PLASTIC MELT PRESSURE TRANSDUCER/TRANSMITTER

Models 130,230,330 (RIGID)
131,231,331 (FLEXIBLE)

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 oil, Mineral oil and Nak 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
- Internal Calibration Resistor set to 80% ± 0.5% FSO
- Zero and Span controls, approximately ± 20% FSO (2XX, 3XX only)

PRESSURE RANGES:

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

ACCURACY:

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

- ± 0.25% FSO, RSS (0-5000 psi & higher)
- ± 0.5% FSO, RSS (0-500 and 0-3500 psi)

WIRING CODE

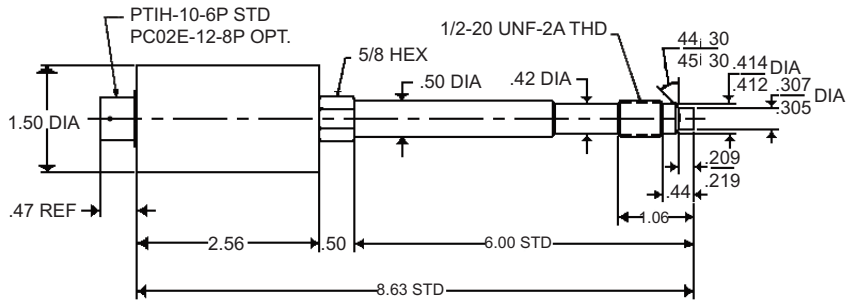
PTIH-10-6P	130, 131	230, 231	330, 331
A/1	+ SIGNAL	+ SIGNAL	+ EXC./SIG.
B/2	- SIGNAL	- SIGNAL*	- EXC./SIG.
C/3	+ EXC.	+ EXC.	NC
D/4	- EXC.	- EXC.*	NC
E/5	CALIBRATE	CALIBRATE	CALIBRATE
F/6	CALIBRATE	CALIBRATE	CALIBRATE

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

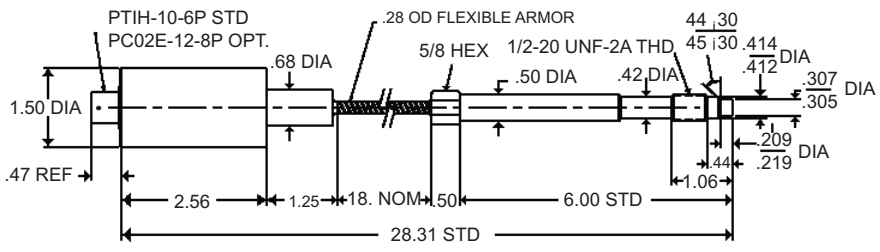
PIGTAIL	330, 331
RED	+ EXC./SIGNAL
BLACK	- EXC./SIGNAL
SHIELD	NC

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

MODEL 30



MODEL 31



PLASTIC MELT PRESSURE

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

A5SL-30.00

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GP:50 Pressure, Level & Temperature Transmitters & Transducers

Specifications reflect standard product, improved performance/mechanical options available. Modifications may alter specs, consult factory for more information.

Full Scale Pressure Ranges - See ordering guide	
Accuracy	**Static Error Band (Non-linearity, Hysteresis, Non-repeatability)** ± 0.5% FSO(RSS) 500 through 3500 psi ± .25% FSO(RSS) 5000 through 30000 psi
Material in Contact with Pressure Media	15-5 PH diaphragm, 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	750°F (400°C), 1000°F available with NaK fill
Strain Gauge Housing	176°F (80°C)
Temperature Effects from Diaphragm	
From Fill	
Zero	8 psi/100ºF per inch of stem and capillary
From Strain Gauge Housing	
Zero	Less than ± 1.0% FSO/100°F (± 2.0% FSO/100°C)
Span	Less than ± 1.0% FSO/100ºF (± 2.0% FSO/100°C)

Electricals

Excitation Voltage		Output at 70° F (* Amplified Output)	
(Model 130/131)	3.5-15 Vdc	3.33* mV/V ± 2%	
(Model 230/231)	9-40 Vdc	5.0 Vdc ±2%	
(Model 330/331)	9-36 Vdc	4-20 mA ±2%	
Zero Balance			
(Model 130/131)	0.0 mV/V ±5% FSO at 70°F		
(Model 230/231)	0.0 Vdc ±2% FSO at 70°F		
(Model 330/331)	4.0 mA ±2% FSO at 70°F		
Input Impedance		Input Current	
(Model 130/131)	350 ohm, nominal	**(Model 230/231)**	8 mA nominal
Load Impedance			
(Model 130/131)	50,000 ohms minimum for less than 0.1% FSO attenuation.		
(Model 330/331)	1350 ohms max. at 36 Vdc & 750 ohms 24 Vdc		
Output Current			
(Model 230/231)	2.0 mA maximum for less than 0.1% FSO attenuation.		
Range Ca. Signal	80% ±0.5% FSO standard		

Connections	
Pressure	1/2" - 20 UNF-2A thread for standard (M18 x 1.5 metric thread optional)
Electrical	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.

MODEL

130/131	3.33 mV/V
230/231	5 Vdc
330/331	4-20 mA
230X/231X	5 Vdc
330X/331X	4-20 mA
330Z/331Z	4-20 mA

PRESSURE RANGE

(PSI)				(BAR)			
RH	500	**RX**	7500	**UV**	50	**VF**	750
RJ	600	**RZ**	10000	**UX**	75	**UA**	1000
RK	750	**SB**	15000	**UY**	100	**UH**	1400
RM	1000	**SD**	20000	**UZ**	150	**UB**	1500
RO	1500	**SF**	30000	**VA**	200	**UC**	2000
RR	2000	**SZ**	Other	**VB**	300		
RS	2500			**VC**	350		
RT	3000			**VD**	500		
RV	5000			**VE**	700		

ORDERING GUIDE:

Use the following codes to identify desired item.

MODEL		RANGE		OPTIONS
•	—	•	—	•/•/•

Example: 331-RV-CF/GP

OPTIONS

AA None (standard connector PTIH-10-6P)

ALTERNATE CONNECTOR OR CABLE

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 36" 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
GP Hastelloy C-276 Diaphragm and Thread
GQ Boron-Hardened diaphragm
GS 0-10 Vdc FSO, Model 2xx only, (Requires 16-32 Vdc excitation)
QJ NaK Fill for 750°F max. applications
GW NaK Fill with Inconel diaphragm and stemfor 1000°F max. applications
GV Silicone Oil Fill. (Increases Thermal Shift) Consult factory
GX Mineral Oil Fill. (Increases Thermal Shift) Consult factory
JW Titanium Nitride-Coated Diaphragm & Threads
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

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
MT Non-standard Armored Capillary Tube (50" max)

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