



MODEL 38M BAROMETRIC PRESSURE TRANSMITTER

4-20 MA, HIGH ACCURACY,
850 TO 1080 MBAR
ABSOLUTE

Viatran's Model 38M pressure sensor is among our most accurate pressure transmitters for industrial test and research applications. The 38M measures barometric pressure from 850 to 1080 mBarA with standard accuracy of $\leq \pm 0.21\%$ FSO.



PERFORMANCE

Full Scale Pressure Ranges (FSPR)	850 to 1080 mBar Absolute (Optional ranges can be factory set from 0 to 1080 mBarA with a minimum 24.0 mBarA span)
Static Error Band	$\leq \pm 0.21\%$ FSO (Includes BFSL, Hysteresis and Repeatability by RSS)
Nonlinearity (Best Fit Straight Line)	$\leq \pm 0.1\%$ FSO ($\leq \pm 0.06\%$ FSO with DN option)
Hysteresis & Repeatability	$\leq \pm 0.13\%$ FSO each
Full Scale Output (FSO)	16 mA at 21°C (70°F) $\leq \pm 0.5\%$ FSO standard
Resolution	Infinite
Long Term Stability	$\leq \pm 0.5\%$ FSO per 6 months (typical)
Compensated Temperature Range	0° to 77° C (32°F to 170°F)
Process Media Temperature Range	-40°C to 121°C (-40°F to 250°F)
Ambient Operating Temperature Range	-40°C to 85°C (-40°F to 185°F)
Storage Temperature Limits	-40°C to 85°C (-40°F to 185°F)
Temperature Effect on Zero	$\leq \pm 0.018\%$ FSO per 1°C (1.8°F)
Temperature Effect on Span	$\leq \pm 0.018\%$ FSO per 1°C (1.8°F)

ELECTRICAL

Supply Voltage	8 to 30 Vdc
Power Supply Regulation	$\leq \pm 0.01\%$ FSO per volt change over the supply voltage range
Output Signal	4 - 20 mA
Load Resistance	1050 Ohms max at 30 Vdc
Circuit Protection	Input polarity may be reversed. Output may be short-circuited indefinitely Over voltage protection to 1000 volts according to EN61000-4-5
Insulation Resistance	< 5 nS to case ground
Response Time	< 2 mSec to reach 90% of full scale
RFI / EMI Suppression	CE EMC compliant per IEC EN 61326-1 & 61326-2-3 Annex BB, CE marked
Electrical Connection	Bendix / Amphenol PT02E-10-6P, mates PT06E-10-6S (SR)
Pin Outs	Pin A + Power / Signal Pin B - Power / Signal Pin C No Connection Pin D No Connection Pin E No Connection Pin F No Connection Shell Ground

Model 38M Barometric Pressure Transmitter



High Accuracy



Many Options available



All Stainless Steel construction



Low Pressure Applications

MATERIALS OF CONSTRUCTION

Wetted Parts	316 stainless steel
Housing	304 SS with an Aluminum alloy, black zinc-cobalt plated electrical connector
Weight	283 g (10 oz)

MECHANICAL

Pressure Connection	G-1/4 female
Proof Pressure	3100 mBar (45 PSI)
Burst Pressure	5170 mBar (75 PSI)
Pressure Cavity Volume	1.5 mL
Mounting	May be supported by process piping
Identification	Laser etched onto body

OPTIONS

BF	(K)PTIH-10-6P
BG	DIN 43650
BL	WK6-32S
BN	(K)PTIH-8-4P
BQ	(K)PT02H-10-6P
BR	CF3102E-14S-6P
ZU	Direct Cable - 79°C (175°F) max temperature
Y()	Multiple pressure ports available. Consult factory
DC	Extended temperature operation: -40°C to 77°C (-40°F to 170°F)
DG	Improved temperature compensation: (± 0.5% FSO per 55.6°C (100°F) zero and span shift)
DH	Special ranging
DK	Special shunt calibration setting
DM	Modified full scale output
DN	Improved Accuracy (Non Linearity) ≤±0.06% FSO
DQ	Cleaning for oxygen service
EA	Special calibration run
NH	Customer specified identification
PW	Scaled with Process Meter
VU	1/8" Barbed (Male) Port

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

Model 38M Barometric Pressure Transmitter

NOTES

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***RSS** Root Sum Squared for Non-Linearity, Hysteresis, Repeatability

****FSO** The algebraic difference between full scale pressure output value and the minimum pressure output value.

*****Calibration** Calibration is performed at ambient temperature of 21°C (70°F). Maximum thermal error was calculated from this datum.

Pressure reference temperature = 0°C (32°F)

DIMENSIONAL DATA:



