

PRESSURE TRANSMITTER

Models 247 / 347



FEATURES

- Economical
- Adjustable zero
- Resistant to pressure spikes
- Standard DIN connector
- Welded stainless steel construction

TYPICAL APPLICATIONS

- Hydraulic systems
- Injection molding
- Die casting
- Off road vehicles
- Compressors and pumps
- High volume usage

DESIGNED FOR HARSH CONDITIONS

Viatran's Model X47 uses bonded foil sensing technology to offer a rugged but inexpensive solution that is small and fits into hard-to-access areas.

INSPIRED BY DIVERSE NEEDS

Hydraulic systems in test and control applications generate several "spikes" that overpressure many sensors. To combat spikes, Viatran employs a bonded foil strain gage on a hardened stainless steel diaphragm. This higher mass diaphragm withstands short-term overpressure conditions inherent in hydraulic applications. For measuring low pressure (3 to 200 PSI or 0.34 to 13.7 bar), Viatran uses a piezoresistive silicon sensor.

EASILY ADAPTABLE

The X47 series utilizes several features to fit the widest possible applications. The standard DIN 43650 connector is an industrial standard with excellent weather resistance.

The X47 can be fitted with a 6-pin bayonet or a direct coupled cable. The X47 has a 1/4" NPT or SAE female pressure port. A standard zero adjustment control makes setup simple.

For more information, contact Viatran.

Models 247 / 347

PERFORMANCE

| | | |
|-------------------------|----------------------------------------------|----------------------------------------------------------------|
| | Full Scale Pressure Range (FSPR) | 0-3, 5, 10, 15, 30, 50, 75, 100, 200, PSIG, PSIA |
| | | 0-300, 400, 500, 750, 1K, 1.5K, 2K, 3K, 4K, 5K, 7.5, 10K, 15K, |
| | | 20K PSIG |
| | | 0-15 PSIV* |
| | Non-linearity (Best Fit Straight Line) | ≤±0.50% FSO |
| | Hysteresis | <0.25% FSO |
| | Non-Repeatability | ±0.1% FSO |
| Full Scale Output (FSO) | 247 | 5 Vdc ±2% at 70°F (21°C) |
| | 347 | 16 mA ±2% at 70°F (21°C) |
| | Resolution | Infinite |
| | Long Term Stability | ≤±0.5% FSO per 6 months |
| | Compensated Temperature Range | 70°F to 170°F (21°C to 76°C) |
| | Maximum Operating Temperature | 200°F (93°C) |
| | Minimum Operating Temperature | -20°F (-28°C) |
| | Storage Temperature Limits | -40°F to 250°F (-40°C to 121°C) |
| | Thermal Effect on Zero | ≤±2% FSO per 100°F Typical |
| | Thermal Effect on Span | ≤±2% FSO per 100°F Typical |
| | Zero Adjust | ±5% of FSO (nominal) |

ELECTRICAL

| | | |
|-------------------------|---------------------------------|---------------------------------------------------------|
| | Supply Voltage | 8 to 30 Vdc |
| Power Supply Regulation | 247 | ≤±0.05% FSO per Volt |
| | 347 | ≤±0.08% FSO per Volt |
| Output Signal | 247 | 0-5 Vdc |
| | 247 w/DM option | 0 to 10 Vdc (requires 12 Vdc supply min) |
| | 347 | 4 to 20 mA |
| | Load Impedance (347 only) | 1050 Ohms max at 30 Vdc |
| | Load Impedance (247 only) | ≥50K Ohm resistive |
| | Circuit Protection | Reverse polarity protected. CE marked |
| | RFI/EMI | CE EMC compliant as per IEC EN 61326-1 and EN 61326-2-3 |
| | | Annex BB |
| | Voltage Spike | Withstand 1000 volt spike per EN 61000-4-5 |
| | Insulation Resistance | <5 nS conductance |
| Input current | 247 | ≤4 mA |
| | 347 | 4-20 mA |
| | Response Time | <2 mSec for 10-90% change in output |
| | Electrical Connections | DIN Plug 43650 |
| | 247 | 347 |
| Pin 1 | +Power | +Power/Signal |
| Pin 2 | +Signal | -Power/Signal |
| Pin 3 | Common | No connection |
| Ground Spade | Case ground | Case ground |

MECHANICAL

| | |
|------------------------------|-------------------------------------------------------------------|
| Pressure Connection | 1/4" NPT female |
| Proof Pressure | ≤200 PSI 3x |
| | ≥ 300 PSI 1.5 times FSPR or 25K PSI (1723 bar), whichever is less |
| Burst Pressure | 5 times FSPR or 30K PSI (2068 bar), whichever is less |
| Pressure Cavity Volume | 0.06 cubic inches, nominal |

MATERIALS OF CONSTRUCTION

| | | |
|----------------------|------------------------------------------------------------|------------------------|
| Wetted Parts | 0-3 thru 200 PSI (0-1.0 thru 13.7 bar) | 316L stainless steel |
| | 0-300 PSI (20.6 bar) and above | 15-5PH stainless steel |
| Weight | 8 oz nominal silicon sensor, 10.5 oz nominal (strain gage) | |
| Identification | Synthetic label | |
| Mounting | May be supported by process piping | |

* For PSIV and Compound Range units, thermal effect on zero is ≤±3.0% per 100°F.



PRESSURE TRANSMITTER
Models 247 / 347

OPTIONS

| | | |
|-------|---------|----------------------------------------------------------------|
| Codes | DH..... | Special range |
| | DN..... | Improved Accuracy, $\pm 0.35\%$ FSO for 0-3 thru 0-15,000 PSIG |
| | DX..... | Modified output |

Note: Vented gage units should only be installed in environments that allow the breather to remain dry and free from contamination. Application of some available options may affect standard performance. Consult your viatran Representative for details.

ACCESSORIES

- Digital indicator
- Mating electrical assembly
- Mating electrical connector
- Protective cover

