

1700 Series-Hygienic Pressure Transmitters

- ▶ Pressure Ranges from 100 Millibar to 40 Bar
- ▶ Sanitary or G1 Process Connections
- ▶ Voltage and Current Output Models
- ▶ Temperature Cooling Options Available for 302°F or 572°F (150°C or 300°C) Operation

The 1700 series features a stainless steel diaphragm with various process connections suitable for dairy and pharmaceutical applications. The 1700 is suitable for both static and dynamic pressure measurement in the ranges from 100 millibar to 40 bar and is available with a choice of electrical outputs and connections.

Specifications

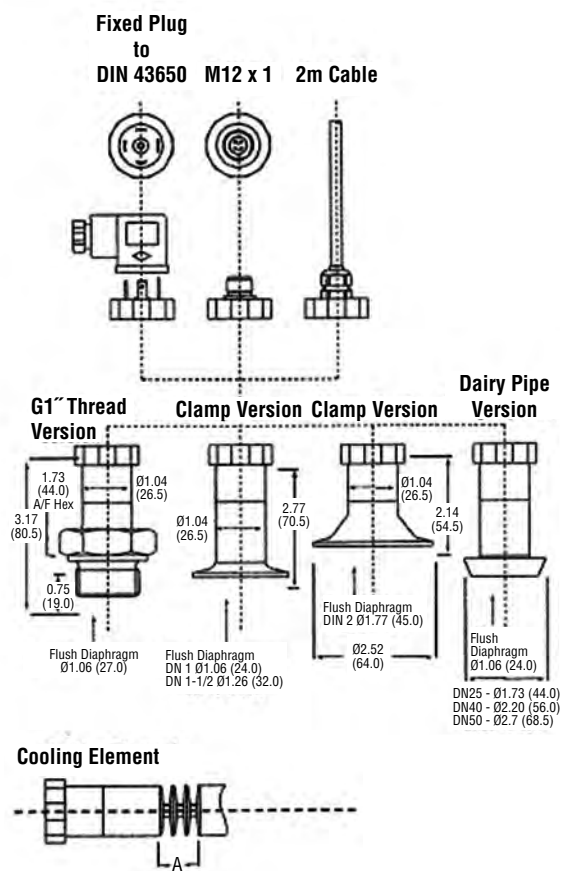
Input	
Pressure Range	0 to 600 psi (0 to 40 bar) Gauge and Absolute
Proof Pressure	>2 x Full Scale
Burst Pressure	>2 x Full Scale
Fatigue Life	Designed for more than 100 million cycles
Performance	
Long Term Drift	±0.2% span/annum
Accuracy	0.25%
Thermal Error Over Compensated Temperature	1% (0°C to 70°C), 2% for 100, 250, and 400 millibar ranges (0°C to 50°C)
Operating Temperatures	-13°F to +185°F (-25°C to +85°C) -13°F to +257°F (-25°C to +125°C) media
Zero Tolerance	1% of span
Span Tolerance	1% of span
Mechanical Configuration	
Pressure Port	see ordering chart
Wetted Parts	316 S/S: Seals Viton® (G1 thread only)
Electrical Connection	see ordering chart
Enclosure	IP65 = G (with connector fitted) IP67 = E & F
Fill Fluid	Silicon oil or food grade
Vibration	10g rms, 20 - 2000Hz
Acceleration	10g
Shock	100g 11ms
Approvals	CE, EXII 1G, E Exia IIC T4
Weight	175gm
Voltage Output Units	
Output	see ordering chart
Supply Voltage (Vs)	12 to 36Vdc
Supply Voltage Sensitivity	0.005% FS/Volt
Min. Load Resistance	10Kohm
Current Consumption	15 mA max
Current Output Units	
Output	4 - 20mA 2 wire
Supply Voltage (Vs)	12 to 36Vdc (IS units 14 - 28 volts)
Supply Voltage Sensitivity	0.005% FS/Volt
Max. Loop Resistance	(Vs-12) x 50 ohms

EMC Specifications

Emissions & Immunity according to EN61326.



Dimensions inch (mm)



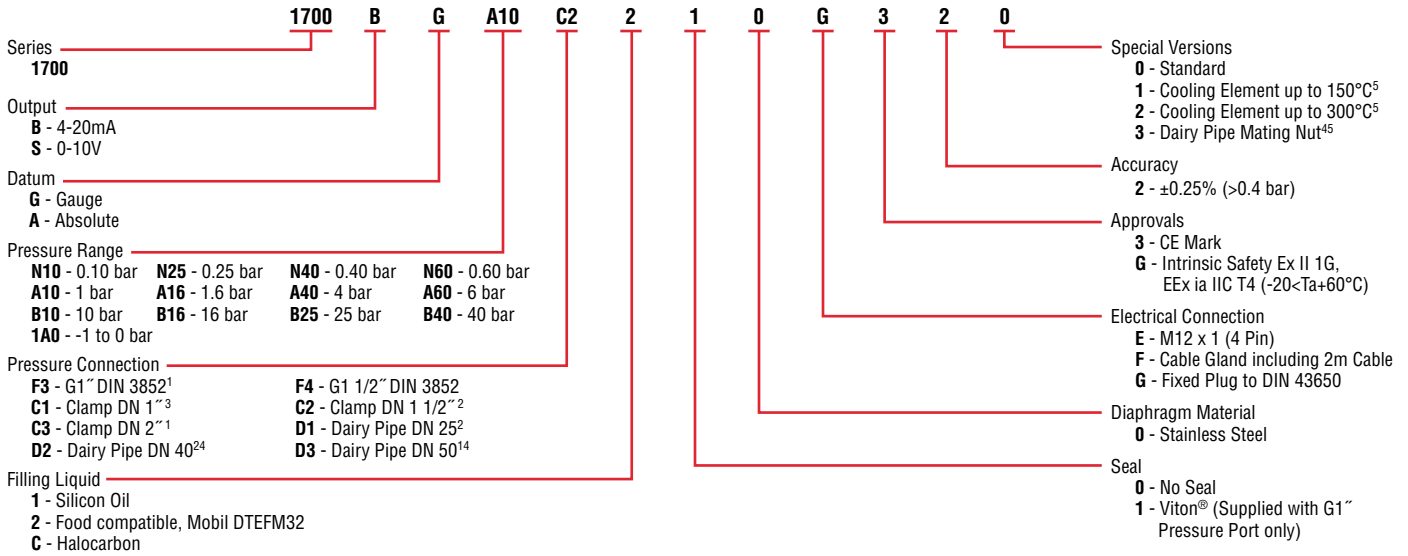
Temperature Range	Size A	Number of Cooling Fins
302°F (150°C)	0.87 (22)	2
572°F (300°C)	1.34 (34)	3

Intrinsically Safe units length increased by 1.06" (27 mm).

PRESSURE TRANSDUCERS

How to Order

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



Electrical Connections

Electrical Connection Code	2-Wire System			3-Wire System			
	Supply +	Supply -	Ground	Supply +	Supply -	Signal +	Ground
E M12 x 1 (4-pin)	1	2	4	1	2	3	4
F Cable	WH	BR	DRAIN	WH	BR	G	DRAIN
G "DIN 43650"	1	2	GROUND	1	2	3	GROUND

Cable Legend:

WH = White
BR = Brown
G = Green

Notes:

1. Not available for ranges ≤250mb.
2. Not available for ranges ≤400mb.
3. Not available for ranges ≤600mb.
4. For Dairy Pipe Mating Nut.
5. Please state media temperature (max 85°C) and mounting orientation.

1701 Series-Flush Diaphragm Pressure Transmitters

- ▶ Stainless Steel Wetted Parts with Flush Diaphragm
- ▶ G1/2, G3/4 or G1 Threads and Sanitary
- ▶ Voltage and Current Output Models

The 1701 series features a stainless steel flush diaphragm on a threaded process connection making it ideal for slurries, suspended solids in liquids and viscous liquids where recessed diaphragms could become blocked. The 1701 is suitable for both static and dynamic pressure measurement in the ranges from 15 PSI to 5802 PSI (1 bar to 400 bar) and is available with a choice of electrical outputs and connections.

Specifications

Input	
Pressure Range	0 to 6000 psi (0 to 400 bar) Gauge 0 to 370 psi (0 to 25 bar) Absolute
Proof Pressure	>2 x Full Scale (1.5 x for 400 bar)
Burst Pressure	>2 x Full Scale
Fatigue Life	Designed for more than 100 million cycles
Performance	
Long Term Drift	±0.2% span/annum
Accuracy	0.25%
Thermal Error	2% max
Compensated Temperature	-13°F to +185°F (-25°C to +85°C)
Operating Temperatures	-13°F to +185°F (-25°C to +85°C) -13°F to +257°F (-25°C to +125°C) media
Zero Tolerance	1% of span
Span Tolerance	1% of span
Mechanical Configuration	
Pressure Port	see ordering chart
Wetted Parts	316 S/S: Seals <100 bar Viton® >100 bar Nitrite
Electrical Connection	see ordering chart
Enclosure	IP65 = G (with connector fitted) IP67 = E & F
Fill Fluid	Silicon oil or food grade
Vibration	10g rms, 20 - 2000Hz
Acceleration	10g
Shock	100g 11ms
Approvals	CE, EXII 1G, E Exia II CT4
Weight	225gm
Voltage Output Units	
Output	see ordering chart
Supply Voltage (Vs)	14 to 36Vdc
Supply Voltage Sensitivity	0.005% FS/Volt
Min. Load Resistance	10Kohm
Current Consumption	15 mA max
Current Output Units	
Output	4 - 20mA 2 wire
Supply Voltage (Vs)	12 to 36Vdc (IS units 14 - 28 volts)
Supply Voltage Sensitivity	0.005% FS/Volt
Max. Loop Resistance	(Vs-12) x 50 ohms

EMC Specifications

Emissions & Immunity according to EN61326.

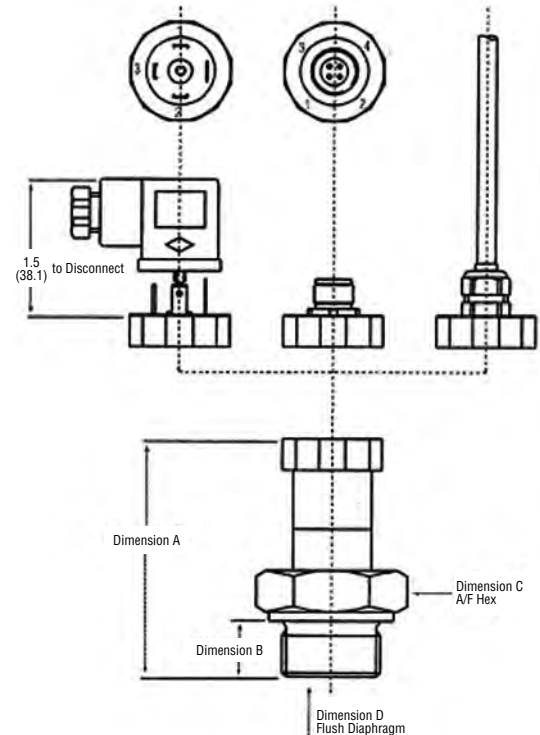


Dimensions inch (mm)

MECHANICAL CONNECTION

Inch Thread

Fixed Plug to DIN 43650 (1701X-G3) **M12 x 1 (1701X-E3)** **2m Cable (1701X-F3)**



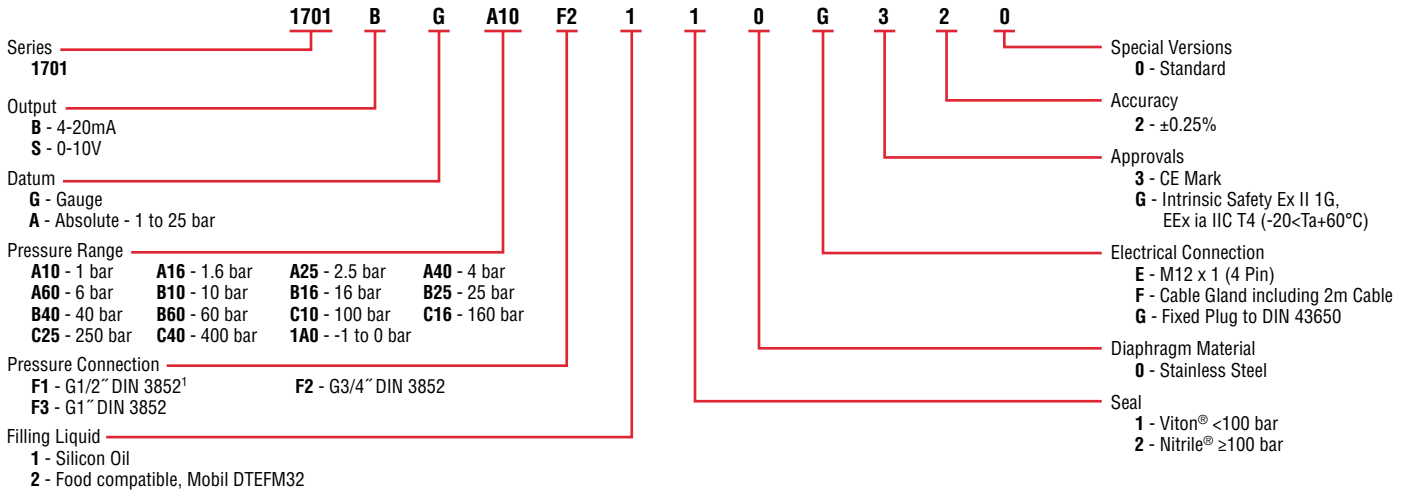
	Dim A	Dim B	Dim C	Dim D
G1/2" Thread	3.01 (76.5)	0.59 (15.0)	1.06 (27.0)	0.71 (18.0)
G3/4" Thread	3.09 (78.5)	0.63 (16.0)	1.34 (34.0)	0.87 (22.0)
G1" Thread	3.17 (80.5)	0.75 (19.0)	1.73 (44.0)	1.10 (28.0)

Intrinsically Safe units length increased by 1.06" (27 mm).

PRESSURE TRANSDUCERS

How to Order

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



Electrical Connections

Notes:
1. Not available for ranges ≤1.6mb.

Electrical Connection Code	2-Wire System			3-Wire System			
	Supply +	Supply -	Ground	Supply +	Supply -	Signal +	Ground
E M12 x 1 (4-pin)	1	2	4	1	2	3	4
F Cable	WH	BR	DRAIN	WH	BR	G	DRAIN
G "DIN 43650"	1	2	GROUND	1	2	3	GROUND

Cable Legend:

WH = White
BR = Brown
G = Green

1702 Series-Fixed Range Low Pressure Transmitters

- ▶ Pressure Ranges from 40 millibar to 1 Bar
- ▶ 316 S/S Diaphragm
- ▶ Voltage and Current Output Models
- ▶ Choice of Enclosures and Pressure Fittings

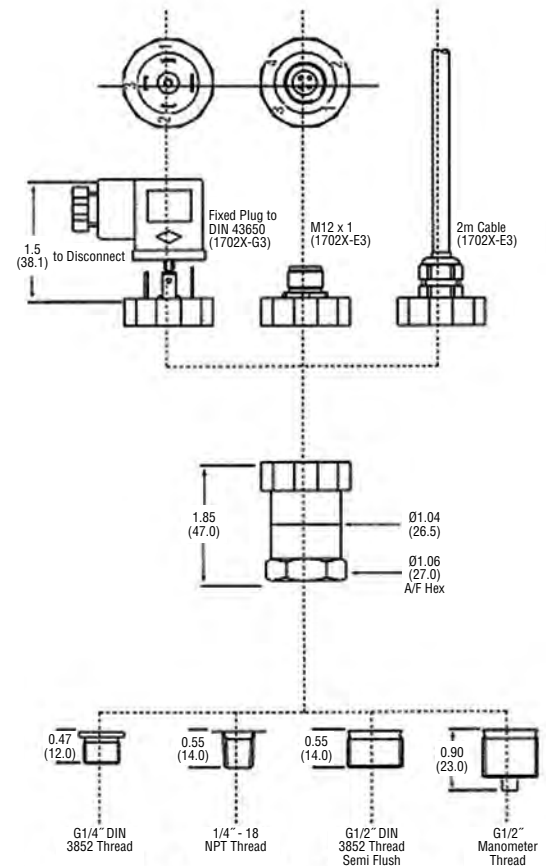
The Gems 1702 low range pressure transmitter is ideal for pneumatics, process control and chemical processes. Featuring a 316 S/S diaphragm and Viton® o-ring the 1702 is compatible with many corrosive medias. A choice of process connections makes the units suitable for direct pipe mounting whilst optional electrical outputs and connections allow interfacing with most systems.

Specifications

Input	
Pressure Range	100 mbar to 1 bG, 100 mbar to 1bA
Proof Pressure	>2 x Full Scale
Burst Pressure	>2 x Full Scale
Fatigue Life	Designed for more than 100 million cycles
Performance	
Long Term Drift	±0.1% span/annum
Accuracy	0.25%
Thermal Error Over Compensated Temperature	1% (0°C to 70°C) - 1 bar, 2% for 100 mbar to 400 mbar ranges (0°C to 50°C)
Operating Temperatures	-13°F to +185°F (-25°C to +85°C) -13°F to +257°F (-25°C to +125°C) media
Zero Tolerance	1% of span
Span Tolerance	1% of span
Mechanical Configuration	
Pressure Port	see ordering chart
Wetted Parts	316 S/S, Viton®
Electrical Connection	see ordering chart
Enclosure	IP65 = G (with connector fitted) IP67 = E & F
Vibration	10g rms, 20 - 2000Hz
Acceleration	10g
Shock	100g 11ms
Weight	140gm
Voltage Output Units	
Output	see ordering chart
Supply Voltage (Vs)	12 to 36Vdc
Supply Voltage Sensitivity	0.005% FS/Volt
Min. Load Resistance	10Kohm
Current Consumption	7 mA max
Current Output Units	
Output	4 - 20mA 2 wire
Supply Voltage (Vs)	12 to 36Vdc
Supply Voltage Sensitivity	0.005% FS/Volt
Max. Loop Resistance	(Vs-12) x 50 ohms



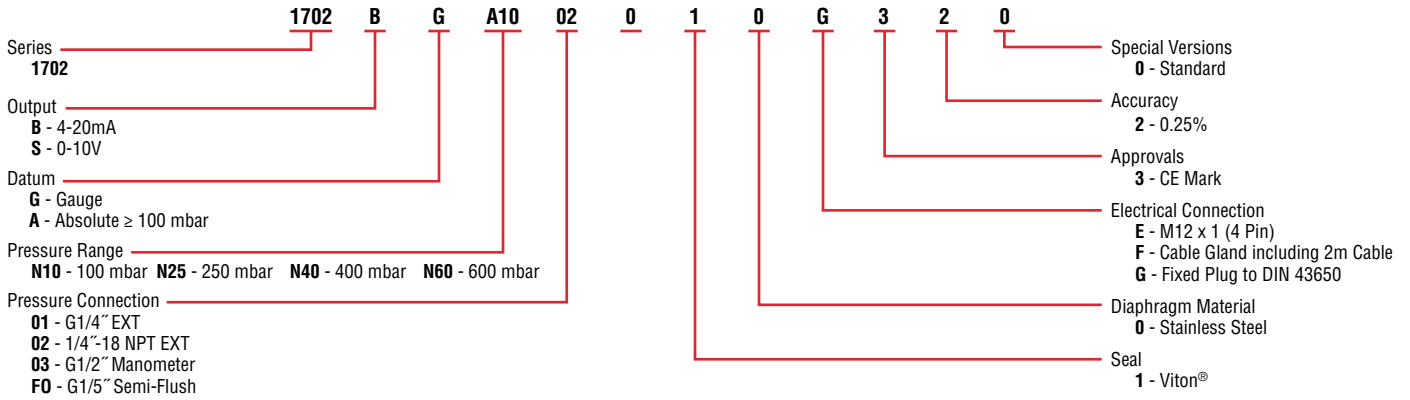
Dimensions inch (mm)



PRESSURE TRANSDUCERS

How to Order

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



Electrical Connections

Electrical Connection Code	2-Wire System			3-Wire System			
	Supply +	Supply -	Ground	Supply +	Supply -	Signal +	Ground
E M12 x 1 (4-pin)	1	2	4	1	2	3	4
F Cable	WH	BR	DRAIN	WH	BR	G	DRAIN
G "DIN 43650"	1	2	GROUND	1	2	3	GROUND

Cable Legend:

WH = White
BR = Brown
G = Green

22IC Series / 26IC Series – CSA Intrinsically Safe Industrial Pressure Transducers

- ▶ Ex II 1G; Ex ia IIC T4 Ga
- ▶ Vacuum to 6,000 PSI (400 bar); Absolute or Gauge
- ▶ Voltage and 2 Wire 4-20mA Output Models
- ▶ All Stainless Steel Wetted Parts

Certified to the latest harmonized European standard (ATEX) the 22IC and 26IC 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 22IC and 26IC 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.

Specifications

Input	
Pressure Range	Vacuum to 6000 psi G (400 bar) 0-363 psi Absolute (0-25 bar)
Proof Pressure	2 x Full Scale (FS) (1.5 x FS for ≥ 5000 psi, 400 bar)
Burst Pressure	>35 x FS ≤ 100 psi (6 bar); >20 x FS ≤ 1000 psi (60 bar); >5 x FS ≤ 6000 psi (400 bar)
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	-40°F to +260°F (-40°C to +125°C) for elec. codes A, B, C
Operating Temperatures	-5°F to +180°F (-20°C to +80°C) for elec. code G -5°F to +125°F (-20°C to +50°C) 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 2000 Hz
Acceleration	100g steady acceleration in any direction 0.032% FS/g for 15 psi (1 bar) range decreasing logarithmically to 0.0007% FS/g for 6000 psi (400 bar) range.
Shock	Withstands free fall to IEC 68-2-32 procedure 1
Approvals	Ex II 1G; Ex ia IIC T4 Ga, -4°F ≤ Ta ≤ +167°F (-20°C ≤ Ta ≤ +75°C)
Weight	Approx. 3.5 ounces (100 grams) (additional cable; 75 g/m)

Series 22IC



Series 26IC



Individual Specifications

Voltage Output units	
Output	see ordering chart
Supply Voltage (Vs)	1.5 Vdc above FS output to 25.5 Vdc
Supply Voltage Sensitivity	0.01% FS/Volt
Min. Load Resistance	(FS output / 2) Kohms
Current Consumption	approx 6 mA at 7.5V output
Current Output units	
Output	4-20 mA (2 wire)
Supply Voltage (Vs)	24 Vdc, (7-35 Vdc) above 212°F (100°C) supply
Supply Voltage Sensitivity	0.01% FS/Volt
Max. Loop Resistance	(Vs-7) x 50 ohms

PRESSURE TRANSDUCERS

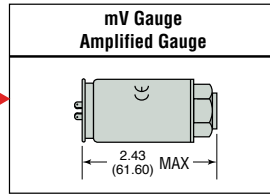
Dimensions

22IC Series

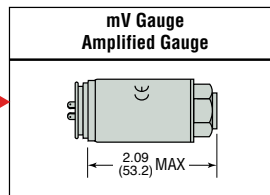
Mini 4 Pin - No Connector	
Code B	
Mini 4 Pin - With Connector	
Code A	
IP67 Cable (Waterproof)	
Code F	
IP65 or NEMA4 Cable	
Code D or 2	

26IC Series

10-6 or 8-4 Mil-C Connector	
10-6 Code C	
8-4 Code 1	
Large DIN 43650 Plug	
Code G	
Conduit Connector with Cable	
Code 3	
Conduit Connector with Flying Leads	
Code T	
Moulded, Immersible Cable	
Code M	



Maximum diameter 1.07" (27.3 mm)



Maximum diameter 1.07" (27.3 mm)

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

Nose Cone - Black Acetal	
Code 19	
Nose Cone Sink Weight	
Code 29	Through hole Ø0.39 (10.0)

inch (mm)

Connection Code			Voltage units				Current units (4-20mA)		
			IN+	COM	OUT+	EARTH	(+)	(-)	EARTH
A, B, G	Industrial DIN	PIN	1	2	3	4	1	2	4
C	"10-6 Bayonet"	PIN	A	C	B	E	A	B	E
D	Cable		R	BK	W	DRAIN	R	BK	DRAIN
F	IP67 cable		R	BK	W	DRAIN	R	BK	DRAIN
1	"8-4 Bayonet"	PIN	A	C	B	D	A	B	D
3	"conduit & cable"		R	BK	W	DRAIN	R	BK	DRAIN
M	Immersible IP68 to 200m		R	W	Y	DRAIN	R	BL	DRAIN

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

How to Order

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

22IC B G A60 01 A B U A

Series **22IC** **26IC** Performance Code

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

Pressure Datum **A** - Absolute **G** - Gauge Cable Length³
U - No Cable Fitted
D - 3 feet (1 Meter)
E - 9 feet (3 Meters)
F - 16 feet (5 Meters)
G - 32 feet (10 Meters)
H - 49 feet (15 Meters)
J - 65 feet (20 Meters)
K - 82 feet (25 Meters)
L - 98 feet (30 Meters)
M - 131 feet (40 Meters)
N - 164 feet (50 Meters)
P - 246 feet (75 Meters)
Q - 328 feet (100 Meters)
R - 410 feet (125 Meters)
S - 492 feet (150 Meters)


Pressure Range¹ - psi **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 Range¹ - bar **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 Port² **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 - 7/16-20 UNF to SAE J514 **0A** - R1/4 External
05 - G1/4 Ext. Soft Seal **19** - Nose Cone (26IC Only)

Electrical Connection
22IC Series
A - Industrial DIN Mating Connector Supplied
B - Industrial DIN Mating Connector Not Supplied
F - Cable Gland Metal IP67
26IC Series
C - Fixed Plug Size 10-6 Mating Plug Not Supplied
G - Fixed Plug To DIN 43650 Mating Plug Supplied
M - Immersible Max. depth 656 feet (200 meters)
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 1G
 Ex ia IIC T4 Ga, -4°F ≤ Ta ≤ 167°F (-20°C ≤ Ta ≤ +75°C)

- Notes:
 1. Additional intermediate ranges available. Please consult factory.
 2. Addition Pressure Ports available. Please consult factory.
 3. Max length on 22IC-32 feet (10 Meters).
 4. Intrinsically safe transducers are available with amplified outputs only.

PRESSURE TRANSDUCERS

NOTES

A large grid of dashed red lines, intended for taking notes. The grid consists of approximately 30 columns and 40 rows of small squares.

PRESSURE TRANSDUCERS

Order from: **7 5 6 f** [g 7 ca dUm] 622 Mary Street; Suite 101 - Warminster, PA 18974

Phone: 267-673-8117 - 800-352-6265 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

2200 Series / 2600 Series – General Purpose Industrial 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 can easily accommodate specials while not sacrificing high performance.

Specifications

Input	
Pressure Range	Vacuum to 6000 psi (400 bar)
Proof Pressure	2 x Full Scale (FS) (1.5 x Fs for 400 bar, ≥ 5000 psi)
Burst Pressure	>35 x FS <= 100 psi (6 bar); >20 x FS >= 1000 psi (60 bar); >5 x FS <= 6000 psi (400 bar)
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	-5°F to +180°F (-20°C to +80°C)
Operating Temperatures	-40°F to +260°F (-40°C to +125°C) for elec. codes A, B, C, 1 -5°F to +180°F (-20°C to +80°C) for elec. codes 2, D, G, 3 -5°F to +125°F (-20°C to +50°C) for elec. codes F, M, P Amplified units >100°C maximum 24 VDC supply
Zero Tolerance	1% of span
Span Tolerance	1% of span
Response Time	0.5 ms
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 NEMA 4 for elec. codes A, B, C, D, G, 1, 2, 3 IP67 for elec. code "F" IP68 for elec. codes M, (max depth 200 meters H ₂ O) IP30 for elec. code "3" with flying leads
Vibration	70g, peak to peak sinusoidal, 5 to 2000 Hz (Random Vibration: 20 to 2000 Hz @ ≈20g Peak per MIL-STD.-810E Method 514.4)
Acceleration	100g steady acceleration in any direction 0.032% FS/g for 15 psi (1 bar) range decreasing logarithmically to 0.0007% FS/g for 6000 psi (400 bar) range.
Shock	20g, 11 ms, per MIL-STD.-810E Method 516.4 Procedure I
Approvals	CE, UR (22IC, 26IC, 22CS, 26CS)
Weight	Approx. 100 grams (additional cable; 75 g/m)

Series 2200



Series 2600



Individual Specifications

Millivolt Output units	
Output	100 mV (10 mv/v)
Supply Voltage (Vs)	10 VDC (15 VDC max.) Regulated
Bridge resistance	2600-6000 ohms
Voltage Output units	
Output	see ordering chart
Supply Voltage (Vs)	1.5 VDC above span to 35 VDC @ 6 mA
Supply Voltage Sensitivity	0.01% FS/Volt
Min. Load Resistance	(FS output / 2) Kohms
Current Consumption	approx 6 mA at 7.5V output
Current Output units	
Output	4-20 mA (2 wire)
Supply Voltage (Vs)	24 VDC, (7-35 VDC)
Supply Voltage Sensitivity	0.01% FS/Volt
Max. Loop Resistance	(Vs-7) x 50 ohms

Electromagnetic Capability

Meets the requirement for CE marking of EN50081-2 for emissions and EN50082-2 for susceptibility.

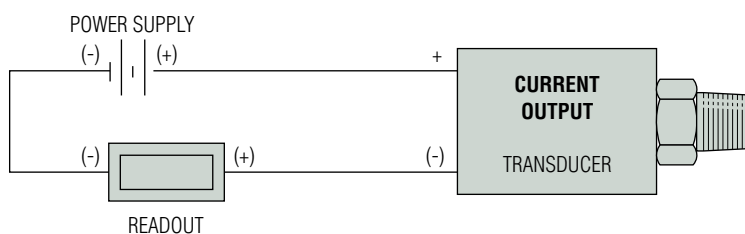
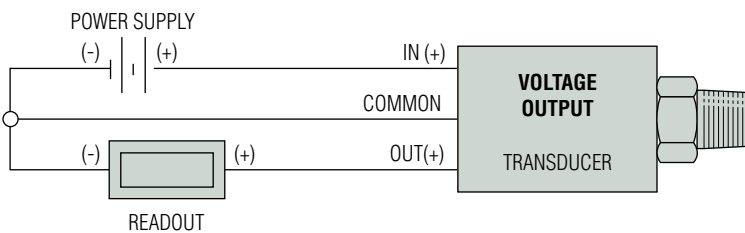
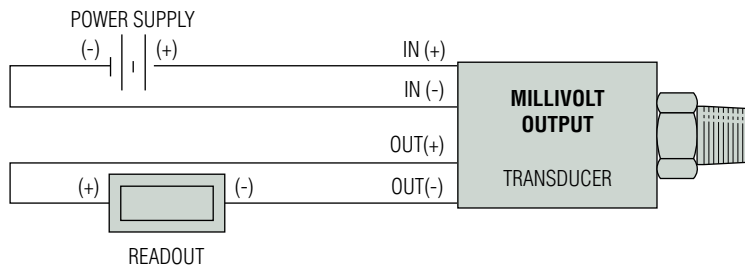
Test Data:

- EN61000-4-2 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 $<\pm 1\%$
- ENV50204 Radiated RF Susceptibility to Mobile Telephones. 10V/m, 900MHz. Maximum recorded output error was $<\pm 1\%$.
- 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 $<\pm 1\%$

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


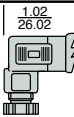
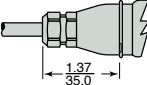
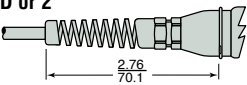
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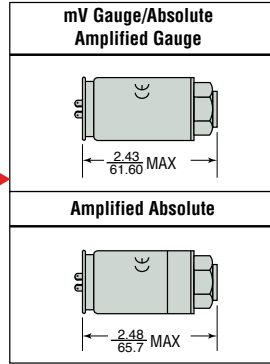
R = Red
 BL = Blue
 BK = Black
 W = White
 Y = Yellow













Dimensions

2200 Series


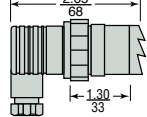
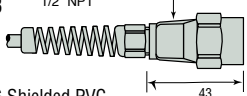
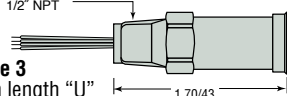
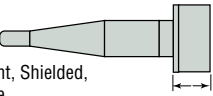
Mini 4 Pin - No Connector
Code B 
Mini 4 Pin - With Connector
Code A  1.02 26.02
IP67 Cable (Waterproof)
Code F  1.37 35.0
24 AWG Shielded PVC
IP65 or NEMA4 Cable
Code D or 2  2.76 70.1
24 AWG Shielded PVC

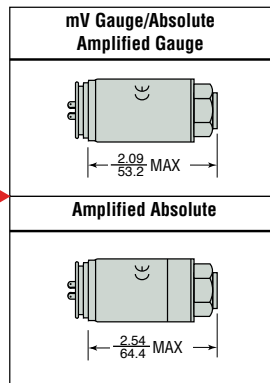


Maximum diameter 1.07" (27.3 mm)


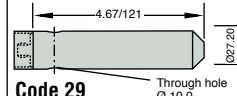
1/8-27 NPT
Code 08  0.59 15
1/4 - 18 NPT
Code 02 with snubber  0.79 20
Code OJ with snubber 
1/4-18 NPT Internal
Code 0E  0.95 24
1/2-14 NPT
Code 0H  1.02 26.0
7/16-20 UNF-2A
Code 04  0.75 19
9/16-18 UNF-2A
Code 1P  0.67 17
G 1/8 Internal
Code 09 
G 1/4 External
Code 01  0.67 17
R 1/4
Code 0A  0.79 20

2600 Series

10-6 or 8-4 Mil-C Connector
10-6 Code C  0.87 22
8-4 Code 1
Large DIN 43650 Plug
Code G  2.65 68 1.30 33
Conduit Connector with Cable
Code 3 1/2" NPT  43 1.70
24 AWG Shielded PVC
Conduit Connector with Flying Leads
Code 3 1/2" NPT with length "U"  1.70/43
Moulded, Immersible Cable
Code M 24 AWG, Vent, Shielded, Polyurethane  0.90 23



Maximum diameter 1.07" (27.3 mm)

Nose Cone - Black Acetal
Code 19  0.75 19
Nose Cone Sink Weight
Code 29  4.67/121 Through hole Ø 10.0 0.87/20

inch
mm

PRESSURE TRANSDUCERS

How to Order

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

Series	2200	2600	2200	B	G	A60	01	A	3	U	A	Performance Code
Output	A - 100 mV B - 4-20mA	C - 1-6V D - 1-11V H - 1-5V	J - 0.5-5.5V R - 0-5V S - 0-10V	G - 0.2-10.2V F - 0.1-5.1V								Accuracy/Thermal A - .25%/1.5% B - .15%/1.0%
Pressure Datum	A* - Absolute *Max absolute range is 25 bar. (≤ 300 psi)		G - Gauge									Cable Length ¹ U - No Cable Fitted ^{1 2} D - 1 Metre (3 feet) E - 3 Metres (9 feet) F - 5 Metres (16 feet) G - 10 Metres (32 feet)
Pressure Range ³ - psi	F07 - 0-7.5 F15 - 0-15 F30 - 0-30 F60 - 0-60 G10 - 0-100 G15 - 0-150 G20 - 0-200 G30 - 0-300 G50 - 0-500	G60 - 0-600 H10 - 0-1,000 H15 - 0-1,500 H20 - 0-2,000 H30 - 0-3,000 H40 - 0-4,000 H50 - 0-5,000 H60 - 0-6,000	Vac = -15 psi 1F5 - Vac-0 3F0 - Vac-15 6F0 - Vac-45 1G0 - Vac-85 1G5 - Vac-135 2G0 - Vac-185 3G0 - Vac-285									Apparatus Protection 2 - mV Only Transient Protection CE Mark, UR 3 - Amplified Only RFI Protected CE Mark, UR
Pressure Range - bar	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									Electrical Connection (See Notes) 2200 Series A - 4 PIN DIN (Micro) Mating Connector Supplied B - 4 PIN DIN (Micro) Mating Connector Not Supplied 2 - Cable Nema 4 USA D - Cable European Color Code 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 - Moulded Cable Immersible 1 - Fixed Plug Size 8-4 Mating Plug Not Supplied 3 - Conduit Connector 1/2NPT Ext. 1M Cable ²
Pressure Port	08 - 1/8-27 NPT External 02 - 1/4-18 NPT External 0J - 1/4 NPT External w/snubber 0E - 1/4 NPT Internal 0H - 1/2-14 NPT External 04 - 7/16-20 External (SAE #4, J514) 1P - 9/16-18 External (SAE #6, J1926-2) IJ - 7/16-20 External (SAE #4, J1926-2)	European Threads 09 - G1/8 Internal 01 - G1/4 External 0A - R1/4 External Submersible (2600 only) 19 - Plastic Nose Cone 29 - Sink Weight Nose Cone										Notes: 1. When electrical connection is cable please select a cable length from Table 1 below. When electrical connection is DIN or plug style "U" must be specified. 2. Where electrical connection - 3 and cable length - U occur in part number, the unit will be supplied with flying leads (4-1/2" IP30). 3. Additional Pressure Ranges are available. Please consult factory.



Table 1 - Cable Length

(2600 Series) (2200 Series select "U" through "G")

Code	Length (M)	Code	Length (M)
U	No Cable Fitted	M	40
D	1	N	50
E	3	P	75
F	5	Q	100
G	10	R	125
H	15	S	150
J	20	4	170
K	25	5	200
L	30	6	225

Note: Maximum cable length on a 2200 is 10 meters.

22CS Series / 26CS Series – CSA Intrinsically Safe Industrial Pressure Transmitters

- ▶ Ranges from 7.5 to 6000psi (0.5 to 400 bar) and 0-300psi (0-25 bar) Absolute
- ▶ Voltage and 2 Wire 4-20mA output models
- ▶ All stainless steel wetted parts

Certified by CSA for Canada and USA, the 22CS and 26CS Series intrinsically safe pressure transmitters are designed to withstand the rigors of the most difficult applications. An all-stainless steel construction, eliminates the need for seals and oil barriers that can deteriorate over time.

Incorporating Gems CVD Sensors and ASIC technology the 22CS and 26CS Series 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 and electrical connections rated from IP65 to fully immersible (IP68 200m WG).

Specifications

Input	
Pressure Range	Vacuum to 6000 psi G (400 bar); 300 psi Absolute (0-25 bar)
Proof Pressure	2 x Full Scale (FS) (1.5 x FS for 400 bar, ≥ 5000 psi)
Burst Pressure	>35 x FS ≤ 100 psi (6 bar); >20 x FS ≤ 1000 psi (60 bar); >5 x FS ≤ 6000 psi (400 bar)
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	-5°F to +180°F (-20°C to +80°C)
Operating Temperatures	-40°F to +260°F (-40°C to +125°C) for elec. codes A, B, C -5°F to +180°F (-20°C to +80°C) for elec. codes G -5°F to +125°F (-20°C to +50°C) 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, 3 and G (with DIN connector fitted) IP67 for elec. code F IP68 for elec. codes M
Vibration	35g peak sinusoidal, 5 to 2000 Hz
Acceleration	100g steady acceleration in any direction 0.032% FS/g for 15 psi (1 bar) range decreasing logarithmically to 0.0007% FS/g for 6000 psi (400 bar) range.
Shock	Withstands free fall to IEC 68-2-32 procedure 1
Approvals	CSA Certified Class I, Division 1, Groups A, B, C, D Class II, Division 1, Groups E, F, G Class III When used in conjunction with a Zener safety barrier
Weight	Approx. 3.5 ounces (100 grams) (additional cable; 75 g/m)

Series 22CS



Series 26CS



Individual Specifications

Voltage Output units	
Output	See ordering chart
Supply Voltage (Vs)	1.5 VDC above FS output to 28 VDC
Supply Voltage Sensitivity	0.01% FS/Volt
Min. Load Resistance	(FS output / 2) Kohms
Current Consumption	Approx 6 mA at 7.5V output
Current Output units	
Output	4-20 mA (2 wire)
Supply Voltage (Vs)	24 VDC, (7-28 VDC)
Supply Voltage Sensitivity	0.01% FS/Volt
Max. Loop Resistance	(Vs-7) x 50 ohms

Electrical Connections

	Connection Code	mA Output			Voltage Output			
		+VE	-VE	EARTH	-VE	COMMON	EARTH	EARTH
22CS	A, B	1	2	E	1	2	2	4
	2, D, F	R	BK	DRAIN	R	BK	W	DRAIN
26CS	1	A	B	D	A	B	C	D
	C	A	B	E	A	B	C	E
	G	1	3	E	1	2	3	E
	3 (Cable)	R	BK	DRAIN	R	BK	W	DRAIN
	F (Leads)	R	BK	GR	R	BK	W	GR
	M	R	BL	DRAIN	R	W	Y	DRAIN

Electromagnetic Capability

Meets the requirement for CE marking of EN50081-2 for emissions and EN50082-2 for susceptibility.

Test Data:


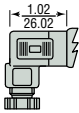
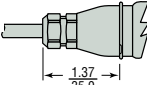
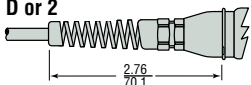
- EN61000-4-2 Electrostatic Discharge. 8kV air discharge, 4kV contact discharge. Unit survived.
- ENV50140 Radiated RF Susceptibility. 10V/m, 80MHz-1GHz, 1kHz mod. Maximum recorded output error was $\pm 1\%$
- ENV50204 Radiated RF Susceptibility to Mobile Telephones. 10V/m, 900MHz. Maximum recorded output error was $\pm 1\%$.
- 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 $\pm 1\%$

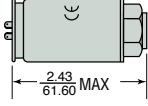
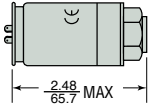
Cable Legend:

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

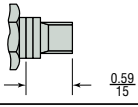
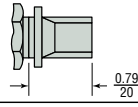
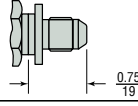

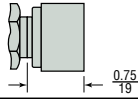
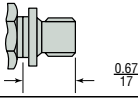
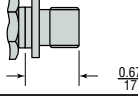
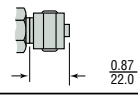
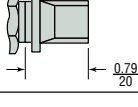
Dimensions

22CS Series



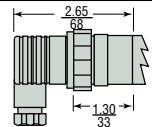
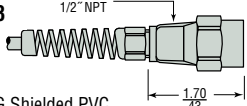
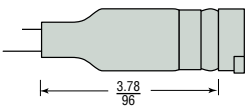
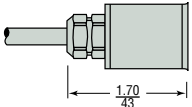
Industrial DIN Connector	
Code B	
Industrial DIN Connector (mate supplied)	
Code A	
IP67 Cable	
Code F	
24 AWG Shielded PVC	
IP65 or NEMA4 Cable	
Code D or 2	
24 AWG Shielded PVC	

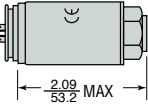
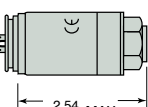
Amplified Gauge	
Amplified Absolute	

Maximum diameter 1.07" (27.3 mm)

1/8-27 NPT	Code 08	
1/4 - 1/8 NPT	Code 02	
7/16-20 UNF-2A	Code 04	
G1/8 Internal	Code 09	
G1/4 Internal	Code 00	
G1/4 External	Code 01	
G1/4 Soft Seal	Code 05	
G1/2 Manometer	Code 03	
R1/4	Code 0A	

26CS 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	
24 AWG Shielded PVC	
Conduit Connector with Flying Leads	
Code M	
Code F	

Amplified Gauge	
Amplified Absolute	

Maximum diameter 1.07" (27.3 mm)

inch
mm

How to Order

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

			22CS	B	G	A60	01	A	C	U	A	
Series											Performance Code	
	22CS	26CS									Accuracy/Thermal	
Output											A - .25%/1.5% B - .15%/1.0%	
	B - 4-20mA	C - 1-6V D - 1-11V H - 1-5V G - 0.2-10.2V	J - 0.5-5.5V R - 0-5V S - 0-10V F - 0.1-5.1V									Cable Length
Pressure Datum	A - Absolute	G - Gauge									U - No Cable Fitted D - 3 feet (1 Meter) E - 9 feet (3 Meters) F - 16 feet (5 Meters) G - 32 feet (10 Meters) H - 50 feet (15 Meters) J - 65 feet (20 Meters) K - 82 feet (25 Meters) L - 98 feet (30 Meters) M - 132 feet (40 Meters) N - 164 feet (50 Meters) P - 246 feet (75 Meters) Q - 328 feet (100 Meters) R - 410 feet (125 Meters) S - 525 feet (160 Meters)	
Pressure Range ¹ - psi											Apparatus Protection	
	F15 - 0-15 F30 - 0-30 F60 - 0-60 G10 - 0-100 G15 - 0-150 G20 - 0-200 G30 - 0-300 G50 - 0-500	G60 - 0-600 H10 - 0-1,000 H15 - 0-1,500 H20 - 0-2,000 H30 - 0-3,000 H40 - 0-4,000 H50 - 0-5,000 H60 - 0-6,000			Vac = -15 psi 1F5 - Vac-0 3F0 - Vac-15 6F0 - Vac-45 1G0 - Vac-85 1G5 - Vac-135 2G0 - Vac-185 3G0 - Vac-285						C - CSA Approved Intrinsically Safe	
Pressure Range ¹ - bar											Electrical Connection	
	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						22CS Series A - Industrial DIN Mating Connector Supplied B - Industrial DIN Mating Connector Not Supplied F - Cable Gland Metal IP67 2 - IP65 - NEMA4 Cable D - IP65 - NEMA4 Cable 26CS 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 Meters 1 - Fixed Plug Size 8-4 Mating Plug Not Supplied 3 - Conduit Connector 1/2 NPT Ext. 1M Cable F - Cable Gland Metal IP67	
Pressure Port ²												
	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								

Notes:

1. Additional Pressure Ranges are available. Please consult factory.
2. For other Pressure Ports, please consult factory.

22FA Series / 26FA Series – CSA Intrinsically Safe Industrial Pressure Transmitters

- ▶ CSA Certified Intrinsically Safe (See Specification)
- ▶ Ranges from 7.5 to 6000psi (0.5 to 400 bar) and 0-300psi (0-25 bar) Absolute
- ▶ Voltage and 2 Wire 4-20mA output models
- ▶ All stainless steel wetted parts

Certified by CSA for Canada and USA, the 22FA and 26FA Series intrinsically safe pressure transmitters are designed to withstand the rigors of the most difficult applications. An all-stainless steel construction, eliminates the need for seals and oil barriers that can deteriorate over time.

Incorporating Gems CVD Sensors and ASIC technology the 22FA and 26FA Series 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 and electrical connections rated from IP65 to fully immersible (IP68 200m WG).

Specifications

Input	
Pressure Range	Vacuum to 6000 psi G (400 bar); 300 psi Absolute (0-25 bar)
Proof Pressure	2 x Full Scale (FS) (1.5 x FS for 400 bar, ≥ 5000 psi)
Burst Pressure	>35 x FS ≤ 100 psi (6 bar); >20 x FS ≤ 1000 psi (60 bar); >5 x FS ≤ 6000 psi (400 bar)
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	-5°F to +180°F (-20°C to +80°C)
Operating Temperatures	-40°F to +260°F (-40°C to +125°C) for elec. codes A, B, C -5°F to +180°F (-20°C to +80°C) for elec. codes G -5°F to +125°F (-20°C to +50°C) 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, 3 and G (with DIN connector fitted) IP67 for elec. code F IP68 for elec. codes M
Vibration	35g peak sinusoidal, 5 to 2000 Hz
Acceleration	100g steady acceleration in any direction 0.032% FS/g for 15 psi (1 bar) range decreasing logarithmically to 0.0007% FS/g for 6000 psi (400 bar) range.
Shock	Withstands free fall to IEC 68-2-32 procedure 1
Approvals	CSA certified intrinsically safe Class I, Division 1, Group D when used with a zener safety barrier
Weight	Approx. 100 grams (additional cable; 75 g/m)

Series 22FA



Series 26FA



Individual Specifications

Voltage Output units	
Output	See ordering chart
Supply Voltage (Vs)	1.5 VDC above FS output to 28 VDC
Supply Voltage Sensitivity	0.01% FS/Volt
Min. Load Resistance	(FS output / 2) Kohms
Current Consumption	Approx 6 mA at 7.5V output
Current Output units	
Output	4-20 mA (2 wire)
Supply Voltage (Vs)	24 VDC, (7-28 VDC)
Supply Voltage Sensitivity	0.01% FS/Volt
Max. Loop Resistance	(Vs-7) x 50 ohms

Electrical Connections

	Connection Code	mA Output			Voltage Output			
		+VE	-VE	EARTH	-VE	COMMON	EARTH	EARTH
22FA	A, B	1	2	E	1	2	2	4
	2, D, F	R	BK	DRAIN	R	BK	W	DRAIN
26FA	1	A	B	D	A	B	C	D
	C	A	B	E	A	B	C	E
	G	1	3	E	1	2	3	E
	3 (Cable)	R	BK	DRAIN	R	BK	W	DRAIN
	F (Leads)	R	BK	GR	R	BK	W	GR
	M	R	BL	DRAIN	R	W	Y	DRAIN

Electromagnetic Capability

Meets the requirement for CE marking of EN50081-2 for emissions and EN50082-2 for susceptibility.

Test Data:



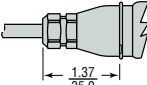
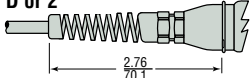
- EN61000-4-2 Electrostatic Discharge. 8kV air discharge, 4kV contact discharge. Unit survived.
- ENV50140 Radiated RF Susceptibility. 10V/m, 80MHz-1GHz, 1kHz mod. Maximum recorded output error was $<\pm 1\%$
- ENV50204 Radiated RF Susceptibility to Mobile Telephones. 10V/m, 900MHz. Maximum recorded output error was $<\pm 1\%$.
- 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 $<\pm 1\%$

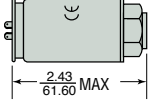
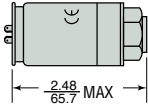
Cable Legend:

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










Dimensions

22FA Series



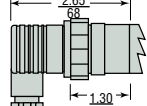
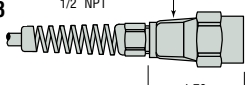
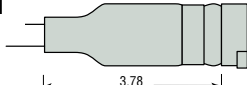
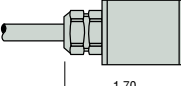
Industrial DIN Connector	
Code B	
Industrial DIN Connector (mate supplied)	
Code A	
IP67 Cable	
Code F	
24 AWG Shielded PVC	
IP65 or NEMA4 Cable	
Code D or 2	
24 AWG Shielded PVC	

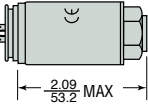
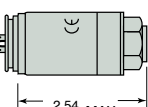
Amplified Gauge	
Amplified Absolute	

Maximum diameter 1.07" (27.3 mm)

1/8-27 NPT	Code 08	
G1/8 Internal	Code 09	
1/4 - 1/8 NPT	Code 02	
7/16-20 UNF-2A	Code 04	
G1/4 Internal	Code 00	
G1/4 External	Code 01	
G1/4 Soft Seal	Code 05	
R1/4	Code 0A	
G1/2 Manometer	Code 03	

26FA 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	
24 AWG Shielded PVC	
Conduit Connector with Flying Leads	
Code M	
Code F	

Amplified Gauge	
Amplified Absolute	

Maximum diameter 1.07" (27.3 mm)

inch
mm

How to Order

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

			22FA	B	G	A60	01	A	C	U	A	
Series											Performance Code	
	22FA	26FA									Accuracy/Thermal	
Output											A - .25%/1.5% B - .15%/1.0%	
	B - 4-20mA	C - 1-6V D - 1-11V H - 1-5V G - 0.2-10.2V	J - 0.5-5.5V R - 0-5V S - 0-10V F - 0.1-5.1V									Cable Length
Pressure Datum	A - Absolute	G - Gauge									U - No Cable Fitted D - 3 feet (1 Meter) E - 9 feet (3 Meters) F - 16 feet (5 Meters) G - 32 feet (10 Meters) H - 50 feet (15 Meters) J - 65 feet (20 Meters) K - 82 feet (25 Meters) L - 98 feet (30 Meters) M - 132 feet (40 Meters) N - 164 feet (50 Meters) P - 246 feet (75 Meters) Q - 328 feet (100 Meters) R - 410 feet (125 Meters) S - 525 feet (160 Meters)	
Pressure Range ¹ - psi											Apparatus Protection	
	F15 - 0-15 F30 - 0-30 F60 - 0-60 G10 - 0-100 G15 - 0-150 G20 - 0-200 G30 - 0-300 G50 - 0-500	G60 - 0-600 H10 - 0-1,000 H15 - 0-1,500 H20 - 0-2,000 H30 - 0-3,000 H40 - 0-4,000 H50 - 0-5,000 H60 - 0-6,000			Vac = -15 psi 1F5 - Vac-0 3F0 - Vac-15 6F0 - Vac-45 1G0 - Vac-85 1G5 - Vac-135 2G0 - Vac-185 3G0 - Vac-285						C - CSA Approved Intrinsically Safe	
Pressure Range ¹ - bar											Electrical Connection	
	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						22FA Series A - Industrial DIN Mating Connector Supplied B - Industrial DIN Mating Connector Not Supplied F - Cable Gland Metal IP67 2 - IP65 - NEMA4 Cable D - IP65 - NEMA4 Cable 26FA 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 Meters 1 - Fixed Plug Size 8-4 Mating Plug Not Supplied 3 - Conduit Connector 1/2 NPT Ext. 1M Cable F - Cable Gland Metal IP67	
Pressure Port ²												
	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										

Notes:

1. Additional Pressure Ranges are available. Please consult factory.
2. For other Pressure Ports, please consult factory.

1200 Series / 1600 Series – OEM Transducers Featuring Exceptional Proof Pressure and Stability Specifications

- ▶ 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 1200 Series features stability and toughness via its CVD and ASIC design coupled with a thicker diaphragm. The thicker diaphragm enables these sensors 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. A modular design allows 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	
Pressure Range	Vacuum to 6000 psi (400 bar)
Proof Pressure	4 x Full Scale (FS) (<1% FS Zero Shift)
Burst Pressure	>35 x FS <= 60 psi (4 bar); >20 x FS <= 600 psi (40 bar); >5 x FS <= 6000 psi (400 bar)
Fatigue Life	Designed for more than 100 million FS cycles
Performance	
Supply Voltage Sensitivity	0.01% FS/Volt
Long Term Drift	0.2% FS/year (non-cumulative)
Accuracy	0.5% FS typical
Thermal Error	2.0% FS typical
Compensated Temperatures	-5°F to +180°F (-20°C to +80°C)
Operating Temperatures	-40°F to +260°F (-40°C to +125°C) for elec. codes A, B, C, 1 -5°F to +180°F (-20°C to +80°C) for elec. codes 2, D, G, 3 -5°F to +125°F (-20°C to +50°C) for elec. code F temperatures >100°C supply is limited to 24 VDC
Zero Tolerance	1% of span
Span Tolerance	1% of span
Response Time	0.5 ms
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 NEMA 4 for elec. codes A,B,C,D,G,1,2,3 IP67 for elec. codes F IP30 for elec. code "3" with flying leads
Vibration	70g, peak to peak sinusoidal, 5 to 2000 Hz (Random Vibration: 20 to 200 Hz @ ≈20g Peak per MIL-STD.-810E Method 514.4)
Acceleration	100g steady acceleration in any direction 0.032% FS/g for 15 psi (1 bar) range decreasing logarithmically to 0.0007% FS/g for 6000 psi (400 bar) range.
Shock	20g, 11 ms, per MIL-STD.-810E Method 516.4 Procedure I
Approvals	CE, UR (12 ET, 16 ET Intrinsically safe)
Weight	approx. 100 grams (additional; cable 75 g/m)



Along with the superiority of the CVD strain gauge, Psibar® transducers incorporate components to leverage the sensing element's strength. The output is a product with a unique balance of performance and value unmatched in today's pressure sensing market.



PRESSURE TRANSDUCERS

Individual Specifications

Voltage Output units	
Output	See ordering chart
Supply Voltage (Vs)	1.5 VDC above span to 35 VDC
Min. Load Resistance	(FS output / 2) Kohms
Current Output units	
Output	4-20 mA (2 wire)
Supply Voltage (Vs)	24 VDC, (7-35 VDC)
Max. Loop Resistance	(Vs-7) x 50 ohms

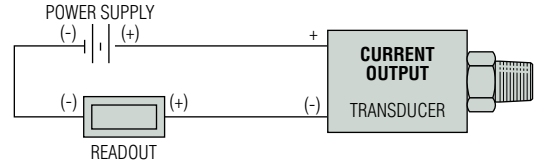
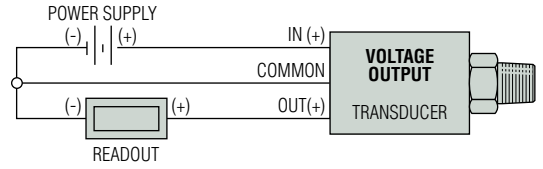
Electrical Connection Cable		Voltage Units				Current Units (4-20 mA)		
		IN+	COM	OUT+	EARTH	(+)	(-)	EARTH
A, B, G "DIN"	PIN	1	2	3	4	1	2	4
C "10-6 Bayonet"	PIN	A	C	B	E	A	B	E
D "cable"		R	BK	W	DRAIN	R	BK	DRAIN
F "IP 67 cable"		R	BK	W	DRAIN	R	BK	DRAIN
1 "8-4 Bayonet"	PIN	A	C	B	D	A	B	D
2 "cable"		R	BK	W	DRAIN	R	BK	DRAIN
3 "conduit & cable"		R	BK	W	DRAIN	R	BK	DRAIN

Electromagnetic Capability

Meets the requirement for CE marking of EN50081-2 for emissions and EN50082-2 for susceptibility.

Test Data:

- EN61000-4-2 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 $\leq \pm 1\%$
- ENV50204 Radiated RF Susceptibility to Mobile Telephones. 10V/m, 900MHz. Maximum recorded output error was $\leq \pm 1\%$.
- 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 $\leq \pm 1\%$



Cable Legend:

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

Table 1 - Cable Length

Code	Length (M)	Code	Length (M)
U	No Cable Fitted	M	40
D	1	N	50
E	3	P	75
F	5	Q	100
G	10	R	125
H	15	S	150
J	20	4	170
K	25	5	200
L	30	6	225

Monitor Liquid Level with Gems Psibar® Pressure Transducers

- ▶ Continuously Monitor Liquid Levels
- ▶ Stainless Steel Wetted Parts are Compatible With Most Fluids
- ▶ Mount Through Top or Side of Tanks

Gems Psibar® pressure transducers provide a great, cost-effective method for measuring liquid levels. From measuring inventories in process storage tanks to monitoring hot water feed tanks, our design flexibility promotes easy installation, with mounting either through the tank top or from the side.

Getting Started...

Tank content is determined from the pressure exerted on the sensor, so you need to know the depth **and** the specific gravity of the liquid being measured. When these two factors are known, the following equation can be used to determine the pressure range needed to specify an applicable pressure transducer:

$$\text{Pressure in PSI} = \text{Liquid Level (in feet)} \times (\text{Specific Gravity} \times 0.433)$$

Example:

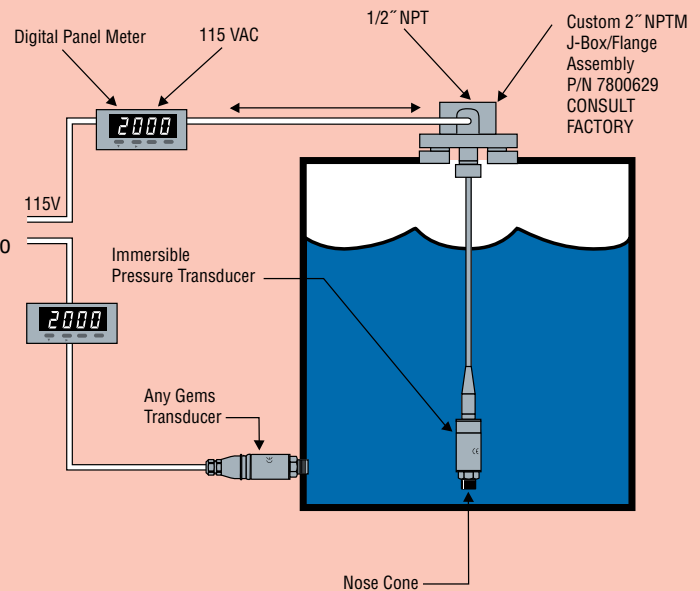
Tank Level:

$$\text{Pressure in PSI} = \text{Liquid Level (in feet)} \times (\text{Specific Gravity} \times 0.433)$$

$$\text{Pressure in PSI} = 30 \times (1.0 \times 0.433)$$

$$\text{Pressure in PSI} = 12.99 \text{ PSI}$$

Using a Psibar Series 1200, 1600, 2200 or 2600 transducer, specify Pressure Range code **F15** (0-15 PSI).



Order from: 7 5 '6 f][[g'7 ca dUbn]'622 Mary Street; Suite 101 - Warminster, PA 18974

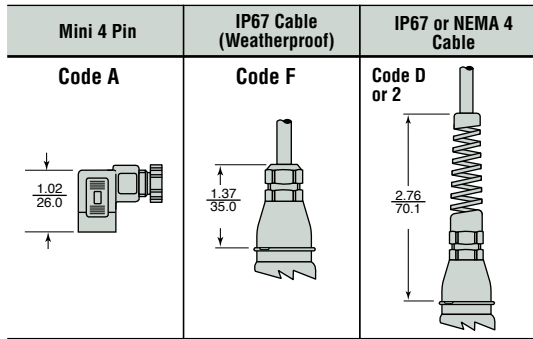
Phone: 267-673-8117 - 800-352-6265 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

1200/1600 Series / p2of3 / 3-APR-14

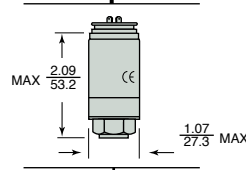
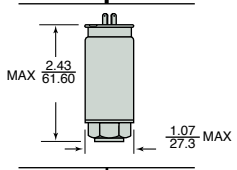
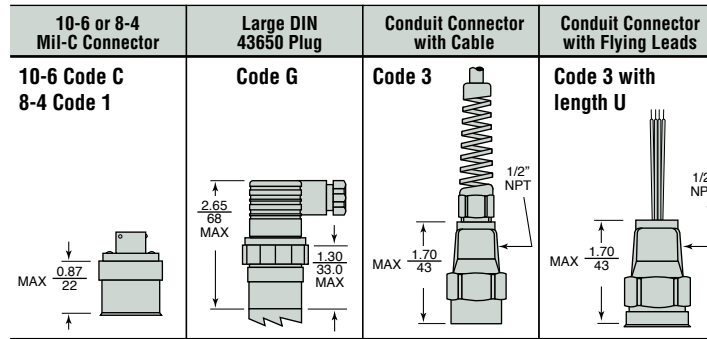


Dimensions

1200 Series



1600 Series



1/8 NPT	1/4-18 NPT	1/4-18 NPT Internal	1/2-14 NPT	7/16 - 20 UNF-2A (SAE J514)	9/16-18 UNF-2A	G 1/8	G1/4 External	R 1/4
MAX 0.59 / 15	MAX 0.79 / 20	0.95 / 24	MAX 1.02 / 26.0	MAX 0.75 / 19	MAX 0.67 / 17		MAX 0.67 / 17	0.79 / 20
Code 08	Code 02 (0J with snubber)	Code 0E	Code 0H	Code 04	Code IP	Code 09	Code 01	Code 0A

How to Order

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

Series: **1200** **1600** 12 ET⁴ 16 ET⁴

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

Datum: **G** - Gauge

Pressure Range³ - psi: **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-135
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 Range³ - bar: **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

Performance Code: **A**

Cable Length¹: **U** - None **E** - 3m (9ft)
D - 1m (3ft) **F** - 5m (16ft)
G - 10m (32ft)

Apparatus Protection: **3** - Amplified Only RFI Protected CE Mark, UR
E - Amplified only IS mark (Div. 1 only)⁴
T - Amplified only IS mark (Div. 1 and 2)^{4,5}

Electrical Connection: **1200 Series**
A - Mini Din with mate
B - Mini Din without mate
F - IP67 Weatherproof Cable Gland²
2 - NEMA 4 Cable²

1600 Series
C - 10-6 Mil C Connector
1 - 8-4 Mil C Connector
G - Large DIN 43650 Plug
3 - Conduit Connector with 1 Meter Leads (for cable specify length code)

Pressure Port: **08** - 1/8-27 NPT External **09** - G 1/8 Internal
02 - 1/4-18 NPT External **01** - G 1/4 External
0J - 1/4 NPT External w/snubber **0A** - R 1/4 External
0E - 1/4 NPT Internal
0H - 1/2-14 NPT External
04 - 7/16-20 External (SAE #4, J514)
1P - 9/16-18 External (SAE #6, J1926-2)
1J - 7/16-20 External (SAE #4, J1926-2)

European Threads

- Notes:
- When electrical connection is cable please select a cable length from Table 1 (opposite page). When electrical connection is DIN or plug style "U" must be specified.
 - Electrical Connections "F" and "2" are 24AWG, Shielded, PVC Cable.
 - Additional Pressure Ranges are available. Please consult factory.
 - Intrinsically safe transducers are available with amplified outputs only. (ETL, entity approved for Class I, Division 1, Groups C & D, hazardous areas; Class I, Divisions 1 and 2, Groups C & D for Electrical Connection Codes -A, -B, -G or -3 only.)
 - Apparatus Protection Code -T is available for Electrical Connection Codes -A, -B, -G or -3 only.

Order from: 7'5'6"ff [g7ca dUbnf 622 Mary Street; Suite 101 - Warminster, PA 18974

6700 Series-Stable Industrial Transmitters with Turndown Capabilities

- ▶ Gauge and Absolute Pressure Models
- ▶ Submersible, General Purpose and Wash down Enclosures
- ▶ High Stability Achieved by Sputtered Sensing Element

The 6700 series features customer accessible 5:1 turndown from nominal range via a switch and potentiometer. 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

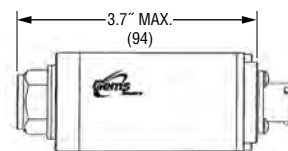
Input	
Pressure Range	0.5 to 400 bar; (7.5 to 6000 psi) Gauge and Absolute
Proof Pressure	2 x Full Scale (FS) (1.5 x FS for 400 bar, ≥ 5000 psi)
Burst Pressure	>35 x FS ≤ 100 psi (6 bar); >20 x FS ≤ 1000 psi (60 bar); >5 x FS ≤ 6000 psi (400 bar)
Fatigue Life	Designed for more than 100 million FS cycles
Performance	
Output	4-20 mA (2 wire)
Supply Voltage (Vs)	9.5 to 40 VDC (ExII 1G 9.5 to 28 Vdc)
Supply Voltage Sensitivity	0.005% of max span/Volt
Long Term Drift	0.15% of max span/year (non-cumulative)
Accuracy	0.15% FS typical
Thermal Error Typical	15°F to 120°F (-10°C to +50°C) 0.5% of max span -4°F to +176°F (-20°C to +80°C) 1% of max span
Operating Temperatures	-4°F to +185°F (-20°C to +85°C) elec. conn. code C G & L -4°F to +122°F (-20°C to +50°C) elec. conn. code M, 3 -22°F to +212°F (-30°C to +100°C) process/media
Zero Tolerance	0.15 % span, typical
Span Tolerance	0.15% span, typical
Zero Adjustment	±10% (100% at factory) by potentiometer
Span Adjustment	17% to 100% of span by potentiometer/switches
Max. Loop Resistance	(Vs-9.5) x 50 ohms
Mechanical Configuration	
Pressure Port	see ordering chart
Wetted Parts	17-4 PH Stainless Steel (1 & 1.6b 17-4 PH and 15-7 MO)
Electrical Connection	see ordering chart
Enclosure	318 Duplex 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, 3 IP68 for elec. code M
Vibration	35g peak sinusoidal, 5 to 2000 Hz
Acceleration	100g steady acceleration in any direction 0.036% FS/g for 10 psi (0.75 bar) range decreasing logarithmically to 0.0007% FS/g for 6000 psi (400 bar) range.
Shock	Withstands free fall to IEC 68-2-32 procedure 1
Approvals	CE, Lloyds Register, optimal EXII 1G; E Exia II CT4 (-40°C < T amb < 75°C) Cert BASEEFA 02ATEX00040X
Weight	approx. 250 grams (additional; cable 75 g/m)



Dimensions in. (mm)

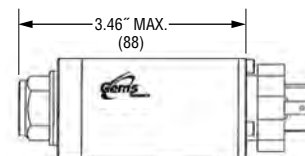
Max diameter 39mm, all models

Code C



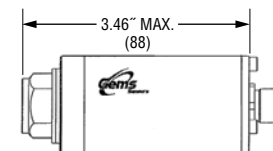
Six Pin Fixed Plug (10-6)

Code G



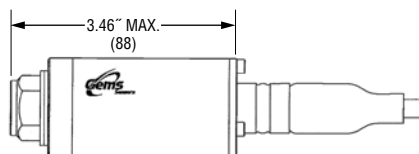
Fixed Plug to DIN 43650 Mating Connector Supplied

Code L



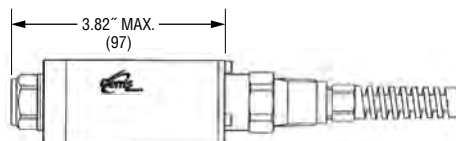
Electrical Connector M12 x 1 (5 Pin)

Code M



Immersible to 200mWG

Code 3



1/2 - 14 NPT conduit

How to Order

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

SELECT: **6700 B G B10 00 G 3 000 B**

- 6700** series for bar ranges, **6710** series for psi ranges
- Output Response: **B** 4-20 mA Undamped;
- Pressure Datum: **G** gauge and compound; **A** absolute
- Insert pressure range code from table below
- Pressure Port see chart
- Electrical Connection **C** Fixed plug size 10-6, mate sold separately part # 499532-0006
M IP68 immersible cable; **G** Fixed plug to DIN 43650, mate supplied
L M12 x 1 (5 pin); **3** 1/2-14 NPT conduit
- Approvals/Protection **3** CE;
G ATEX approved intrinsically safe EExia IIC T4, galvanic isolation gauge and absolute
- Cable Length in meters (requires electrical connection code M)
000 no cable; **001** 1 meter cable; **999** 999 meters
- Static/Thermal performance **B** 0.15%/5%

Note: For 500mb use range code A 0.25%/3%

Electrical Connections

Electrical Connection Code	Wiring		
	(+)	(-)	EARTH
G "DIN"	1	2	4
C "10-6 Bayonet"	A	B	E
M "IP 68 Immersible Cable"	R	BL	DRAIN

Cable Legend:
R = Red BL = Blue

Pressure Range Code

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

6710 Model PSI Ranges	Range Code	Gauge (G) Absolute (A)
0 to 15	F15	G, A
0 to 30z	F30	G, A
0 to 60	F60	G, A
0 to 100	G10	G, A
0 to 150	G15	G, A
0 to 200	G20	G, A
0 to 300	G30	G, A
0 to 500	G50	G
0 to 600	G60	G
0 to 1000	H10	G
0 to 1500	H15	G
0 to 3000	H30	G
0 to 5000	H50	G
0 to 6000	H60	G

Pressure Ports – See Page H-50 for Dimensions

Code	Description of Stainless Steel Fittings
OO	G 1/4 internal
AO	G 1/4 external
KO	7/16-20 UNF-3A external
MO	M14 x 1.5 external
PO	G 1/2 manometer
BO	1/4-18 NPT external
GO	1/2-14 NPT external
SO	7/16-20 UNJF-3A, MS 33656E4

Immersible Sensors	
10	Plastic Nose cone
20	Nose cone with restrictor
30	Nose cone w/ steel sink weight

Order from: **7 5 6 f]] [g 7 ca dUbn'** 622 Mary Street, Suite 101 - Warminster, PA 18974