

Pressure Transmitter

Sealed Gage & Absolute

MODEL #570/770/870



DURABLE. DEPENDABLE. ACCURATE.

RUGGED CONSTRUCTION

All welded construction and stainless steel surfaces makes the X70 ideal for corrosive environments. The transmitters O-Ring free design ensures reliability with corrosive media. Viatran's X70 FM approved labelled units are designed to meet NEC/API Dual Seal requirements. For applications requiring field adjustments, Model 571 is also hermetically sealed, with magnetically coupled adjustments to eliminate contamination from liquid or gas intrusion. For the most corrosive environments, Hastelloy, Inconel, and 316 SS wetted parts are available.

OVERPRESSURE PROTECTION

Models 570, 770 and 870 all feature bonded

foil strain gage sensors. The overpressure protection in this technology helps to eliminate damage to the sensors when they are exposed to transient pressure spikes. Viatran also offers isolation diaphragms and oil fills for specific application requirements.

PRESSURE MEASUREMENT SOLUTION

You'll find complete specifications on the reverse side to help you select the right X70 transmitter for your application. Viatran offers a full line of pressure measurement products for the process control industry including a "low power" version of the X70 which draws less than 1 mA of current. For more information, contact Viatran today at 1-800-688-0030, ext 516.

A better alternative to conventional process transmitters in a reliable, cost-effective design. The X70 will withstand harsh environments. With a diameter of only 1.5", the X70 transmitters are ideal for limited space applications. Their light weight enables direct mounting on process piping.

FEATURES

- All stainless steel construction
- Small size - 1.5" diameter
- Exotic wetted materials available
- Watertight/submersible design
- 4 – 20 mA, 0 – 5 V, mV/Volt output
- FM, ATEX, CSA, and CE approvals available

TYPICAL APPLICATIONS

- Offshore oil rigs
- Gas compressors
- Paint spraying
- Water treatment
- Natural gas pipelines
- Polyethylene manufacture
- Rolling mills
- Stamping presses



For product availability, or to order please call 1-800-688-0030, ext 518.

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An ISO 9001: 2001 Certified Company

SPECIFICATIONS

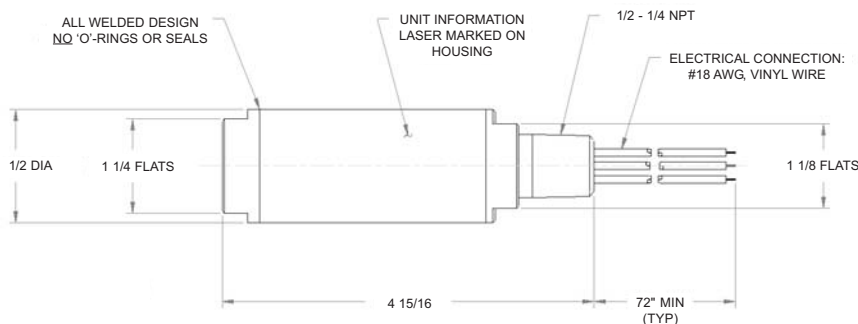
PERFORMANCE

Full Scale Pressure Range (FSPR)	0-100 thru 0-100K PSIS, PSIA
Linearity (Best Fit Straight Line)	
0-100 PSI	±0.5%
150-10K PSI	±0.2%
15K-100K PSI	±0.25%
Hysteresis	≤0.15% FSO
Repeatability	≤0.15% FSO
Full Scale Output (FSO)	
570	16 mA
770	5 VDC
870	2 mV/V
Zero and Span Balance	±1% FSO
Long Term Stability	±0.25% FSO per 6 months
Response Time	<1 mSec to reach 90% of FSO
Temperature Effect on Zero	≤±1% FSO per 100°F
Temperature Effect on Span	≤±1% FSO per 100°F
Compensated Temperature	70°F to +170°F
Operating Temperature	-40°F to +190°F
Non-Operating Temperature	-65°F to +250°F

ELECTRICAL

Supply Voltage	
570/770	12 to 36 VDC
870	10 V nominal, 15 V maximum
Power Supply Regulation Effect	
570/770	≤±0.02% FSO per Volt
870	Ratiometric
Output Signal	
570	4 – 20 mA
770	0 – 5 VDC
870	2 mV/Volt (Nominal)
Load Impedance	
570	900 Ohms max. at 30 VDC & 0 Ohms at 10 VDC
770	100K Ohms minimum
Bridge Impedance	
(All)	5000 Ohms nominal
Circuit Protection	
(570/770)	Varistor protected across the input leads for surges above 40 V and currents to 250 Amps peak with a pulse width of 20 µSecs. Reverse polarity protected.
Insulation Resistance	
570/770	>200 MegOhms to case ground
870	>1000 MegOhms to case ground at 50 VDC and 70°F
Electrical Connection	1/2" NPT (M), 18 AWG wire, 72"

Red	570	770	870
Black	+Signal	+Power	+Power
Green	-Signal	+Signal	+Signal
White	Case Ground	Case Ground	-Power
		-Power/-Signal	-Signal



ELECTRICAL CONNECTIONS	
WIRE COLOR	FUNCTION
RED	+ INPUT/ SIGNAL
BLACK	- INPUT/ SIGNAL
GREEN	CASE GROUND

STANDARD PRESSURE CONNECTION: 1/4-NPT (FEMALE)
STANDARD WETTED PARTS MATERIAL: 15-5PH SST

MECHANICAL

Pressure Connection

0-50 thru 0-15K PSI	1/4" - 18 NPT Female
0-20K thru 0-50K PSI	1/4" F250-C High Pressure Tube
0-60K thru 0-100K PSI	5/16" F312-C High Pressure Tube

Proof Pressure

0-100 thru 0-15K PSI	1.5 times FSPR or 20K PSI, whichever is less
0-20K thru 0-100K PSI	1.2 times FSPR

Burst Pressure

0-100 thru 0-15K PSI	≥2.3 to 5 times FSPR dependent on sensor
0-20K thru 0-100K PSI	≥1.5 times FSPR or 125K PSI, whichever is less

Mounting

Supported by process piping or optional mounting bracket

Materials of Construction

Enclosure

0-100 thru 0-15K PSI	15-5 PH and 316 stainless steel
0-20K thru 0-100K PSI	316 SST and PH 13-8 Mo SST

Wetted Parts

0-100 thru 0-15K PSI	15-5 PH stainless steel
0-20K thru 0-100K PSI	PH 13-8 Mo SST

Shock Limitation

100 Gs

Weight

24 oz.

Identification

Laser etched onto body

Enclosure

Classification NEMA 4X, 6

CERTIFICATIONS

FM	Consult factory for available Options Intrinsic Safety (570 only): Class I, II, III, Division 1, Groups A-G, Class I, Zone 0, AEx ia IIC, T4 at Ta=80°C, T5 at Ta=40°C Entity, Type 4X hazardous locations Explosion Proof: Class I, II, III, Division 1, Groups A-G, AEx d IIC, T5 at Ta=88°C NEMA 4X hazardous locations Nonincendive (570 only): Class I,II,III Division 2, Groups A,B,C,D,F,G, Class I, Zone 2, Group IIC, T4 at Ta=80°C T5 at Ta=40°C, Type 4X hazardous locations
CSA	Intrinsic Safety (570 only): Ex ia IIC; Class I, Zone 0; Class I, II, III, Groups A-G; Type 4, T4 at Ta=80°C, T5 at Ta=40°C Explosion Proof (570, 870 only): Class I, II, III, Groups A-G Hazardous Locations
ATEX	Intrinsic safety (570 only): II 1G EEx ia IIC, -20°C, Ta <40°C Flameproof: II 2 G EEx d IIC, T5 (-20°C ≤ Ta ≤ 80°C)
CE	EMC Directive 89/336/EEC and Low Voltage Directive 72/23/EEC EN 61010-1 (1993)/ Safety Requirements EN 61326-(2001) - EMC Requirements PED Directive 97/23/EC

OPTIONS

Y ()	Alternate Pressure Ports Performance Options
DF	Bleed Port (10K PSI and below)
DG	Improved temperature compensation (<0.5%/100°F for Zero/Span)
DH	Special Range
DM	Modified output (0-10 VDC, 770 only)
DQ	Cleaning for Oxygen Service
EA	Special Calibration Run
JJ	Direct Mount Indicator with explosion proof housing
JS	Direct Mount Indicator
ME	CSA Explosion Proof label (570/870)
MR	Modified electrical damping (570)
NG	ATEX Flameproof label
NH	Customer specified identification
NJ	CE label
NK	ATEX Intrinsic Safety label (570)
NX	CSA Intrinsic Safety label (570)
NY	FM Explosion Proof label
NZ	FM nonincendive label
PW	1/8 DIN digital indicator (consult factory)
QA	316 stainless steel wetted parts
QB	Inconel (X-750) wetted parts
QC	Hastelloy (C-276) wetted parts
TF	FM Intrinsic Safety label

Application of some available options may affect standard performance. Consult your Viatran representative for details.

ACCESSORIES

Mounting Bracket
Conduit Connection Box
Loop Powered Digital Indicator

