

Summary of Specifications		
Specification	300 thru 15,000 psis	< 300 or > 15,000 psis
Standard RSS	± 0.20% Full Scale Output (FSO)	± 0.25% FSO
Improved RSS (Option "DN")	± 0.15% FSO	N/A
Non-Linearity	± 0.10% FSO typical	± 0.25% FSO typical
Hysteresis	± 0.05% FSO typical	± 0.05% FSO typical
Zero Repeat	± 0.05% FSO typical	± 0.05% FSO typical
Stability	± 0.25% FSO per year	± 0.25% FSO per year
Compensated Temperature Range	0°F to 170°F (-18°C to 76°C)	0°F to 170°F (-18°C to 76°C)
Extended Temperature Range (Option "DC")	-40°F to 170°F (-40°C to 76°C)	N/A
Extended Temperature Range (Option "EH")	+70°F to 185°F (21°C to 85°C)	N/A
Operating Temperature Range	-40°F to 190°F (-40°C to 87°C)	-40°F to 190°F (-40°C to 87°C)
Temperature Effect on Zero and Span	≤±.01% per 1°F (0.56° C)	≤±.01% per 1°F (0.56° C)
Temperature Effect on Zero and Span (Option "DG")	≤±.005% per 1°F (0.56° C)	≤±.005% per 1°F (0.56° C)
Overpressure	Lessor of 1.5X FSPR or 20K PSI (1378 bar)	<300 (1.5X FSPR), >15K (1.2X FSPR)
Response Time	<2 mSec to reach 90% FSO	<2 mSec to reach 90% FSO

FEATURES

- Bonded Foil for Overpressure Protection
- Rugged All-Welded Stainless Steel design
- Pressure Ranges from 100 thru 100K psi
- Wetted material options & O-ring free design for corrosive applications
- Fully sealed design (IP66 - Nema 4X rated)
- 4-20 mA, 0-5 Vdc, 0-10 Vdc, mV/Volt output options
- Global Explosive atmosphere & hazardous location options (includes Intrinsic Safety, Explosion Proof, Non-Incendive, Non-Sparking and Flameproof)
- Flush Tip Design option

APPLICATIONS / INDUSTRIES

When faced with applications requiring a rugged, durable and long lasting solution, many users turn to Viatran for the X70 series of pressure transmitters and transducers. Some examples include:

- Offshore and Land Based Drill Rigs
- Coiled Tubing Trucks
- Hydraulic Power Units
- Compressors
- Rolling Mills
- Polyethylene Manufacturing
- High Pressure Material Testing
- Metal Stamping



Models 570 / 770 / 870

PERFORMANCE

	Full Scale Pressure Range	0-100 thru 0-100K PSIS (0-6.89 thru 0-6894 bar)
Accuracy (RSS) (BFSL Linearity, Hysteresis, Repeatability)	0-300 PSI thru 0-15K PSI Ranges	±0.20% FSO (±0.15% FSO improved with "DN" option)
	< 0-300 PSI or > 0-15K PSI Ranges	±0.25% FSO
Linearity (Best Fit Straight Line)	0-300 PSI thru 0-15K PSI Ranges	±0.10% FSO (BFSL), Typical
	< 0-300 PSI or > 0-15K PSI Ranges	±0.25% FSO (BFSL), Typical
	Hysteresis	< ± 0.05% FSO, Typical
	Repeatability	< ± 0.05% FSO, Typical
Full Scale Output (FSO)	570	16 mA
	770	5 Vdc
	870	2 mV/V
	Zero and Span Balance	±1.0% FSO
	Long Term Stability	≤±0.25% FSO per year
	Response Time	<2 mSec to reach 90% FSO
	Temperature Effect on Zero	≤±1% FSO per 100°F (56°C)
	Temperature Effect on Span	≤±1% FSO per 100°F (56°C)
	Compensated Temperature.....	0°F to 170°F (-18°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	12 to 30 Vdc	
	770	9 to 30 Vdc	
	870	10 Vdc nominal, 15 Vdc 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	
	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 (21°C)	
Electrical Connection	1/2" NPT (M), 18 AWG wire, 72"	
	570	770	870
	Red	+Power	+Power
	Black	-Power/Signal	+Signal
	Green	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

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Please contact Viatran for specific order inquiries.



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)

Country	Approval Option Code	Approval / Certification Description
USA	TF	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
	NY	Explosion Proof: Class I, II, III Division 1, Groups A-G, AEx d IIC, T5 at Ta=88°C NEMA 4X Hazardous Locations
	NZ	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	NX	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)
	ME	Explosion Proof: Class I, II, III, Groups A-G Hazardous Locations (570, 870)
EUROPE	NK	Intrinsic Safety: Ex II 1G, Ex ia IIC, -20°C, Ta <40°C
	NG	Flameproof: Ex II 2 G Ex d IIC, T6 (-20°C ≤ Ta ≤ 40°C)
	TK	Non-Sparking: Ex 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
	KN	Flameproof: IECEx db IIC Gb T5, T5: -20°C ≤ Ta ≤ +85°C IP68
RUSSIA	TW	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
	FA	Russian Metrology Certificate

OPTIONS

Pressure Ports	YK.....1/4" NPT (M)
	YM.....1/4" F250-C (High pressure tube)
Electrical Connectors	BH.....Amphenol 6-pin electrical connector (Weld-Mount)
	ZE.....MIL-C-5015 (1 1/8" dia.) 4 pin (Weld-Mount) electrical connector
Performance	DC.....Extended Temperature Operation (Low)
	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)
	DO.....Cleaning for oxygen service
	EA.....Special calibration run
	EH.....Extended Temperature Operation (High)
	JJ.....Direct mount indicator with explosion proof housing
	JS.....Direct mount indicator
	MR.....Modified electrical damping (570)
	NH.....Customer specified identification
	PW.....1/8 DIN digital indicator (consult factory)
	Wetted Materials
QB.....Inconel (X-750) wetted parts	
QC.....Hastelloy (C-276) wetted parts	

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

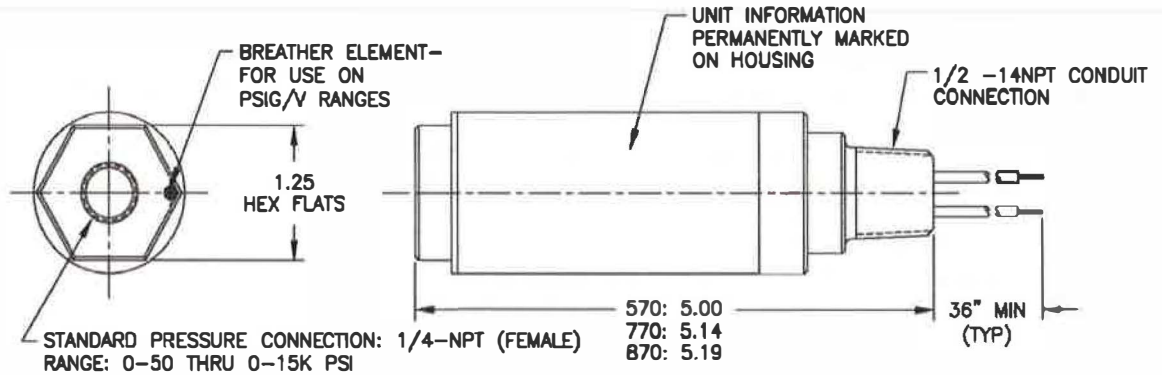
PRESSURE TRANSMITTER / TRANSDUCERS
Models 570 / 770 / 870

ACCESSORIES

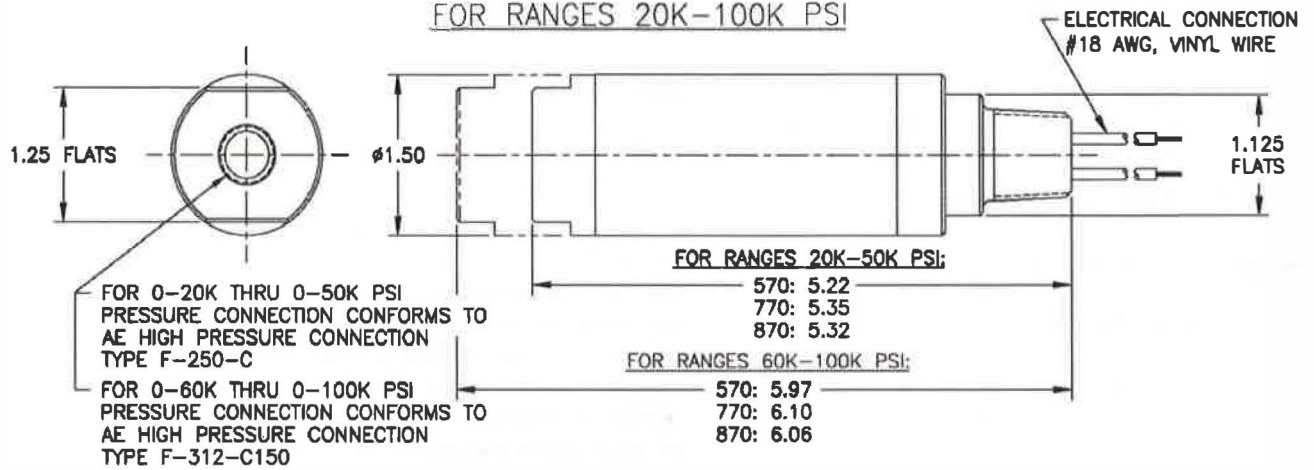
- Mounting bracket
- Conduit connection box
- Loop powered digital indicator

DIMENSIONAL DATA

FOR RANGES 0-15K PSI



FOR RANGES 20K-100K PSI



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