

## 3300 Series

### Compact Low Pressure OEM Pressure Transmitters

- ▶ 0 to 16 bar pressure ranges (0 - 250 psi)
- ▶ Choice of outputs, electrical connections and pressure ports
- ▶ Operating temperature up to 125°C (257°F)

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

|                                 |                                                             |
|---------------------------------|-------------------------------------------------------------|
| <b>Performance</b>              |                                                             |
| <b>Long Term Drift</b>          | 0.2% FS/YR (non-cumulative)                                 |
| <b>Accuracy</b>                 | 0.25% FS                                                    |
| <b>Thermal Error</b>            | ±1% max./80°C (176°F)                                       |
| <b>Compensated Temperatures</b> | -20°C to +100°C (-4°F to +212°F)                            |
| <b>Operating Temperatures</b>   | -40°C to +125°C (-40°F to +257°F)                           |
| <b>Zero Tolerance</b>           | ±0.5% of span, max.                                         |
| <b>Span Tolerance</b>           | ±1% of span, max.                                           |
| <b>Fatigue Life</b>             | Designed for more than 100 M cycles                         |
| <b>Mechanical Configuration</b> |                                                             |
| <b>Pressure Port</b>            | See under "How to Order," last page                         |
| <b>Wetted Parts</b>             | 17-4 PH Stainless Steel                                     |
| <b>Electrical Connection</b>    | See under "How to Order," last page                         |
| <b>Enclosure</b>                | IP67 (IP65 for electrical codes B, K and G)                 |
| <b>Vibration</b>                | BSEN 60068-2-6 (FC)<br>BSEN 60068-2-64 (FH)                 |
| <b>Shock</b>                    | BSEN 60068-2-2n (Ea)                                        |
| <b>Approvals</b>                | CE, PED, RoHS                                               |
| <b>Weight</b>                   | 35 to 53 grams (1.23 to 1.9 ounce). Configuration dependant |

### Individual Specifications

|                                 |                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------|
| <b>Voltage Output Units</b>     |                                                                                     |
| <b>Output</b>                   | 0 V min. to 10 V max.<br>See under "How to Order," last page                        |
| <b>Supply Voltage (Vs)</b>      | 3 Volts above full scale to 30 Vdc (24 Vdc, max. above 110°C (230°F) applications). |
| <b>Current Output Units</b>     |                                                                                     |
| <b>Output</b>                   | 4-20 mA                                                                             |
| <b>Supply Voltage (Vs)</b>      | 8-30 Vdc (24 Vdc, max. above 110°C (230°F) applications)                            |
| <b>Max Load Resistance</b>      | (Supply Voltage - 8) x 50 ohms                                                      |
| <b>Ratiometric Output Units</b> |                                                                                     |
| <b>Output</b>                   | 0.5 to 4.5 Vdc                                                                      |
| <b>Supply Voltage (Vs)</b>      | 5 Vdc ±10%                                                                          |



Deutsch DT04-4P



DIN 9.4 mm

M12 x 1P



Packard MetriPack

Amp Superseal 1.5



DIN 43650A

### 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 Transients   |
| EN61000-4-6:2006           | Conducted RF Immunity   |

## Pressure Capability

Bar

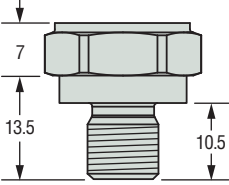
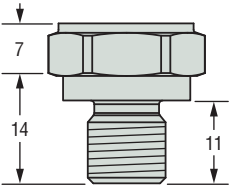
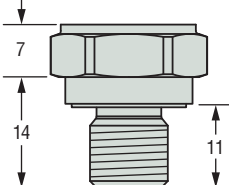
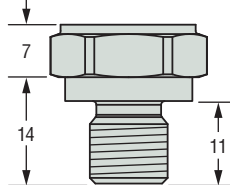
| Pressure Range (Bar) | Burst Pressure (x Full Scale) | Proof Pressure            |
|----------------------|-------------------------------|---------------------------|
| 0-1                  | 15                            | 3x Nominal Pressure Range |
| 0-1.6                | 100                 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

PSI

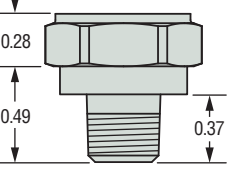
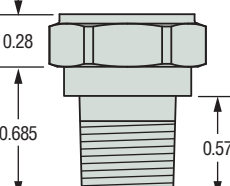
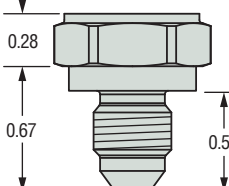
| Pressure Range (PSI) | Burst Pressure (x Full Scale) | Proof Pressure            |
|----------------------|-------------------------------|---------------------------|
| 0-15                 | 150                           | 3x Nominal Pressure Range |
| 0-30                 | 200                           |                           |
| 0-50                 | 125                           |                           |
| 0-100                | 85                            |                           |
| 0-150                | 50                            |                           |
| 0-200                | 30                            |                           |
| 0-250                | 30                            |                           |

## Pressure Ports

Metric

|                  | G1/8"-27 External                                                                                                                                                                                                     | G1/4"-19 External                                                                                                                                                                                                 | G1/4"-19 A Integral Face Seal                                                                                                                                                                                                           | M12 x 1.5 - 6g                                                                      |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Dimensions in MM |  |  |  |  |
| Fitting Code     | 0S                                                                                                                                                                                                                    | 01                                                                                                                                                                                                                | 05                                                                                                                                                                                                                                      | 0L                                                                                  |
| Torque           | 22-25 NM                                                                                                                                                                                                              | 30-35 NM                                                                                                                                                                                                          | 30-35 NM                                                                                                                                                                                                                                | 28-30 NM                                                                            |

SAE

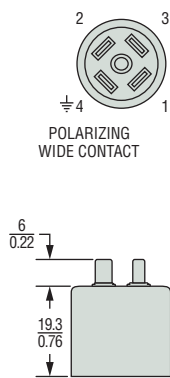
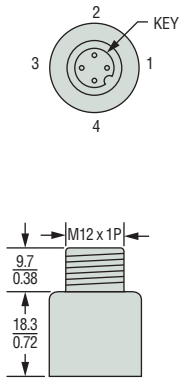
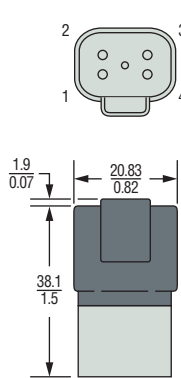
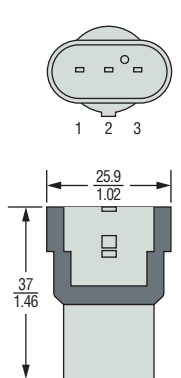
|                      | 1/8"-27 NPT                                                                                                                                                                                                             | 1/4"-18 NPT                                                                                                                                                                                                              | 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                                                                                                                                                                                                                                         |

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

General Notes:

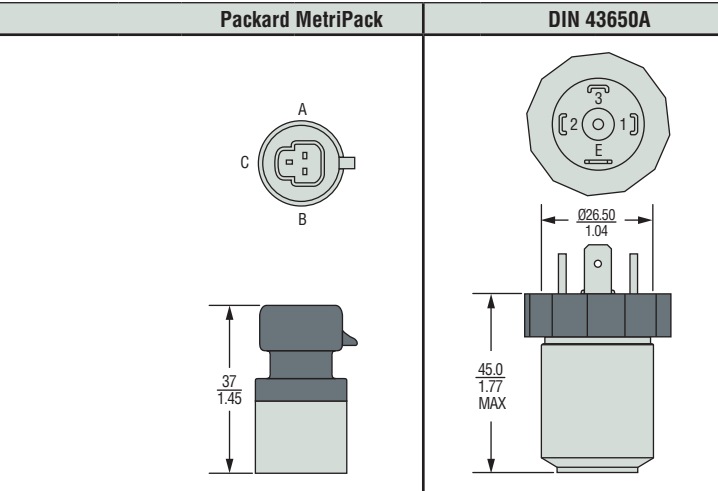
1. The diameter of all cans is 19 mm (0.748")
2. Hex is 22 mm (0.866") Across Flats (A/F) for deep socket mounting

## 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 <sub>out</sub> (pressure) | No Connect   | V <sub>supply</sub>                                                               | Supply       | V <sub>supply</sub>                                                                | Supply       | Ground                                                                              | Return       | V <sub>out</sub> (pressure) | Amp Superseal connectors may be used with 0.5-4.5V Ratiometric Output only. |
| 2                                                                                 | V <sub>supply</sub>         | Supply       | Ground                                                                            | Return       | V <sub>out</sub> (pressure)                                                        | No Connect   | V <sub>supply</sub>                                                                 | Supply       | Ground                      |                                                                             |
| 3                                                                                 | No Connect                  | No Connect   | V <sub>out</sub> (pressure)                                                       | No Connect   | Ground                                                                             | Return       | No Connect                                                                          | No Connect   | V <sub>supply</sub>         |                                                                             |
| 4                                                                                 | Ground                      | Return       | No Connect                                                                        | No Connect   | No Connect                                                                         | No Connect   | V <sub>out</sub> (pressure)                                                         | No Connect   | —                           |                                                                             |

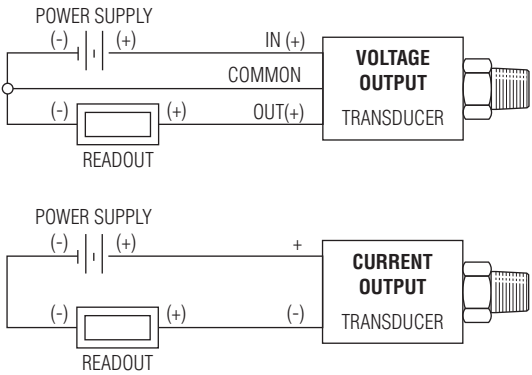
## Mating Connectors

| 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                        |
| 557254      | DIN 43650A Connector, strain relief (with drive screw & gasket)                                                    | G                        |
|             | 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                        |



| Code 9 |                             |                                                                         | Code G |                             |              |
|--------|-----------------------------|-------------------------------------------------------------------------|--------|-----------------------------|--------------|
| Pin ID | Voltage Mode                | Note                                                                    | Pin #  | Voltage Mode                | Current Mode |
| C      | V <sub>out</sub> (pressure) | MetriPack connectors may be used with 0.5-4.5V Ratiometric Output only. | 1      | V <sub>supply</sub>         | Supply       |
| A      | Ground                      |                                                                         | 2      | Ground                      | Return       |
| B      | V <sub>supply</sub>         |                                                                         | 3      | V <sub>out</sub> (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

Series

Output

Pressure Range

Compound Range

Pressure Datum

3300

X

XXXX

X

XX

X

0

00

B - 4-20 mA

N - 0.5-4.5 V

S - 0-10 V

C - 1-6 V

P - 1-10 V

T - 0.5-4.5 V Ratiometric

H - 1-5 V

R - 0-5 V

01B0 - 1 bar

01B6 - 1.6 bar

02B5 - 2.5 bar

04B0 - 4 bar

06B0 - 6 bar

10B0 - 10 bar

16B0 - 16 bar

015P - 15 psi

030P - 30 psi

050P - 50 psi

100P - 100 psi

150P - 150 psi

200P - 200 psi

250P - 250 psi

00B0V - -1 to 0 barG

01B0V - -1 to +1 barG

01B5V - -1 to +1.5 barG

03B0V - -1 to +3 barG

05B0 - -1 to +5 barG

09B0 - -1 to +9 barG

15B0 - -1 to +15 barG

000PV - -15 to 0 psiG

015PV - -15 to +15 psiG

035PV - -15 to +35 psiG

085PV - -15 to +85 psiG

135PV - -15 to +135 psiG

185PV - -15 to +185 psiG

235PV - -15 to +235 psiG

G - Gauge

A - Absolute

V - Compound

Electrical Connection

Pressure Port

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<sup>1</sup>

8 - Deutsch DT04-4P

9 - Packard MetriPack<sup>1</sup>

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

PRESSURE TRANSDUCERS

Visit [www.GemsSensors.com](http://www.GemsSensors.com) for most current information.

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