







PVTVM's Transmitter Selection Guide

Model Number	TR1101	TR3101 TR3102	TR4101 TR4102 TR4105	TR5102
				
Acceleration (g's)	•			
Velocity (ips/sec, mm/sec)	•			
Displacement (mils, um)	•	•	•	
Vibration Measurements				
Radial Vibration		TR3101	TR4101	
Axial Position		TR3102	TR4102	
Phase Reference			TR4102 TR4105	•
Speed			TR4105	•
Case Vibration	•			
Sensor Interfaces				
Built in Accelerometer				
Proximity Probe (5mm, 8mm, and 11mm)		•	•	•
Accelerometer	•			
Velocity Transducer	•			
Available Outputs				
4-20mA Output	•	•	•	•
Buffered Output (3 meters)			•	
Buffered Output (300 meters)	•	•		•
Available Features				
Loop Powered (2- Wire) Transmitter			•	
3-Wire Transmitter	•	•		•
Hazardous Rating (CSA, ATEX) Explosion Proof, Class I, Class II, Div.1, Groups (A-G), EExdIICT4				
Hazardous Rating (CSA, ATEX) Intrinsically Safe, EExiaIICT4			•	
Hazardous Rating (CSA), non-incendive, Class I, Div.2, Groups (A-D, T4)			•	
Environmental Rating- NEMA 4 or IP65				
Low Pass and High Pass Filter				
Warranty- 5 years	•	•	•	•

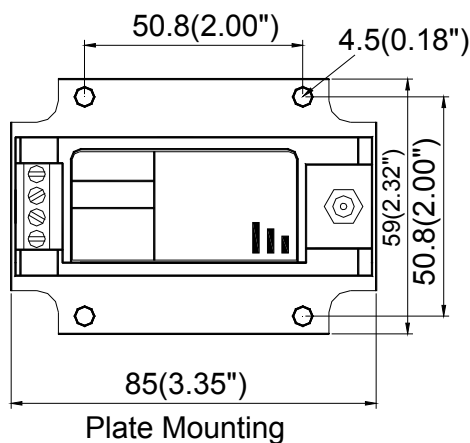
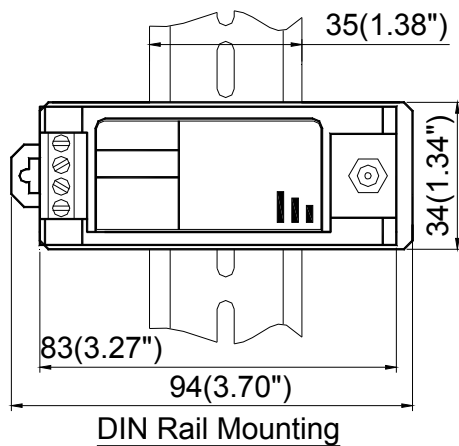
• = Complete Offering

TR1101 Seismic Vibration Transmitter

The TR1101 is a cost-effective solution for monitoring case vibration on balance of plant machines. The TR1101 conditions the signal from an accelerometer or velocity transducer and provides a 4-20mA output in acceleration, velocity or displacement.

Features

- ✓ Measures machinery case vibration
- ✓ 4-20mA output in acceleration, velocity or displacement
- ✓ Buffered output up to 300 meters (1,000 feet)
- ✓ Compatible with other manufacturers' sensors (accelerometer or velocity sensor)
- ✓ Aluminum cast (copper free) case with epoxy potting for better environmental protection and reliability
- ✓ Compact size



Specifications

Electrical

Power Supply:

22-30VDC, 100mA (Non isolated)

Frequency Response ($\pm 3\text{dB}$):

Acceleration: 2.0 - 10 KHz

Velocity: 2 - 10 KHz (velocity sensor)

Velocity: 10 - 5 KHz (accelerometer)

Displacement: 10 - 3 KHz (velocity sensor)

Acceleration (low frequency): 1.0 - 100Hz

Velocity (low frequency): 1.0 - 100Hz (TM079VD)

Displacement (low frequency): 1.0 - 100Hz (TM079VD)

Sensor Interface:

Sensitivity:

100mV/g nominal for accelerometer or

4.0mV/mm/sec (100mV/in/sec) nominal for velocity sensor

40mV/mm/sec (1000mV/in/sec) nominal for velocity

TM079VD or 4mV/ μm (100mV/mil) nominal for displacement TM079VD

Current Source:

Nominal 4mA@24VDC

Connectors:

GAP/Buf: gap and buffered output

SIG: sensor signal

COM: signal com

4-20mA: 4-20mA output



Electrical specifications continued

Buffered Output:

- Original vibration, un-filtered
- Impedance: 100Ω
- Maximum cable distance: 300m (1,000ft)
- Sensitivity: same as the sensor

Overall Vibration:

- 4-20mA, source
- Driving load resistance up to 750Ω

System Self-test:

- System OK: output 4-20mA
- System Not OK: output < 3.0mA

Physical

- Height: 75mm (2.95")
- Weight: 1.0kg (2.0 lbs)

Environmental

Temperature:

- Operation: -40°C to +70°C
- Storage: -40°C to +100°C

Humidity:

- 90% non-condensing

Order Information

*Factory Default

TR1101-AXX-EXX-GXX

AXX: Full Scale

- A00*: 0 - 200um pk-pk
- A01: 0 - 500um pk-pk
- A02: 0 - 100um pk-pk
- A03: 0 - 10mil pk-pk
- A04: 0 - 25mil pk-pk
- A05: 0 - 5.0mil pk-pk
- A06: 0 - 50mm/s pk
- A07: 0 - 100mm/s pk
- A08: 0 - 20mm/s pk
- A09: 0 - 2.0ips pk
- A10: 0 - 4.0ips pk
- A11: 0 - 1.0ips pk

AXX: Full Scale continued

- A12: 0 - 5.0g pk
- A13: 0 - 10g pk
- A14: 0 - 5.0g pk (low frequency)
- A15: 0 - 10g pk (low frequency)
- A16: 0 - 50mm/s pk (low frequency, E01, E04)
- A17: 0 - 100mm/s pk (low frequency, E01, E04)
- A18: 0 - 500um pk-pk (low frequency, E04)
- A19: 0 - 200um pk-pk (low frequency, E04)

- A20: 0 - 2.0ips pk (low frequency, E04)
- A21: 0 - 4.0ips pk (low frequency, E01, E04)
- A22: 0 - 20mil pk-pk (low frequency, E04)
- A23: 0 - 10mil pk-pk (low frequency, E04)
- A24: 0 - 2.0ips (50 mm/s) rms
- A25: 0 - 1.0ips (25 mm/s) rms
- A26: 0 - 0.8ips (20 mm/s) rms
- A27: 0 - 0.5ips (12.5 mm/s) rms

EXX: Sensor Type (not included)

- E00*: Accelerometer TM0782A, TM0783A, TM0784A, TM0785A, TM0786A or any current mode accelerometer with 100mV/g
- E01: Velocity sensor TM0793V, TM0796V or any current mode velocity sensor with 4mV/mm/sec
- E02: 330500, 330525 velocity sensor
- E03: 330750 velocity sensor
- E04: TM079VD low frequency sensor

GXX: Mount

- G00*: DIN rail mount
- G01: Plate mount

TR1101 Accessories

The TR1101 requires an external accelerometer or velocity sensor to work as a system.

TM0782A, TM0783A, TM0784A, TM0785A, TM0786A:
Accelerometer

TM0793V, TM0796V: Velocity sensor

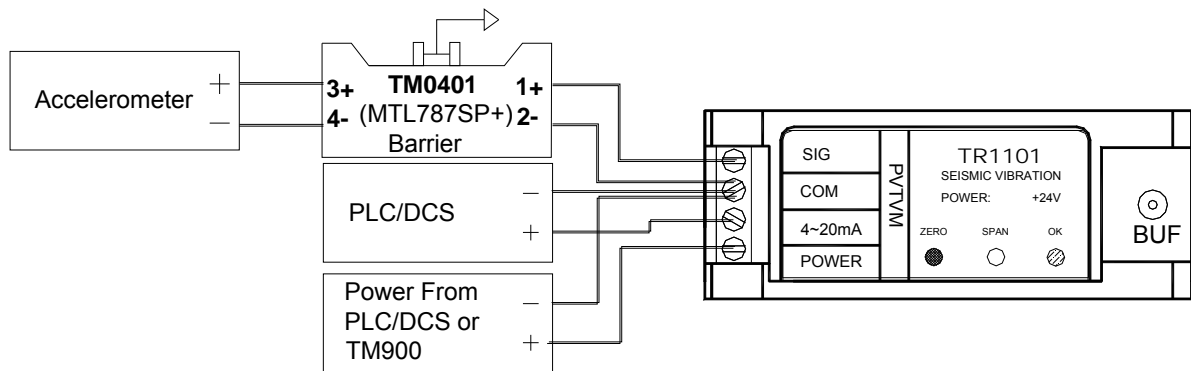
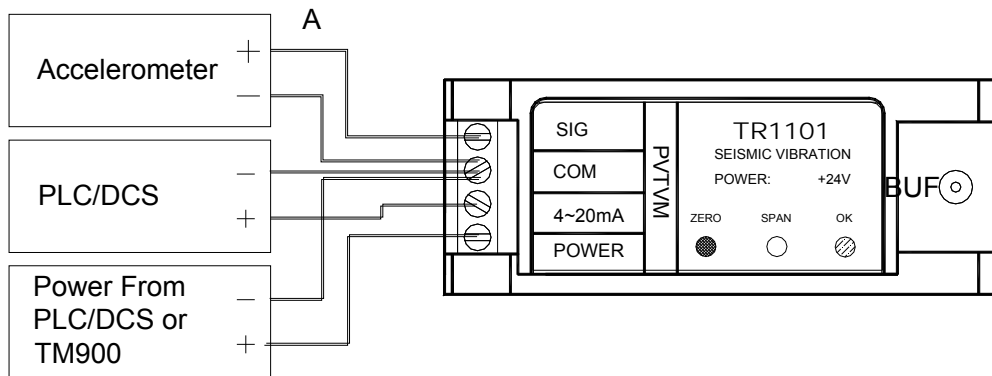
TM079VD: Low frequency velocity and displacement sensor

TM900A: Din Rail Mounted Power Supply

TM0200: 3-1/2 digit display unit



Field-Wiring Diagram



Note:

Other barriers available:
TM0402: (STAHL 9001/51-280-091-141)
TM0407: (STAHL 9160/13-11-11)