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.

Series 2200

Series 2600

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_2O) 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)

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

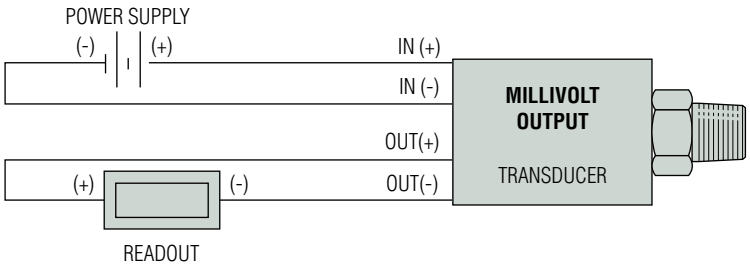
Meets the requirement for CE marking of EN50081-2 for emissions and EN50082-2 for susceptibility.

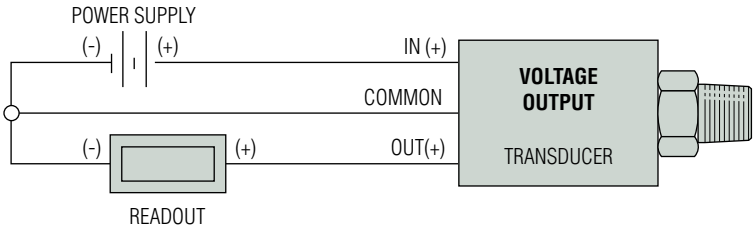
Test Data:

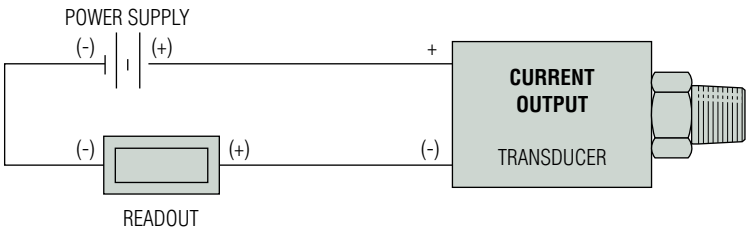
- EN61000-4-2 Electrostatic Discharge. 8kV air discharge, 4kV contact discharge. Unit survived.
- ENV50140 Radiated RF Susceptibility. 10V/m, 80MHz-1GHz, 1kHz mod. Maximum recorded output error was <±1%
- ENV50204 Radiated RF Susceptibility to Mobile Telephones. 10V/m, 900MHz. Maximum recorded output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

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

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







Order from: C A Briggs Company; 622 Mary Street; Suite 101 - Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

Dimensions

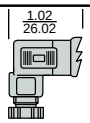
2200 Series

Mini 4 Pin - No Connector

Code B

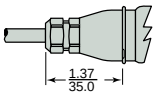
Mini 4 Pin - With Connector

Code A



IP67 Cable (Waterproof)

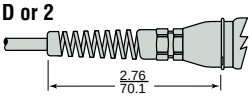
Code F



24 AWG Shielded PVC

IP65 or NEMA4 Cable

Code D or 2

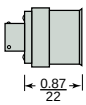


24 AWG Shielded PVC

2600 Series

10-6 or 8-4 Mil-C Connector

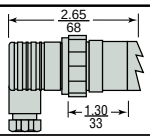
10-6 Code C



8-4 Code 1

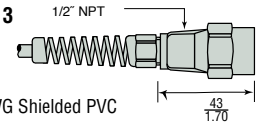
Large DIN 43650 Plug

Code G



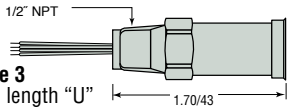
Conduit Connector with Cable

Code 3



24 AWG Shielded PVC

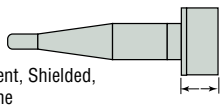
Conduit Connector with Flying Leads



Code 3
with length "U"

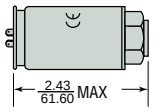
Moulded, Immersible Cable

Code M

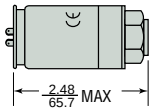


24 AWG, Vent, Shielded, Polyurethane

mV Gauge/Absolute Amplified Gauge

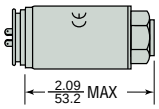


Amplified Absolute

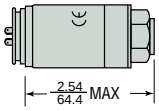


Maximum diameter 1.07" (27.3 mm)

mV Gauge/Absolute Amplified Gauge



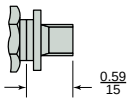
Amplified Absolute



Maximum diameter 1.07" (27.3 mm)

1/8-27 NPT

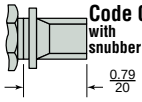
Code 08



1/4 - 18 NPT

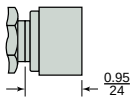
Code 02 with snubber

Code 0J with snubber



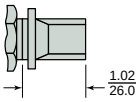
1/4-18 NPT Internal

Code 0E



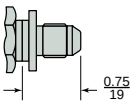
1/2-14 NPT

Code 0H



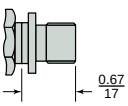
7/16-20 UNF-2A

Code 04



9/16-18 UNF-2A

Code 1P

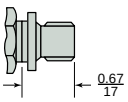


G 1/8 Internal

Code 09

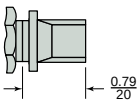
G 1/4 External

Code 01



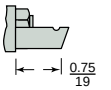
R 1/4

Code 0A

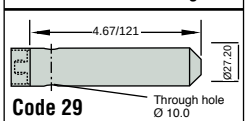


Nose Cone - Black Acetal

Code 19



Nose Cone Sink Weight



Code 29

inch
mm

PRESSURE TRANSDUCERS

Order from: C A Briggs Company; 622 Mary Street; Suite 101 - Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

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 - 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

Pressure Datum
A* - Absolute **G** - Gauge
*Max absolute range is 25 bar. (≤ 300 psi)

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

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

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

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

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)

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

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]

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.

Order from: C A Briggs Company; 622 Mary Street; Suite 101 - Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

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).

Series 22CS

Series 26CS

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)

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

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 <±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%

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

Cable Legend:

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

Dimensions

22CS Series

Industrial DIN Connector

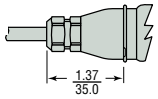
Code B

Industrial DIN Connector (mate supplied)

Code A

IP67 Cable

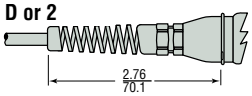
Code F



24 AWG Shielded PVC

IP65 or NEMA4 Cable

Code D or 2

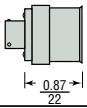


24 AWG Shielded PVC

26CS Series

10-6 or 8-4 Mil-C Connector

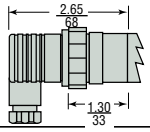
10-6 Code C



8-4 Code 1

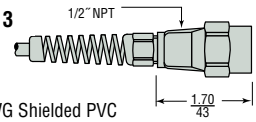
Large DIN 43650 Plug (mate supplied)

Code G



Conduit Connector with Cable

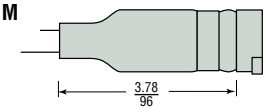
Code 3



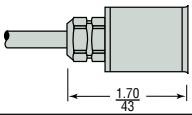
24 AWG Shielded PVC

Conduit Connector with Flying Leads

Code M

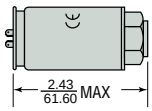


Code F

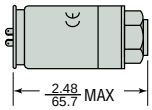


inch
mm

Amplified Gauge

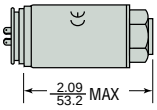


Amplified Absolute

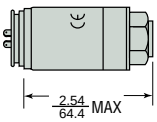


Maximum diameter 1.07" (27.3 mm)

Amplified Gauge



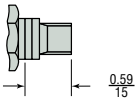
Amplified Absolute



Maximum diameter 1.07" (27.3 mm)

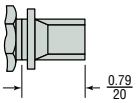
1/8-27 NPT

Code 08



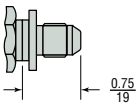
1/4 - 1/8 NPT

Code 02



7/16-20 UNF-2A

Code 04

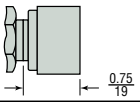


G1/8 Internal

Code 09

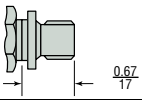
G1/4 Internal

Code 00



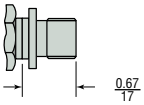
G1/4 External

Code 01



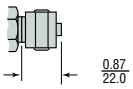
G1/4 Soft Seal

Code 05



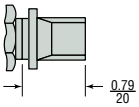
G1/2 Manometer

Code 03



R1/4

Code 0A



PRESSURE TRANSDUCERS

Order from: C A Briggs Company; 622 Mary Street; Suite 101 - Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

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
- **22CS**
- **26CS**

Output
- **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

Pressure Datum
- **A** - Absolute
- **G** - Gauge

Pressure Range[1] – psi
- **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

Pressure Range[1] - 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

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

Electrical Connection

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

Apparatus Protection
- **C** - CSA Approved Intrinsically Safe

Cable Length
- **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)

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

Performance Code

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).

Series 22FA

Series 26FA

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)

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

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 <±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%

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

Cable Legend:

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

PRESSURE TRANSDUCERS

Dimensions

22FA Series

Industrial DIN Connector

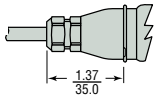
Code B

Industrial DIN Connector (mate supplied)

Code A

IP67 Cable

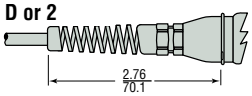
Code F



24 AWG Shielded PVC

IP65 or NEMA4 Cable

Code D or 2

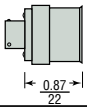


24 AWG Shielded PVC

26FA Series

10-6 or 8-4 Mil-C Connector

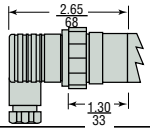
10-6 Code C



8-4 Code 1

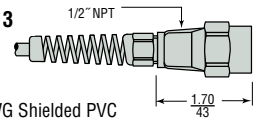
Large DIN 43650 Plug (mate supplied)

Code G



Conduit Connector with Cable

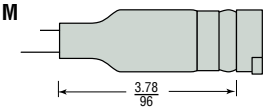
Code 3



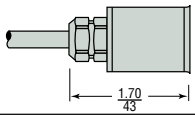
24 AWG Shielded PVC

Conduit Connector with Flying Leads

Code M

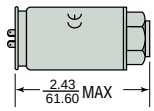


Code F

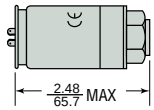


inch
mm

Amplified Gauge

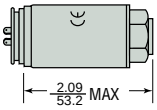


Amplified Absolute

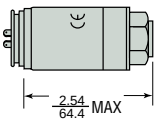


Maximum diameter 1.07" (27.3 mm)

Amplified Gauge



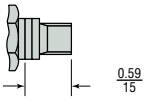
Amplified Absolute



Maximum diameter 1.07" (27.3 mm)

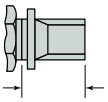
1/8-27 NPT

Code 08



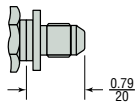
G1/8 Internal

Code 09



1/4 - 1/8 NPT

Code 02

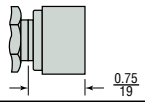


7/16-20 UNF-2A

Code 04

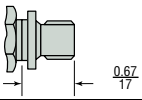
G1/4 Internal

Code 00



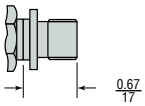
G1/4 External

Code 01



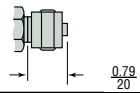
G1/4 Soft Seal

Code 05



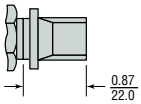
R1/4

Code 0A



G1/2 Manometer

Code 03



PRESSURE TRANSDUCERS

Order from: C A Briggs Company; 622 Mary Street; Suite 101 - Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

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
22FA **26FA**

Output
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

Pressure Datum
A - Absolute
G - Gauge

Pressure Range[1] – 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 Range[1] - 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 Port[2]

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
05 - G1/4 Ext. Soft Seal	

Electrical Connection

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

Apparatus Protection
C - CSA Approved Intrinsically Safe

Cable Length
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)

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

Performance Code

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

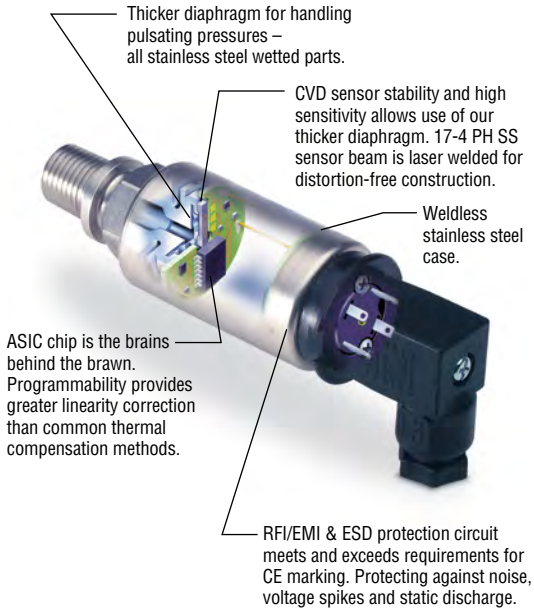
- Gauge, Vacuum, and Compound Pressure Models
- General Purpose and Wash down Enclosures
- High Proof Pressure Achieved by Thicker Diaphragm Construction
- Voltage and Current Output Models

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
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.

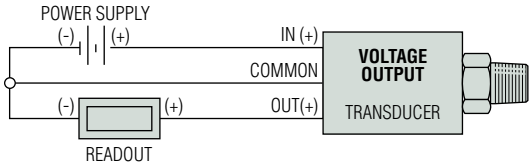


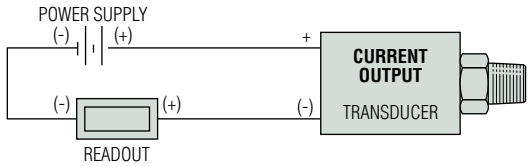
Order from: C A Briggs Company; 622 Mary Street; Suite 101 - Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

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





Cable Legend:

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

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 <±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%

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:

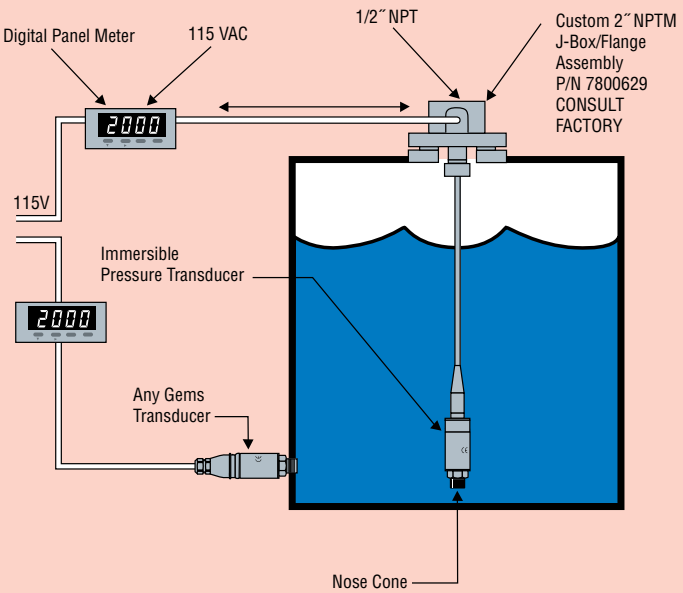
Pressure in PSI = Liquid Level (in feet) x (Specific Gravity x 0.433)

Example:

Tank Level:

Pressure in PSI = Liquid Level (in feet) x (Specific Gravity x 0.433)
Pressure in PSI = 30 x (1.0 x 0.433)
Pressure in PSI = 12.99 PSI

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



PRESSURE TRANSDUCERS

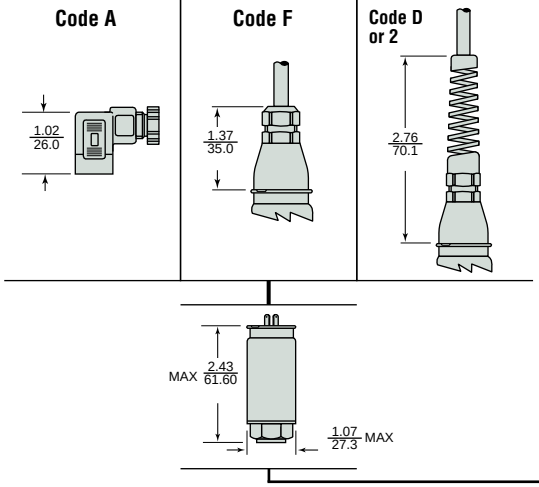
Order from: C A Briggs Company; 622 Mary Street; Suite 101 - Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

3-Day Delivery on Most Transducers

Dimensions

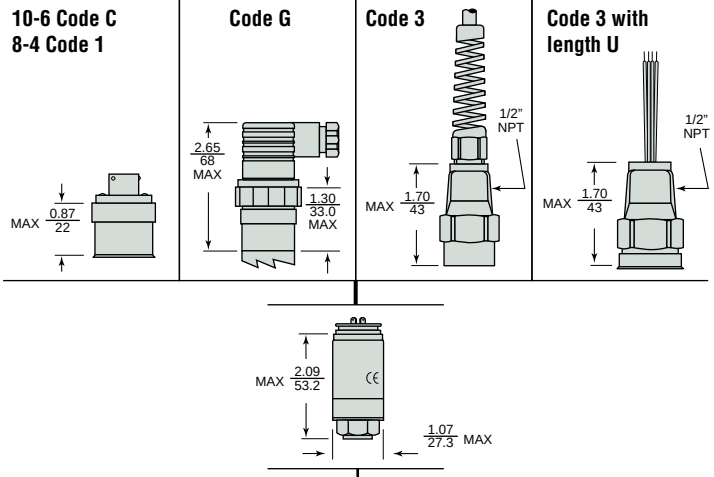
1200 Series

Mini 4 Pin	IP67 Cable (Weatherproof)	IP67 or NEMA 4 Cable
Code A	**Code F**	**Code D or 2**



1600 Series

10-6 or 8-4 Mil-C Connector	Large DIN 43650 Plug	Conduit Connector with Cable	Conduit Connector with Flying Leads
10-6 Code C **8-4 Code 1**	**Code G**	**Code 3**	**Code 3 with length U**



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

1600 B G A60 01 D 3 D A

Series
1200 **1600**

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

Datum
G - Gauge

Pressure Range[3] - psi
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-135
1G5 - Vac-135
2G0 - Vac-185
3G0 - Vac-285

Pressure Range[3] - 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

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 - G 1/8 Internal
01 - G 1/4 External
0A - R 1/4 External

Electrical Connection
1200 Series
A - Mini Din with mate
B - Mini Din without mate
F - IP67 Weatherproof Cable Gland[2]
2 - NEMA 4 Cable[2]

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)

Apparatus Protection
3 - Amplified Only RFI Protected CE Mark, UR

Cable Length[1]
U - None
D - 1m (3ft)
E - 3m (9ft)
F - 5m (16ft)
G - 10m (32ft)

Performance Code

Notes:
1. 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.
2. Electrical Connections "F" and "2" are 24AWG, Shielded, PVC Cable.
3. Additional Pressure Ranges are available. Please consult factory.

PRESSURE TRANSDUCERS

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.

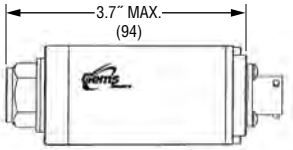
Specifications

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 logarthmicaly 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)

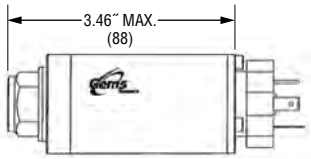
Max diameter 39mm, all models

Code C



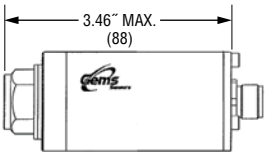
Six Pin Fixed Plug (10-6)

Code G



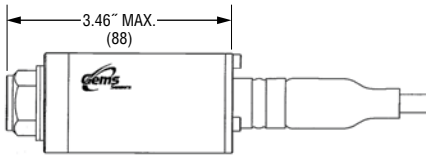
Fixed Plug to DIN 43650 Mating Connector Supplied

Code L



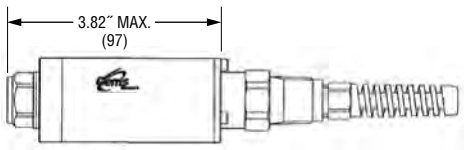
Electrical Connector M12 x 1 (5 Pin)

Code M



Immersible to 200mWG

Code 3



1/2 - 14 NPT conduit

PRESSURE TRANSDUCERS

Order from: C A Briggs Company; 622 Mary Street; Suite 101 - Warminster, PA 18974
Phone: 267-673-8117 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

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**

1. **6700** series for bar ranges,
   6710 series for psi ranges
2. Output Response:
   B 4-20 mA Undamped;
3. Pressure Datam:
   G gauge and compound; **A** absolute
4. Insert pressure range code from table below
5. Pressure Port see chart
6. 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
7. Approvals/Protection
   3 CE;
   G ATEX approved intrinsically safe EExia IIC T4, galvanic isolation gauge and absolute
8. Cable Length in meters (requires electrical connection code M)
   000 no cable; **001** 1 meter cable; **999** 999 meters
9. 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