



# Pressure, Level & Temperature Transmitters & Transducers

2770 Long Road, Grand Island, NY 14072 USA

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## EXPLOSION PROOF & ZONE 2/DIV 2 PRESSURE TRANSMITTER

### Models 111X/P, 211X/P, 311X/P & 311N/AN/GN



#### FEATURES:

- FM & CSA Explosion Proof Approved (Factory Sealed, conduit seal not required)
- Zone 2/Div 2 Approved (Save installation cost in Zone 2 area)
- Rugged, all-welded SST construction
- Compact design.

#### PRESSURE RANGES:

- From 0-50 thru 0-75,000 psi

#### STATIC ACCURACY:

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

#### Pressure Format:

- 0-50 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 176°F
- Storage: -65°F to 250°F
- Effect on Zero & Span:  $< \pm 2.0\%$  FSO/100°F for each

#### Electricals:

- Excitation Voltage:
  - (Model 111X/P) 3.5-15 Vdc
  - (Model 211X/P) 10.5-32 Vdc
  - (Model 311X/P) 9-36 Vdc
  - (Model 311 N/AN/GN) 10-28 Vdc
- Output Current: 4-20 mA  $\pm 0.1\%$  FSO at 70°F
- Load Impedance:
  - (Model 111) 50Ω min.
  - (Model 211) 1350 Ω max. 36 Vdc
  - (Model 311) 750 Ω max. 24 Vdc
- Input Impedance:
  - (Model 111) 350Ω nominal
  - (Model 211) 8 mA nominal
- 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 Intrinsically Safe Approval  
See 311Z, I, GI, AI Data Sheet

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

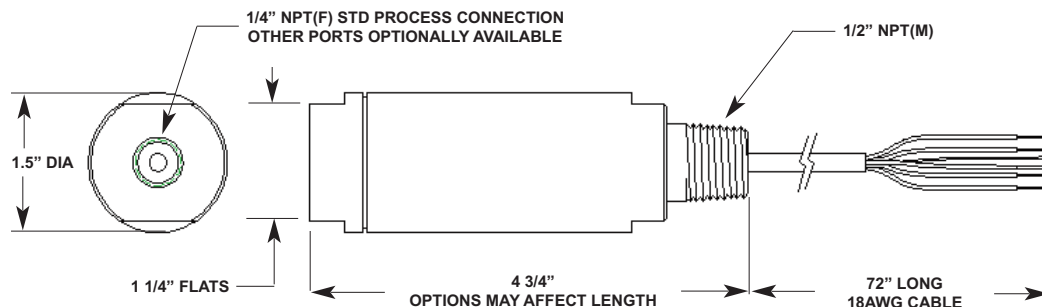
#### Approvals



#### WIRING:

	111X/P	211X/P	311X/P/N/AN/GN
A/1 RED	+EXC.	+EXC.	+EXC./SIGNAL
B/2 GREEN	+SIGNAL	CASE GRN	CASE GRN
C/3 WHITE	-SIGNAL	+SIGNAL	-
D/4 BLACK	-EXC.	-EXC./SIGNAL	-EXC./SIGNAL
E/5 GRN & YEL	CASE GRN	-	-

Alternate wiring available.



A5SL-11XP.00 Rev A

GP:50 reserves the right to make product improvements and amendments to the product specifications stated throughout this brochure without prior notification. Please contact the factory on all critical dimensions and specifications for verification.



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## EXPLOSION PROOF & ZONE 2/DIV 2 PRESSURE TRANSMITTER Models 111X/P, 211X/P, 311X/P & 311N/AN/GN

Typical configurations (consult factory for more options)

### MODEL

111 3 mV/V  
211 0-5 Vdc  
311 4-20 mA

### APPROVAL \*See details below

X FM Explosion Proof  
P FM/CSA Explosion Proof  
N FM/CSA Div/Zone 2  
AN ATEX/IEC Zone 2 (311 only)  
GN ATEX/IEC/FM/CSA Div/Zone 2 (311 only)

### 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 0-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)

3 Absolute  
4 Vacuum (P has Sealed Gauge Reference)  
6 Sealed Gauge (Ref side evac & sealed)  
8 Elevated/Supressed Zero  
10 Compound range (requires SZ option)

### 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

AA Standard connection - 1/2" NPT M conduit w/ 6ft 18 AWG multiconductor cable  
DT4 4-Pin mini fast, 7/8-16 THD, Nickel Pltd. (Div 2 / Zone 2 only) (No Barrier required when used w/ approved mating cable) (Consult Factory for other electrical conn. for Zone 2/Div 2 units)

#### 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  
GK Inconel wetted parts  
GP Hastelloy C-276 wetted parts  
GS 0-10 Vdc output (14.2-32 Vdc excitation)  
HE Improved zero balance (±0.5% FSO)  
MD Explosion Proof Zero and Span adjust

#### \* APPROVALS AVAILABLE:

X **FM only:** Class I/II/III, Div 1, Grps A-G, T6 at Ta=40C  
P **FM/CSA:** Class I/II/III, Div 1, Grps A-G, T6 at Ta=40C

#### Zone 2 / Div 2

N **FM:** Class I, Zone 2 AEx nC IIC T5, Class I, Div. 2, Grp. A, B, C, D Class II, Grp. E, F, G, Class III T5, Ta = 80C (electrical connection dependent)  
**CSA:** Ex nA IIC T5, Ex nL IIC T5, Class I Div. 2 Grp. A, B, C, D Class II Div. 2 Grp. E, F, G Class III T5, Ta=80C (elec. conn. dependent)  
AN **ATEX** CE0575 II 3 G Ex nA IIC, Ex ic IIC T5, Ta=80C (all electrical connections)  
**IEC** Ex na IIC, Ex ic IIC T5, Ta=80C (all electrical connections)  
GN FM, CSA, ATEX & IEC combined

#### \* SEE WEBSITE FOR CERTS

For I.S. Approval see Intrinsically Safe Data Sheet - A5SL-111S.00

Explosion Proof and IS Approvals can be combined - Consult Factory