



# BLUE RIBBON CORP.

2770 Long Road, Grand Island, NY 14072 USA  
 Tel. (716) 773-9300 • Fax (716) 773-5019  
 BrSales@BlueRibbonCorp.com • www.BlueRibbonCorp.com

## INDUSTRIAL GRADE PRESSURE TRANSDUCER MODELS BR111, BR211, BR311

### APPLICATIONS:

- Pumps and Compressors
- Irrigation Systems
- Hydraulic Control
- Machine Control
- General Industrial

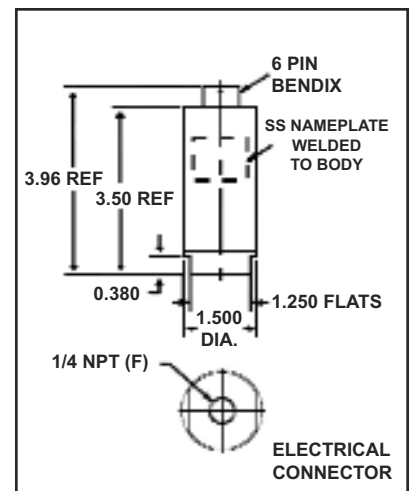
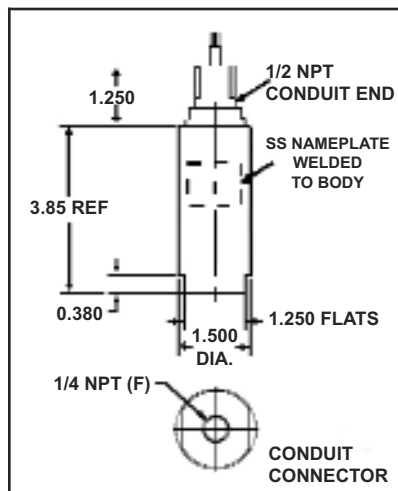
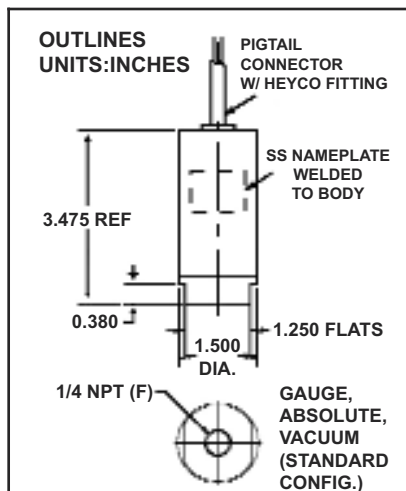
### FEATURES:

- Rugged, all welded SST Construction
- 3 mV/V, 0-5 VDC, 4-20 mA and Intrinsically Safe 4-20mA
- High Accuracy,  $\pm 0.5\%$  FSO Standard,  $\pm 0.1\%$  FSO optional
- Resistant to Pressure Spikes



### WIRING CODE

	BR111	BR211	BR311
<b>A/1 RED</b>	+ EXCITATION	+ EXCITATION	+ EXCITATION/SIGNAL
<b>B/2 GREEN</b>	+ SIGNAL	+ SIGNAL	N/C
<b>C/3 WHITE</b>	- SIGNAL	N/C	N/C
<b>D/4 BLACK</b>	- EXCITATION	- EXCITATION/SIGNAL	- EXCITATION/SIGNAL
<b>E/5 BLUE</b>	N/C	N/C	N/C
<b>F/6 BROWN</b>	N/C	N/C	N/C
<b>SHIELD</b>	OPEN	OPEN	OPEN



Blue Ribbon 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.



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Standard Specifications listed below. Consult factory for further options, which may change the overall dimensions.

<b>Output (at 70°F)</b>	<b>Model BR111</b> 3 mV/V 3.5 -15 VDC Excitation	<b>Model BR211</b> 0-5 VDC 9.0 - 40 VDC Excitation	<b>Model BR311</b> 4-20mA 9.0 - 36 VDC Excitation
<b>Accuracy</b>	<b>Option B</b> ±0.5% FSO	<b>Option C</b> ±0.2% FSO	<b>Option D</b> ±0.1% FSO
<b>Resolution</b>	Infinite (practical minimum of 0.02% on BR111, BR211 and 0.06% on BR311)		
<b>Pressure Ranges</b>	<b>Model BR111, BR211, BR311</b> 0-20 In.WC thru 0-15,000 PSI		
<b>Pressure Types</b>	2 Gauge 3 Absolute 4 Vacuum 6 Sealed Gauge (hermetic) 7 Gauge (non-hermetic) 8 Elevated (suppressed zero) 9 Other 10 Compound		
<b>Zero Balance (at 70°F)</b>	<b>Model BR111, BR211</b> 0.0 mV/V ±2% FSO (at 10 VDC)	<b>BR311</b> 4 mA ±2% FSO (at 24 VDC)	
<b>Range Calibration Signal</b>	<b>Model BR111</b> Resistance value provided on calibration card for 100% FSO		
<b>Temperature Limits</b>	<b>Compensated</b> 0°F to +180°F	<b>Operating</b> -40°F to +190°F	<b>Storage</b> -65°F to +250°F
<b>Temperature Compensation (Standard)</b>	<b>Zero / Span</b> Less than ±2% FSO/100°F at FSPR and/or URL		
<b>Electricals</b>	<b>Model BR111</b> 350 ohm nominal, full bridge 50,000 ohms minimum, for less than 0.1% FSO attenuation	<b>Model BR211</b>	<b>Model BR311</b>
<b>Input Impedance</b>	8mA Nominal		
<b>Load Impedance</b>	2.0mA maximum for less than 0.1% FSO attenuation		
<b>Input Current</b>	1350 ohms maximum at 36 VDC and 750 ohms maximum at 24 VDC		
<b>Output Current</b>	5:1(3:1 for ranges ≤15 PSI)		
<b>Load Impedance</b>			
<b>Option GR Turndown</b>			
<b>Insulation Resistance</b>	>10 megohms @ 50 VDC & at 70°F		
<b>Standard Connections</b>	<b>Process Connection</b> 1/4" NPT (F)	<b>Electrical Connection</b> 36" long, 24AWG, 4 conductor cable (or equivalent)	
<b>Mechanicals</b>	<b>Proof Pressure</b> 2X FSPR (or URL) or 22,500 PSI whichever is less	<b>Burst Pressure</b>	
<b>Gauge/SG/Absolute Vacuum</b>	5X FSPR (or URL) or 23,000 PSI whichever is less 5X FSPR in gauge		
<b>Pressure Response</b>	Less than 5 ms 10% to 90%		
<b>Weight</b>	10 oz. Nominal, adding options may increase weight		
<b>Wetted Material</b>	316 and 15-5 PH Stainless Steel		
<b>Enclosure Material</b>	316 Stainless Steel		
<b>Mounting</b>	Pressure Port		



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## ORDERING GUIDE:

Example: 311-C-PZ-CA/GJ

MODEL	ACCURACY	PRESSURE RANGE	PRESSURE TYPES	OPTIONS
•	+	•	+	•/•/•

### MODEL (Signal)

BR111 3 mV/V  
 BR211 5 Vdc  
 BR311 4 - 20 mA

### 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

### 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  
 DR 4-4Pin Turck, 7/8-16 UN THD - Mating AVAK

### 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

### Model BR311 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 TYPES

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)

### GENERAL

DE IP-67 (NEMA-6) vented 36" polyurethane cable, neoprene gromme, 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). Pressure overload 10X rated range, or 22,5000 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 & 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.) 0-10 Vdc FSO, Model 211.  
 GS 316SS pressure cavity. (Option GD not available)  
 GY  $\pm 0.5\%$  FSO zero balance (Std. w/"D" accuracy), ranges  $\geq 30$  PSI only  
 HE NEMA 4 rating (Sealed gauge).  
 HK RFI protection.  
 HL  $\pm 15$  Vdc excitation, Model 211.  
 HR 5000 ohm strain gauges (Model 111)  
 JE Remote cable mounted Z&S controls. 3' cable on open side. Cable on closed side as required. Model 311 only.  
 JH Fast response (500 microsecond, Model 211).  
 JJ Barometric pressure, 23-35" Hga  
 JK Internal damping as specified by customer.  
 JS Voltage surge protection (lighting resistance) Mdl 311  
 JV 1-5 Vdc FSO.  
 MA Submersible housing, 8' polyurethane jacket non-vented cable, neoprene grommet and 1/2" NPT (M) conduit fitting (0-500 psi max).  
 CW Customer special  
 GZ 80% Shunt Cal  
 ME EMI Protection  
 MX Monel Wetted Parts