O'Keefe Controls Co.

Specialists in Valves, Controls, Pneumatics, Fluid Measurement

Gems™ Sensors

3300 Series

Compact Low Pressure OEM Pressure Transmitters

- 0 - 600 psi pressure ranges (0 to 41 bar)
- Choice of outputs, electrical connections and pressure ports
- Operating temperature up to 257°F (125°C)

For OEMs that need consistent high levels of performance, reliability and stability the 3300 Series units offer a small package size with all stainless steel wetted parts at an unbeatable price performance ratio. A wide choice of electrical outputs as well as both electrical and pressure connections means the unit is suitable for most applications without modification. The compact construction of the 3300 series makes it ideal for installation where space is at a premium.

Specifications

Performance	
Long Term Drift	0.2% FS/YR (non-cumulative)
Accuracy	0.25% FS
Thermal Error	±1% max./176°F (80°C)
Compensated Temperatures	-4°F to +212°F (-20°C to +100°C)
Operating Temperatures	-40°F to +257°F (-40°C to +125°C)
Zero Tolerance	±0.5% of span, max.
Span Tolerance	±1% of span, max.
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
Electrical Connection	See under "How to Order," last page
Enclosure	IP67 (IP65 for electrical codes B and K)
Vibration	BSEN 60068-2-6 (FC) BSEN 60068-2-64 (FH)
Shock	BSEN 60068-2-27 (Ea)
Approvals	CE, PED, RoHS
Weight	1.23 to 1.9 ounce (35 to 53 grams). Configuration dependant

Individual Specifications

Voltage Output Units	
Output	0 V min. to 10 V max. See under "How to Order," last page
Supply Voltage (Vs)	3 Volts above full scale to 30 Vdc (24 Vdc, max. above 230°F (110°C) applications).
Current Output Units	
Output	4-20 mA
Supply Voltage (Vs)	10-30 Vdc (24 Vdc, max. above 230°F (110°C) applications)
Ratiometric Output Units	
Output	0.5 to 4.5 Vdc
Supply Voltage (Vs)	5 Vdc ±10%
Max Load Resistance	(Supply Voltage - 7.5) x 50 ohms

EMC Specifications

Emissions Tests: EN61326-1:2006 and EN61326-2-3:2006

Test Standard	Test
EN55011:2007	Conducted Emissions
EN55011:2007	Radiated Emissions

Immunity Tests: EN61326-1:2006 and EN61326-2-3:2006

Test Standard	Test
EN61000-4-2:1995 + A1 + A2	Electrostatic Discharge
EN61000-4-3:2006	Radiated Immunity
EN61000-4-4:2004	Fast Burst Trasients
EN61000-4-6:2006	Conducted RF Immunity

Pressure Capability

PSI

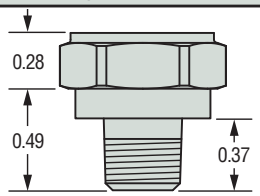
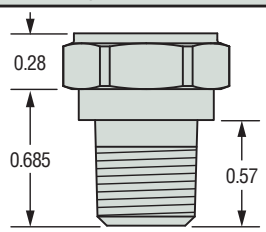
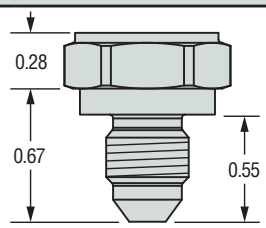
Pressure Range (PSI)	Burst Pressure (x Full Scale)	Proof Pressure
0-15	150	3x Nominal Pressure Range
0-30	200	
0-50	125	
0-100	85	
0-150	50	
0-200	30	
0-250	30	
0-300	25	
0-500	15	
0-600	12	

Bar

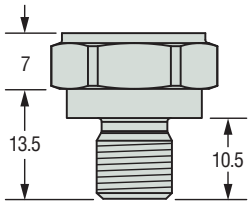
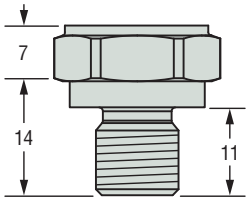
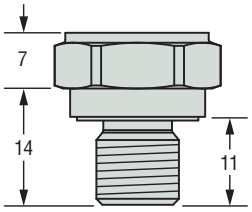
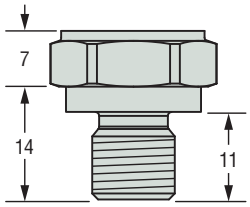
Pressure Range (Bar)	Burst Pressure (x Full Scale)	Proof Pressure
0-1	15	3x Nominal Pressure Range
0-1.6	100	
0-2.5	200	
0-4	125	
0-6	85	
0-10	50	
0-16	30	
0-20	25	
0-34	15	
0-41	12	

Pressure Ports

SAE

	1/8˝-27 NPT	1/4˝-18 NPT	7/16˝-20 UNF with 37° Flare
Dimensions in Inches			
Fitting Code	**08**	**02**	**04**
Torque	2-3 TFFT*	2-3 TFFT*	15-16 NM

Metric

	G1/8˝-27 External	G1/4˝ External	G1/4˝ A Integral Face Seal	M12 x 1.5 - 6g
Dimensions in MM				
Fitting Code	**OS**	**01**	**05**	**OL**
Torque	22-25 NM	30-35 NM	30-35 NM	28-30 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

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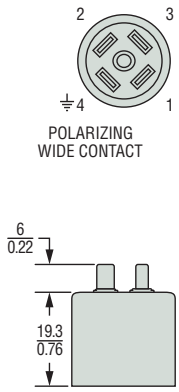
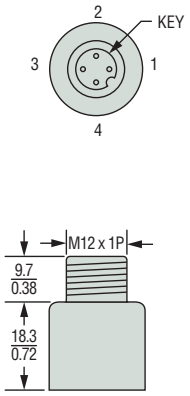
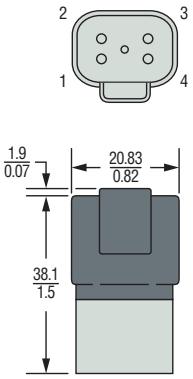
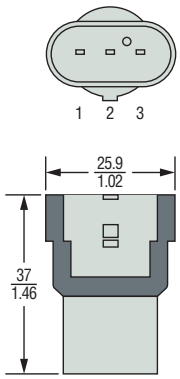
Electrical Connector

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

	Code B		Code K		Code E		Code 8		Code 6	
Pin #	**Voltage Mode**	**Current Mode**	**Voltage Mode**	**Current Mode**	**Voltage Mode**	**Current Mode**	**Voltage Mode**	**Current Mode**	**Voltage Mode**	**Note**
1	V_{out} (pressure)	No Connect	V_{supply}	Supply	V_{supply}	Supply	Ground	Return	V_{out} (pressure)	Amp Superseal connectors may be used with 0.5-4.5V Ratiometric Output only.
2	V_{supply}	Supply	Ground	Return	V_{out} (pressure)	No Connect	V_{supply}	Supply	Ground	
3	No Connect	No Connect	V_{out} (pressure)	No Connect	Ground	Return	No Connect	No Connect	V_{supply}	
4	Ground	Return	No Connect	No Connect	No Connect	No Connect	V_{out} (pressure)	No Connect	—	

Mating Connectors

Part Number	Description	For Use on Elect. Code #
557230	MINI DIN Connector, Strain Relief (with drive screw & gasket)	B and K
557703-01M0	M12 Cord Set – 1 Meter (Red 1, Green 2, Blue 3, Yellow 4)	E
557703-03M0	M12 Cord Set – 3 Meters (Red 1, Green 2, Blue 3, Yellow 4)	E
557703-04M0	M12 Cord Set – 4 Meters (Red 1, Green 2, Blue 3, Yellow 4)	E
557703-05M0	M12 Cord Set – 5 Meters (Red 1, Green 2, Blue 3, Yellow 4)	E
	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 (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

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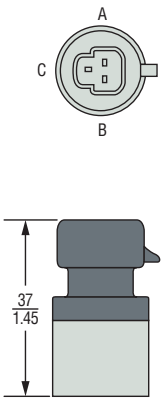
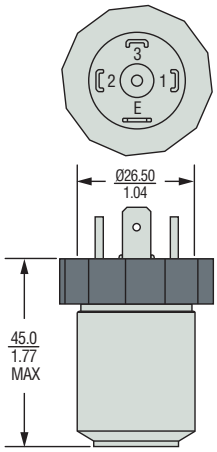
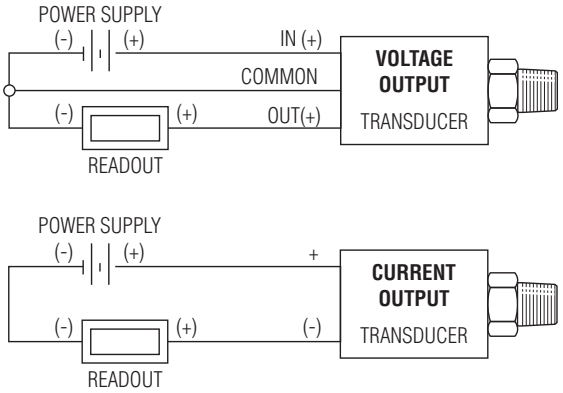
Packard MetriPack	DIN 43650A
	

Code 9			Code G		
Pin ID	**Voltage Mode**	**Note**	**Pin #**	**Voltage Mode**	**Current Mode**
C	V_{out} (pressure)	MetriPack connectors may be used with 0.5-4.5V Ratiometric Output only.	**1**	V_{supply}	Supply
A	Ground		**2**	Ground	Return
B	V_{supply}		**3**	V_{out} (pressure)	No Connect
—	—		**4**	No Connect	No Connect

Wiring Diagram



How to Order

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

3300 **X** **XXXX** **X** **XX** **X** **0** **00**

Series

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

Pressure Range
- **01B0** - 1 bar
- **01B6** - 1.6 bar
- **02B5** - 2.5 bar
- **04B0** - 4 bar
- **06B0** - 6 bar
- **10B0** - 10 bar
- **16B0** - 16 bar
- **20B0** - 20 bar
- **34B0** - 34 bar
- **41B0** - 41 bar
- **015P** - 15 psi
- **030P** - 30 psi
- **050P** - 50 psi
- **100P** - 100 psi
- **150P** - 150 psi
- **200P** - 200 psi
- **250P** - 250 psi
- **300P** - 300 psi
- **500P** - 500 psi
- **600P** - 600 psi

Pressure Datum
- **G** - Gauge
- **A** - Absolute
- **V** - Compound

Electrical Connection
- **B** - Industrial DIN 9.4 mm
- **E** - M12 x 1
- **G** - DIN 43650A
- **K** - Industrial DIN 9.4 mm (alternate pin out)
- **6** - Amp - Superseal 1.5 Series[1]
- **8** - Deutsch DT04-4P
- **9** - Packard MetriPack[1]

Pressure Port
- **01** - G1/4˝ External
- **02** - 1/4˝-18 NPT
- **04** - 7/16˝-20 UNF with 37° Flare
- **05** - G1/4˝ A Integral Face Seal
- **08** - 1/8˝-27 NPT
- **0L** - M12 x 1.5 - 6g
- **0S** - G1/8˝-27 External

Notes:
1. Compatible with Ratiometric Output Only; Code T

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