Fatigue Life Mechanical Configuration Pressure Port Wetted Parts Electrical Connection Enclosure Vibration Shock EMC (Radiated Immunity)	Designed for more than 100 M cycles See under "How to Order," last page 17-4 PH Stainless Steel See under "How to Order," last page IP67 (IP65 for electrical code G) 40G peak to peak sinusoidal, (Random Vibration: 20 to 1000 Hz @ approx. 40G peak per MIL-STD-810E) Withstands free fall to IEC 68-2-32 procedure 1 100 V/m CE, conforms to European Pressure Directive, Fully RoHS compliant,
Fatigue Life Mechanical Configuration Pressure Port Wetted Parts Electrical Connection Enclosure Vibration Shock EMC (Radiated Immunity)	Designed for more than 100 M cycles See under "How to Order," last page 17-4 PH Stainless Steel See under "How to Order," last page IP67 (IP65 for electrical code G) 40G peak to peak sinusoidal, (Random Vibration: 20 to 1000 Hz @ approx. 40G peak per MIL-STD-810E) Withstands free fall to IEC 68-2-32 procedure 1 100 V/m CE, conforms to European Pressure Directive,



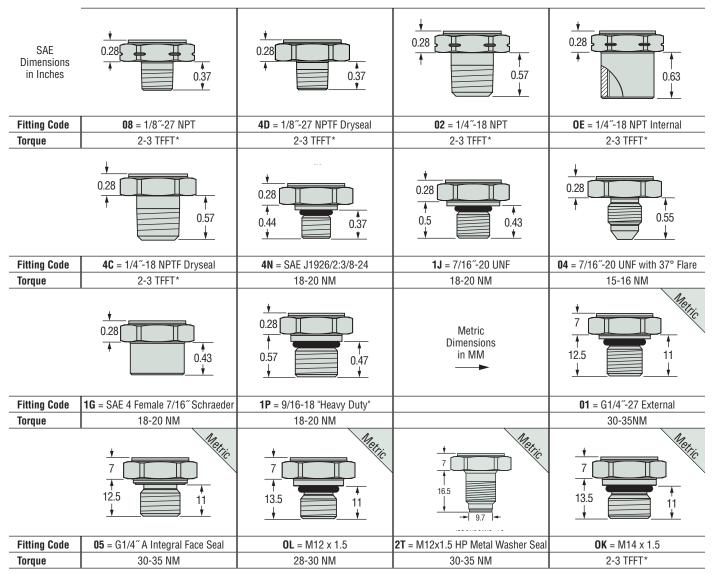
Individual Specifications

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) 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%

Pressure Capability

Pressure Range PSI (Bar)		ressure Scale)	Burst Pressure (x Full Scale)			
roi (bai)	3100	3200	3100	3200		
100-300 (7-25)	3.00 x FS		40 >	FS		
500-1,500 (40-100)			20)	20 x FS		
2,000-6,000 (160-400)		3.00 x FS	10 x FS			
7,500-9,000 (600)	2.00 x FS			10 x FS		
10,000 (700)			4 x FS			
15,000 (1,000)		0.5050		>60,000 PSI (4,000 bar)		
25,000 (1,800)	1 40 v FC	2.50 x FS	1.8 x FS	(1,000 bai)		
30,000 (2,200)	1.40 x FS	_	1.5 x FS	_		

Pressure Ports



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

General Notes:

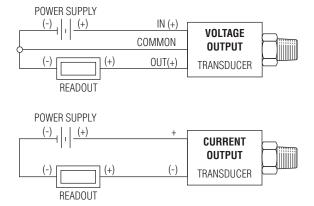
- 1. The diameter of all cans is 19 mm (0.748")
- 2. Hex is 22 mm (0.866°) Across Flats (A/F) for deep socket mounting 3. O-Ring material, where applicable, is Nitrile® unless otherwise specified.



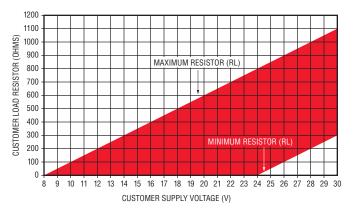
Electrical Connector

			DIN 9	.4 mm	M12	x 1P	Amp Sup	erseal 1.5	Deutsch	DT04-4P	DIN 4	3650A	
2 POLARIZING WIDE CONTACT					3 (6	2 KEY	1	2 3	0.07	2		2 ○ 1 〕 E 01.04 26.50 →	
inch mm	0.86 (21.9)		0.38 9.7 ↑ 0.72 18.3 ↑		1.46		1.9		1.77 45.0 MAX				
	Code B Code R		Cod	le E	Code 6		Code 8		Code G				
Pin #	Voltage Mode	Current Mode	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)	No Connect	V_{supply}	Supply	$V_{ m supply}$	Supply	V _{out}	No Connect	Ground	Return	V_{supply}	Supply	
2	V _{supply}	Supply	Ground	Return	V _{out}	No Connect	Ground	Return	V _{supply}	Supply	Ground	Return	
3	V _{out} 2 (temp)	No Connect	V _{out}	No Connect	Ground	Return	V_{supply}	Supply	No Connect	No Connect	V _{out}	No Connect	
4	Ground	Return	No Connect	No Connect	No Connect	No Connect	_	_	V _{out}	No Connect	No Connect	No Connect	

Wiring Diagram



Current Output Mode (Load Resistor Range)



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

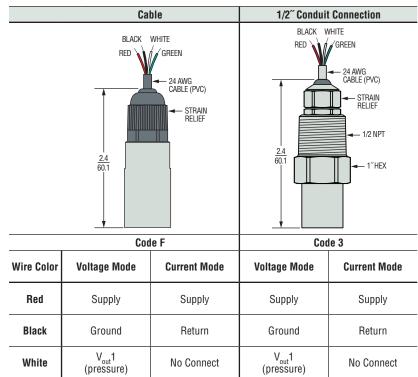
Packard MetriPack





Code 9						
Pin ID	Voltage Mode	Current Mode				
С	V _{out}	No Connect				
A	Ground	Return				
В	V_{supply}	Supply				
_	_	_				

Cable-Out Types



No Connect

V_{out}2 (temp)

No Connect

Mating Connectors

Part Number	Description	For Use on Elect. Code #
557230	MINI DIN Connector, Strain Relief (with drive screw & gasket)	B and R
557703-01M0	M12 Cord Set – 1 Meter (Red 1, Green 2, Blue 3, Yellow 4)	Е
557703-03M0	M12 Cord Set – 3 Meters (Red 1, Green 2, Blue 3, Yellow 4)	Е
557703-04M0	M12 Cord Set – 4 Meters (Red 1, Green 2, Blue 3, Yellow 4)	Е
557703-05M0	M12 Cord Set – 5 Meters (Red 1, Green 2, Blue 3, Yellow 4)	Е
	Recommended Mating Parts (AMP p/n: Housing 282087-1; Contacts 3X 183025-1; Seal 281934-1; Boot 880811-2)	6
557701	AMP Superseal Mate Kit	6
210729	AMP 3.5´ Cable Cord Set – Clear Pos 1, Black Pos 2, Red Pos 3	6
210730	AMP 12" Flying Leads Cord Set – White Pos 1, Black, Red Pos 3	6
	Recommended Mating Parts (AMP p/n: Socket Conn 1-967325-1. Consult AMP for Contacts, Wire Seal and Strain Relief options)	7
557702	DIN 72585 Twist Lock Mate Kit	7
	Recommended Mating Parts (Deutsch p/n: Housing Plug DT064S-P012; Wedge W4S-P012; Sockets 4X 0462-201-1631)	8
224153	Deutsch Cord Set 3' Long (18 AWG PVC Cable – Black 1, Red 2, Green 3, White 4)	8
	Recommended Mating Parts (Delphi Packard MetriPack p/n: Body 12065286; Seal 12052893. Consult Delphi for Contacts)	9
218760	Packard Mate Kit	9
223974	Packard Cord Set 3' Long (24 AWG PVC Cable – White 1, Black 2, Red 3)	9
223975	Packard Cord Set 6' Long (24 AWG PVC Cable – White 1, Black 2, Red 3)	9
227987	Packard Cord Set 14.75' Long (22 AWG PVC Cable - White 1, Black 2, Red 3)	9
220492	Packard Mate - 12" Flying Leads – 3 Conductor PVC 18 AWG	9
222976	Packard Mate - 18" Flying Leads – 3 Conductor PVC 18 AWG	9
220797	Packard Mate - 24" Flying Leads – 3 Conductor PVC 18 AWG	9

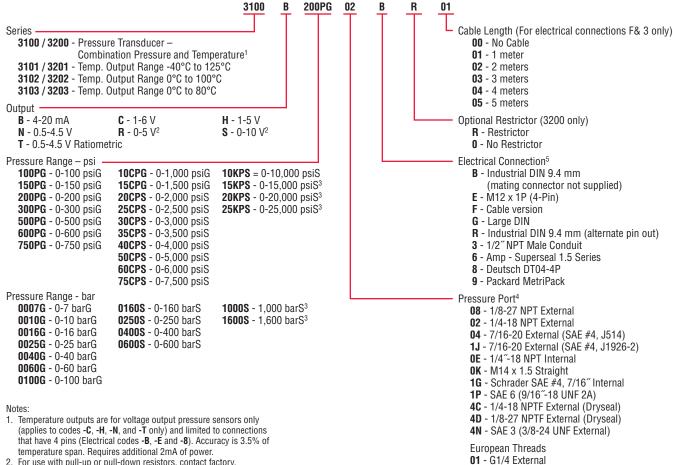
V_{out}2 (temp)

Green



How to Order

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



- For use with pull-up or pull-down resistors, contact factory.
- Ranges 15,000 psi (1,000 bar) and above available with -2T pressure port only
- Pressure ports **0E** and **1G** are NOT available with the Restrictor
- 5. For electrical codes F & 3, specify cable length in meters.



05 - G1/4 External Soft Seal

0L - M12 x 1.5 (<1,000 bar, 15,000 psi)

2T - M12 x 1.5 (6g) (≥1,000 bar, 15,000 psi)