



Pressure, Level & Temperature Transmitters & Transducers

2770 Long Road, Grand Island, NY 14072 USA

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INTRINSICALLY SAFE PRESSURE TRANSMITTER

Models 311Z, I, GI, AI



FEATURES:

- FM, CSA, ATEX & IEC Intrinsically Safe
- Rugged, all-welded SST construction
- Compact design.

PRESSURE RANGES:

- From 0-5 thru 0-75,000 psi

STATIC ACCURACY:

- $\pm 0.1\%$ FSO thru $\pm 0.5\%$ FSO

Pressure Format:

- 0-5 thru 0-75,000 PSIS, PSIG, PSIA, PSIV

Accuracy:

(Includes Hysteresis, Non-linearity, Non-Repeatability)

- Option B: $\pm 0.50\%$ FSO RSS
- Option C: $\pm 0.20\%$ FSO RSS
- Option D: $\pm 0.10\%$ FSO RSS

Zero Balance & FSO:

- $\pm 1.0\%$ FSO at 70°F for each

Long Term Stability:

- $< \pm 0.20\%$ FSO for 6 months at 70°F

Temperature Limits:

- Compensated: 0 to 180°F
- Operating: -40°F to 190°F (-40°F to 176°F for Intrinsically Safe units)
- Storage: -65°F to 250°F
- Effect on Zero & Span: $< \pm 2.0\%$ FSO/100°F ($< \pm 1.0\%$ FSO/100°F available)

Electricals:

- Excitation Voltage:
(Model 311Z) 9-36 Vdc
(Model 311 I/AI/GI/AI) 10-28 Vdc
- Output Current: 4-20 mA $\pm 0.1\%$ FSO at 70°F
- Load Impedance: 750Ω max-24 Vdc
- Insulation Resistance: Greater than 10 megohms at 50 Vdc and 70°F

Mechanicals:

- Proof Pressure: 2 X FSPR (50-15k psi) or 22,000 psi, whichever is less
- Burst Pressure: 5 X FSPR (or URL) or 22,500 psi, whichever is less
- Pressure Response: Less than 5 ms 10% to 90%

Wetted Materials:

- 316 & 17-4 PH SST / Enclosure 316 SST

Consult factory for options / Improved performance.

For Explosion Proof Rating
See 111X/P, 211X/P, 311X/P Data Sheet

Explosion Proof & Intrinsically Safe Approvals
Can be combined - Consult Factory

NOTE: Shown with "CF" option
1/2" NPT Male Conduit

Approvals

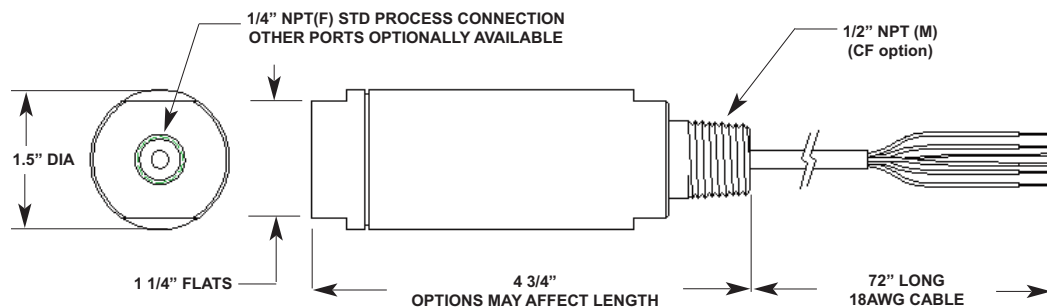


WIRING:

311Z, I, GI, AI	
A/1 RED	+EXC./SIGNAL
B/2 GREEN	CASE GROUND
C/3 WHITE	-
D/4 BLACK	-EXC./SIGNAL
E/5 GRN & YEL	-

(Shield with Drain in cable)

Alternate wiring available.



Shown with "CF" option

A5SL-11IS.00 Rev E



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Typical configurations (consult factory for more options)

MODEL

311 4-20 mA

APPROVAL **See details below*

I FM/CSA Intrinsic Safety
 Z FM/CSA Intrinsic Safety
 AI ATEX/IEC Intrinsic Safety
 EC CE marking
 GI ATEX/IEC/FM/CSA Intrinsic Safety

ACCURACY

B ±0.50% RSS
 C ±0.20% RSS
 D ±0.10% RSS

PRESSURE RANGE (PSI)

Consult factory for others

PV 0-50	RH 0-500	RT 0-3000	SH 0-50,000
PX 0-75	RJ 0-600	RV 0-5000	SK 0-75,000
PZ 0-100	RK 0-750	RX 0-7500	SZ Special Range
RB 0-150	RM 0-1000	RZ 0-10,000	
RD 0-200	RO 0-1500	SB 0-15,000	
RE 0-250	RR 0-2000	SD 0-20,000	
RF 0-300	RS 0-2500	SF 0-30,000	

PRESSURE TYPE

(May be affected by Altitude/Barometric pressure - consult factory)

2 Gauge: < 300 PSI
 3 Absolute
 4 Vacuum
 6 Sealed Gauge ≤ 1,000 PSI
 7 Sealed Gauge > 1,000 PSI

NOTE:

Specifications reflect standard product, improved performance / mechanical options available.

Modifications may alter specs, consult factory for more information.

OPTIONS (Consult factory for more options not listed)

ELECTRICAL CONNECTIONS

Select "CF" option for 1/2" NPT (M) conduit

AA STD: 36" Pigtail (use "CF" for 1/2" conduit)
 CA Bendix PTIH-10-6P (Mate PT06E-10-6S [SR], not supplied)
 CC Bendix PC02E-12-8P
 CF 1/2" NPT (M) conduit 72" Leads
 CZ Special Connector/Cable/Other
 DC M12-4 pin
 DR4 4-Pin mini fast, 7/8-16 THD, Nickel Pltd.

PRESSURE PORTS

AA 1/4" NPT (F) Standard
 FH 1/8" NPT (F)
 FJ 1/4" NPT (M)
 FL 1/8" NPT (M)
 FM F-250-C Autoclave
 FN 1/2" NPT (M)
 LF 1/2" NPT (F)

GENERAL

GC Special calibration run (ie. 5 or 10 point)
 GD 10X overpressure or 22.5K psi, whichever is less [not with GY]
 GE Improved temp. comp. (±1.0% FSO/100°F zero and ±1.0% span)
 GF Expanded process temperature range, -65 to 250° F (±2% FSO/100° F)
 GG Alt. shunt cal signal, not avail. w/311Z
 GJ Zero & Span adjusts
 GK Inconel wetted parts
 GP Hastelloy C-276 wetted parts
 GR 3:1 rangeability for ≤30PSI
 5:1 rangeability for >30PSI
 HE Improved zero balance (±0.5% FSO)

* APPROVALS AVAILABLE:

Z **FM:** Class I, II, III Division 1, GRPS A,B,C,D,E,F,G, T4 at Ta=80C
CSA: Exia, Class I, GRPS A,B,C,D Class II, GRPS E,F,G Class III, T4 at Ta=80C

I **FM & CSA** Class I, II, III Div. 1, GRPS A,B,C,0,E,F & G, Class I, Zone 0, AEx ia IIC, T5 at Ta=85C

AI **ATEX** CE0575 II 1 G Ex ia IIC T5
IEC Ex ia II C T5

GI FM, CSA, ATEX & IEC combined

* SEE WEBSITE FOR CERTS

See Explosion Proof Data Sheet