PRESSURE TRANSMITTER

Model 970



FEATURES

- HART communication
- Small size and weight
- High pressures
- Accuracy to 0.1% FSO
- 100 PSI up to 100K PSI

TYPICAL APPLICATIONS

- Offshore oil rigs
- Oil production platforms
- Natural gas pipelnes
- Rig safety systems

SMART, RANGEABLE, RUGGED

If Rig Real Estate is an issue, then the Model 970 is a great solution. Small sized, this rugged transducer is perfect for Offshore Oil Rigs where space is valuable.

HART COMMUNICATIONS

HART communications allow simpler systems commissioning at start up. Digital compensation, done at Viatran to each Model 970, provides excellent accuracy and enhanced rangeability.

REMOTE CALIBRATION

The HART communication system allows for simultaneous analog and digital communication. This means the Model 970 is fully compatible with existing analog systems while still offering the benefits of digital/ remote calibration and communications. Communicating with the 970 can be accomplished with a handheld device or using a PC and available software.

OPTIONAL APPROVALS

The Model 970 is all welded stainless steel which makes it perfect for corrosive environments. It can also have FM, CSA and ATEX hazardous location markings.

MODIFICATION FOR YOUR NEEDS

We can easily modify the Model 970 (and have) for your unique pressure application. Give us a call. You'll find that this pressure transducer is an excellent long-term solution.

MECO MEASUREMENTS & CONTROLS
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PERFORMANCE

Full Scale Pressure Range	0-100 thru 0-100K, PSIA, PSIS
Turndown (≤20K PSI)	4:1 with no degradation in static accuracy or thermal effect
Static Accuracy	≤±0.1% FSO (combined linearity, hysteresis and zero repeat)
	≤±0.25% FSO (Ranges 25,000 PSI & Up)
Compensated Range	-20°F to 170°F (28°C to 76°C)
	≤±0.1% span/±50°F (relative to 75°F at 1:1 range)
Thermal Error	≤±0.35% from -20°F to 170°F (28°C to 76°C)
	≤±1% per 100°F (25,000 PSI and up)
Full Scale Output (FSO)	16 mA ±0.1% FSO
	16 mA ±0.5% FSO
Dynamic Response Time	≤300 mSec to reach 63% FSO
Temperature Range, Fluid	-40°F to 250°F (-40°C to 121°C)
Storage Temperature Range	-65°F to 250°F (-54°C to 121°C)

ELECTRICAL

Supply Voltage	9.5 to 28 Vdc normal operation; 13 to 28 Vdc HART Communication
Power Supply Regulation	±0.02% FSO per volt
Output Signal	Two wire 4-20 mA. Digital process signal super-imposed on a 4-20
	mA signal, available to any HART protocol computer system
Load Impedance	230 Ohms to 1100 Ohms for HART communication
Circuit Protection	Reverse polarity protected
Insulation Resistance	≥200 MegOhms to all terminals in parallel and at the transmitter
	case
RFI/EMI Supression	Negligible to 500 MHz at 5 watts direct contact
Electrical Connection	1/2" NPT (M), 3 wires, 18 AWG, 72"L
Red	+Power/Signal
Black	-Power/Signal
Green	Case Ground

MECHANICAL

Pressure Connection	0-100 thru 0-15K	1/4" NPT (F)
	0-20K thru 0-50K	1/4" F250-C high pressure tube
	0-60K thru 0-100K	5/16" F312-C high pressure tube
Proof Pressure	0-100 thru 0-15K	1.5 times or 20K PSI, whichever is less
	0-20K thru 0-100K	1.2 times FSPR
Burst Pressure	0-100 thru 3K	5 times FSPR
	5K	4 times FSPR
	7.5 thru 10K	2.7 times FSPR
	15K	2.3 times FSPR
	20K	2 times FSPR
	25K thru 100K	1.5 times or 125,000 PSI, whichever is less

MATERIALS OF CONSTRUCTION

Wetted Materials	0-100 thru 0-15K PSI	15-5PH, stainless steel
	0-20 thru 0-100K PSI	13-8 Mo
Housing	0-100 thru 0-15K PSI	316, 15-5PH stainless steel
	0-20 thru 0-100K PSI	316 SS and 13-8 Mo
Shock Limitation		100 g's
Weight		24 oz ±3 oz
Identification		Laser etched onto body
Mounting		May be mounted by process piping, electrical conduit, or optical
		mounting bracket to 2" pipe

ACCESSORIES

Mounting bracket
Polyhead conduit connection box
HART communicator
In-line remote seals

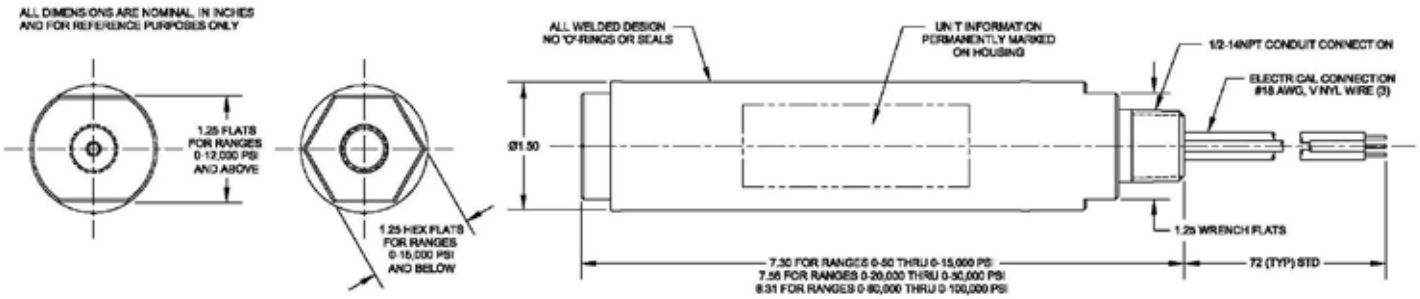
CERTIFICATIONS (Consult Factory for Available Options)

FM	Intrinsic Safety: Class I, II, III, Division 1, Groups A-G, Class I, Zone 0, AEx ia IIC, T4 at Ta=80ºC, T5 at Ta=40ºC Entity, Type 4X hazardous locations Explosion Proof: Class I, II, III, Division 1, Groups A-G, AEx d IIC, T5 at Ta=88ºC NEMA 4X hazardous locations Nonincendive: Class I,II,III Division 2, Groups A,B,C,D,F,G, Class I, Zone 2, Group IIC, T4 at Ta=80ºC T5 at Ta=40ºC, Type 4X hazardous locations Nonincendive: Class I,II,III Div. 2, Groups A-G and Class I, Zone 2, Group IIC, T4 at Ta=80ºC, T5 at Ta=40ºC
CSA	Intrinsic Safety: Ex ia IIC; Class I, Zone 0; Class I, II, III, Groups A-G; Type 4, T4 at Ta=80ºC, T5 at Ta=40ºC Explosion Proof: Ex d IIC; Class 1, Zone 1, Class I, II, III, Groups A-G, Type 4, T5 at Ta=80ºC Hazardous Locations. Nonincendive: Ex nA IIC; Class I, Zone 2, Class I, Div 2, Groups A,B,C,D, Class II, Div 2, Groups F, G, Class III, Div 2, T4 at Ta=60ºC, Type 4 Enclosures
ATEX	Intrinsic Safety: II 1 G EEx ia IIC T4 (-20ºC < Ta <50ºC) Flameproof: II 2 G EEx d IIC, T6 (-20ºC < Ta < 40ºC) Type N: II 3 G EEx nL IIC T4 (-20ºC < Ta < 60ºC)
CE	EMC Directive 89/336/EEC and Low Voltage Directive 72/23/EEC EN 61010-101993/A2:1995: Low Voltage Standard EN 61326: EMC Conformity Standard PED Directive 97/23/EC EMC Directive 89/336/EEC

OPTIONS

Codes	
CL	Extra lead length
DF	Bleed port (10K PSI and below)
DQ	Oxygen cleaning
EA	Special calibration
ME	CSA Explosion Proof label
NG	ATEX Flameproof label
NH	Customer specified information
NJ	CE label
NK	ATEX Intrinsic Safety/Nonincendive label
NX	CSA Intrinsic Safety label
NY	FM Explosion Proof/Dust Ignition Proof label
NZ	FM Nonincendive label
TF	FM Intrinsic Safety label
TJ	CSA Div/Zone 2 label
TK	ATEX Type N label
YI	1/8" NPT (F)
YM	1/4" F250-C high pressure tube (standard on 20K-50K ranges)
YN	3/8" NPT (F)
YR	1/2" NPT (F)
YS	3/8" F375-C high pressure tube (0-60K max pressure)
	For exotic metal options, consult factory for media, price & delivery
ZA	G 1/2M conduit connection
ZC	Cable gland connection
ZU	Direct coupled cable

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



Information is accurate to the best of Viatran's knowledge. We reserve the right to change specifications at any time.

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