



## INDUSTRIAL GRADE FLUSH TRANSMITTER

**Models 117, 217, 317, 317Z (FM/CSA Intrinsically Safe)**



### FEATURES:

- Flush Diaphragm
- All-welded type 316 & 15-5 ph SST
- Rugged, all encapsulated electronics
- Minimal zero installation effect

### PRESSURE RANGES:

- From 0-50 to 0-10,000 psi

### ACCURACY:

- From 0.2% FSO to 1.0% FSO  
(See specifications)

### Approvals



### WIRING:

A/1 RED  
B/2 GREEN  
C/3 WHITE  
D/4 BLACK  
E/5 BLUE  
F/6 BROWN  
SHIELD

### 117

+EXC.  
+SIGNAL  
-SIGNAL  
-EXC.  
CAL. OPTIONAL  
CAL. OPTIONAL  
OPEN

### 217

+EXC.  
+SIGNAL  
NC  
-EXC./SIGNAL  
CAL. OPTIONAL  
CAL. OPTIONAL  
OPEN

### 317

+EXC./SIGNAL  
NC  
NC  
-EXC./SIGNAL  
CAL. OPTIONAL  
CAL. OPTIONAL  
OPEN

### Accuracy:

Static error band (Includes Hysteresis, Non-linearity, Non-Repeatability)

- **Series A:** ±1.0% FSO (RSS)
- **Series B:** ±0.5% FSO (RSS)
- **Series C:** ±0.2% FSO (RSS)

### Temperature Compensation:

- Effect on Zero / Span: Less than ±2.0% FSO/100°F for each

### Electricals:

- Excitation Voltage:  
(Model 117) 3.5-15 Vdc  
(Models 217 & 317) 9-40 Vdc
- Output at 70°F:  
(Model 117) 3.0 mV/V ±2% FSO  
(Model 217) 0 - 5.0 Vdc ±2% FSO  
(Model 317) 4-20 mA ±2% FSO
- Input Current :  
(Model 217) 8 mA nominal
- Output Current:  
(Model 317) 2.0 mA max. for less than 0.1% FSO attenuation.
- Input Impedance:  
(Model 117) 350 ohms nominal
- Load Impedance:  
(Model 117) 50,000 ohms min. for less than 0.1% FSO attenuation  
(Model 317) 1350 ohms max. at 36 Vdc and 750 ohms max. Vdc.
- Zero Balance:  
(Model 117) 0.0 mV/V ±2% FSO at 70° F  
(Model 217) 0.0 Vdc ±2% FSO  
(Model 317) 4.0 mA ±2% FSO at 70° F
- Insulation Resistance: Greater than 10 megohms at 50 Vdc & 70° F
- Resolution: Infinite

### Temperature Limits:

- Compensated: 0° F to +180° F
- Operating (Tip Temperature): -20° to +250° F

### Mechanicals:

- Proof Pressure: 1.5 X full scale pressure range or 12 kpsi, whichever is less.
- Burst Pressure: 5 X full scale pressure range or 15 kpsi, whichever is less.
- Case Materials: Type 316 Stainless Steel
- Weight: 8 oz. nominal
- Identification: Etched SST nameplate welded to body.

### Connections:

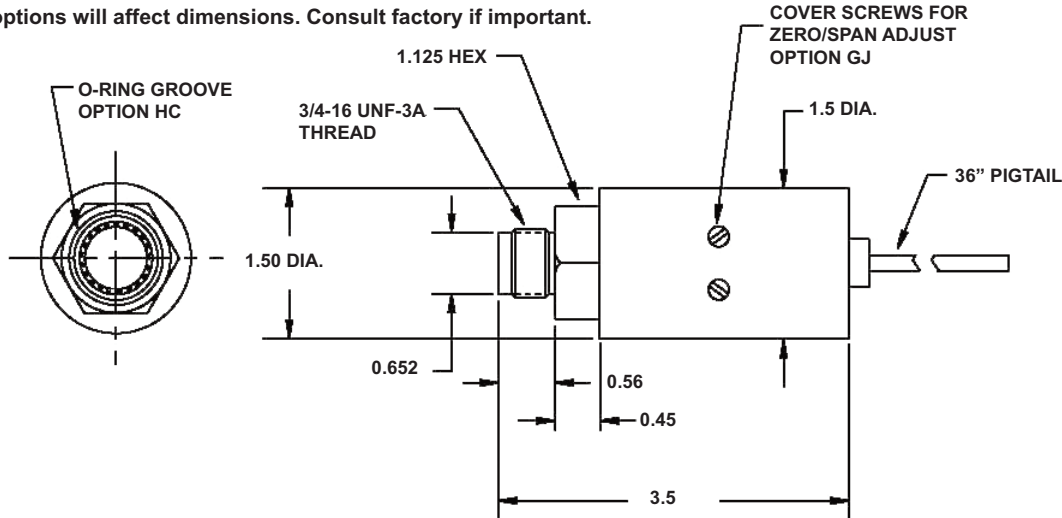
- Pressure: 3/4" - 16 UNF-3A thread with Teflon O-ring with retaining rim (included)
- Electrical Cable:  
(Models 117 & 217) 6 conductor, 24 AWG 36" long,  
(Model 317) 4 conductor, 24 AWG 36" long.



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Some options will affect dimensions. Consult factory if important.



Typical configurations (consult factory for more options)

### MODEL

|      |                              |
|------|------------------------------|
| 117  | 3 mV/V                       |
| 217  | 0 - 5 Vdc                    |
| 317  | 4 - 20 mA                    |
| 317Z | 4 - 20 mA Intrinsically Safe |

### ACCURACY (Series)

|   |          |
|---|----------|
| A | 1.0% FSO |
| B | 0.5% FSO |
| C | 0.2% FSO |

### PRESSURE RANGE (PSI)

|    |     |    |       |    |        |
|----|-----|----|-------|----|--------|
| PV | 50  | RF | 300   | RT | 3,000  |
| PX | 75  | RH | 500   | RV | 5,000  |
| PZ | 100 | RK | 750   | RX | 7,500  |
| RB | 150 | RM | 1,000 | RZ | 10,000 |
| RD | 200 | RO | 1,500 | SZ | Other  |
| RE | 250 | RR | 2,000 |    |        |

### PRESSURE TYPE

|   |                             |
|---|-----------------------------|
| 2 | Gauge                       |
| 3 | Absolute                    |
| 6 | Sealed Gauge (Hermetic)     |
| 7 | Sealed Gauge (non-hermetic) |

### MODEL 17 ACCESSORIES

|                            | PN#  | Material   | Seal Type           | Pressure Port         |
|----------------------------|------|------------|---------------------|-----------------------|
| Weld Nipple                | WN17 | AA(316 SS) | AA (Retaining Ring) | AA (3/4" - 16 UNF-3B) |
| Weld Plug                  | WP17 | AA(316 SS) | AA (Retaining Ring) | AA (3/4" - 16 UNF-3A) |
| O-Ring with Retaining Ring | OR17 | AA(Teflon) | AA (Retaining Ring) |                       |

\* Consult factory for option code.

OPTIONS (Other Options Available Consult Factory)

### ALTERNATE CONNECTOR OR CABLE

|    |                                                                                      |
|----|--------------------------------------------------------------------------------------|
| CA | PTIH-10-6P (Mate PT06E-10-6S [SR], not included)                                     |
| CF | 1/2" NPT (M) thread with 36" potted leads                                            |
| CH | Vented cable 8' long (NEMA 4 termination)                                            |
| CJ | DIN 43650 connector (includes mate)                                                  |
| CL | 1/2" NPT (M) thread with 24" vented cable (for ranges less than 299 psi).            |
| CT | Teflon jacketed cable, Tefzel used on submersible units (options CH, CL, CW, DE, EM) |

### PROCESS CONNECTION

|    |                                                                   |
|----|-------------------------------------------------------------------|
| AA | 3/4" - 16 UNF-3A M Port, Teflon O-Ring Face Seal & Retaining Ring |
| FN | 1/2" NPT (M)                                                      |
| LH | SAE-6 (M), 9/16"-18 UNF, ranges > 500 psi only                    |
| FZ | Non-standard pressure port                                        |

### GENERAL

|    |                                                                                                                   |
|----|-------------------------------------------------------------------------------------------------------------------|
| CW | Submersible housing, 8' non-vented submersible polyurethane jacket cable, neoprene grommet, 1/2" NPT (M) conduit. |
| DE | IP-67 (NEMA-6) vented polyurethane jacket cable, neoprene grommet.                                                |
| GA | Standardized output to $\pm 0.5\%$ FSO                                                                            |
| GB | Alternate pressure range, pressure units, or full scale outputs that are non-standard                             |
| GE | Improved temp. compensation to $\pm 0.5\%$ FSO/ 100°F for zero and span respectively                              |
| GG | Alternate shunt calibration signal                                                                                |
| GH | Internal shunt calibration resistor set to 100 $\pm 0.5\%$ FSO unless otherwise specified                         |
| GJ | Zero & span adjust. ( $\sim \pm 20\%$ FSO). <b>Not on Model 117</b>                                               |
| GK | Inconel thread and diaphragm                                                                                      |
| GP | Hastelloy thread and diaphragm                                                                                    |
| HC | Integral O-ring groove, includes Teflon O-ring. (Eliminates need for O-ring retaining ring)                       |
| HL | RFI protection (For unit in proximity to radio transmitter)                                                       |
| HX | Hastelloy diaphragm only                                                                                          |
| JG | Viton O-ring                                                                                                      |
| GX | Mineral oil fill                                                                                                  |
| GZ | Customer special                                                                                                  |

### NOTE:

Specifications reflect standard product, improved performance / mechanical options available.

Modifications may alter specs, consult factory for more information.

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