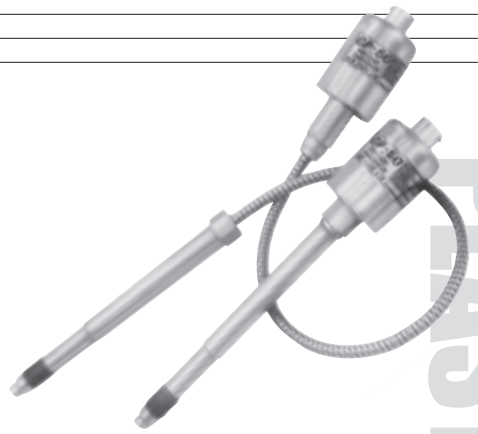
PLASTIC MELT PRESSURE TRANSDUCER/TRANSMITTER

Models 130 & 131
230 & 231
330 & 331



PLASTIC MELT PRESSURE

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
- Explosion-Proof ratings available

PRESSURE RANGES:

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

ACCURACY:

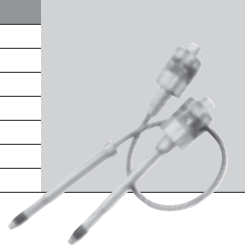
(Non -Linearity, Hysteresis, Non-repeatability).

- ±0.25% FSO, RSS (0-3000 psi & higher)
- ±5% FSO, RSS (0-500 and 0-2500 psi).

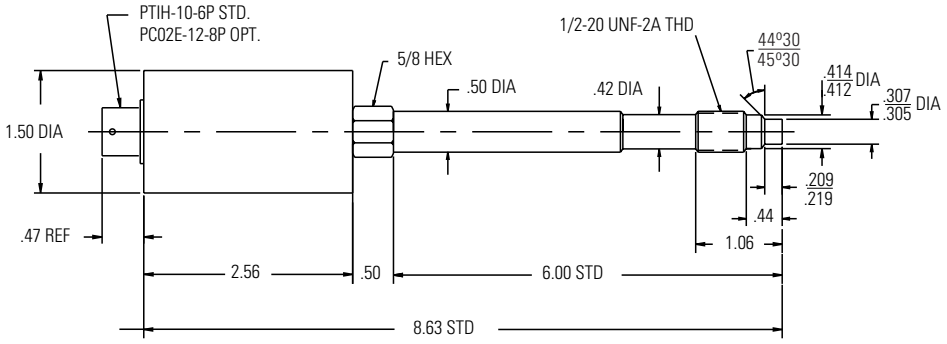
MODEL	OUTPUT @ 70° F*	EXITATION
130/131	3.33* mV/V ± 2%	3.5-15 Vdc
230/231	5.0 Vdc ± 2%	9-40 Vdc
330/331	4-20 mA ±2%	9-36 Vdc
FM APPROVED	X Series Explosion-Proof rated Class I, II, III Division I, Groups A, B, C, D, E, F, & G. Shaded specifications only.	
230X/231X	5.0 Vdc ± 2%	10.5-32 Vdc
330X/331X	4-20 mA ± 2%	13-37 Vdc
330Z/311Z	4-20 mA ± 2%	9-36 Vdc
FM APPROVED	Intrinsically Safe Class I, II, III Division I, II, Groups A, B, C, D, E, F, & G. Shaded specifications only.	

* Amplified Output

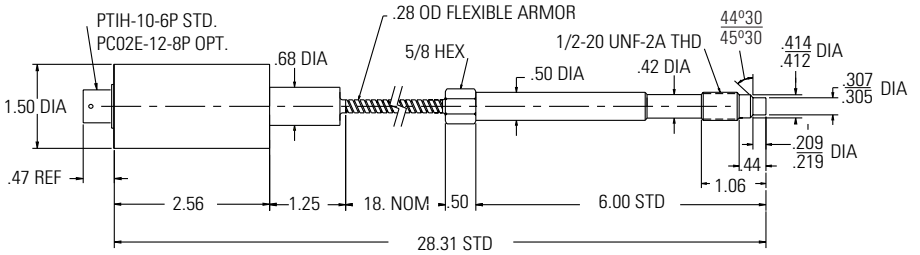
OUTLINE



Some options will affect dimensions. Consult factory if important.



MODEL 30



MODEL 31

MODELS 130, 230, 330

These are the rigid stem versions of GP:50's plastic melt pressure transducers. Available in a standard length of 6 inches, they may be ordered in longer or shorter lengths to accommodate individual needs (See outline drawing & close up). The limiting minimums may be the die temperature and environment which must jointly combine to restrict the electronics and sensor from exceeding 180°F.

MODELS 131, 231, 331

The flexible tube version of the product line provides the ultimate in thermal isolation for those demanding applications reaching the upper limits of 750°F. Provided with a standard 18 inch length of flexible capillary tubing protected with a stainless steel armored jacket, and a 6 inch rigid stem length (see outline drawing), they can be provided in shorter or longer lengths, with or without the armor, for machine geometries requiring alternative packages. Many variations are possible. Please call the factory for free consultation on your needs.

WIRING CODE

PTIH-10-6P	130, 131	230, 231	330, 331
A/1	+ Signal	+ Signal	+ Excit./Signal
B/2	- Signal	- Signal**	Common with D/4
C/3	+ Excit.	+ Excit.	NC
D/4	- Excit.	- Excit.**	- Excit./Signal
E/5	Calibrate	Calibrate	NC Option ME
F/6	Calibrate	Calibrate	NC Option ME

PC02E-12-8P	130, 131	230, 231	330, 331
A/1	+ Excit.	+ Excit.	+ Excit./Signal
B/2	+ Signal	+ Signal	NC
C/3	- Excit.	- Excit.**	NC
D/4	- Signal	- Signal**	- Excit./Signal
E/5	Cal. (Common)	Cal. (Common)	NC Option ME
F/6	Cal. (Int. Res)	Cal. (Int. Res.)	NC Option ME
G/7	NC	NC	NC
H/8	Cal. (Ext. Res.)	Cal. (Ext. Res.)	NC

Pigtail	330, 331
Red	+ Excit./Signal
Black	- Excit./Signal
Green	Case Ground
	Explosion-Proof units
Shield	NC

** - Signal and - Excitation are common to each other.

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.

Full Scale Pressure Ranges - See ordering guide	
Accuracy Static Error Band (Non-linearity, Hysteresis, Non-repeatability	 ± 1.0% FSO(RSS) 500 through 3000 psi ± .25% FSO(RSS) 5000 through 30000 psi
Material in Contact with Pressure Media	15-5 PH stainless steel and hard chrome plated diaphragm surface
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 Fill Zero From Strain Gauge Housing Zero Span	 8 psi/100°F per inch of stem and capillary Less than ± 1.0% FSO/100°F (± 2.0% FSO/100°C) Less than ± 1.0% FSO/100°F (± 2.0% FSO/100°C)
Electricals Input Impedance Model 130, 131 Input Current Model 230, 231 Load Impedance Model 130, 131 Model 330, 331 Output Current Model 230, 231 Zero Balance Model 130, 131 Model 230, 231 Model 330, 331 Range Calibration Signal	 350 ohm, nominal 8 mA, nominal 50,000 ohms minimum for less than 0.1% FSO attenuation 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 mV/V ± 5% FSO @ 70°F 0.0 Vdc ± 5% FSO @ 70°F 4.0 mA ± 5% FSO @ 70°F 80% ± 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.

SPECIFICATIONS

ORDERING GUIDE

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

Only shaded codes and options are available with Explosion-Proof ratings. These units are provided with 1/2" NPT(M) threaded conduit fitting as standard.

MODEL

130/131 3.33 mV/V
230/231 5 Vdc
330/331 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	UH	1400
SD	20000	UB	1500
SF	30000	UC	2000
SZ	Other		

GP:50 New York Ltd. 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.

Use The Following Codes To Identify Desired Item.

MODEL	RANGE	OPTIONS
• —	• —	•/•/•

Example
331-RV-CF/GJ

OPTIONS

AA - None (standard connector)

ALTERNATE CONNECTOR OR CABLE

Note: Explosion-Proof rated models are only provided with 1/2" NPTM) conduit thread, (Option CF).
CC Bendix PC02E-12-8P, [Mate: PC06A-12-8S-(SR), not included].
CD Cannon WK6-32S, [Mate: WK6-21C, not included].
CF 1/2" NPT(M) thread with 24" potted leads.
CZ Alternate Connector/ Cable/ Other.

ALTERNATE PRESSURE PORT

FB M18 X 1.5 Metric Thread.
FG M14 X 1.5 Metric Thread.
FZ Non-Standard Pressure Port.

GENERAL

GB Alternate Electronic Output - specify zero and span output values
GN 12.5" Rigid Stem.
GO 9" Rigid Stem.
GP Hastelloy C-276 Diaphragm and Thread
GQ Boron-Hardened diaphragm.
GS 0-10 Vdc FSO, Model 2xx only, (Requires 16-32 Vdc excitation).
GT 30" Armored Capillary Tube.
GV Silicone Oil Fill. (Increase Thermal Shift)
GX Mineral Oil Fill. (Increase Thermal Shift)
HD 3" Rigid Stem
HJ 1 3/16" Rigid Stem
HS 9" Armored Capillary Tube
HT 24" Rigid Stem
HU 4" Rigid Stem
HV 24" Armored Capillary Tube
HY 12" Armored Capillary Tube
JW Titanium Nitride-Coated Diaphragm & Threads.
ME Internal Calibration Resister set to 80% ± 0.5% FSO (for 300 series units.)
MD Add Zero and Span Controls for Explosion-Proof models
GJ Add Zero and Span Controls. (Approximately ±20% FSO adjustment).
JA 100 ohm RTD., 3 - wire, provided with no external cal. & 8 - pin standard connector
GZ Customer Special
MO Gentran Wiring
MP Barber-Colman Wiring
MT Non-standard Armored Capillary Tube (50" max)

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