

# PLASTIC MELT PRESSURE TRANSDUCER/TRANSMITTER

**FOR HAZARDOUS ENVIRONMENTS**

**Models 230X, 231X, 330X, 331X, 330Z, 331Z**



## GENERAL

The GP:50 product line of melt pressure transducers and transmitters are based on the proven bonded strain gage principle successfully utilized in thousands of applications. Our unique design incorporates a heavier sensor allowing a thicker tip diaphragm, provides better linearity, and reduces costs.

The design incorporates an extremely small capillary tubing that transmits the media pressure to the strain gage sensor and mating electronics via a mechanical fill fluid. (Mercury is the standard, silicone and mineral oil are readily available depending on the application).

## FEATURES:

- Rugged, all-welded, all stainless steel construction.
- Interchangeable with existing systems.
- Many options available, Hastelloy C-276 or Boron - Hardening
- FM Explosion-Proof and FM Intrinsically Safe Approved (Class I, Division I, Groups A, B, C, D)
- CSA Intrinsically Safe Approved
- Internal Calibration Resistor set to  $80\% \pm 0.5\%$  FSO
- Zero and Span controls, approximately  $\pm 20\%$  FSO

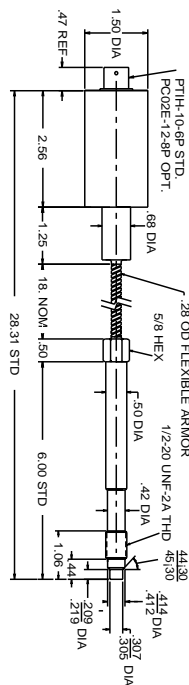
## PRESSURE RANGES:

- From 0-500 through 0-30,000 psi)
- (See ordering guide)

## ACCURACY:

- (Non -Linearity, Hysteresis, Non-repeatability)
- $\pm 0.25\%$  FSO, RSS (0-5000 psi & higher)
- $\pm 0.5\%$  FSO, RSS (0-500 and 0-3500 psi)

### MODEL 231/331

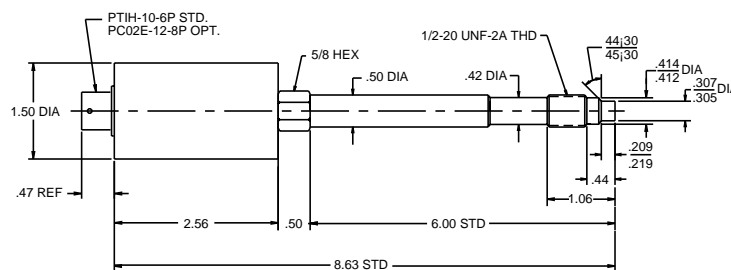


Some options will affect dimensions. Consult factory if important.

MODEL	OUTPUT @ 70°F*	EXITATION
230X/231X	5.0 Vdc $\pm 2\%$	9-40 Vdc
330X/331X	4-20 mA $\pm 2\%$	9-36 Vdc

\* Amplified Output

### MODEL 230/330



PLASTIC MELT PRESSURE

# SPECIFICATIONS

Unless otherwise stated, these specifications are the standards to which the units are normally constructed. Alterations may be easily and readily accomplished by the standard modification code or by discussion with the factory. We invite your inquiry.

Accuracy	Static Error Band (Non-linearity, Hysteresis, Non-repeatability)	$\pm 0.5\%$ FSO(RSS) 500 through 3000 psi $\pm .25\%$ FSO(RSS) 5000 through 30000 psi
Material in Contact with Pressure Media		15-5 PH stainless steel, Armoloy coated (hard chrome) Diamond, Boron or Titanium Nitride coatings optional
Proof Pressure		2 times full scale pressure range or 35,000 psi whichever is less
Temperature Limits	Diaphragm Strain Gauge Housing	750°F (400°C) 176°F (80°C)
Temperature Effects from Diaphragm	From Diaphragm Zero From Strain Gauge Housing Zero Span	5 psi/100°F per inch of stem and capillary Less than $\pm 1.0\%$ FSO/100°F ( $\pm 2.0\%$ FSO/100°C) Less than $\pm 1.0\%$ FSO/100°F ( $\pm 2.0\%$ FSO/100°C)
Electricals	Input Current Model 230, 231 Load Impedance Model 330, 331 Output Current Model 230, 231 Zero Balance Model 230, 231 Model 330, 331 Range Calibration Signal	8 mA, nominal 1350 ohms maximum, at 36 Vdc and 750 ohms at 24 Vdc 2.0 mA maximum for less than 0.1% FSO attenuation 0.0 Vdc $\pm 5\%$ FSO @ 70°F 4.0 mA $\pm 5\%$ FSO @ 70°F 80% $\pm 0.5\%$ FSO standard 100, 200 series
Connections	Pressure Electrical	1/2" - 20 UNF-2A thread for standard (M18 x 1.5 metric thread optional) PTIH-10-6P standard, PT06A-10-6S (SR), standard mate (not included) See options.
Enclosed Materials		316 stainless steel
Mounting Torque		500 inch pounds, maximum
Identification		Etched stainless steel nameplate welded to body.

## ORDERING GUIDE

Use The Following Codes To Identify Desired Item.

MODEL	RANGE	OPTIONS
•	—	• / • / •

Example: 331X-RV-CF/GN  
(X for Explosion Proof, Z for Intrinsically Safe)

### MODEL

230X/231X/230Z/231Z 5 Vdc  
330X/331X/330Z/331Z 4-20 mA

### PRESSURE RANGE

	psi		bar
RH	500	UV	50
RJ	600	UX	75
RK	750	UY	100
RM	1000	UZ	150
RO	1500	VA	200
RR	2000	VB	300
RS	2500	VC	350
RT	3000	VD	500
RV	5000	VE	700
RX	7500	VF	750
RZ	10000	UA	1000
SB	15000	SZ	Other

GP:50 reserves the right to make product improvements and amendments to the product specification stated throughout this brochure without prior notification. Please contact the factory on all critical dimensions and specifications for verification.

Ordering: Specify model, and pressure range and indicate modifications or accessories required.

### OPTIONS

AA - None (standard connector PTIH-10-6P) (330Z, 331Z)  
1/2" NPT (M) thread with 72" leads (230X, 231X, 330X, 331X)

### ALTERNATE CONNECTOR

CF 1/2" NPT(M) thread with 36" potted leads  
CC PC02E-12-8P  
CD WK-6-32S

### GENERAL

GB Alternate Electronic Output - specify zero and span output values  
GP Hastelloy C-276 Diaphragm and Thread  
GQ Boron-Hardened diaphragm  
GS 0-10 Vdc FSO, Model 2xx only, (Requires 16-32 Vdc excitation)  
GV Silicone Oil Fill. (Increases Thermal Shift) Consult factory  
GX Mineral Oil Fill. (Increases Thermal Shift) Consult factory  
JW Titanium Nitride-Coated Diaphragm & Threads  
MD Add Zero and Span Controls for Explosion-Proof models

### RIGID STEM

GN 12.5" Rigid Stem  
GO 9" Rigid Stem  
HD 3" Rigid Stem  
HJ 1 3/16" Rigid Stem  
HT 24" Rigid Stem  
HU 4" Rigid Stem

### FLEX TUBING

GT 30" Armored Capillary Tube  
HS 9" Armored Capillary Tube  
HV 24" Armored Capillary Tube  
HY 12" Armored Capillary Tube