



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, IECEx and EAC Ex approvals available

TYPICAL APPLICATIONS

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



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 labeled units are designed to meet NEC/API Dual Seal requirements.

For most applications requiring field adjustments we recommend the Model 571, as it is also hermetically sealed, with magnetically coupled adjustments to eliminate contamination from liquid or gas intrusion.

For extreme 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 over pressure 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 or specific application requirements.

PRESSURE MEASUREMENT SOLUTIONS

You'll find complete specifications on the following pages 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 (LP770) which draws less than 1 mA of current.

OUR COMMITMENT TO QUALITY

The "X70" series design will perform and maintain on site durability in the most severe applications. To satisfy your unique application requirements, Viatran will also modify our standard products to meet your needs.

Viatran's vision is to be your fastest, easiest and most trusted solution. Call us today to explore the solutions we have to offer.

1.800.688.0030

Your local applications specialist:



Models 570 / 770 / 870

PERFORMANCE

Accuracy (RSS)

(BFSL Linearity, Hysteresis, Repeatability)

Linearity (Best Fit Straight Line)

Full Scale Output (FSO)

Full Scale Pressure Range 0-100 thru 0-100K PSIS (0-6.89 thru 0-6894 bar)

0-300 PSI thru 0-15K PSI Ranges $\pm 0.20\%$ FSO ($\pm 0.15\%$ FSO improved with "DN" option)

< 0-300 PSI or > 0-15K PSI Ranges $\pm 0.25\%$ FSO ($\pm 0.15\%$ FSO improved with "DN" option)

0-300 PSI thru 0-15K PSI Ranges $\pm 0.10\%$ FSO (BFSL), Typical

< 0-300 PSI or > 0-15K PSI Ranges $\pm 0.15\%$ FSO (BFSL), Typical

Hysteresis $< \pm 0.05\%$ FSO, Typical

Repeatability $< \pm 0.05\%$ FSO, Typical

570 16 mA

770 5 Vdc

870 2 mV/V

Zero and Span Balance $\pm 1\%$ FSO

Long Term Stability $\leq \pm 0.25\%$ FSO per 6 months

Response Time < 2 mSec to reach 90% FSO

Temperature Effect on Zero $\leq \pm 1\%$ FSO per 100°F (37°C)

Temperature Effect on Span $\leq \pm 1\%$ FSO per 100°F (37°C)

Compensated Temperature 70°F to 170°F (21°C to 76°C)

Operating Temperature -40°F to 190°F (-40°C to 87°C)

Storage Temperature Limit -65°F to 250°F (-53°C to 121°C)

ELECTRICAL

Supply Voltage

570/770 12 to 30 Vdc

870 10 Vdc nominal, 15 Vdc maximum

Power Supply Regulation Effect

570/770 $\leq \pm 0.02\%$ 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

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 μ Secs. Reverse polarity protected.

Insulation Resistance

570/770 > 200 MegOhms to case ground

870 > 1000 MegOhms to case ground at 50 Vdc and 70°F (21°C)

Electrical Connection

..... 1/2" NPT (M), 18 AWG wire, 72"

570

770

870

Red

+Power/Signal

+Power

+Power

Black

-Power/Signal

+Signal

+Signal

Green

Case ground

Case ground

-Power

White

-Power/Signal

-Signal

MECHANICAL

Pressure Connection

0-50 thru 0-15K PSI 1/4" - 18 NPT Female (0-3.3 thru 0-1034 bar)

0-20K thru 0-50K PSI 1/4" F250-C High Pressure Tube (0-1378 thru 0-3447 bar)

0-60K thru 0-100K PSI 5/16" F312C High Pressure Tube (0-4136) thru 0-6894 bar)

Proof Pressure

0-100 thru 0-15K PSI 1.5 times FSPR or 20K PSI (1378 bar), (0-6.8 thru 0-1034 bar) whichever is less

0-20K thru 0-100K PSI 1.2 times FSP (0-1378 thru 0-6894 bar)

Burst Pressure

0-100 thru 0-15K PSI ≥ 2.3 to 5 times FSPR dependent on (0-6.8 thru 0-10342 bar) sensor

0-20K thru 0-100K PSI ≥ 1.5 times FSPR or 125K PSI (8618 bar) (0-1378 thru 0-6894 bar) whichever is less

Mounting Supported by process piping or optional mounting bracket






Models 570 / 770 / 870

MATERIALS OF CONSTRUCTION

Enclosure	0-100 thru 0-15K PSI.....15-5 PH and 316 stainless steel (0-6.8 thru 0-1034 bar)
	0-20K thru 0-100K PSI.....316 SST and PH 13-8 Mo SST (0-1378 thru 0-6894 bar)
Wetted Parts	0-100 thru 0-15K PSI.....15-5 PH stainless steel (0-6.8 thru 0-1034 bar)
	0-20K thru 0-100K PSI.....PH 13-8 Mo SST (0-1378 thru 0-6904 bar)
Shock Limitation.....	100 G's
Weight.....	24 oz. (0.680 kilograms)
Identification.....	Laser etched onto body
Enclosure.....	Classification NEMA 4X

CERTIFICATIONS (CONSULT FACTORY FOR AVAILABLE OPTIONS)

USA	Intrinsic Safety: 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, NEMA 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 Non-Incendive: 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, NEMA Type 4X Hazardous Locations
CANADA	Intrinsic Safety: Ex ia IIC; Class I, Zone 0; Class I, II, III, Groups A-G; NEMA Type 4, T4 at Ta=80°C, T5 at Ta=40°C (570,870) Explosion Proof: Class I, II, III, Groups A-G Hazardous Locations (570, 870)
EUROPE	Intrinsic Safety:  II 1G, Ex ia IIC, -20°C, Ta <40°C Flameproof:  II 2 G Ex d IIC, T6 (-20°C ≤ Ta ≤ 40°C) Non-Incendive:  II G Ex nA II, T4 Gc (-20°C ≤ Ta ≤ 80°C) (770/870) EMC Directive 2004/108/EC EN 61326-1:2006 PED Directive 97/23/EC Flameproof: IECEx db IIC Gb T5, T5: -20°C ≤ Ta ≤ +85°C IP68
RUSSIA	Intrinsic Safety 0Ex ia IIC Ga X T4: - 20°C ≤ Ta ≤ +80°C T5: - 20°C ≤ Ta ≤ +40°C Flameproof Ex d IIC Gb X T6: - 20°C ≤ Ta ≤ +40°C Non-Sparking 2Ex nA IIC Gc X T4: - 20°C ≤ Ta ≤ +80°C Russian Metrology Certificate

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)
DN	Improved Accuracy (±0.15% FSO)
DQ	Cleaning for oxygen service
EA	Special calibration run
FA	Russian Metrology Certificate
JJ	Direct mount indicator with explosion proof housing
JS	Direct mount indicator
KN	IECEx flameproof safety label
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
NX	CSA intrinsic safety label (570 / 770)
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
TK	ATEX nonincendive label (770, 870)
TW	EAC Ex Certification label

Note: Application of some available options may affect standard performance. Consult your Viatran Representative for details.

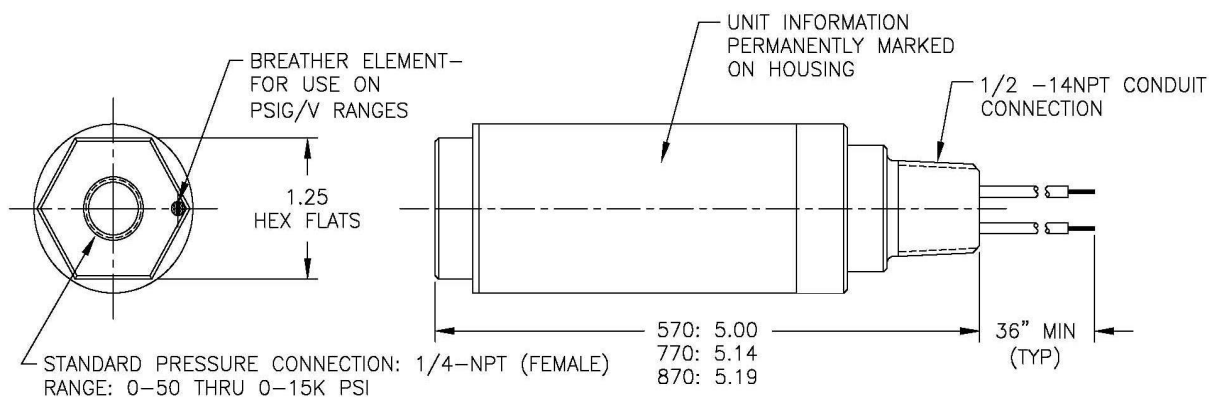
Models 570 / 770 / 870

ACCESSORIES

Mounting bracket
Conduit connection box
Loop powered digital indicator

DIMENSIONAL DATA

FOR RANGES 0–15K PSI



FOR RANGES 20K–100K PSI

