# Proximity Transmitters

## TXR5521 RPM Transmitter

### Features

- **4-20 mA proportional to shaft RPM**
- **Sensing to 177°C with PP Series Probe**
- **Dynamic output for vibration phase reference used in analysis**
- **Full scale range from 5 RPM to 300,000 RPM**

### Combined Probe Driver & Signal Conditioner for RPM or Phase Reference

The Model TXR5521 is a 2-wire transmitter operating on a nominal power of +24 Vdc. The unit operates with an eddy current proximity probe to sense a keyway or gear teeth on a rotating shaft and provides a 4-20 mA output proportional to shaft RPM. The transmitter is factory preset by complete model number. The full scale RPM can be set from 5 to 300,000 RPM and pulses/revolution set from 1 to 99. The minimum RPM resolution is a function of the number of pulses/revolution: the number of pulses per revolution times the maximum RPM desired must be less than or equal to 300,000.

### Specifications

**Function:** Loop powered transmitter operates with a non-contact proximity probe/cable to convert shaft rotation in revolutions per minute (RPM) to a proportional 4-20 mA output signal.

**Proximity Probe/Cable:** Available for any standard probe cable combination, Can be factory-calibrated for any probe and/or cable.

**Loop Supply Voltage (Vs):** 17 volts to 30 Vdc

**Standard Target Material:** 4140 steel shaft keyway or gear teeth. Custom calibration available for other materials, please consult factory.

**Probe Gap:** 1.25 mm [50 mils].

**Pulses/Revolution:** 1 to 99 pulses/revolution (300,000 pulses/minute maximum). See How To Select for factory preset options.

**RPM Range (4-20 mA output):** From 5 to 300,000 RPM. See How To Select for factory preset options.

**Test Output (AC & DC):**
Access: Via terminals and BNC
Isolation: 10K ohm from 4-20 mA loop
Sensitivity:4 mV/micron (100mV/mil)

**Maximum Load Resistance (RL):**
RL=50 x (Vs -17.0) Ohms

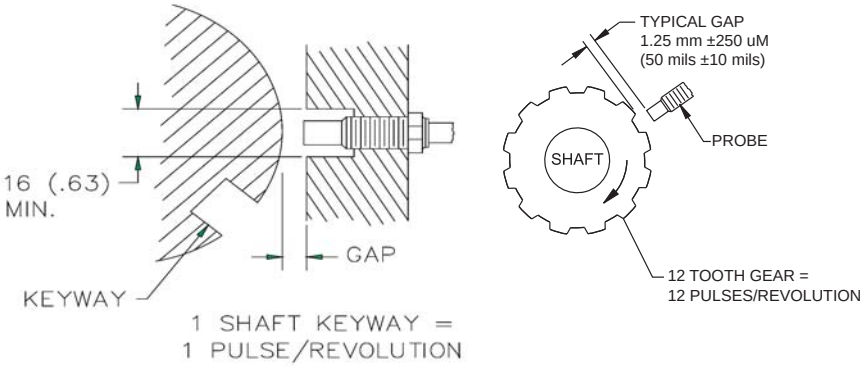
**Temperature Limits:** -40° to 85°C

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

**Housing:** Polymer internally coated for RFI/EMI protection.

**Hazardous Area Ratings:**
- CSA Certified: Intrinsically Safe Class I, Div 1, Grps A, B, C & D, Temp Code T4.
- CSA Certified: Non-Incendive Class I, Div 2, Grps A, B, C & D
- BASEEFA Certified: Intrinsically Safe Ex ia IIC T4, Non-Incendive Ex ia IIC T4

### Typical Application Diagrams (probe shown only)



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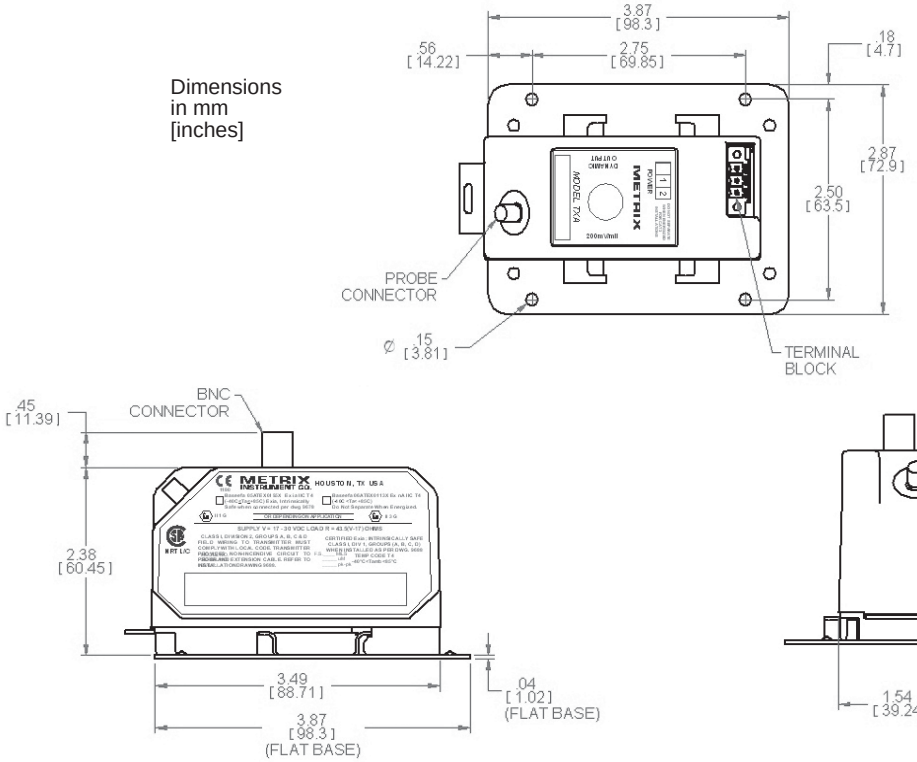
## Weight & Dimensions

Dimensions
in mm
[inches]




Weight = 0.6 pounds

## How to Select

**TXR5521 -** **A** **B** **C** **D** **-** **EE** **-** **FFFFFF**

| Probe Series | System Length* | Tip Configuration | No. of Keyways | Full-Scale RPM |
|---|---|---|---|---|
| **72** = 10000/7200 | **5** = 5 meter or **9** = 9 meter | **0** = 5 or 8 mm Tip applies to all 7200, 3300 and 3309 systems<br>**1** = 0.190 Tip for 3000 series only<br>**2** = 0.300 Tip for 3000 series only | **01** = 1 keyway (minimum)<br>**through**<br>**99** = 99 keyways (maximum) | **Examples:**<br>**010000 = 10,000**<br>**000470 = 470**<br>**002030 = 2030** |
| **33** = 3300 | **5** = 5 meter or **9** = 9 meter | | | |
| **39** = NSv 3309 | **5** = 5 meter or **7** = 7 meter | | | |
| **30** = 3000 | **1** = 15 feet or **2** = 20 feet | | | |

***Custom lengths available, please contact factory**

**NOTES:**

- **No. of Keyways x RPM ≤ 300,000**
- **Full scale ranges may be selected in 1 RPM increments. However, the minimum resolution is 0.1% of full scale. For example, a 99,952 RPM full scale will change in increments of 100 RPM.**