

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:


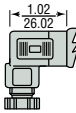
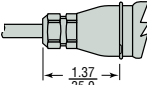
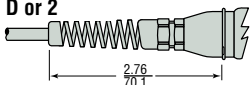
- EN61000-4-2 Electrostatic Discharge. 8kV air discharge, 4kV contact discharge. Unit survived.
- ENV50140 Radiated RF Susceptibility. 10V/m, 80MHz-1GHz, 1kHz mod. Maximum recorded output error was $\pm 1\%$
- ENV50204 Radiated RF Susceptibility to Mobile Telephones. 10V/m, 900MHz. Maximum recorded output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

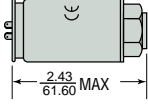
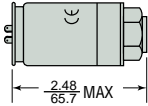
Cable Legend:

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

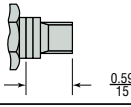
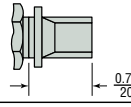
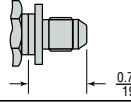

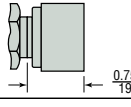
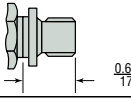
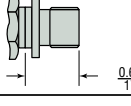
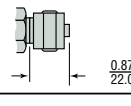
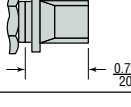
Dimensions

22CS Series



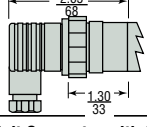
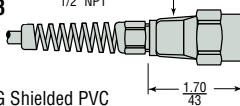
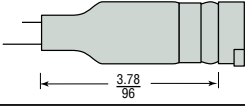
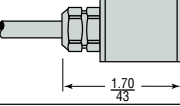
Industrial DIN Connector	
Code B	
Industrial DIN Connector (mate supplied)	
Code A	
IP67 Cable	
Code F	
24 AWG Shielded PVC	
IP65 or NEMA4 Cable	
Code D or 2	
24 AWG Shielded PVC	

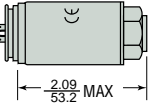
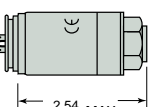
Amplified Gauge	
Amplified Absolute	

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

PRESSURE TRANSDUCERS

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.