Viatran
PRESSURE & LEVEL SENSORS

PRESSURE TRANSMITTER
# Model 571

## FEATURES

- Hermetically sealed external controls
- Built-in field calibration signal
- All welded, watertight construction
- FM, CSA, CRN, ATEX, EACEx (Optional)
- 4-20 mA

## TYPICAL APPLICATIONS

- Offshore oil rigs
- Shipboard/Marine
- Pulp and paper
- Chemical processing
- Water treatment

**GAGE. ABSOLUTE. ACCURATE.**

AS9100D ISO 9001:2015

## COMPACT AND COMPLETELY SEALED

The 571 is designed to withstand harsh atmospheres. All welded construction combined with 316 stainless steel makes the 571 airtight, watertight, and ideal for corrosive environments. An O-Ring free design ensures reliability.


## APPROVAL OPTIONS

Model 571 qualifies for FM, CSA, CRN, ATEX and EACEx ratings. External zero, span, and calibration controls are hermetically sealed, yet easily adjusted by means of Viatran's unique magnetically coupled adjustments. The signal conditioner in the 571 allows for 5:1 ranging of the transmitter's standard pressure range.

## IN-FIELD SETUP AND RANGING

A calibration circuit permits ranging and setup without a calibrated pressure source. When the cal switch is activated, an electronic signal is sent through the unit, simulating the level or pressure. The optional non-interactive zero and span circuit allows taring of the zero without effecting the span.

## JUST ONE PART OF A COMPLETE LINE OF SOLUTIONS FROM VIATRAN

The 571 represents one transmitter in a family of sensors designed for the process control industry. 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:**

FM APPROVED
REGISTERED CRN 0F13984.5C


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# Model 571

## PERFORMANCE

| | |
|---|---|
| Full Scale Pressure Range (FSPR) | 0-50 thru 0-100K PSIA/PSIS |
| Accuracy (RSS) | |
| (BFSL Non-Linearity, Hysteresis, Non-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 ( ±0.15% FSO improved with "DN" option) |
| Non-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 ..... ±0.15% FSO (BFSL), Typical |
| | Hysteresis ..... < ± 0.05% FSO, Typical |
| | Non-Repeatability ..... < ± 0.05% FSO, Typical |
| | Full Scale Output (FSO) .....16 mA at 70°F |
| | Resolution .....Infinite |
| | Long-term Stability .....≤±0.25% FSO per 6 months |
| Response Time | Mechanical & Electrical Combined .....≤20mSec to reach 90% of FSO |
| | Temperature Effect on Zero .....≤±0.5% FSO per 100°F |
| | Temperature Effect on Span .....≤±0.5% FSO per 100°F |
| | Temperature Effect on Zero and Span combined at 5:1 Range Down ...≤±4.0% FSO per 100°F |
| | Compensated Temperature Range .....70°F to +170°F |
| | Maximum Operating Temperature .....+190°F |
| | Minimum Operating Temperature.....-10°F |
| | Non-operating Temperature Range.....-65°F to 250°F |

## ELECTRICAL

| | |
|---|---|
| | Supply Voltage.....12 to 30 VDC |
| | Power Supply Regulation.....≤±0.02% FSO per volt |
| | Output Signal .....4-20 mA at 70°F |
| | Load Impedance .....900 Ohms maximum at 30 VDC |
| Zero Adjustment | Elevation .....-100% of FSO |
| | Suppression .....+50% of FSO |
| | Span Adjustment .....Rangeable down 5:1 from standard range |
| | Range Calibration Signal .....20% of FSPR externally switched |
| | Calibration Signal Accuracy .....±1.0% FSO. The exact signal to pressure correlation is provided with each unit. |
| | Circuit Protection .....Varistor protected across the input leads for surges above 40V and currents to 250A |
| | .....peak with a pulse width of 20 µSec. Reverse polarity protected. |
| | Bridge Resistance.....5K Ohms nominal |
| | Insulation Resistance ..... ≥5 nS to case ground |
| | RFI/EMI Suppression..... Negligible to 500 MHz at 5 Watts direct contact |
| | Electrical Connection ..... 1/2" NPT Male, 18 AWG, 72" |
| | Red..... +Power/Signal |
| | Black..... -Power/Signal |
| | Green..... Case Ground |

## MECHANICAL

| | |
|---|---|
| Pressure Connections | 50 thru 15K PSI.....1/4" NPT female |
| | 20K thru 50K PSI.....Autoclave Engineers F250-C |
| | .....1/4" High Pressure Tube |
| | 60K thru 100K PSI.....Autoclave Engineers F312-C |
| | .....5/16" High Pressure Tube |
| Proof Pressure | 50 thru 0-15K PSI .....1.5 times FSPR or 20K PSI, whichever is less |
| | 20K thru 0-100K PSI .....1.2 times FSPR |
| Burst Pressure | 50 thru 0-3K PSI .....5 times FSPR |
| | 5K PSI.....4 times FSPR |
| | 7.5K thru 10K PSI.....2.7 times FSPR |
| | 15K PSI.....2.3 times FSPR |
| | 20K thru 100K PSI.....1.5 times FSPR or 125K PSI, whichever is less |
| | Shock Limitation .....100G's |
| | Weight .....24oz. |
| Enclosure Materials | 50 thru 15K PSI.....15-5 PH and 316 stainless steel |
| | 20K thru 100K PSI.....PH 13-8 Mo SST and 300 Series SST |
| Wetted Materials | 50 thru 15K PSI.....15-5 PH stainless steel |
| | 20K thru 100K PSI.....PH 13-8 Mo SST |
| | Enclosure Classification.....NEMA/Type 4x |

## CERTIFICATIONS (Consult Factory for Available Options)

| | |
|---|---|
| US | Intrinsic Safety: Class I, II, III, Division 1, Groups A-G, Class 1, Zone 0, AEx ia IIC, T4 at Ta≤80ºC, T5 at Ta≤40ºC, Indoor and Outdoor NEMA/Type 4X Hazardous Locations<br>Explosion Proof: for use in Class I, Division 1, Groups A-D, Class II/III, Div 1, Groups E,F,G,CL1, ZN 1, AEx d IIC, T5 at Ta≤88ºC, NEMA/Type 4X, Hazardous Locations<br>Nonincendive: CL I, DIV 2, GPS A-D, CL II DIV 2 GPS F, G, CL III, DIV 2 and CL I, ZN 2, GPS IIC, T4 at Ta≤80ºC, T5 at Ta≤40ºC, NEMA/Type 4X, Hazardous Locations |
| Canada | Intrinsic Safety: CL I, DIV 1, GPS A-D, CL II, DIV 1, GPS E-G, Class III, DIV 1, Ex ia IIC T4 at Ta≤80ºC, T5 at Ta≤40ºC, Per drawing CD0627<br>Explosion Proof: Class I, Division 1, Groups A-D, Class II, Division 1, Groups E-G, Class III, Enclosure Type 4, Dual Seal, Hazardous Locations |
| Europe | Intrinsic Safety: Ⓔx II 1 G Ex ia IIC Ga, T3 (-20ºC≤Ta≤88ºC), T4 (-20ºC≤Ta≤75ºC), T5 (-20°C≤Ta≤40°C)<br>Flameproof: Ⓔx II 2 G Ex db IIC, T6...T4 Gb (-20ºC≤Ta≤+60ºC)<br>Nonincendive: Ⓔx II 3 G EX nA IIC Gc T4 (-20°C<Ta<80°C)<br>EMC Directive 2004/108/EC<br>PED 97/23/EC |
| Russia | Intrinsic Safety 0Ex ia IIC Ga X T4: - 20˚C ≤ Ta ≤ +80˚C T5: -20˚C ≤ Ta ≤ +40˚C<br>Flameproof Ex d IIC Gb X T6: - 20˚C ≤ Ta ≤ +40˚C<br>Non-Sparking 2Ex nA IIC Gc X T4: - 20˚C ≤ Ta ≤ +80˚C<br>Russian Metrology Certificate |

## OPTIONS

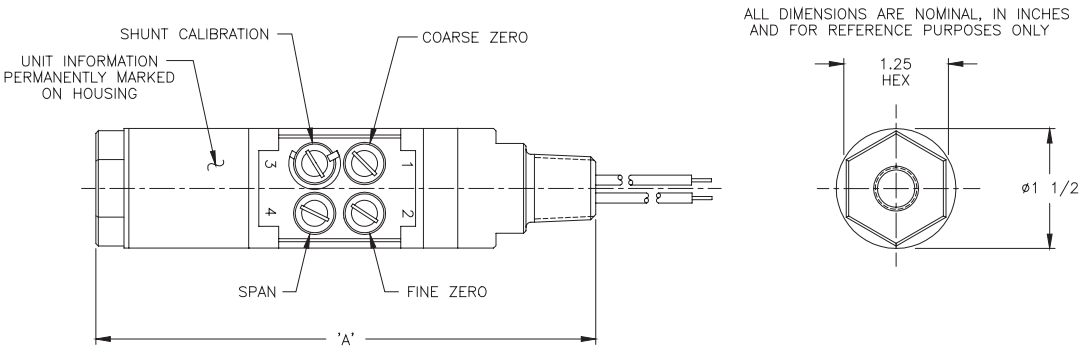
| | |
|---|---|
| BB | Mini change electrical connector |
| BP | Micro change electrical connector |
| DF | Bleed port (6K PSI and below) |
| DK | Special shunt calibration |
| DN | Improved Accuracy (±0.15% FSO) |
| DQ | Cleaning for oxygen service |
| DZ | Noninteractive module |
| EA | Special calibration run |
| FA | Russian Metrology Certificate |
| ME | CSA Explosion Proof label |
| NG | ATEX Flameproof label |
| NH | Customer specified identification |
| NJ | CE label |
| NK | ATEX Intrinsic Safety label |
| NT | Secondary containment |
| NX | CSA Intrinsic Safety label |
| NY | FM Explosion Proof label |
| NZ | FM Nonincendive label |
| TF | FM Intrinsic Safety label |
| TW | EAC Ex Certification label |
| Q( ) | Hastelloy, Inconel or 316 SST wetted parts |
| W( ) | Alternate pressure ports |
| Y( ) | Alternateports |
| Z( ) | Alternateelectricalconnection |
| ZU | Direct coupled cable |

Note: 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

## DIMENSIONAL DATA




| STD. UNIT LENGTHS BY RANGE (Options may change length, consult factory) | A |
|---|---|
| 0-50 THRU 0-15,000 PSI | 6.35 |
| 0-20, 000 THRU 0-50,000 PSI | 6.72 |
| 0-60,000 THRU 0-100,000 PSI | 7.47 |

## INSTALLATION NOTES: