

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

PRESSURE TRANSDUCERS

CVD TECHNOLOGY

- ▶ 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

Pressure Range Vacuum to 400bar G (6000 psi) 0-25bar Absolute

Proof Pressure 2 x Full Scale (FS)
(1.5 x FS for 400bar, >= 5000psi)

Burst Pressure >35 x FS <= 6bar (100psi)
>20 x FS >=60bar (1000psi)
>5 x FS <= 400bar (6000psi)

Fatigue Life Designed for more than 100 million FS cycles

Performance

Long Term Drift 0.2% FS/year (non-cumulative)

Accuracy 0.25 % FS typical (optional 0.15% FS)

Thermal Error 1.5% FS typical (optional 1% FS)

Compensated Temperatures -20° to 80° C (-5° to 180° F)

Operating Temperatures -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

Zero Tolerance 1% of span

Span Tolerance 1% of span

Mechanical Configuration

Pressure Port See ordering chart

Wetted Parts 17-4 PH Stainless Steel

Electrical Connection See ordering chart

Enclosure 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,

Vibration 35g peak sinusoidal, 5 to 2000Hz

Acceleration 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

Shock Withstands free fall to IEC 68-2-32 procedure 1

Approvals Ex II 1G ; EEx ia IIC T4 (-20 ≤ Ta ≤ +75°C)

Weight Approx. 100grams (additional cable; 75g/m)



CE

Ex II IG

Individual Specifications

Voltage Output units

Output See ordering chart

Supply Voltage (Vs) 1.5Vdc above FS output to 25.5Vdc

Supply Voltage Sensitivity 0.01%FS/Volt

Min. Load Resistance (FS output / 2) Kohms

Current Consumption Approx 6mA at 7.5V output

Current Output Units

Output 4-20mA (2 wire)

Supply Voltage (Vs) 24Vdc, (7-25.5Vdc) above 100°C supply limited to 24Vdc

Supply Voltage Sensitivity 0.0 1% FS/Volt

Max. Loop Resistance (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
A - Absolute (Max length on 221C-10 Metres)
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)

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


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

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


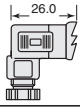
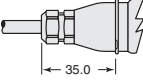
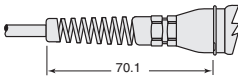
Electrical Connection **221C** Series **261C** Series
A - Industrial DIN Mating Connector Supplied **C** - Fixed Plug Size 10-6 Mating Plug Not Supplied
B - Industrial DIN Mating Connector Not Supplied **G** - Fixed Plug To DIN 43650 Mating Plug Supplied
F - Cable Gland Metal IP67 **M** - Immersible 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



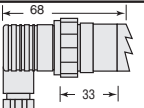
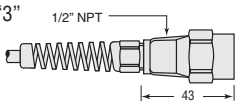
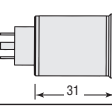
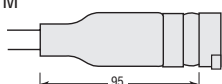
 II IG
EEx ia IIC T4
(-20 < Ta < +75°C)

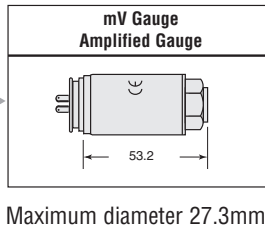
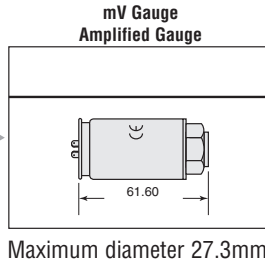
Dimensions (in mm)

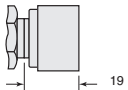
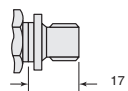
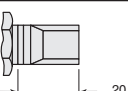
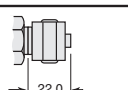
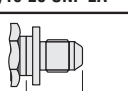
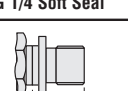
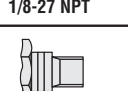


221C Series


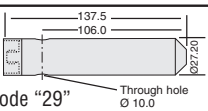
Industrial DIN Connector	
Code "B"	
Industrial DIN Connector (mate supplied)	
Code "A"	
IP67 Cable	
Code "F"	
IP65 or NEMA4 Cable	
Code "D" or "2"	

261C Series

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



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

Nose Cone - Black Acetal	
Code "19"	
Nose Cone Sink Weight	
Code "29"	

Others - Consult factory