



Model 38K Barometric Pressure Transmitter



MODEL 38K BAROMETRIC PRESSURE TRANSMITTER

**4-20 MA, HIGH ACCURACY,
85 TO 108 KPA ABSOLUTE**

Viatran's Model 38K pressure sensor is among our most accurate pressure transmitters for industrial test and research applications. The 38K measures barometric pressure from 85 to 108 kPa with Improved Accuracy of $\leq \pm 0.06\%$ FSO available.

PERFORMANCE

Full Scale Pressure Ranges (FSPR)	85 to 108 kPa Absolute (Optional ranges can be factory set from 0 to 108 kPaA with a minimum 25 kPaA span)
Accuracy (RSS*)	$\leq \pm 0.21\%$ FSO
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 $\leq \pm 0.5\%$ FSO at 21°C (70°F)
Resolution	Infinite
Long Term Stability	$\leq \pm 0.9\%$ FSO per 6 months
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 38K Barometric Pressure Transmitter



High Accuracy



Many Options available



All Stainless Steel construction



Low Pressure Applications

LOW

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	310 kPa (45 PSI)
Burst Pressure	517 kPa (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
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

NOTES

Note:	Application of some available options may affect standard performance. Consult Viatran for details.
*RSS	Root Sum Squared for Non-Linearity, Hysteresis, Repeatability

Model 38K Barometric Pressure Transmitter

**FSO	The algebraic difference between full scale pressure output value and the maximum 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)

Model 38K Barometric Pressure Transmitter

