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Gems Sensors & Controls

3500 Series

Compact Low Pressure OEM Pressure Transmitters

- 5 to 600 psi pressure ranges (0.35 to 40 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 3500 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 3500 Series makes it ideal for installation where space is at a premium.

Specifications

Input	
Pressure Range	5-600 psi (0.35-40 bar)
Proof Pressure	2x
Burst Pressure	3X
Performance	
Long Term Drift	<0.2% FS/YR
Accuracy	0.25% FS
Thermal Error, Max.	±1% / 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, Max.	±0.5% of span
Span Tolerance, Max.	±0.5% of span
Fatigue Life	Designed for more than 100 M cycles
Mechanical Configuration	
Pressure Port	See under “How to Order,” last page
Wetted Parts	316L Stainless Steel
Electrical Connection	See under “How to Order,” last page
Enclosure	IP67
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 ounces (35-53 grams). Configuration dependant

Individual Specifications

Voltage	
Output	0V min. to 10V max. See under “How to Order,” last page
Supply Voltage (Vs)	2 Volts above full scale to 30 Vdc (24 Vdc, max. above 230°F (110°C) applications)
Source and Sinks	8 mA
Current	
Output	4-20 mA
Supply Voltage (Vs)	10-30 Vdc (24 Vdc, max. above 230°F (110°C) applications)
Maximum Load Resistance	(Supply Voltage -10) x 50ohms
Ratiometric	
Output	0.5 to 4.5V
Supply Voltage (Vs)	5 Vdc ±10%

EMC Specifications

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

EN55011:2009 + A1	Radiated Emissions

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

EN61000-4-2:2009	Electrostatic Discharge
EN61000-4-3:2006 + A2	Radiated Immunity
EN61000-4-4:2012	Fast Burst Transients
EN61000-4-6:2009	Conducted RF Immunity

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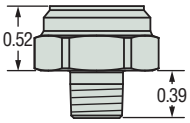
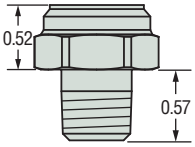
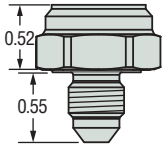
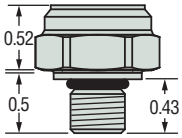
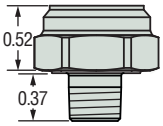
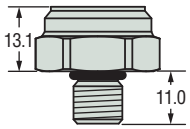
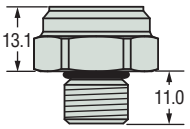
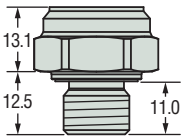
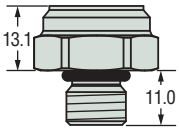
Pressure Ports

SAE

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

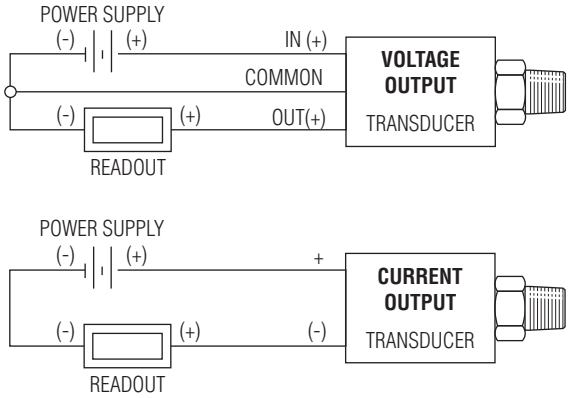
BSP & Metric

	G1/8″ External	G1/4″-19 External w/O-Ring	G1/4″-19 A Integral Face Seal	M12 x 1.5 w/O-Ring
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 (0.886″) Across Flats (A/F) for deep socket mounting

Wiring Diagram



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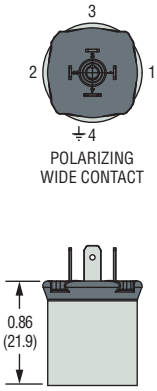
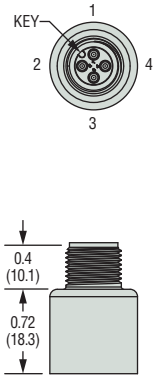
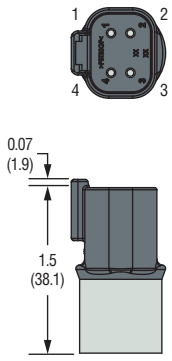
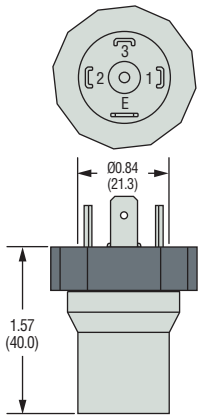
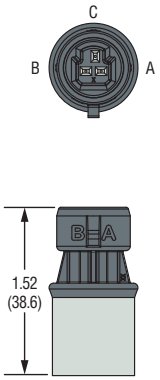
Electrical Connector

DIN 9.4 mm	M12 x 1P	Deutsch DT04-4P	DIN 43650A	Packard MetriPack
				

	Code B		Code K		Code E		Code 8		Code G		Code 9		
Pin #	**Voltage Mode**	**Current Mode**	**Voltage Mode**	**Current Mode**	**Voltage Mode**	**Current Mode**	**Voltage Mode**	**Current Mode**	**Voltage Mode**	**Current Mode**	**Pin ID**	**Voltage Mode**	**Note**
1	V_{out} (pressure)	No Connect	V_{supply}	Supply	V_{supply}	Supply	Ground	Return	V_{supply}	Supply	C	V_{out} (pressure)	MetriPack connectors may be used with 0.5-4.5V Ratiometric and 4-20 mA only.
2	V_{supply}	Supply	Ground	Return	V_{out} (pressure)	No Connect	V_{supply}	Supply	Ground	Return	A	Ground	
3	No Connect	No Connect	V_{out}	No Connect	Ground	Return	No Connect	No Connect	V_{out}	No Connect	B	V_{supply}	
4	Ground	Return	No Connect	No Connect	No Connect	No Connect	V_{out} (pressure)	No Connect	No Connect	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
557254	Large DIN 43650A	G
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 (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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How to Order

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

3500 X XXXX X XX X X 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
- **000P** - 0 psi[1]
- **0000** - 0 bar[1]
- **05P0** - 5 psi
- **350M** - 350 mbar
- **010P** - 10 psi
- **700M** - 700 mbar
- **015P** - 15 psi
- **0001** - 1 bar
- **030P** - 30 psi
- **01B6** - 1.6 bar
- **050P** - 50 psi
- **02B5** - 2.5 bar
- **100P** - 100 psi
- **0004** - 4 bar
- **150P** - 150 psi
- **0006** - 6 bar
- **200P** - 200 psi
- **0010** - 10 bar
- **250P** - 250 psi
- **0016** - 16 bar
- **400P** - 400 psi
- **0025** - 25 bar
- **600P** - 600 psi
- **0040** - 40 bar

Pressure Datum
- **G** - Gauge
- **A** - Absolute
- **V** - Compound[2]

Pressure Port
- **08** - 1/8-27 NPT External
- **4D** - 1/8˝-27 NPTF
- **02** - 1/4-18 NPT External
- **04** - 7/16-20 External Flare (SAE #4, J514)
- **1J** - 7/16-20 External
- **01** - G1/4 External
- **05** - G1/4 External Soft Seal
- **OL** - M12 x 1.5 - 6g
- **OS** - G1/8˝-27 External

Electrical Connection
- **B** - Industrial DIN 9.4 mm
- **E** - M12 x 1
- **G** - DIN 43650A
- **K** - Industrial DIN (Alternative Pinout)
- **8** - Deutsch DT04-4P
- **9** - Packard MetriPack[3]

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

Notes:
1. Compound only.
2. Compound versions extend the pressure range on the low end to -15 PSIG or -1 barG respectively. Compound versions measure Gauge pressure only.
3. Compatible with mA (Code B) or Ratiometric (Code T) Output Only.

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ELECTRICAL ENGINEERING & FLUID CONTROL DISTRIBUTORS
Est.1899

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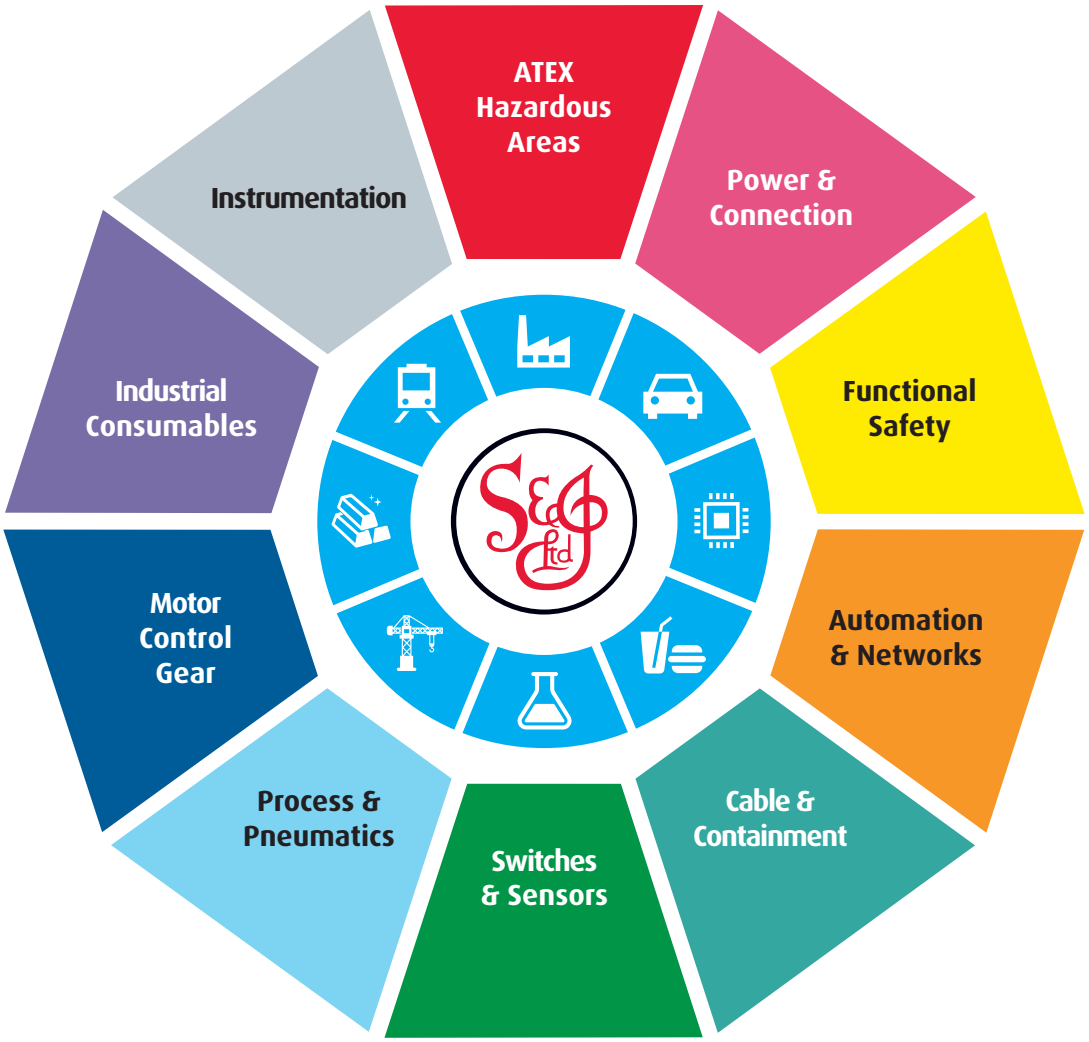

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