



INDUSTRIAL GRADE PRESSURE TRANSDUCER

Models 111, 211, 311

Custom Engineered to fit your application.

FEATURES:

- Rugged, welded, stainless steel construction
- Strain gauge technology
- High accuracy, $\pm 0.5\%$ FSO standard, $\pm 0.1\%$ FSO optional
- Resistant to pressure spike
- Small package size

SPECIFICATIONS:

Output (at 70° F)

Model 111..... 3 mV/V 3.5 - 15 Vdc excitation
 Model 211..... 0-5 Vdc 9.0 - 40 Vdc excitation
 Model 311..... 4-20 mA 9.0 - 36 Vdc excitation

Pressure Ranges

0-5 thru 0-20,000 PSI
 PSIG, PSIS, PSIA, PSIV and Compound ranges available

Accuracy

(Static error band includes non-linearity, hysteresis and repeatability)

Series B $\pm 0.5\%$ BFSL
 Series C $\pm 0.2\%$ BFSL
 Series D $\pm 0.1\%$ BFSL

Resolution Infinite (practical minimum of 0.02% on 111, 211 and 0.06% on 311)

Zero Balance (at 70° F)

Model 111, 211 0.0 mV/V $\pm 2\%$ FSO (@ 10 Vdc)
 Model 311 4 mA $\pm 2\%$ FSO (@24 Vdc)

Range Calibration Signal

Model 111 Resistance value provided on calibration card for 100% FSO

Insulation Resistance ... > 10 megohms @ 50 Vdc & @ 70° F

Temperature Limits

Compensated 0-180° F
 Operating -20° F to 190° F
 Storage -65° F to +250° F

Temperature Compensation (Standard)

Zero / Span Less than $\pm 2\%$ FSO/100° F at FSPR and/or URL

Standard Connections

Process Connection 1/4" NPT (F)
 Electrical Connection
 36" long Belden 8723, 24 AWG, 4 conductor cable (or equivalent)

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



For Intrinsically Safe and Explosion Proof approvals, please see our 111, 211, 311 Hazardous Loc. Data Sheet.

| Wiring Code (for most connectors) | | | |
|-----------------------------------|------------|-----------------|-----------------|
| | 111 | 211 | 311 |
| A/1 RED | + EXCIT. | + EXCIT. | + EXCIT./SIGNAL |
| B/2 GREEN | + SIGNAL | + SIGNAL | NC |
| C/3 WHITE | - SIGNAL | NC | NC |
| D/4 BLACK | - EXCIT. | - EXCIT./SIGNAL | - EXCIT./SIGNAL |
| E/5 BLUE | NC OPT. GH | NC OPT. GH | NC OPT. GH |
| F/6 BROWN | NC OPT. GH | NC OPT. GH | NC OPT. GH |
| SHIELD | OPEN | OPEN | OPEN |

Electricals

Input Impedance

Model 111..... 350 ohm nominal, full bridge

Input Current

Model 211..... 8mA nominal

Load Impedance

Model 111..... 50,000 ohms minimum, for less than 0.1% FSO attenuation

Model 311..... 1350 ohms maximum at 36 Vdc and 750 ohms maximum at 24 Vdc

Output Current

Model 211..... 2.0 mA maximum for less than 0.1% FSO attenuation

Turndown

Model 311 option GR .. 5:1 (3:1 for ranges \leq 15 PSI)

Mechanicals

Proof Pressure 2 X FSPR (or URL) or 22,500 psi, whichever is less

Burst pressure

Gauge/SG/Absolute 5 X FSPR (or URL) or 23,000 psi, whichever is less

Vacuum..... 5 X FSPR in gauge

Pressure Response ... Less than 5 ms 10% to 90%

Weight 10 oz. nominal, options may increase weight

Wetted Material 316 & 17-4 PH Stainless Steel

Enclosure Material 316 stainless steel

Mounting Pressure port

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-11.00 Rev B

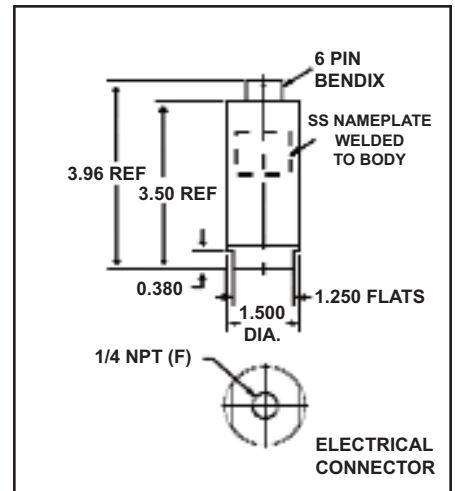
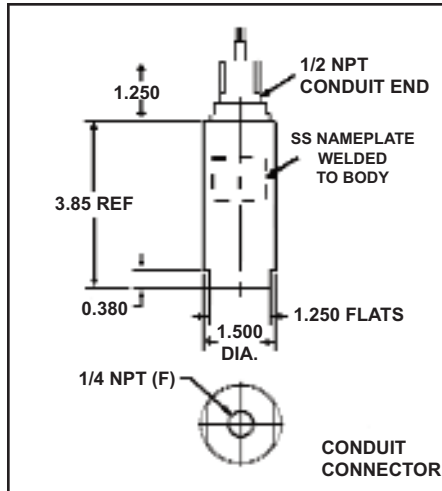
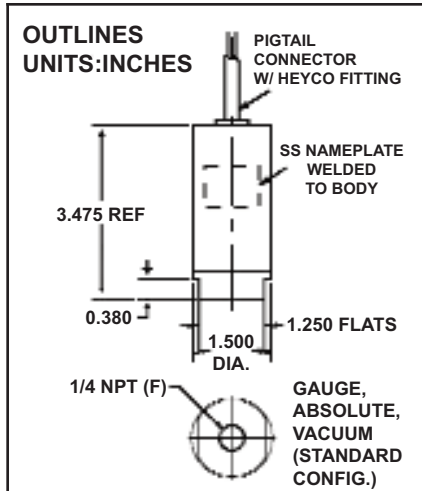
2770 Long Road, Grand Island, NY 14072 USA

Tel. (716) 773-9300 Fax (716) 773-5019 E-mail:sales@gp50.com website:www.gp50.com

INDUSTRIAL GRADE



Pressure, Level & Temperature Transmitters & Transducers



ORDERING GUIDE: Example: 311-C-PZ-CA/GJ

| MODEL | SERIES | RANGE | PRESSURE TYPE | OPTIONS |
|-------|--------|-------|---------------|---------|
| • | - | • | - | •/•/• |

Use the following codes to identify desired item (we invite your inquiries on specifications not listed):

For Intrinsically Safe and Explosion Proof approved options, please see our 111X, 211X, 311X brochure.

| MODEL (Signal) | | |
|----------------------------|--|-----------|
| 111 | 3 mV/V | |
| 211 | 5 Vdc | |
| 311 | 4 - 20 mA | |
| SERIES (Accuracy) | | |
| B | 0.5% FSO (Standard) | |
| C | 0.2% FSO | |
| D | 0.1% FSO | |
| RANGE (PSI) | | |
| PJ 5 | PX 75 | RO 1500 |
| PL 7.5 | PZ 100 | RR 2000 |
| PN 10 | RB 150 | RS 2500 |
| PP 15 | RD 200 | RT 3000 |
| PQ 3-15 | RE 250 | RV 5000 |
| PR 20 | RF 300 | RW 0-6000 |
| PS 3-27 | RH 500 | RX 7500 |
| PO 25 | RJ 600 | RZ 10,000 |
| PT 30 | RK 750 | SB 15,000 |
| PV 50 | RM 1000 | SD 20,000 |
| | SZ | Other |
| Model 311 w/option GR only | | |
| TG | 0-5 through 0-15 | |
| TJ | 0-6 through 0-30 | |
| TL | 0-20 through 0-100 | |
| TN | 0-60 through 0-300 | |
| TP | 0-200 through 0-1000 | |
| TR | 0-600 through 0-3000 | |
| TT | 0-1000 through 0-5000 | |
| PRESSURE TYPE | | |
| 2 | Gauge (Direct, 0-299 psi and lower) | |
| 3 | Absolute | |
| 4 | Vacuum | |
| 6 | Sealed Gauge (hermetic) (0-100 psig and higher) | |
| 7 | Gauge (non-hermetic seal) (0-300 psi and higher) | |
| 8 | Elevated (suppressed zero) | |
| 9 | Other | |
| 10 | Compound (vacuum & gauge pressure) | |

| OPTIONS | |
|------------------------------|---|
| AA | None |
| ALTERNATE CONNECTOR OR CABLE | |
| CA | Bendix PTIH-10-6P |
| CB | Bendix CF3102E-14S-6P |
| CC | Bendix PC02E-12-8P |
| CD | Cannon WK6-32S |
| CE | Terminal Block |
| CF | 1/2" NPT(M) thread with 36" leads |
| CG | MS3102R-14S-6S |
| CH | Vented cable, 8' long (NEMA 4 termination) |
| CJ | DIN 43650 (includes mate) |
| CK | Lumberg RSF-3/12 mm |
| CL | 1/2" NPT (M) w/36" vented cable (ranges <299 psi) |
| CM | Bendix PTIH-8-4P, or equal |
| CN | Bendix MS3102A-14S-5P, or equal |
| CO | Junction Box (Includes CF) |
| CP | Cannon WK4-32S |
| CQ | Cannon WKA7-32S |
| CT | 36" Teflon jacket cable (high temp) |
| CU | 1/2" NPT (F) conduit thread with 36" pigtail |
| CZ | Other |
| ALTERNATE PRESSURE PORT | |
| FA | MS33649-4 (1/4 AN-10050, female) |
| FC | 3/8" NPT (F) |
| FD | MS33656-4 (7/16-20 UNF-3A) |
| FH | 1/8" NPT (F) |
| FJ | 1/4" NPT (M) |
| FL | 1/8" NPT (M) |
| FM | Autoclave Type F-250-C, 9/16-18(F) |
| FN | 1/2" NPT (M) |
| FO | 1/4" BSPP (M) |
| LC | VCR fitting for 1/4" tubing |
| LG | SAE-4 (F) O-ring seal thread |
| LH | SAE-6 (M) O-ring seal straight thread (with O-ring) |
| LP | 1/4" BSPP (F) |
| LT | SAE-4 (M) O-ring seal straight thread (with O-ring) |
| FE | Bullet nose for submersible option GM, 316 SS |
| LD | Tapered inlet, sludge level |
| LJ | Tapered inlet w/ standoff plate |
| LX | 1-1/2" tube size Tri-Clover fitting |
| LY | 2" tube size Tri-Clover fitting |
| FZ | Other |

| GENERAL | |
|---------|---|
| DE | IP-67 (NEMA-6) vented 36" polyurethane cable, neoprene grommet, 36" cable |
| GA | Standardized output to $\pm 0.5\%$ FSO |
| GB | Alternate full scale outputs. Set to $\pm 2\%$ FSO |
| GC | Special calibration of a standard range (i.e. 5-10 point). |
| GD | Pressure overload 10X rated range, or 22,500 psi, whichever is less. Not available with GM, CW, GY, GF GP, HX, JP, GR. Burst pressure 15x rated range or 23,000 psi, whichever is less. |
| GE | Improved temp comp to $\pm 0.5\%$ FSO/100° F for zero and span. |
| GF | Expanded process temperature range, -65 to 250°F ($\pm 2\%$ FSO/100°F) |
| GG | Alternate calibration signal |
| GH | Internal cal resistor, set to 100% $\pm 0.5\%$ FSO unless otherwise specified. |
| GJ | Zero and span controls. ($\pm 20\%$ FSO, Models 211, 311) |
| GK | Inconel Pressure Cavity. |
| GL | Oxygen cleaning. |
| GM | Submersible Housing, w/8' Vented Submersible Polyurethane Jacket Cable, Neoprene Grommet, and 1/2" NPT (M) Conduit Thread. |
| GR | Ranging. (Model 311 only. See pressure code. Includes option GJ, n/a w/ option GD. Limited to B series Acc.) |
| GS | 0-10 Vdc FSO, Model 211. |
| GY | 316SS pressure cavity. (Option GD not available) |
| HE | $\pm 0.5\%$ FSO zero balance (Std. w/"D" accuracy), ranges ≥ 30 psi only |
| HK | NEMA 4 rating (Sealed gauge). |
| HL | RFI protection. |
| HR | ± 15 Vdc excitation, Model 211. |
| JE | 5000 ohm strain gauges (Mdl.111) |
| JH | Remote cable mounted Z&S controls. 3' cable on open side. cable on closed side as required. Mdl. 311 only. |
| JJ | Fast response (500 microsecond, Model 211). |
| JK | Barometric pressure, 23-35" Hga |
| JS | Internal damping as specified by customer. |
| JV | Voltage surge protection (lighting resistance) Mdl 311 |
| MA | 1-5 Vdc FSO. |
| CW | Submersible housing, 8' polyurethane jacket non-vented cable, neoprene grommet and 1/2" NPT (M) conduit fitting (0-500 psi max). |
| GZ | Customer special |
| ME | 80% Shunt Cal |
| MX | EMI Protection |
| QU | Monel Wetted Parts |

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Tel. (716) 773-9300 Fax (716) 773-5019 E-mail:sales@gp50.com website:www.gp50.com