

## 221C Series/261C - Intrinsically Safe Industrial Pressure Transmitters

- ▶ Ex II 1G ; EEx ia IIC T4 (-20°C ≤ Ta ≤ 75°C)
- ▶ Ranges from 0.5b to 400b gauge and 0 to 25bar Absolute range
- ▶ Voltage and 2 wire 4-20mA output models
- ▶ All Stainless Steel wetted parts

Certified to the latest harmonised European standard (ATEX) the 221C and 261C Intrinsically safe pressure transmitters are designed to withstand the rigours of the most difficult applications with an all stainless steel construction, free from seals or oil barriers.

Incorporating Gems CVD Sensors and ASIC technology the 221C and 261C offer long term reliability, excellent performance and long term stability ensuring long service life without routine maintenance.

Available with a wide choice of pressure fittings units can be supplied to IP65 or fully immersible to IP68 200mWG and a variety of electrical connectors.



Ex II IG

CE

### Specifications

#### Input

<b>Pressure Range</b>	Vacuum to 400bar G (6000 psi) 0-25bar Absolute
<b>Proof Pressure</b>	2 x Full Scale (FS) (1.5 x FS for 400bar, >= 5000psi)

<b>Burst Pressure</b>	>35 x FS <= 6bar (100psi) >20 x FS >=60bar (1000psi) >5 x FS <= 400bar (6000psi)
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<b>Fatigue Life</b>	Designed for more than 100 million FS cycles
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#### Performance

<b>Long Term Drift</b>	0.2% FS/year (non-cumulative)
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<b>Accuracy</b>	0.25 % FS typical (optional 0.15% FS)
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<b>Thermal Error</b>	1.5% FS typical (optional 1% FS)
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<b>Compensated Temperatures</b>	-20° to 80° C (-5° to 180° F)
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<b>Operating Temperatures</b>	-40° to 125°C (-40° to 260°F) for elec. codes A, B, C -20° to 80°C (-5° to 180°F) for elec. code G -20° to 50°C (-5° to 125°F) for elec. codes F,M, 3
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<b>Zero Tolerance</b>	1% of span
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<b>Span Tolerance</b>	1% of span
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#### Mechanical Configuration

<b>Pressure Port</b>	See ordering chart
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<b>Wetted Parts</b>	17-4 PH Stainless Steel
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<b>Electrical Connection</b>	See ordering chart
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<b>Enclosure</b>	316 ss, 17-4 PH ss IP65 for elec. codes A, B, C, G (with connector fitted) 3 IP67 for elec. code "F" IP68 for elec. codes M,
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<b>Vibration</b>	35g peak sinusoidal, 5 to 2000Hz
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<b>Acceleration</b>	100g steady acceleration in any direction 0.032%FS/g for 1 bar (15psi) range decreasing logarithmically to 0.0007%FS/g for 400bar (6000psi) range
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<b>Shock</b>	Withstands free fall to IEC 68-2-32 procedure 1
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<b>Approvals</b>	Ex II 1G ; EEx ia IIC T4 (-20 ≤ Ta ≤ +75°C)
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<b>Weight</b>	Approx. 100grams (additional cable; 75g/m)
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CE

Ex II IG

### Individual Specifications

#### Voltage Output units

<b>Output</b>	See ordering chart
<b>Supply Voltage (Vs)</b>	1.5Vdc above FS output to 25.5Vdc
<b>Supply Voltage Sensitivity</b>	0.01%FS/Volt
<b>Min. Load Resistance</b>	(FS output / 2) Kohms
<b>Current Consumption</b>	Approx 6mA at 7.5V output

#### Current Output Units

<b>Output</b>	4-20mA (2 wire)
<b>Supply Voltage (Vs)</b>	24Vdc, (7-25.5Vdc) above 100°C supply limited to 24Vdc
<b>Supply Voltage Sensitivity</b>	0.0 1% FS/Volt
<b>Max. Loop Resistance</b>	(Vs-7) x 50 ohms

Wire Code	Current Units (4-20mA)		
	(+)	(-)	EARTH
A, B, G Industrial DIN	PIN 1	2	4
C "10-6 Bayonet"	PIN A	B	E
D Cable	R	BK	DRAIN
F IP 67 cable	R	BK	DRAIN
1 "8-4-Bayonet"	PIN A	B	D
3 "Conduit & cable"	R	BK	DRAIN
M Immersible IP68 to 200m	R	BL	DRAIN

Wire Code	Voltage Units			
	IN+	COM	OUT+	EARTH
A, B, G Industrial DIN	PIN 1	2	3	4
C 10-6 Bayonet	PIN A	C	B	E
D Cable	R	BK	W	DRAIN
F IP 67 cable	R	BK	W	DRAIN
1 "8-4-Bayonet"	PIN A	C	B	D
3 "Conduit & cable"	R	BK	W	DRAIN
M Immersible IP68 to 200m	R	W	Y	DRAIN

**Cable Legend:**

R = Red  
BL = Blue  
BK = Black  
W = White

**CVD TECHNOLOGY**

**PRESSURE TRANSDUCERS**

**How to Order**

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

**221C B G A60 01 A B U A**

Series **221C 261C** Performance Code

Output **B - 4-20mA C - 1-6V J - 0.5-5.5V** Accuracy/Thermal  
**D - 1-11V R - 0-5V A - .25%/1.5%**  
**H - 1-5V S - 0-10V B - .15%/1.0%**

Pressure Datum **G - Gauge** Cable Length (Max length on 221C-10 Metres)  
**A - Absolute D - 1 Metre**  
**E - 3 Metres**  
**F - 5 Metres**  
**G - 10 Metres**  
**H - 15 Metres**  
**J - 20 Metres**  
**K - 25 Metres**  
**L - 30 Metres**  
**M - 40 Metres**  
**N - 50 Metres**  
**P - 75 Metres**  
**Q - 100 Metres**  
**R - 125 Metres**  
**S - 150 Metres**

Pressure Range - bar (Additional intermediate ranges available - please consult factory)

<b>A10</b> - 0-1	<b>B25</b> - 0-25	<b>Vac</b> = -1 bar
<b>A16</b> - 0-1.6	<b>B40</b> - 0-40	<b>1A0</b> - Vac-0
<b>A25</b> - 0-2.5	<b>B60</b> - 0-60	<b>1A6</b> - Vac-0.6
<b>A40</b> - 0-4	<b>C10</b> - 0-100	<b>2A5</b> - Vac-1.5
<b>A60</b> - 0-6	<b>C16</b> - 0-160	<b>4A0</b> - Vac-3
<b>B10</b> - 0-10	<b>C25</b> - 0-250	<b>6A0</b> - Vac-5
<b>B16</b> - 0-16	<b>C40</b> - 0-400	<b>1B0</b> - Vac-9
		<b>1B6</b> - Vac-15
		<b>2B5</b> - Vac-24
		<b>4B0</b> - Vac-39

Pressure Range - psi (Additional intermediate ranges available - please consult factory)


<b>F15</b> - 0-15	<b>G60</b> - 0-600	<b>Vac</b> = -15 psi
<b>F30</b> - 0-30	<b>H10</b> - 0-1,000	<b>1F5</b> - Vac-0
<b>F60</b> - 0-60	<b>H15</b> - 0-1,500	<b>3F0</b> - Vac-15
<b>G10</b> - 0-100	<b>H20</b> - 0-2,000	<b>6F0</b> - Vac-45
<b>G15</b> - 0-150	<b>H30</b> - 0-3,000	<b>1G0</b> - Vac-85
<b>G20</b> - 0-200	<b>H40</b> - 0-4,000	<b>1G5</b> - Vac-135
<b>G30</b> - 0-300	<b>H50</b> - 0-5,000	<b>2G0</b> - Vac-185
<b>G50</b> - 0-500	<b>H60</b> - 0-6,000	<b>3G0</b> - Vac-285

Pressure Port **01** - G1/4 External **08** - 1/8-27 NPT External  
**02** - 1/4-18 NPT External **09** - G1/8 Internal  
**03** - G1/2 Manometer **00** - G1/4 Internal  
**04** - 7/16-20UNF to SAE J514 **0A** - R1/4 External **Others** - Consult Factory  
**05** - G1/4 Ext. Soft Seal **19** - Nose Cone (2600 Only)

Electrical Connection **221C Series**  
**A** - Industrial DIN Mating Connector Supplied  
**B** - Industrial DIN Mating Connector Not Supplied  
**F** - Cable Gland Metal IP67


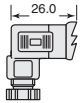
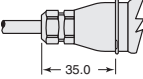
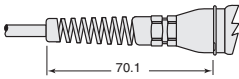
**261C Series**  
**C** - Fixed Plug Size 10-6 Mating Plug Not Supplied  
**G** - Fixed Plug To DIN 43650 Mating Plug Supplied  
**M** - Immersible Max. depth 200metres  
**1** - Fixed Plug Size 8-4 Mating Plug Not Supplied  
**3** - Conduit Connector 1/2NPT Ext. 1M Cable

Apparatus Protection **B** - Intrinsically safe, zener barrier, Gauge only  
**G** - Intrinsically safe, galvanic barrier Gauge or Absolute



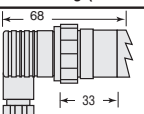
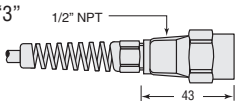
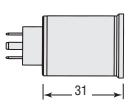
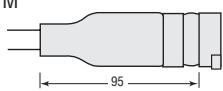
 II IG  
EEx ia IIC T4  
(-20 < Ta < +75°C)

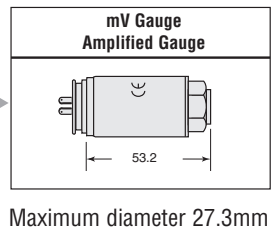
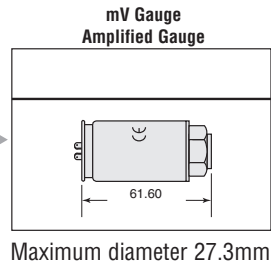
Dimensions (in mm)

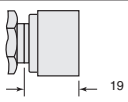
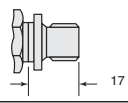
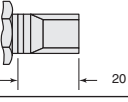
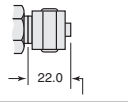
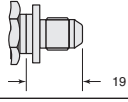
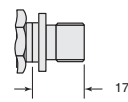
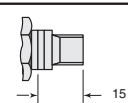
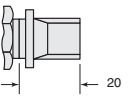

221C Series


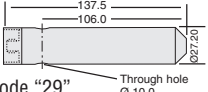
<b>Industrial DIN Connector</b>	
Code "B"	
<b>Industrial DIN Connector (mate supplied)</b>	
Code "A"	
<b>IP67 Cable</b>	
Code "F"	
<b>IP65 or NEMA4 Cable</b>	
Code "D" or "2"	

261C Series

<b>10-6 or 8-4 Mil-C Connector</b>	
10-6 Code "C"	
8-4 Code "1"	
<b>Large DIN 43650 Plug (mate supplied)</b>	
Code "G"	
<b>Conduit Connector with Cable</b>	
Code "3"	
<b>Micro DIN Connector</b>	
Code "T"	
<b>Immersible Cable</b>	
Code "M"	



<b>G 1/4 Internal</b>	
Code "00"	
<b>G 1/4 External</b>	
Code "01"	
<b>1/4 - 1/8 NPT</b>	
Code "02"	
<b>G 1/2 Manometer</b>	
Code "03"	
<b>7/16-20 UNF-2A</b>	
Code "04"	
<b>G 1/4 Soft Seal</b>	
Code "05"	
<b>1/8-27 NPT</b>	
Code "08"	
<b>R 1/4</b>	
Code "0A"	
<b>G 1/8 Internal</b>	
Code "09"	

<b>Nose Cone - Black Acetal</b>	
Code "19"	
<b>Nose Cone Sink Weight</b>	
Code "29"	

Others - Consult factory