



# Pressure Sensors



**Gems**™  
Sensors & Controls

# Welcome to Gems Sensors

## Pressure Catalogue

INTRODUCTION

This catalogue describes our best selling pressure sensors, from economical OEM to aerospace quality transducers we have the choice and variety of configurations for most applications. The catalogue is divided into sections, for each range of products, and includes special pages describing our immersible sensors. Dimensional drawings, specifications and photographs are included providing comprehensive technical information for designers and specifiers.

We want to make it as easy as possible for you to do business with Gems. This catalogue should provide you with all you need to know about a pressure transducer or transmitter and includes a section for accessories and additional information. Should you not find what you are looking for please do not hesitate to contact your nearest Gems Sales Office or Representative. A list of our Representatives can be found at the back of this catalogue.

We understand that some applications require a bespoke sensor. Our engineers are ready to offer comprehensive advice and, whether it is a special connector, a different label or a completely re-designed package, we can provide timely cost effective solutions.

Gems also manufactures pressure switches, level sensors, flow sensors, and tank sight level indicators some of which are illustrated on page 71. Many of these products are available ex stock through our express shipping services in Europe and North America. Please contact your sales office for full details.

For the last 40 years we have listened, and responded, to our customer needs, helping our OEM customers to maintain a competitive edge and, providing end users with reliable solutions to the most demanding pressure measuring problems.



Visit us at: [www.gems-sensors.co.uk](http://www.gems-sensors.co.uk) or [www.gemssensors.com](http://www.gemssensors.com)

### The fastest way to more information:

...just complete the form below and fax it to your nearest sales office (address on back page)

**From:**

Name .....	Company .....
Department.....	Street/PO Box .....
Post Code/City.....	Telephone .....
Email .....	Fax .....

I have the following application.....  
 .....  
 .....

and I would like to talk with one of your sales engineers. Please call me (date/time) .....

Please send me more information on:

- |  |   |
|--|---|
| <input type="checkbox"/> Gems Electro Optic Level Switches | <input type="checkbox"/> Gems Single Point Level Switches |
| <input type="checkbox"/> Gems Multi Point Level Switches   | <input type="checkbox"/> Gems Flow Indicators             |
| <input type="checkbox"/> Gems Flow Switches                | <input type="checkbox"/> Gems Pressure Switches           |

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# 2200 Series / 2600 Series - Universal Industrial Pressure Transducers

PRESSURE  
SENSORS

CVD TECHNOLOGY

PRESSURE TRANSDUCERS

- ▶ Gauge, absolute, vacuum and compound pressure models available
- ▶ Submersible, general purpose and wash down enclosures
- ▶ High stability achieved by CVD sensing element
- ▶ Millivolt, voltage and current output models

The 2200 series features stability and accuracy in a variety of enclosure options. The 2600 series extends the packaging options via an all welded stainless steel back end for demanding submersible and industrial applications. The 2200 and the 2600 feature proven CVD sensing technology, an ASIC (amplified units), and modular packaging to provide a sensor line that fits most applications and can easily accommodate specials whilst not sacrificing high performance.

## Specifications

<b>Input</b>	
<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 <= 40bar (6000psi)
<b>Fatigue Life</b>	Designed for more than 100 million FS cycles
<b>Performance</b>	
<b>Long Term Drift</b>	0.2% FS/year (non-cumulative)
<b>Accuracy</b>	0.25 % FS typical (optional 0.15%FS)
<b>Thermal Error</b>	1.5% FS typical (optional 1%FS)
<b>Compensated Temperatures</b>	-20° to 80°C (-5° to 180°F)
<b>Operating Temperatures</b>	-40° to 125°C (-40° to 260°F) for elec. codes A, B, C, 1 -20° to 80°C (-5° to 180°F) for elec. codes 2, D, G, 3 -20° to 50°C (-5° to 125°F) for elec. codes F,M, P
<b>Zero Tolerance</b>	1% of span
<b>Span Tolerance</b>	1% of span
<b>Mechanical Configuration</b>	
<b>Pressure Port</b>	See ordering chart
<b>Wetted Parts</b>	17-4 PH Stainless Steel
<b>Electrical Connection</b>	See ordering chart
<b>Enclosure</b>	316 ss, 17-4 PH ss IP65 for elec. codes A, B, C, G (with connector fitted) D, 1, 2, 3 IP67 for elec. code "F" IP68 for elec. code M IP30 for elec. code "3" with flying leads
<b>Vibration</b>	35g peak sinusoidal, 5 to 2000Hz
<b>Acceleration</b>	100g steady acceleration in any direction 0.032%FS/g for 1bar (15psi) range decreasing logarithmically to 0.0007% FS/g for 400 bar (6000 psi) range.
<b>Shock</b>	Withstands free fall to IEC 68-2-32 procedure 1
<b>Approvals</b>	CE
<b>Weight</b>	Approx. 100grams (additional cable; 75g/m)



CE

UL US



CE

UL US

## Individual Specifications

<b>Millivolt Output units</b>	
<b>Output</b>	100mv +/-1mV
<b>Supply Voltage (Vs)</b>	10Vdc (15Vdc max.) Regulated
<b>Bridge resistance</b>	2600-6000ohms
<b>Voltage Output units</b>	
<b>Output</b>	See ordering chart
<b>Supply Voltage (Vs)</b>	1.5Vdc above FS output to 35Vdc @ 6mA
<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
<b>Current Output units</b>	
<b>Output</b>	4-20mA (2 wire)
<b>Supply Voltage (Vs)</b>	24Vdc, (7-35Vdc) Above 100°C supply limited to 24Vdc
<b>Supply Voltage Sensitivity</b>	0.01% FS/Volt
<b>Max. Loop Resistance</b>	(Vs-7) x 50ohms



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Connection Code			mV Units				Current units (4-20mA)			Voltage units			
			IN+	OUT+	OUT-	IN-	(+)	(-)	EARTH	IN+	COM	OUT+	EARTH
A, B, G	Industrial DIN	PIN	1	2	3	E	1	2	4	1	2	3	4
C	"10-6 Bayonet"	PIN	A	B	C	D	A	B	E	A	C	B	E
D	"Cable"		R	Y	BL	G	R	BK	DRAIN	R	BK	W	DRAIN
F	"IP 67 cable"		R	Y	BL	G	R	BK	DRAIN	R	BK	W	DRAIN
M	"Immersible"		R	Y	BL	W	R	BL	DRAIN	R	W	Y	DRAIN
1	"8-4 Bayonet"	PIN	A	B	C	D	A	B	D	A	C	B	D
2	"Cable"		R	W	G	BK	R	BK	DRAIN	R	BK	W	DRAIN
3	"Conduit & Flying Leads"		R	W	BK	G	R	BK	G	R	BK	W	G
3	"Conduit & Cable"		R	W	G	BK	R	BK	DRAIN	R	BK	W	DRAIN

**Cable Legend:**

- R = Red
- BL = Blue
- BK = Black
- W = White
- G = Green
- Y = Yellow

**How to Order**

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

**2200 B G A60 01 A 3 U A**

Series 2200 2600

Output A - 100mv C - 1-6V J - 0.5-5.5V  
B - 4-20mA D - 1-11V R - 0-5V  
H - 1-5V S - 0-10V

Pressure Datum A\* - Absolute G - Gauge  
 \*Max absolute range is 25bar.

Pressure Range - bar (Additional intermediate pressure ranges available. Please consult factory)

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

Vac = -1 bar  
**1A0** - Vac-0

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)  
29 - Nose cone sink weight (2600 only)  
IG - 7/16 Schraeder Depressor

Electrical Connection A - Industrial DIN Mating Connector Supplied  
B - Industrial DIN Mating Connector Not Supplied  
2 - Cable Nema 4 USA  
D - Cable Weatherproof IP65 Europe  
F - Cable Gland Metal IP67

2600 Series C - Fixed Plug Size 10-6 Mating Plug Not Supplied  
G - Fixed Plug To DIN 43650 Mating Plug Supplied  
M - Immersible Max. depth 200 metres  
1 - Fixed Plug Size 8-4 Mating Plug Not Supplied  
3 - Conduit Connector 1/2NPT Ext. 1M Cable  
 Where electrical connection **-3** and cable length **-U** occur in part number, the unit will be supplied with flying leads (IP30)  
T - Micro DIN 43650 (mating connector not supplied)

Performance Code A  
 Accuracy/Thermal A - .25%/1.5%  
B - .15%/1.0%



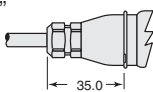
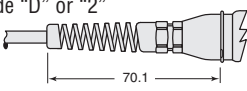
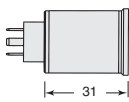
Cable Length (Max length on 2200 - 10 metres)  
U - No Cable Fitted  
D - 1 Metre  
E - 3 Metres  
F - 5 Metres  
G - 10 Metres  
H - 15 Metres  
J - 20 Metres  
K - 25 Metres  
L - 30 Metres  
M - 40 Metres  
N - 50 Metres  
P - 75 Metres  
Q - 100 Metres  
R - 125 Metres  
S - 150 Metres

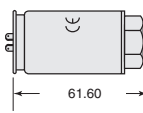
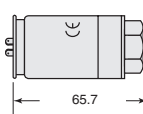
Code	Length (M)
4	170
5	200
6	225

Apparatus Protection 2 - mV Transient Protection CE Mark  
3 - Amplified RFI Protected CE Mark

**Dimensions (in mm)**



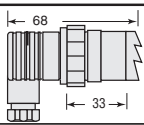
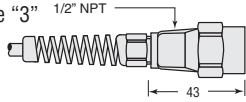
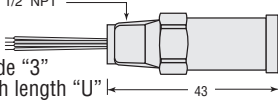

**2200 Series**

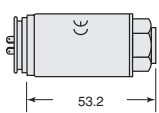
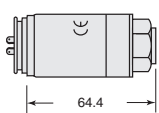
<b>Industrial DIN Connector</b>	
Code "B"	
<b>Industrial DIN Connector (mate supplied)</b>	
Code "A"	
<b>IP67 Cable</b>	
Code "F"	
<b>IP65 or NEMA4 Cable</b>	
Code "D" or "2"	
<b>Micro DIN Connector</b>	
Code "T"	

<b>mV Gauge/Absolute Amplified Gauge</b>	
<b>Amplified Absolute</b>	

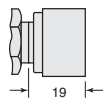
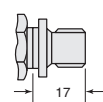
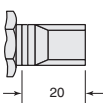
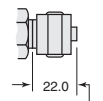
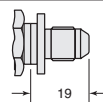
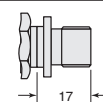
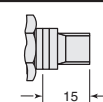
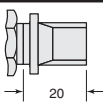

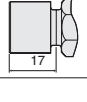

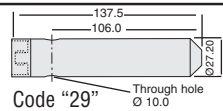
Maximum diameter 27.3 mm

**2600 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" 1/2" NPT	
<b>Conduit Connector with Flying Leads</b>	
Code "3" with length "U"	
<b>Immersible Cable</b>	
Code "M"	

<b>mV Gauge/Absolute Amplified Gauge</b>	
<b>Amplified Absolute</b>	

Maximum diameter 27.3mm

<b>G 1/4 Internal</b>	
<b>G 1/4 External</b>	
<b>1/4 - 1/8 NPT</b>	
<b>G 1/2 Manometer</b>	
<b>7/16-20 UNF-2A</b>	
<b>G 1/4 Soft Seal</b>	
<b>1/8-27 NPT</b>	
<b>R 1/4</b>	
<b>G 1/8 Internal</b>	
<b>7/16 Schraeder</b>	
<b>Nose Cone - Black Acetal</b>	
Code "19"	
<b>Nose Cone Sink Weight</b>	
Code "29"	

Indicators and Accessories Pages 64-69

Others - Consult factory

## 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.



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 1G

### 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**  
**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)

<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


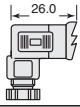
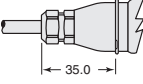
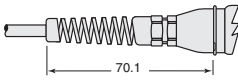
**261C Series**  
**C** - Fixed Plug Size 10-6 Mating Plug Not Supplied  
**G** - Fixed Plug To DIN 43650 Mating Plug Supplied  
**M** - Immersible Max. depth 200metres  
**1** - Fixed Plug Size 8-4 Mating Plug Not Supplied  
**3** - Conduit Connector 1/2NPT Ext. 1M Cable

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



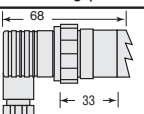
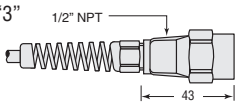
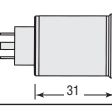
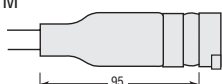
**Ex** II IG  
EEx ia IIC T4  
(-20 < Ta < +75°C)

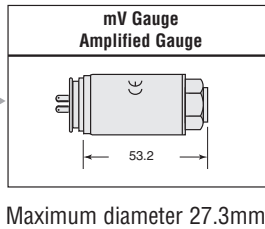
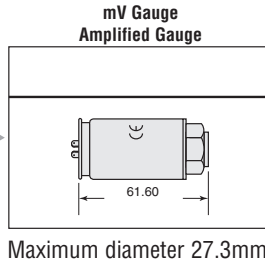
Dimensions (in mm)

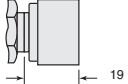
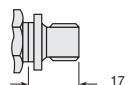
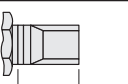
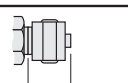
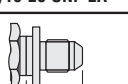
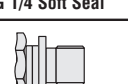



221C Series


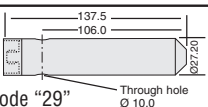
<b>Industrial DIN Connector</b>	
Code "B"	
<b>Industrial DIN Connector (mate supplied)</b>	
Code "A"	
<b>IP67 Cable</b>	
Code "F"	
<b>IP65 or NEMA4 Cable</b>	
Code "D" or "2"	

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

# 1200 Series / 1600 Series- **psibar** an OEM Transducer Featuring Exceptional Proof Pressure and Stability Specifications

PRESSURE SENSORS

CVD TECHNOLOGY

PRESSURE TRANSDUCERS

- ▶ Gauge, vacuum, and compound pressure models
- ▶ General purpose and wash down enclosures
- ▶ High proof pressure achieved by thicker diaphragm construction
- ▶ Voltage and current output models

The **psibar** features stability and toughness via its CVD and ASIC design coupled with a thicker diaphragm. The thicker diaphragm enables **psibar** to survive most pressure spikes caused by pump ripple, solenoid valves, etc. The 1600 series extends the packaging options by providing an all welded stainless steel back end for demanding industrial applications. The **psibar**'s modular design enables special ordering of fittings, electrical cables, etc. for OEM applications. The ASIC and CVD technology enables Gems to offer almost any output over any pressure range.



## Specifications

Input	
<b>Pressure Range</b>	Vacuum to 400bar (6000psi) Gauge datum only
<b>Proof Pressure</b>	4 x Full Scale (FS) (<1% FS Zero Shift)
<b>Burst Pressure</b>	>35 x FS <= 4bar (60psi)
	>20 x FS <=40bar (600psi)
	>5 x FS <= 400bar (6000psi)
<b>Fatigue Life</b>	Designed for more than 100 million FS cycles
Performance	
<b>Supply Voltage Sensitivity</b>	0.01% FS/Volt
<b>Long Term Drift</b>	0.2% FS/year (non-cumulative)
<b>Accuracy</b>	0.5 % FS typical
<b>Thermal Error</b>	2.0% FS typical
<b>Compensated Temperatures</b>	-20° to 80°C (-5° to 180°F)
<b>Operating Temperatures</b>	-40° to 125°C (-40° to 260°F) for elec. codes A, B, C, 1
	-20° to 80°C (-5° to 180°F) for elec. codes 2, D, G, 3
	-20° to 50°C (-5° to 125°F) for elec. code F
<b>Zero Tolerance</b>	1% of span
<b>Span Tolerance</b>	1% of span
Mechanical Configuration	
<b>Pressure Port</b>	See ordering chart
<b>Wetted Parts</b>	17-4 PH Stainless Steel
<b>Electrical Connection</b>	See ordering chart
<b>Enclosure</b>	316 SS, 17-4 PH ss
	IP65 for elec. codes A,B,C,G (with connector fitted) 1,2,3
	IP67 for elec. codes F
	IP30 for elec. code "3" with flying leads
<b>Vibration</b>	35g peak sinusoidal, 5 to 2000Hz
<b>Acceleration</b>	100g steady acceleration in any direction 0.032%FS/g for 1bar (15psi) range decreasing logarithmically to 0.0007%FS/g for 400bar (6000psi) range.
<b>Shock</b>	Withstands free fall to IEC 68-2-32 procedure 1
<b>Approvals</b>	CE
<b>Weight</b>	Approx. 100grams (additional; cable 75g/m)

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
2	"Cable"		R	BK	DRAIN
3	"Conduit & cable"		R	BK	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
2	"Cable"		R	BK	W	DRAIN
3	"Conduit & cable"		R	BK	W	DRAIN

### Cable Legend:

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

## Individual Specifications

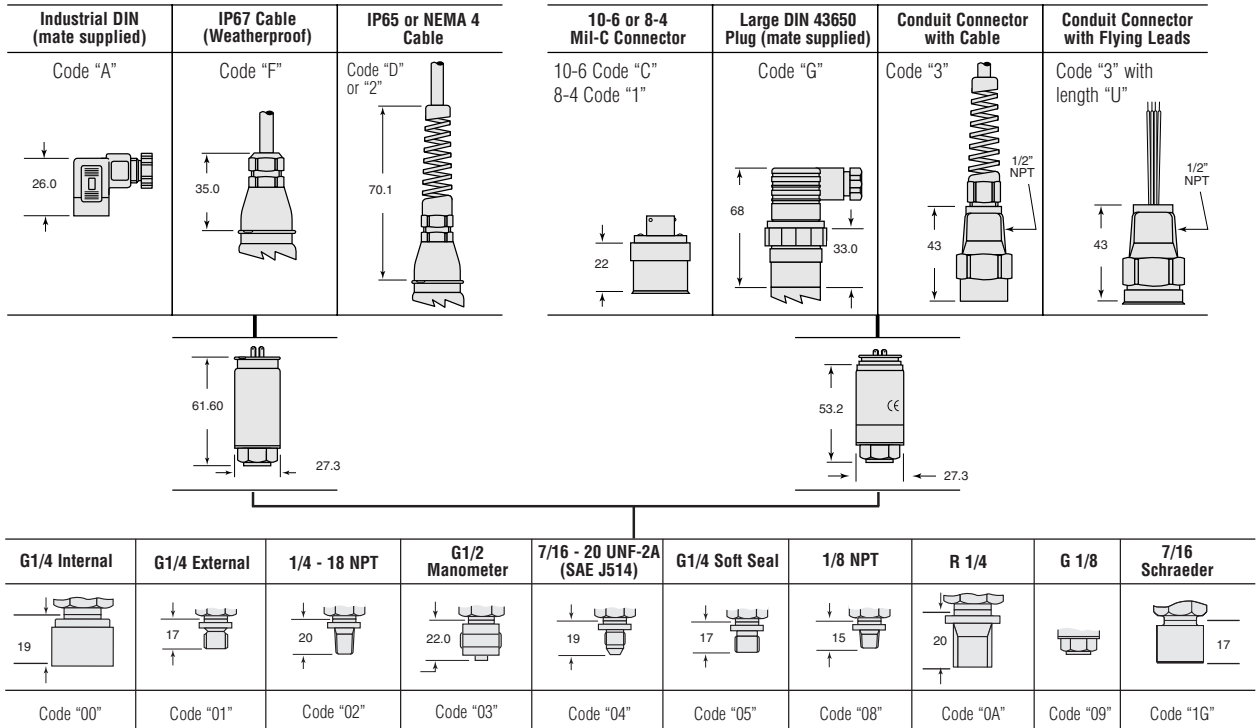
Voltage Output units	
<b>Output</b>	See ordering chart
<b>Supply Voltage (Vs)</b>	1.5Vdc above FS output to 35Vdc
<b>Min. Load Resistance</b>	(FS output / 2) Kohms
Current Output units	
<b>Output</b>	4-20mA (2 wire)
<b>Supply Voltage (Vs)</b>	24Vdc, (7-35Vdc) Above 100°C supply limited to 24Vdc
<b>Max. Loop Resistance</b>	(Vs-7) x 50 ohms

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Dimensions (in mm)

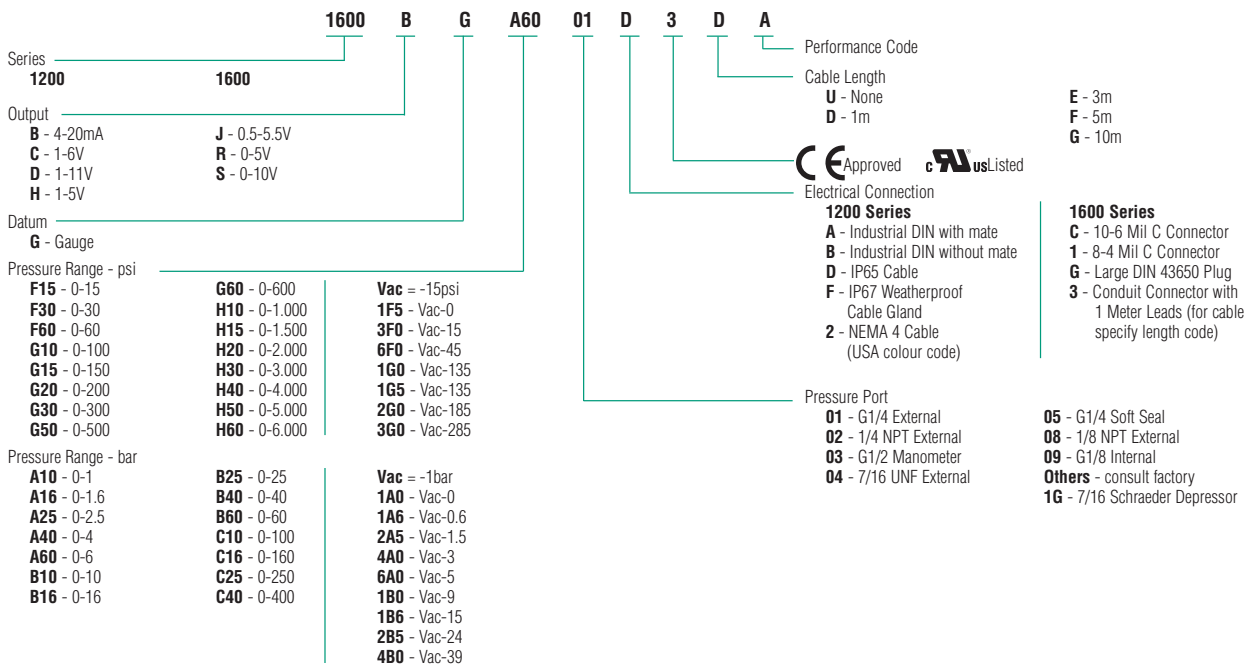
**psibar** 1200 Series

**psibar** 1600 Series



How to Order

Use the **bold** characters from the chart below to construct a product code. For other pressure connections consult Sales Office



## 2800 Series High Performance Industrial Pressure Transmitters

- ▶ 1% Error band over -30° to 100°C
- ▶ Customised options
- ▶ Ranges from 0.5 to 400bar
- ▶ Choice of outputs

The 2800 series features stability and enhanced accuracy in a variety of enclosure options for demanding submersible and industrial applications. The 2800 features proven CVD sensing technology, an ASIC and modular packaging to provide a sensor with high performance over a wide temperature range. Modular construction allows customised options to be easily accommodated

### Specifications

#### Input

<b>Pressure Range</b>	Vacuum to 400bar G (6000psi) 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)
<b>Fatigue Life</b>	Designed for more than 100 million FS cycles

#### Performance

<b>Long Term Drift</b>	0.2% FS/year (non-cumulative)
<b>Accuracy</b>	0.1% FS max.
<b>Thermal Error</b>	1% FS max.*
<b>Compensated Temperatures</b>	-30° to +100°C (-20° to +212°F)
<b>Operating Temperatures</b>	-40° to 125°C (-40° to 260°F) for elec. codes C and D -20° to 50°C (-5° to 125°F) for elec. code M
<b>Zero Tolerance</b>	1% of span
<b>Span Tolerance</b>	1% of span

#### Mechanical Configuration

<b>Pressure Port</b>	See ordering chart
<b>Wetted Parts</b>	17-4 PH Stainless Steel
<b>Electrical Connection</b>	See ordering chart
<b>Enclosure</b>	316 ss, 17-4 PH ss IP40 for elec. code C Gauge Datum IP65 for elec. code C Absolute Datum IP66 for elec. code D IP68 for elec. code M
<b>Vibration</b>	35g peak sinusoidal, 5 to 2000Hz
<b>Acceleration</b>	100g steady acceleration in any direction 0.032% FS/g for 1bar (15psi) range decreasing logarithmically to 0.0007% FS/g for 400bar (6000psi) range.
<b>Shock</b>	Withstands free fall to IEC 68-2-32 procedure 1
<b>Approvals</b>	CE
<b>Weight</b>	Approx. 100grams (additional cable; 75g/m)

\* Standard ranges only

### Individual Specifications

#### Voltage Output units

<b>Output</b>	See ordering chart
<b>Supply Voltage (Vs)</b>	1.5Vdc above FS output to 35Vdc @ 6mA
<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, (7-35Vdc) Above 100°C supply limited to 24Vdc
<b>Supply Voltage Sensitivity</b>	0.01% FS/Volt
<b>Max. Loop Resistance</b>	(Vs-7) x 50ohms



CVD TECHNOLOGY

PRESSURE TRANSDUCERS

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Connection Code		Current units (4-20mA)			Voltage units				
		(+)	(-)	EARTH	IN+	COM	OUT+	EARTH	
C	"10-6 Bayonet"	PIN	A	B	E	A	C	B	E
D	"Cable"		R	BL	DRAIN	R	W	Y	DRAIN
M	"Immersible"		R	BL	DRAIN	R	W	Y	DRAIN

**Cable Legend:** R = Red  
BL = Blue  
W = White  
Y = Yellow

**How to Order**

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

**2800 B G A60 01 A 3 005 A**

**Series** \_\_\_\_\_ **2800**

**Output** \_\_\_\_\_

**B** - 4-20mA      **C** - 1-6V      **J** - 0.5-5.5V  
**D** - 1-11V      **R** - 0-5V  
**H** - 1-5V      **S** - 0-10V

**Pressure Datum** \_\_\_\_\_

**A\*** - Absolute      **G** - Gauge  
\*Max absolute range is 25bar.

**Pressure Range** - bar (additional intermediate pressure ranges available - 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 Port** \_\_\_\_\_

<b>01</b> - G1/4 External	<b>08</b> - 1/8-27 NPT External
<b>02</b> - 1/4-18 NPT External	<b>09</b> - G1/8 Internal
<b>03</b> - G1/2 Manometer	<b>00</b> - G1/4 Internal
<b>04</b> - 7/16-20UNF to SAE J514	<b>0A</b> - R1/4 External
<b>05</b> - G1/4 Ext. Soft Seal	<b>19</b> - Nose Cone
	others - consult factory

**Electrical Connection** \_\_\_\_\_

**C** - Fixed Plug Size 10-6 Mating Plug Not Supplied  
**D** - Weatherproof cable IP66  
**M** - Immersible Max depth 200 metres

**Performance Code**  
Accuracy/Thermal  
**A** - 0.1%/1%

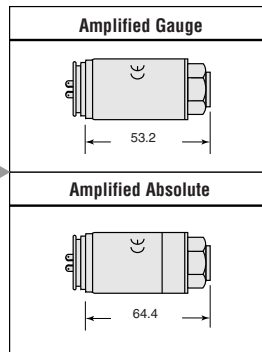
**Cable Length**  
001 = 1 metre cable  
099 = 99 metres cable  
Applies to code D & M electrical connection only  
Code C = 000

**Apparatus Protection**  
RFI Protected CE Mark

**Dimensions (in mm)**

**2800 Series**

<b>10-6 or 8-4 Mil-C Connector</b>	
10-6 Code "C"	
8-4 Code "1"	
<b>IP66 Cable</b>	
Code "D"	
<b>Immersible Cable</b>	
Code "M"	



Maximum diameter 27.3mm

<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

Code "M"

# 281C Series High Performance Intrinsically Safe Industrial Pressure Transmitters

- ▶ 1% Error band over -30° to 100°C
- ▶ Ex II 1G: EEx ia IIC T4 (-20°C ≤ 75°)
- ▶ Ranges from 0.5 to 400bar
- ▶ All stainless steel wetted parts

The Intrinsically Safe 281C series offers high performance for critical measurements. Available in a choice of standard or custom designed packages, the 281C utilises Gems CVD sensing technology with ASIC to provide optimum performance while the all stainless steel wetted parts ensure media compatibility.

## 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)
<b>Fatigue Life</b>	Designed for more than 100 million FS cycles

### Performance

<b>Long Term Drift</b>	0.2% FS/year (non-cumulative)
<b>Accuracy</b>	0.1% FS max.
<b>Thermal Error</b>	1% FS max.*
<b>Compensated Temperatures</b>	-30° to +100°C (-20° to +212°F)
<b>Operating Temperatures</b>	-40° to 125°C (-40° to 260°F) for elec. codes C and D -20° to 50°C (-5° to 125°F) for elec. code M
<b>Zero Tolerance</b>	1% of span
<b>Span Tolerance</b>	1% of span

### Mechanical Configuration

<b>Pressure Port</b>	See ordering chart
<b>Wetted Parts</b>	17-4 PH Stainless Steel
<b>Electrical Connection</b>	See ordering chart
<b>Enclosure</b>	316 ss, 17-4 PH ss IP40 for elec. code C Gauge Datum IP65 for elec. code C Absolute Datum IP66 for elec. code D IP68 for elec. code M
<b>Vibration</b>	35g peak sinusoidal, 5 to 2000 Hz
<b>Acceleration</b>	100g steady acceleration in any direction 0.032% FS/g for 1bar (15psi) range decreasing logarithmically to 0.0007% FS/g for 400bar (6000psi) range.
<b>Shock</b>	Withstands free fall to IEC 68-2-32 procedure 1
<b>Approvals</b>	Ex IIG 1G: EEx ia IIC T4
<b>Weight</b>	Approx. 100grams (additional cable; 75g/m)

\* Standard ranges only

## Individual Specifications

### Voltage Output units

<b>Output</b>	See ordering chart
<b>Supply Voltage (Vs)</b>	1.5Vdc above FS output to 35Vdc @ 6mA
<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, (7-25.5V) Above 100°C supply limited to 24Vdc
<b>Supply Voltage Sensitivity</b>	0.01% FS/Volt
<b>Max. Loop Resistance</b>	(Vs-7) x 50 ohms



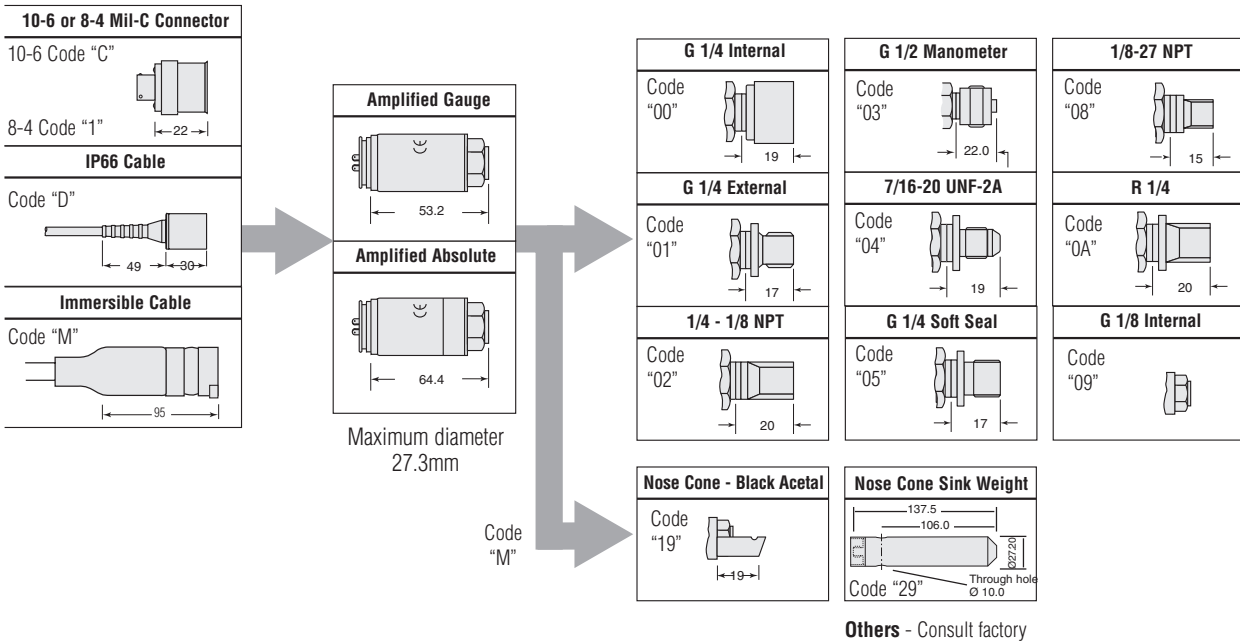
Connection Code			Current units (4-20mA)		
			(+)	(-)	EARTH
C	"10-6 Bayonet"	PIN	A	B	E
D	"Cable"		R	BL	DRAIN
M	"Immersible"		R	BL	DRAIN

Connection Code			Voltage units			
			IN+	COM	OUT+	EARTH
C	"10-6 Bayonet"	PIN	A	C	B	E
D	"Cable"		R	W	Y	DRAIN
M	"Immersible"		R	W	Y	DRAIN

**Cable Legend:** R = Red  
BL = Blue  
W = White  
Y = Yellow

**Dimensions (in mm)**

**281C Series**



Others - Consult factory

**How to Order**

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

<p><b>Series</b> <b>281C</b></p> <p><b>Output</b> B - 4-20mA C - 1-6V D - 1-11V H - 1-5V J - 0.5-5.5V R - 0-5V S - 0-10V</p> <p><b>Pressure Datum</b> A* - Absolute G - Gauge *Max absolute range is 25bar.</p> <p><b>Pressure Range</b> - bar (see note 1) A10 - 0-1 A16 - 0-1.6 A25 - 0-2.5 A40 - 0-4 A60 - 0-6 B10 - 0-10 B16 - 0-16 B25 - 0-25 B40 - 0-40 B60 - 0-60 C10 - 0-100 C16 - 0-160 C25 - 0-250 C40 - 0-400 Vac = -1 bar 1A0 - Vac-0 1A6 - Vac-0.6 2A5 - Vac-1.5 4A0 - Vac-3 6A0 - Vac-5 1B0 - Vac-9 1B6 - Vac-15 2B5 - Vac-24 4B0 - Vac-39</p> <p><b>Pressure Port</b> 01 - G1/4 External 02 - 1/4-18 NPT External 03 - G1/2 Manometer 04 - 7/16-20UNF to SAE J514 05 - G1/4 Ext. Soft Seal 08 - 1/8-27 NPT External 09 - G1/8 Internal 00 - G1/4 Internal 0A - R1/4 External 19 - Nose Cone</p> <p><b>Electrical Connection</b> C - Fixed Plug Size 10-6 Mating Plug Not Supplied D - Weatherproof cable IP66 (see note 1) M - Immersible Max. depth 200 metres</p>	<p><b>281C</b>   <b>B</b>   <b>G</b>   <b>A60</b>   <b>01</b>   <b>A</b>   <b>B</b>   <b>005</b>   <b>A</b></p>	<p><b>Performance Code</b> <b>A</b> - .010%/1%</p> <p><b>Accuracy/Thermal</b> <b>A</b> - .010%/1%</p> <p><b>Cable Length</b> 001 - 1metre cable 099 - 99metres cable Applies to code 'D &amp; M' electrical connection only <b>Code C = 000</b></p> <p><b>Apparatus Protection</b> <b>B</b> - Intrinsically Safe, zener barrier, Gauge only <b>G</b> - Intrinsically safe, galvanic barrier, Gauge or Absolute</p>
--	---	--



EEx ia IIC T4  
(-20<Ta<+75°C)

Notes:  
1 Additional Pressure Ranges are available. Please consult factory.

# 6700 Series-Stable Industrial Transmitters with Turndown Capabilities

- ▶ Gauge and absolute pressure models
- ▶ Submersible, general purpose and wash down enclosures
- ▶ High stability achieved by CVD sensing element

The 6700 series features customer accessible 5:1 turndown from nominal range via a switch and potentiometre. Down ranging whether factory or user adjusted is ideal for applications requiring high overpressure. The 6700 are housed in a rugged enclosure for harsh conditions and features superb stability by incorporating Gems' CVD sensing element.

## Specifications

Input	
<b>Pressure Range</b>	0.5 to 400bar; (7.5 to 6,000psi) Gauge and 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)
<b>Fatigue Life</b>	Designed for more than 100 million FS cycles
Performance	
<b>Output</b>	4-20mA (2 wire)
<b>Supply Voltage (Vs)</b>	9.5 to 40Vdc
<b>Supply Voltage Sensitivity</b>	0.005% of max span/Volt
<b>Long Term Drift</b>	0.15% of max span/year (non-cumulative)
<b>Accuracy</b>	0.15 % FS typical
<b>Thermal Error Typical</b>	-10° to 50°C ( 15° to 120°F) 0.5% of max span -20° to 80°C (-4° to 176°F) 1% of max span
<b>Operating Temperatures</b>	-20° to 85°C (-4° to 185°F) elec. conn. code C G & L -20° to 50°C (-4° to 122°F) elec. conn. code M, 3 -30° to 100°C (-22° to 212°F) process/media
<b>Zero Tolerance</b>	0.1 % span, typical
<b>Span Tolerance</b>	0.1% span, typical
<b>Zero Adjustment</b>	+/- 10% (100% at factory) by potentiometer
<b>Span Adjustment</b>	17% to 100 % of span by potentiometer/switches
<b>Max. Loop Resistance</b>	(Vs-9.5) x 50 ohms
Mechanical Configuration	
<b>Pressure Port</b>	See ordering chart
<b>Wetted Parts</b>	17-4 PH Stainless Steel
<b>Electrical Connection</b>	See ordering chart
<b>Enclosure</b>	321 ss, 17-4 PH ss IP40 for gauge datum elec code C, L IP65 for absolute datum elec code C, L IP65 for elec. code G (with connector fitted), 3 IP68 for elec. code M
<b>Vibration</b>	35g peak sinusoidal, 5 to 2000Hz
<b>Acceleration</b>	100g steady acceleration in any direction 0.036%FS/g for 0.75bar (10psi) range decreasing logarithmically to 0.0007%FS/g for 400bar (6000psi) range.
<b>Shock</b>	Withstands free fall to IEC 68-2-32 procedure 1
<b>Approvals</b>	CE, Lloyds Register EXII 1G; E Exia II CT4 (-40°C < T amb <75°C) Cert BASEEFA 02ATEX00040X
<b>Weight</b>	Approx. 250grams (additional; cable 75g/m)



Lloyds Register

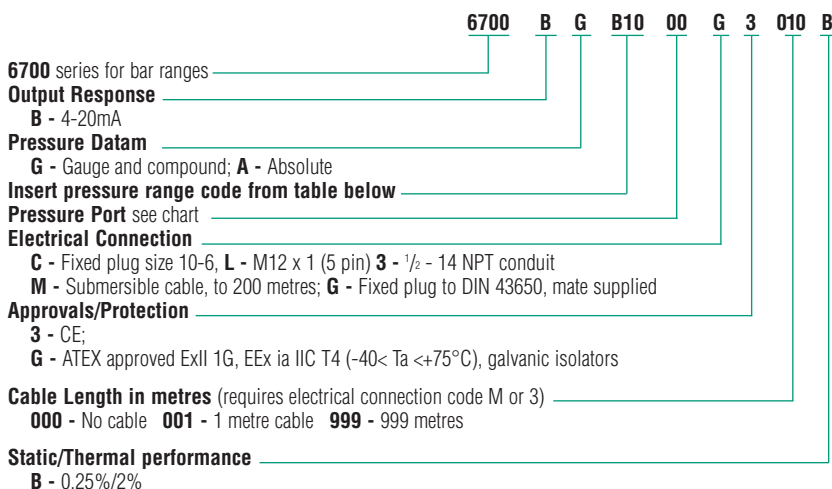
Electrical connection	Wiring			
		(+)	(-)	EARTH
G "DIN"		1	2	4
C "10-6 Bayonet"		A	B	E
M IP68 cable		R	BL	DRAIN
L M12		1	2	4
3 Leads		R	BL	G

**Cable Legend:**

- R = Red
- BL = Blue
- G = Green

## How to Order

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



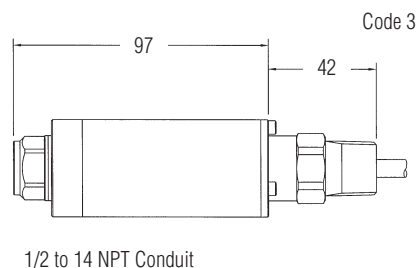
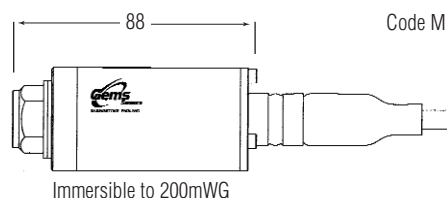
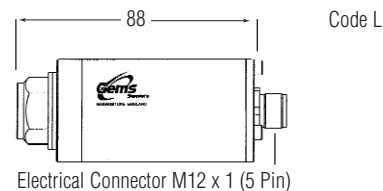
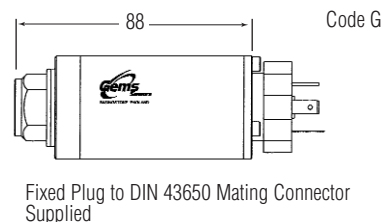
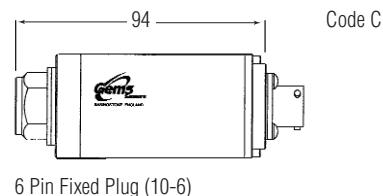
6700 Model Bar Ranges	Range Code	Gauge (G) Absolute (A)
0 to 500mb	<b>N50</b>	G, A
0 to 1	<b>A10</b>	G, A
0 to 1.6	<b>A16</b>	G, A
0 to 2.5	<b>A25</b>	G, A
0 to 4	<b>A40</b>	G, A
0 to 6	<b>A60</b>	G, A
0 to 10	<b>B10</b>	G, A
0 to 16	<b>B16</b>	G, A
0 to 25	<b>B25</b>	G, A
0 to 40	<b>B40</b>	G
0 to 60	<b>B60</b>	G
0 to 100	<b>C10</b>	G
0 to 160	<b>C16</b>	G
0 to 250	<b>C25</b>	G
0 to 400	<b>C40</b>	G

## Pressure Ports for the 6700 series

Code	Description of Stainless Steel Fittings
<b>00</b>	G 1/4 internal
<b>A0</b>	G 1/4 external
<b>K0</b>	7/16-20 UNF-3A external
<b>M0</b>	M14 x 1.5 external
<b>P0</b>	G 1/2 manometer
<b>B0</b>	1/4-18 NPT external
<b>G0</b>	1/2-14 NPT external
<b>S0</b>	7/16-20 UNJF-3A, MS 33656E4
<b>Immersible Sensors</b>	
<b>19</b>	Plastic nose cone
<b>20</b>	Nose cone with restrictor
<b>30</b>	Nose cone w/ s steel sink weight

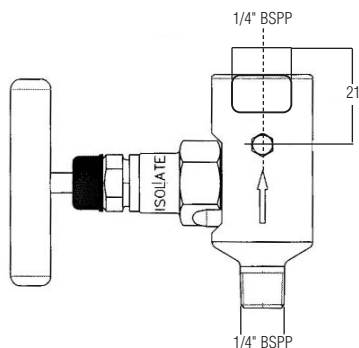
## Dimensions (in mm)

Max diameter 39mm, all models



### Isolating Needle Valve

Part No. 557740

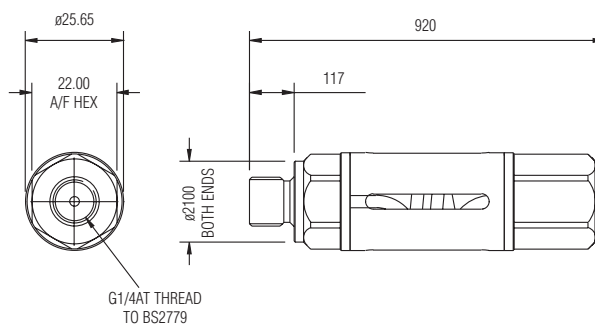


### Cable and Cable Assemblies

Part No.	Sheath	Operating Temperature
557692	Polyurethane	-20 to +50°C
557725	Hytrel	-40 to +100°C
496687	Polylofin	-54 to 120°C

### Temperature Isolator 558564 - 0001

Pigtail, siphon tubes and other forms of temperature isolation are used to reduce media temperature at the transducer. This self-contained 316 SS temperature isolator is packaged in a small housing 92mm long, and reduces the media temperature at the transducer, to about a fifth (transducer temp = media temp/5 + ambient temp). Max. temp. 400°C, max. pressure 400bar.



### Cable Assemblies: 3100/3200 Series pages 22 and 24

557703 - 01M0	12mm x 1 4pin electrical connector with 1metre cable
557703 - 02M0	12mm x 1 4pin electrical connector with 2metre cable
557703 - 03M0	12mm x 1 4pin electrical connector with 3metre cable
557703 - 04M0	12mm x 1 4pin electrical connector with 4metre cable
557703 - 05M0	12mm x 1 4pin electrical connector with 5metre cable

## Accessories

### Mounting Clamps

Generally our pressure transducers are supported by the piping they are mounted to, however when thin tubing, vibrations or large transducers are present then a mounting clamp is required. These clamps utilise a plastic-mounting bracket to

secure the transducer's outer case and a metal base strip to firmly attach the clamp to a surface.

Polypropylene -30 to 90°C	Polyamide -40 to 120°C	For Pressure Transducers	C	
499877-1000	499877-1001	4000 series (25 mm dia.)	64	
499877-1120	499877-1121	1200, 1600, 2200, 2600, 2800 series (28 mm dia.)	73	
499877-1500	499877-1501	4700, 5000 & 6700 series (38 mm dia.)	86	

### Cylindrical Connectors

Part Number	Size	Temperature	For Use With	
166267-0006	10-6 Bayonet	-70 to 195°C	4000-C	
499532-0006	10-6 Bayonet	-54 to 120°C	4000-C 5000-C 1600-C 2600-C 2800-C 4700-C 6700-C	
499855-0001 Requires strain relief clamp 499855-0011	10-5 twist	-54 to 230°C	4000-N	
557702	DIN 72585	-40 to 140°C	3000-7	Drawing not available
557703-0000	12mm x 1 4pin	-20 to 120°C	3000-E	Drawing not available
557704-0000	12mm x 1 5pin	-20 to 120°C	4700-L, 5000-L 6700-L, 9000-L	Drawing not available

### Square/Rectangular Connectors

Part Number	Type	Temperature	For Use With	
557254	DIN 43650A	-20 to 120°C	1600-G, 2600-G, 4700-G 5000-G, 6700-G, 1700-G, 1701-G	
557230	Industrial DIN connector	-20 to 120°C	1200-A, 2200-A	
557701	Amp Superseal	-40 to 125°C	3000-6	Drawing not available

## Restrictors

In most applications quasi static pressure measurement is all that is required. Often, transient pressure pulses are present in the system and it is recommended that a rapid acting pressure snubber or a restrictor is fitted to protect the transmitter or transducer. These pulses are often classified as water or pipe hammer.

Pressure snubbers are widely available and generally employ a moving element to isolate the sensor from a pressure pulse. A high volume displacement is

usually necessary for satisfactory operation.

Since our pressure sensors require only a low volume displacement to actuate, these snubbers may not provide adequate protection. Our restrictors on the other hand attenuate high frequency pulses and only allow steady state or slow changes to pass through. These thread directly into 4000, 4700 and 6700 series, and also 22/2600 and 2800 with G1/4 threads. Available in stainless steel these are designed for hydraulic applications.

Description	Part Number	
Integral capillary 0.5mm diameter, 13.5mm long plus a bleed screw all in stainless steel	466175-0000	
This restrictor has a helical groove, approximately 0.5mm diameter and 56 mm long. Made in japanned steel.	557002	
As above but in stainless steel	557000-0002	

## Industrial Bonded Seals

Description	Part Number	
Sealing for G1/4 thread. Nitrile in zinc plated steel, temperature range -40 to 100°C.	232646-0002	
Sealing for G1/4 thread. Viton in cadmium plated steel, temperature range -26 to 200°C.	499207-0002	
Sealing for G 1/8 thread. Nitrile in zinc plated steel, temperature range -40 to 100°C.	232646-0006	

# Ingress Protection (IP) Codes

FIRST NUMERAL Protection against solid bodies		SECOND NUMERAL Protection against liquid	
		0	1
Example: IP65 - equipment is dust-tight and protected against water jets		0	NO PROTECTION
		1	VERTICALLY DRIPPING WATER
0	NO PROTECTION	2	ANGLED DRIPPING WATER -75 TO 90°
1	OBJECTS GREATER THAN 50mm	3	SPRAYED WATER
2	OBJECTS GREATER THAN 12mm	4	SPLASHED WATER
3	OBJECTS GREATER THAN 2.5mm	5	WATER JETS
4	OBJECTS GREATER THAN 1.0mm	6	HEAVY SEAS (HOSE PROOF)
5	DUST-PROTECTED	7	EFFECTS OF IMMERSION TO 1 METER
6	DUST-TIGHT	8	INDEFINITE IMMERSION TO SPECIFIED DEPTH
6K	DUST TIGHT	9K	JET WASH PROOF

### ELECTROMAGNETIC CAPABILITY

Meets the requirements for CE marketing of EN50081-2 for emissions and EN50082-2 for susceptibility.

TEST DATA:

- ▶ EN6100-4-2 Electrostatic Discharge. 8kV air discharge. 4kV contact discharge. Unit survived.
- ▶ ENV50140 Radiated RF Susceptibility. 10V/m, 80MHz-1GHz, 1kHz mod. Maximum recorded output error was <±1%.
- ▶ ENV50204 Radiated RF Susceptibility to Mobile Telephones. 10V/m, 900MHz Maximum recorded output error was <±1%.
- ▶ EN61000-4-4 Fast Burst Transient. 2kV. 5/50ns, 5kHz for 1 minute. Unit survived.
- ▶ ENV50141 Conducted RF Susceptibility. 10Vms. 1kHz mod. 150kHz - 80MHz. Maximum recorded output error was <±1%.

**CE MARKING**  
The CE mark shows that a product complies with the requirements of all European Community Directives relevant to that product.

Also available from Gems

### Electro Optic Level sensors

ELS-1100 ELS-1200

- ▶ Compact size
- ▶ Integral electronics
- ▶ No moving parts
- ▶ Simple installation



These level sensors use an infrared LED and receiver. When media is in contact with the prism the light is reflected onto the receiver. Manufactured in Polysulphone, the ELS is available in a variety of mountings, power requirements and electrical terminations.

### Single Point Level Switches

#### Vertical Mounting

- ▶ Simple working principle
- ▶ Precise repeatability
- ▶ Cost effective

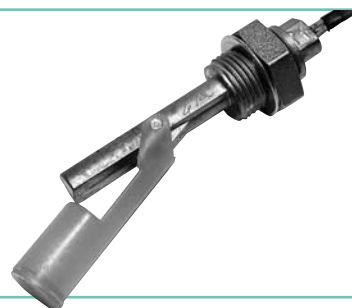


Gems has a large choice of single float level switches with designs for horizontal or vertical mounting. The wide variety of materials available mean compatibility with most media.

#### Horizontal Mounting

- ▶ Robust design
- ▶ High vibration and shock resistance
- ▶ Customer defined solutions available

Available with flanged or threaded mountings, the Gems multi level switches use the same durable technology as single point switches. With up to 7 switch points per unit and a choice of plastics, brass and stainless steel construction it is possible to configure a solution to almost any application.



### Multiple Point Level Switches

- ▶ Bright visual indication
- ▶ Pulse, switch or voltage output options

Today's Rotorflow sensors combine the visual indication of flow with electronic outputs.



### Flow Switches and Indicators

- ▶ Rugged, low maintenance design
- ▶ Flow rates from 0.005 to 380l/min

Flow switches are available in paddle, piston and shuttle types with a large choice of connections. Typical applications include machine tool flow monitoring, air conditioning, plastic moulding and laser cooling.



### Pressure Switches

- ▶ Field-Adjustable or Factory Set Switches
- ▶ High Proof Pressure
- ▶ Rugged and Dependable

Gems offers a choice of pressure switches, from compact cylindrical models for OEM use, to larger, enclosed units for rugged process applications.



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