



Model 349 Pressure Transmitter



MODEL 349 PRESSURE TRANSMITTER

DURABLE, DEPENDABLE, ACCURATE

Viatran's "49" series is a robust, highly accurate pressure transmitter designed for the severe environments found in aerospace, engine test and fluid power control applications.

PERFORMANCE

Full Scale Pressure Range	0-5, 15, 25, 50, 100, 200, 300, 500, 1K, 1500, 2K, 3K, 5K, 7.5K, 10K, 15K, 20K, 25K, 30K, 40K, 50K, 60K 75K, 100K PSIA, PSIS, PSIG
Linearity (Best Fit Straight Line)	$\leq \pm 0.10\%$ FSO For 100K PSI $\leq \pm 0.25\%$ FSO
Hysteresis	$\leq 0.06\%$ FSO
Repeatability	$\leq 0.03\%$ FSO
Full Scale Output (FSO)	16 mA
Long Term Stability	$\leq \pm 0.25\%$ FSO per 6 months
Response Time	≤ 4 mSec to reach 90% of 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 Range	70°F to 170°F (21°C to 76°C)
Operating Temperature Range	-40°F to 185°F (-40°C to 85°C)
Storage Temperature Limit	-65°F to 250°F (-54°C to 121°C)

ELECTRICAL

Supply Voltage	9 to 40 Vdc
Power Supply Regulation Effect	$\leq \pm 0.01\%$ FSO per Volt
Output Signal	4 to 20 mA
Load Impedance	1500 Ohms max at 40 Vdc max
Bridge Impedance	5,000 Ohms nominal
Circuit Protection	Output may be short-circuited indefinitely. Input polarity may be reversed. Over voltage protection to 1000 volts for <1 mSec duration
Electrical Connection	6-pin hermetic, bayonet-style, 303 SST weld mount connector
Pin Outs	PIN A +Signal PIN B -Signal PIN C Calibrate PIN D Calibrate PIN E No Connection PIN F No Connection

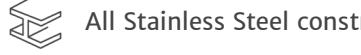
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High Accuracy



Many Options available



All Stainless Steel construction

The Model 349's small size allows flexibility in tight spaces, while the welded body, stainless steel connector and sealed adjustments ensure protection against contamination.

The "49" series utilizes three sensor technologies to achieve top performance through all pressure ranges. For ranges 0-5 to 0-150 PSI, a silicon piezoresistive sensor provides extremely accurate readings and high overpressure protection. Bonded foil strain gage sensors are more reliable for pressure ranges 200 to 15,000 PSI where transient spikes could destroy a silicon sensor.

For pressure measurement over 20,000 PSI, Viatran developed the "tube" sensor. Made from high strength stainless steel, this sensor ensures high accuracy and durability where diaphragm type sensors can rupture. Model 349 is equipped with electronic linearization, a compensation circuit that corrects for non-linearities in the sensor.

Surface-mount technology (SMT) allows this complex circuitry to be incorporated into a small package and yield a linearity specification of $\leq 0.1\%$ FSO (optional to 0.05%).

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MECHANICAL

Pressure Connection

0-5 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

5 thru 150 PSI 3X range minimum
151 thru 15K PSI 1.5X range
20K - 100K PSI 1.2X range

Burst Pressure

5 thru 150 PSI Consult Factory
151 thru 15K PSI
5X range or 30K PSI, whichever is less

20K - 100K PSI

1.5X range or 125K PSI, whichever is less

Pressure Cavity Volume

5 thru 150 PSI 0.25 cu. in.
151 thru 15K PSI 0.32 cu. in.
20K - 100K PSI 0.10 cu. in.

Mounting

Supported by process piping or optional mounting bracket

MATERIALS OF CONSTRUCTION

Wetted Parts

5 thru 150 PSI 316, 304 SST
200 thru 15K PSI 15-5 PH SST
20K - 100K PSI Stainless Steel

Housing

316L SST

Weight

15 oz, nominal

Identification

Laser etched onto body

OPTIONS

Alternate Connector

BZ Micro change connector

Alternate Ports

YA MS33649-04
YG MS16142-04
YI 1/8" NPT(F)
YK 1/4" NPT(M)
YM 1/4" F250-C High pressure tube
YN 3/8" NPT(F)
YS 5/16" F-375-C High pressure tube
YR 1/2" NPT(F)
YV MS33649-08

Performance Options

DG Improve temperature performance
DH Special ranging
DK Special calibration setting
DM Modified output (i.e., 0-10 Vdc)
DN Improved accuracy
DQ Cleaning for oxygen service
EA Special calibration run
NH Customer specified identification
PW 1/8 DIN digital indicator

Note:

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

components of the PC board helps

to prevent damage from severe

vibration with top-mounted and

sealed zero and span adjustments.

An internal calibration circuit

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ALL DIMENSIONS ARE NOMINAL, IN INCHES
AND FOR REFERENCE PURPOSES ONLY

AE HIGH PRESSURE CONNECTIONS LISTED
ARE REGISTERED TRADEMARKS OF
AUTOCLAVE ENGINEERS GROUP,
ERIE, PENNSYLVANIA

