

# 3100 Series Compact High Pressure OEM Pressure Transmitter

- ▶ 10 bar to 2200bar pressure ranges
- ▶ Less than 25mm long
- ▶ Choice of outputs

For OEMs that need consistent high levels of performance, reliability and stability the 3100 Series sputtered thin film units offer unbeatable price performance ratio in a small package size with all stainless steel wetted parts in the volumes required. 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 3100 series makes it ideal for installation where space is at a premium.

## Specifications

Input	
<b>Pressure Range</b>	0 to 10bar to 0 to 2200bar G (100 to 30,000psi)
<b>Proof Pressure</b>	2 x FS (Ranges 1600 & 2200bar 1.5x)
<b>Burst Pressure</b>	Ranges ~400bar 10 x minimum 600 & 1000b 4 x, 1600 & 2200 1.8x
<b>Fatigue Life</b>	Designed for more than 100,000,000 cycles
Performance	
<b>Long Term Drift</b>	0.1% FS/year non cumulative
<b>Accuracy</b>	±0.25% FS (Temp O/P ± 2.5%FS)
<b>Thermal Error</b>	±1% typical/100°C
<b>Compensated Temperature</b>	-40° to 120°C (-40° to 250°F)
<b>Operable</b>	-40° to 125°C (-40° to 250°F)
<b>Zero Tolerance</b>	±0.5% of span
<b>Span Tolerance</b>	±0.5% of span
Mechanical Construction	
<b>Pressure Port</b>	See ordering chart
<b>Wetted Parts</b>	17-4 PH Stainless Steel
<b>Electrical Connection</b>	See ordering chart
Enclosure	
	IP65 for electrical code B (with connector fitted) IP67 for electrical codes E, 6, 7, 8 and 9
<b>Vibration</b>	20G, 10-2000Hz sinusoidal
<b>Shock</b>	Withstands free fall to IEC 68-2-32 procedure 1
<b>Approvals</b>	CE
<b>Weight</b>	35 gms

## Individual Specifications

Voltage Output Units	
<b>Output</b>	See ordering chart (current 4.5mA)
<b>Supply Voltage</b>	2 Volts above Full Scale, to max 30 Volts
Current Output Units	
<b>Output</b>	4-20mA
<b>Supply Voltage</b>	10 to 30Vdc (24Vdc max for 110° and above)
<b>Max. Loop Resistance</b>	(Vs-10) x 50 ohms
Ratiometric Output Units	
<b>Output</b>	0.5 to 4.5Vdc (3.5mA max)
<b>Supply Voltage</b>	5Vdc, ± 10%

### MECHANICAL FITTINGS

**Code 01**  
G 1/4 EXT



**Code 04**  
7/16"-20 UNF  
with 37° Flare



**Code 1J**  
7/16"-20 UNF  
O-Ring



**Code 02**  
1/4"-18 NPT



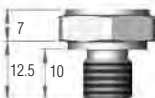
**Code 08**  
1/8"-27 NPT



**Code 05**  
G 1/4"A  
Integral Face Seal



**Code 0L**  
M12 x 15



**Code 2T**  
M12x1.5 HP  
[metal washer seal]



**Code IG**  
7/16"Schraeder



Hex is 22mm [.866"] Across Flats (A/F) for deep socket mounting.  
Other thread forms available. Consult factory.

**NOTE: Dimensions in mm**

## Electrical Connectors



AMP Superseal 1.5



DIN 43650C Industrial



DIN 72585 Bayonet



M12 Ranges



Deutsch DTD4-4P



Packard Metri-pack

## How to Order

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

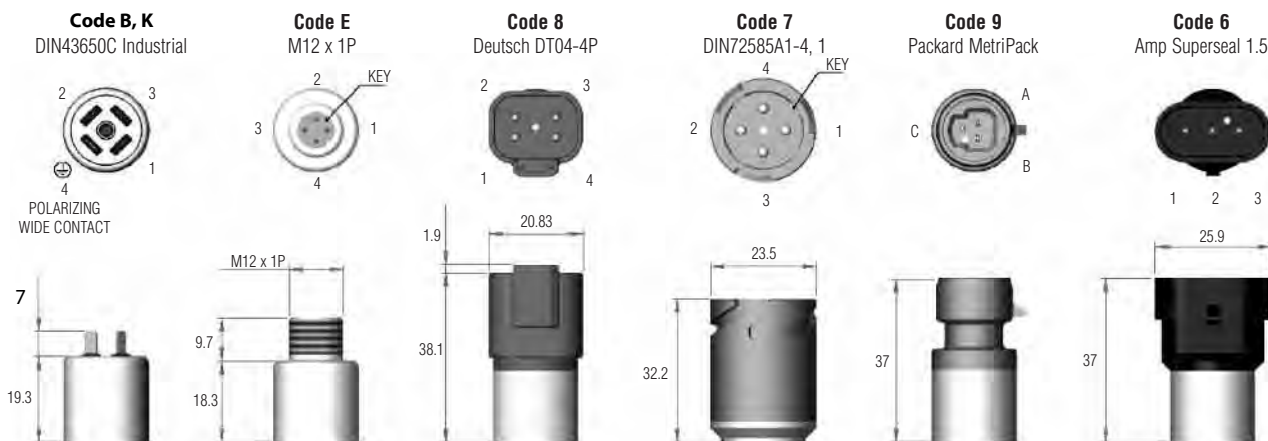
<b>Series</b>	<b>310X</b>	<b>X</b>	<b>XXXXX</b>	<b>XX</b>	<b>X</b>	<b>000</b>	<b>01</b> - female DIN plug included
<b>Variants to Standard Types</b>							
<b>00</b> - Pressure output							
<b>01</b> - Pressure and temperature output (see <b>Note 1</b> )							
<b>Output</b>							
<b>B</b> - 4-20mA							
<b>H</b> - 1-5V							
<b>S</b> - 0-10V							
<b>C</b> - 1-6V							
<b>N</b> - 0.5 to 4.5V Non Ratiometric							
<b>T</b> - 0.5 to 4.5 Ratiometric							
<b>R</b> - 0-5 V							
<b>Pressure Range</b>							
<b>0010G</b> - 10barG							
<b>0016G</b> - 16barG							
<b>0025G</b> - 25barG							
<b>0040G</b> - 40barG							
<b>0060G</b> - 60barG							
<b>0100S</b> - 100barS							
<b>0160S</b> - 160barS							
<b>0250S</b> - 250barS							
<b>0400S</b> - 400barS							
<b>0600S</b> - 600barS							
<b>1000S</b> - 1000barS )							
<b>1600S</b> - 1600barS ) (see <b>Note 2</b> )							
<b>2200S</b> - 2200 barS )							
<b>Electrical Connection</b>							
<b>6</b> - AMP Superseal 1.5 Series							
<b>7</b> - DIN 72585 Bayonet							
<b>8</b> - Deutsch Series DT-04							
<b>9</b> - Packard Metripak							
<b>B</b> - Industrial DIN							
<b>E</b> - M12x 1							
<b>K</b> - Industrial DIN with female plug included							
<b>Integral Pressure Connection</b>							
<b>01</b> - G1/4 External							
<b>02</b> - 1/4- 18 NPT External							
<b>04</b> - 7/16-20 UNF External							
<b>05</b> - G1/4 External Soft Seal							
<b>08</b> - 1/8 NPT External							
<b>0L</b> - M12 x 1.5 - 6g (600b and below)							
<b>1G</b> - Schraeder Deflator (Short)							
<b>1J</b> - 7/16 - 20 UNF External 'O' Ring Seal							
<b>2T</b> - M12 x 1.5-6g (1000b and above)							

For mating electrical connectors and cables see page 67.

**Note 1** Pressure and temperature output available with voltage output and electrical connectors B, E, 7 and 8 only

**Note 2** Ranges 1000 bar and above available with 2T pressure port only.

## ELECTRICAL CONNECTOR



**Note:** The diameter of all cans is 19mm [.748]

### Code B

Pin #	Function	
	Current	Voltage
1	DNC	Press O/P +VE
2	+VE	Supply +VE
3	DNC	Temp O/P +VE
4	-VE	Common

Pin #	Function	
	Current	Voltage
1	+VE	Supply +VE
2	N/A	Press O/P +VE
3	-VE	Common
4	N/A	Temp O/P +VE

Pin #	Function	
	Current	Voltage
1	-VE	Common
2	+VE	Supply +VE
3	N/A	Temp O/P +VE
4	N/A	Press O/P +VE

Pin #	Function	
	Current	Voltage
1	+VE	Supply +VE
2	-VE	Common
3	N/A	Press O/P +VE
4	N/A	Temp O/P +VE

Pin #	Function	
	Current	Voltage
A	-VE	Common
B	+VE	Supply +VE
C	N/A	Press O/P +VE

Pin #	Function	
	Current	Voltage
1	N/A	Press O/P +VE
2	-VE	Common
3	+VE	Supply +VE

### Code K

Pin #	Function	
	Current	Voltage
1	+VE	IN+
2	-VE	COM
3	DNC	OUT+
4	Case	Earth

**Sealed pressure range ("S"):** the pressure reading on these particular devices is found by comparing the pressure measured at the diaphragm to a sealed, known reference.

» the reference is sealed inside the sensor during manufacture

• sealed with the pressure of the day at the time of manufacture (approx. 900-1100mbar)

» this is transducer is therefore neither an absolute or true gauge unit

• using this technique however the pressure reading only ends up slightly out

• the small differential created would be "invisible" in the 4-20mA range of the device as it is so relatively small