

Proximity Transmitters

TXR5521 RPM Transmitter

PROXIMITY PRODUCTS



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.

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

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

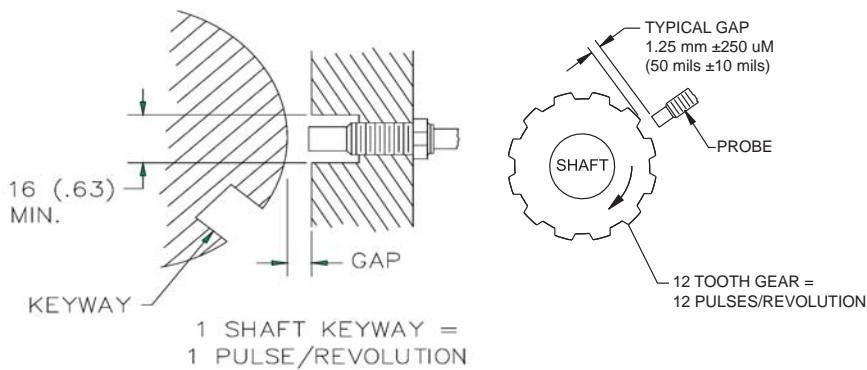
Isolation: 500 Vrms, circuit to case

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

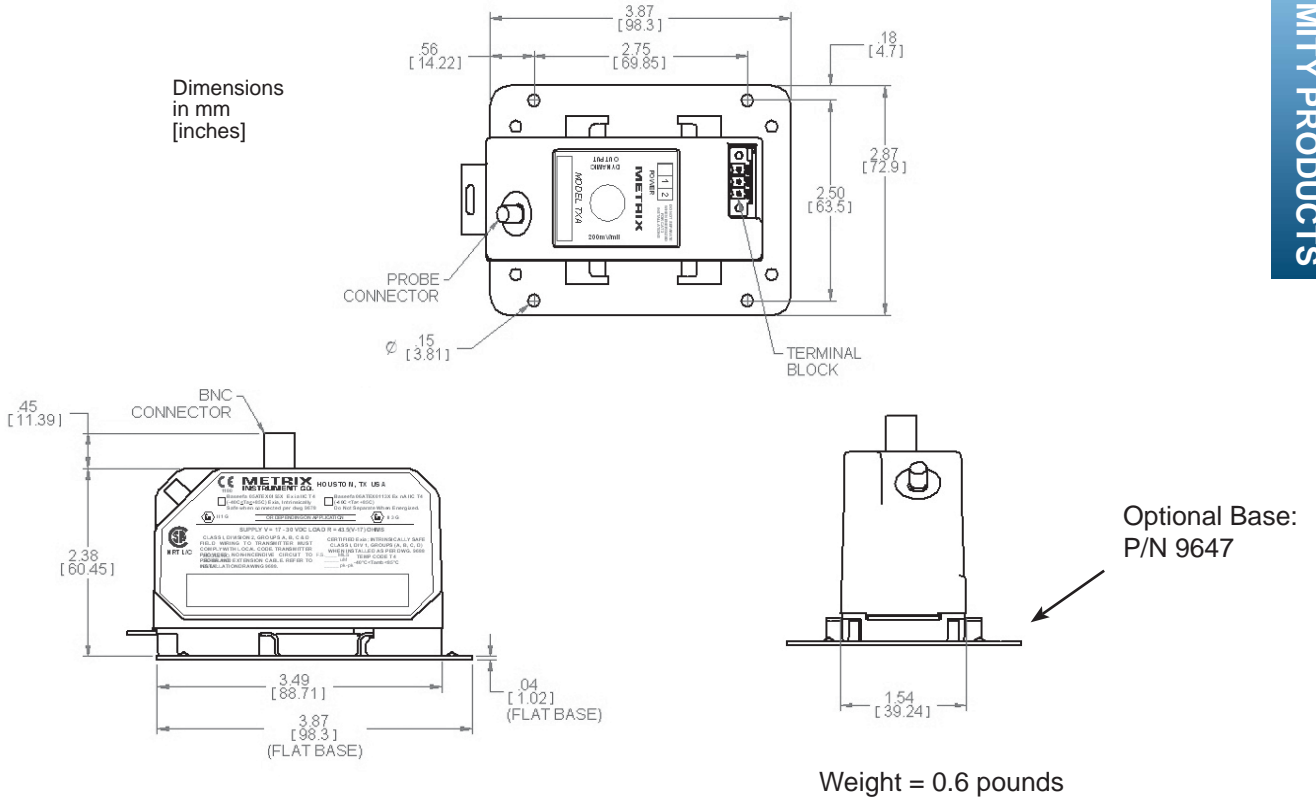
Typical Application Diagrams (probe shown only)



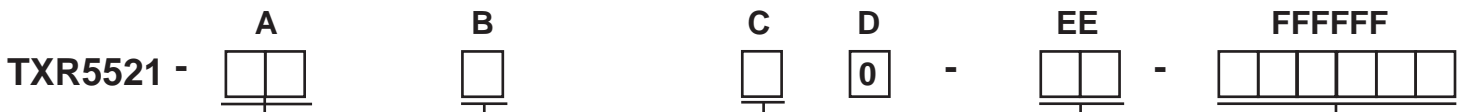
Vibration - Condition Monitoring and Protection

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Weight & Dimensions



How to Select



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 1 = 0.190 Tip for 3000 series only 2 = 0.300 Tip for 3000 series only	01 = 1 keyway (minimum) through 99 = 99 keyways (maximum)	Examples: 010000 = 10,000 000470 = 470 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 \leq 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.



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