



*X55-600*

CURRENT TO PRESSURE  
TRANSDUCERS



*X55-300*

PNEUMATIC PRESSURE  
TRANSMITTERS

ISO 9001  
REGISTERED

**RONAN**



# X55-300

## PNEUMATIC PRESSURE TRANSMITTERS

Ronan's Series X55-300 P to I Convertors convert instrument air pressures to analog current or voltage signals. The two and four-wire models are both available with five common input ranges from 3-15 to 0-100 PSIG. A solid-state sensor assures you of outstanding linearity, negligible hysteresis, very fast response times, and excellent temperature stability.

The electronics portion of the P to I Convertor can be removed from the pneumatic base without loss of air pressure, allowing simple calibration and regular maintenance without purging the air lines. The X55-300 is simple to install and easy to maintain.

Ronan's Series X55-300 P to I Convertors provide standard current and voltage signals to instruments and process control computers. Non-standard signal formats are also possible, thereby eliminating costly interface design requirements for special applications.

## F E A T U R E S

- 5 Ranges Up to 100 PSIG
- Two or Four-Wire Models
- Fast Responding Solid State Design
- Detachable Electronics with Automatic Pressure Seal
- Insensitive to Vibration
- Front Accessible Zero, Span and Setpoint Adjustments
- Mounts in Any Position
- Front Accessible Output Monitor Test Jacks
- Loss-of-Air Alarm Indicator/Output Signal
- Optional High or Low Pressure Adjustable Setpoint
- 3 Times the Maximum Rated Pressure without Damage

## S P E C I F I C A T I O N S

**Models:** X55-302 (two-wire); X55-304 (four-wire)

**Inputs:** 3-15, 3-27, 6-30, 0-30, 0-100 PSIG

**Maximum Input:** 3 times full scale without damage

**Outputs:** X55-302: 4-20 mA or 10-50 mA

X55-304: 4-20 mA, 10-50 mA, 0-1 Vdc, 0-2 Vdc, 0-5 Vdc,  
1-10 Vdc, 1-5 Vdc, 2-10 Vdc

**Accuracy:**  $\pm 0.2\%$  of span (linearity, hysteresis, repeatability)

**Response:** 1.0 msec (10 to 90% of full scale)

**Operating Temperature:** -40° to 150°F (-40° to 70°C)

**Storage:** -58° to 185°F (-50° to 85°C)

**Temperature Stability:** 0.025% of span per °C for 0 to 50°C

**Power Requirements:** X55-302: 12 to 55 Vdc

X55-304: 22 to 30 Vdc

**Connections:** Air, 1/8" NPT (female)

**Loop Resistance: (R) Vs. Power Supply Voltage (PSV):**

X55-302: 4-20 mA:  $R_{max} = PSV - 12 V \div 20 mA$

10-50 mA:  $R_{max} = PSV - 12 V \div 50 mA$

X55-304: 4-20 mA:  $R_{max} = PSV - 6 V \div 20 mA$ ;

or 10-50 mA:  $PSV - 8 V \div 50 mA$

**Output Impedance:** Current Outputs: 1 Mohm

Voltage Outputs: 5 V: 250 ohms; 10 V: 500 ohms

**Alarm Output:** Open collector transistor capable of 50 mA  
(maximum leakage = 100  $\mu A$  at 24 Vdc)

**Wiring:** Up to 12 AWG

**Approvals:** Factory Mutual and CSA:

- EXP = Explosion-Proof - Class I, II, III; Division 1;  
Group B, C, D, E, F, G

- DIN, -D2-, SM = Class I; Division 2; Group A, B, C, D

## O R D E R I N G I N F O R M A T I O N

### Two-Wire P TO I Transmitters (Power = .5W at 24 Vdc)

Model	Description
X55-302-( )-( )-( )-SM	General Purpose Surface Mount (includes transmitter and base)
X55-302-( )-( )-( )-DIN	General Purpose "G" Rail Mount (includes transmitter and base)
X55-302-( )-( )-( )-EXP	Explosion-Proof Surface Mount (includes transmitter and base)
X55-302-( )-( )-( )-D2	General Purpose "U" Rail Mount (includes transmitter and base)
X55-302-( )-( )-( )-LB	Less Base (transmitter only), order parts above for complete system

Alarm Option: N = None L = Low Alarm H = High Alarm

Output Type: B = 4-20 mA C = 10-50 mA

Input Range: 1 = 3-15 PSIG 2 = 3-27 PSIG 3 = 6-30 PSIG 4 = 0-30 PSIG 5 = 0-100 PSIG 6 = 0-6 PSIG 7 = 0-12 PSIG

### Four-Wire P TO I Transmitters (Power = 1 .5W)

Model	Description
X55-304-( )-( )-( )-SM	General Purpose Surface Mount (includes transmitter and base)
X55-304-( )-( )-( )-DIN	General Purpose "G" Rail Mount (includes transmitter and base)
X55-304-( )-( )-( )-EXP	Explosion-Proof Surface Mount (includes transmitter and base)
X55-304-( )-( )-( )-D2	General Purpose "U" Rail Mount (includes transmitter and base)
X55-304-( )-( )-( )-LB	Less Base (transmitter only), order parts above for complete system

Alarm Option: N = None L = Low Alarm H = High Alarm

Output Type: B = 4-20 mA C = 10-50 mA D = 1-5 Vdc E = 2-10 Vdc F = 0-5 Vdc G = 0-10 Vdc H = 0-1 Vdc I = 0-2 Vdc

Input Range: 1 = 3-15 PSIG 2 = 3-27 PSIG 3 = 6-30 PSIG 4 = 0-30 PSIG 5 = 0-100 PSIG 6 = 0-6 PSIG

### X55-302/304 Mounting Hardware and Accessories

Model	Description
X55-SM	Replacement Surface Mounting Base
X55-DIN	Replacement "G" Rail Mounting Base
X55-D2	Replacement "U" Rail Mounting Base
X55-EXP	Replacement Explosion-Proof Housing with Base
X55-SS TAG	Stainless Steel Tag
X55-PMB	2" Painted Pipe Mounting Bracket
X55-PMB-SS	2" 304 Stainless Steel Pipe Bracket
D1-32 x 15	35 mm "G" Style Rail
D2-35 x 7.5	35 mm x 7.5 mm "u" Style Rail
D2-35 x 15	35 mm x 15 mm "U" Style Rail
X55-MF-D1	Conversion Kit, SM or "U" Rail to "G" Rail
X55-MF-D2	Conversion Kit, SM or "G" Rail to "U" Rail

#### DIN Rail Styles



"G" Rail (32 mm x 15 mm)



"u" Rail (35 mm x 7.5 mm)

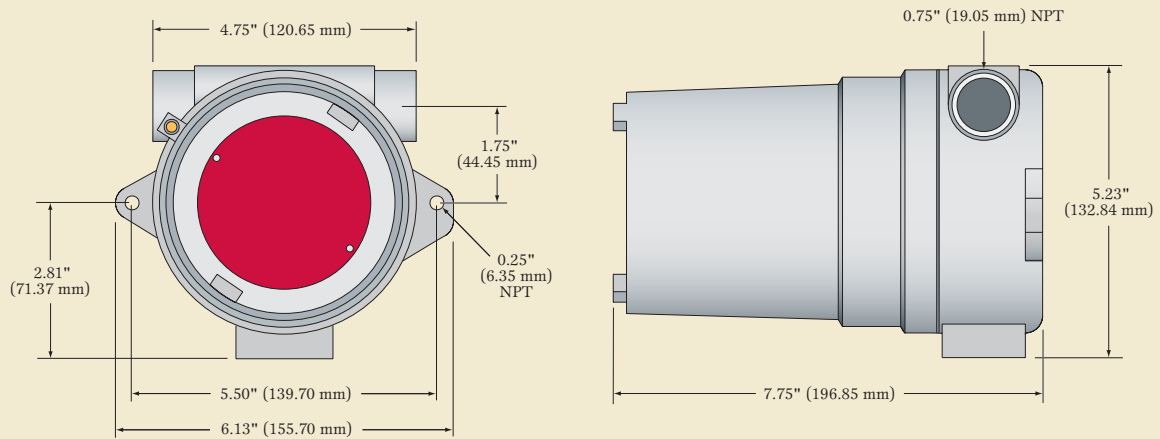


"U" Rail (35 mm x 15 mm)

Specifications subject to change without notice.

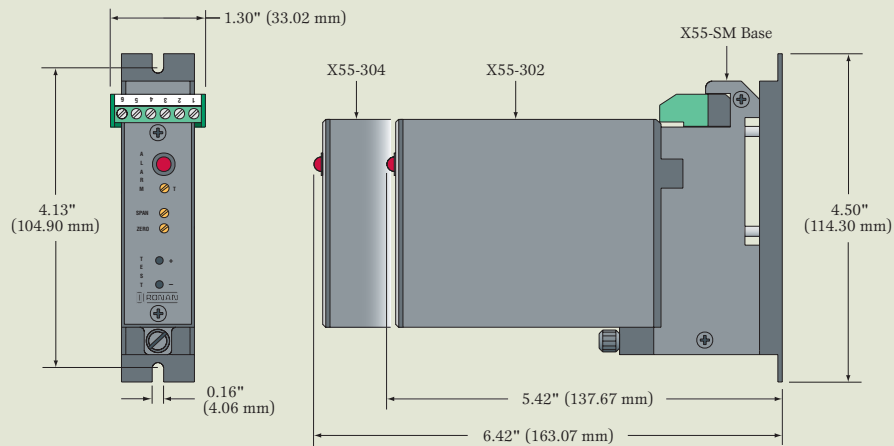
## EXPLOSION-PROOF

2-Wire P to I and 4-Wire P to E Convertors



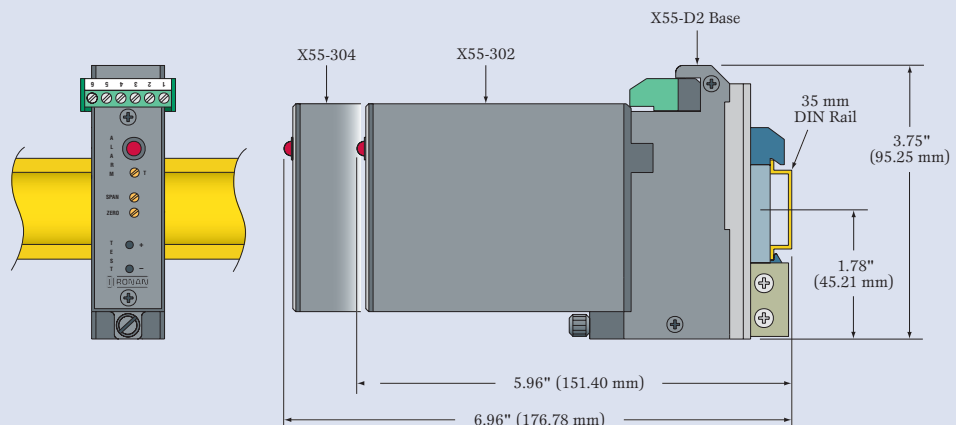
## SURFACE MOUNT

2-Wire P to I and 4-Wire P to E Convertors



## DIN RAIL MOUNT

2-Wire P to I and 4-Wire P to E Convertors





## WARRANTY

Ronan warrants equipment of its own manufacture to be free from defects in material and workmanship, under normal conditions of use and service, and will repair or replace any component found to be defective, on its return, transportation charges prepaid, within (1) year of its original purchase. This warranty carries no liability, either expressed or implied, beyond our obligations to replace the unit which carries the warranty.



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