# ST6900 SERIES COMPACT TRANSMITTER

Datasheet

## OVERVIEW

**ST6900 Series** case mounted transmitters interface directly with PLC, DCS, and 4-20 mA input monitors. The compact size allows for installation in tight places. **Model ST6911** is 4-20 mA proportional to acceleration while **Model ST6917** is proportional to velocity.

These units feature Metrix proprietary Independent Polarity Terminal (IPT®)[1], which allows for error-free wiring. Each ST6900 Series transmitter has the most stable detection circuit available due to built-in protection against temperature shock, and high accuracy at low frequencies by preventing the "ski slope" problem.

CE

## FEATURES AND BENEFITS

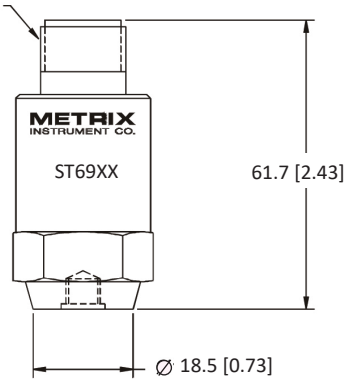
- Loop-powered
- 4-20 mA output proportional to acceleration (ST6911) or velocity (ST6917)
- Loop terminals with Independent Polarity (IPT®) to prevent incorrect wiring
- Interfaces directly with PLC, DCS, 4-20 mA monitors, etc
- M6 x 1 or 1/4- 28" mounting studs
- MIL style connector standard
- Widest operating temperature in its class
- Most stable detection circuit available
- Temperature shock protected
- "Ski slope" problem protected for high accuracy at low frequencies
- Hermetically sealed

## APPLICATIONS

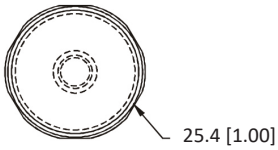
- Blowers
- Centrifuges
- Compressors
- Engines
- Fans
- Generators
- Motors
- Pumps
- Steam Turbines
- Turbochargers

## WEIGHT & DIMENSIONS

ELECTRICAL
CONNECTOR
5/8-24 UNEF-2A
2 PIN (MIL-C-5015)




**Units:** mm [in]
**Weight:** 91 gm (3.1 oz.)



## SPECIFICATIONS

**Vibration Range:**
- 4 to 20 mA output proportional to acceleration (ST6911) and velocity (ST6917), see "Ordering Option A"
- Non standard ranges available

**Frequency Response:**
- Velocity: 2 - 1000 Hz
- Acceleration: 3- 10000 Hz

**Accuracy:** 2% (Repeatability)

**Axis Orientation:** Any

**Supply Voltage (Vs):** 11 to 30 VDC, Non-polarity sensitive, IPT®

**Isolation:** 500 Vrms, circuit to case

**Electrical Connection:** MIL style 2-pin connector

**Maximum Load Resistance ($R_L$):** $R_L$ = 50 x (Vsupply-11) W

**Service Temperature Rating:** -40°F to 100°C (-40°F to 212°F)

**Enclosure Materials:** 316 SS

**Enclosure Environmental Rating:** NEMA 4X, IP 67

**Approvals:** CE marked

## HOW TO ORDER

**ST6911 - A A A - B - C**

Example: ST6911-050-1-0 = 50 g (490 m/s²) pk, M6 x 1.0, No Hazardous Area Approval

| A | A | A | Full Scale |
|---|---|---|---|
| 0 | 1 | 0 | 10 g (98.1 m/s²) pk |
| 0 | 2 | 0 | 20 g (196 m/s²) pk |
| 0 | 5 | 0 | 50 g (490 m/s²) pk |
| 5 | 1 | 0 | 10 g (98.1 m/s²) RMS |
| 5 | 2 | 0 | 20 g (196 m/s²) RMS |
| 5 | 5 | 0 | 50 g (490 m/s²) RMS |

| B | Mounting |
|---|---|
| 0 | 1/4-28 UNF |
| 1 | M6 x 1.0 |

| C | Agency Certification |
|---|---|
| 0 | No Hazardous Area Approval, CE |
| 1 | No Hazardous Area Approval |

**ST6917 - A A A - B - C**

Example: ST6917-151-1-0 = 1.0 in/s (25.4mm/s) RMS, M6 x 1.0, No Hazardous Area Approval

| A | A | A | Full Scale |
|---|---|---|---|
| 1 | 2 | 1 | 1.0 ips (25.4 mm/s) pk |
| 1 | 2 | 2 | 0.5 ips (12.7 mm/s) p |
| 1 | 2 | 3 | 2.0 ips (50.8 mm/s)pk |
| 1 | 2 | 4 | 1.6 ips (40.6 mm/s) pk |
| 1 | 2 | 6 | 0.8 ips (20.3 mm/s) pk |
| 1 | 5 | 1 | 1.0 ips (25.4 mm/s) RMS |
| 1 | 5 | 2 | 0.5 ips (12.7 mm/s) RMS |
| 1 | 5 | 3 | 2.0 ips (50.8 mm/s) RMS |
| 1 | 5 | 4 | 1.6 ips (40.6 mm/s) RMS |
| 1 | 5 | 6 | 0.8 ips (20.3 mm/s) RMS |

| B | Mounting |
|---|---|
| 0 | 1/4-28 UNF |
| 1 | M6 x 1.0 |

| C | Agency Certification |
|---|---|
| 0 | No Hazardous Area Approval, CE |
| 1 | No Hazardous Area Approval |

Optional mounting stud:
Metrix P/N 3719-007
(1/4 - 28 UNF to M6 x 1.0)

**Notes:**
1. IPT® (Independent Polarity Terminal) is a registered trademark of Metrix Instrument Co
2. Metrix is continuously improving our products. Please refer to our website to download the latest version of this datasheet.

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