Proximity Vibration / Position / Phase Reference Transmitters

Seismic Vibration Transmitters
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● = 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 (±3dB):
- 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/um (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
**Proximity Transmitters and Seismic Vibration Transmitters**

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**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

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**Physical**

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

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**Environmental**

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

**Humidity:**
- 90% non-condensing

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**Order Information**

*Factory Default*

**TR1101-AXX-EXX-GXX**

**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

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**TR1101 Accessories**

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

- TM0793V, TM0796V: Velocity sensor
- TM079VD: Low frequency velocity and displacement sensor
- TM900: Power converter
- 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)
TR3101 Proximity 3-Wire Transmitter for Radial Shaft Vibration

The TR3101 is a cost-effective solution for monitoring the radial vibration on balance of plant machines. The TR3101 combines the proximity probe driver and the signal conditioning circuit into one package. It works with the proximity probe and extension cable as a system.

Features

✓ Does not require proximity probe driver
✓ Buffered output/GAP will transmit signal up to 300 meters (1,000 feet)
✓ Compatible with other manufacturers’ proximity probes (5mm, 8mm and 11mm)
✓ Aluminum cast (copper free) case with epoxy potting for better environmental protection and reliability
✓ Same size as a proximity probe driver

Specifications

**Electrical**
- Power Supply: 20-30VDC
- Frequency Response (±3dB): 2.0 - 3,000Hz
- Probe and cable:
  - 5 meter or 9 meter proximity probe and extension cable
  - works with 5mm, 8mm, and 11mm probes
- Proximity probe includes: TM0180, TM0105, TM0110, 3300, 7200, 990 series
- Sensor Linear Range (reference with ANSI 4140 steel):
  - 5mm, 8mm probe: 2.0 mm (80mil)
  - Approximately 0.25mm (10mil) to 2.25mm (90mil)
  - 11mm probe: 4.0mm (160mil)
  - Approximately 0.4mm (15mil) to 4.4mm (175mil)
- Overall Vibration:
  - 4-20mA; Source
- Buffered Output/ GAP:
  - Original vibration, un-filtered
  - Nominal: 2-18VDC
  - Impedance: 500Ω
  - Maximum cable distance: 300m (1,000ft)
  - Sensitivity: 8.0mV/um (200mV/mil) nominal
- Maximum Load: 500Ω
- Isolation:
  - > 500Vrms; circuit to case
- System OK:
  - System OK: output 4-20mA
  - System Not OK: output < 3.0mA

**Physical**
- Height: 75mm (2.95”)
- Weight: 0.5 kg (1.0 lb)
Environmental
Temperature:
- Operation: -40°C to +70°C
- Storage: -40°C to +100°C
Humidity:
- 90% non-condensing

Order Information
* Factory default
Standard configuration:
TR3101-A00-E00-G00-S00
8mm probe:
TM0180-07-00-05-10-02
Extension cable:
TM0181-040-00

TR3101-AXX-EXX-GXX-XX

AXX: Full Scale
- A00*: 0 - 200um (8.0mil) pk-pk
- A01: 0 - 500um (20mil) pk-pk
- A02: 0 - 100um (4.0mil) pk-pk
- A03: 0 - 250um (10mil) pk-pk
- A04: 0 - 630um (25mil) pk-pk
- A05: 0 - 125um (5.0mil) pk-pk

EXX: Probe and Cable (not included)
- E00*: TM0180, 8mm Probe, 5m Cable
- E01: TM0180, 8mm Probe, 9m Cable
- E02: 3300, 8mm Probe, 5m Cable
- E03: 3300, 8mm Probe, 9m Cable
- E04: 7200, 8mm Probe, 5m Cable
- E05: 7200, 8mm Probe, 9m Cable

EXX: Probe and Cable continued
- E06: TM0105, 5mm Probe, 5m Cable
- E07: TM0105, 5mm Probe, 9m Cable
- E08: TM0110, 11mm Probe, 5m Cable
- E09: TM0110, 11mm Probe, 9m Cable
- E10: 3300, 11mm Probe, 5m Cable
- E11: 3300, 11mm Probe, 9m Cable
- E12: 7200, 11mm Probe, 5m Cable
- E13: 7200, 11mm Probe, 9m Cable
- E14: 3309 Probe, 5m Cable
- E15: 3309 Probe, 7m Cable

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

SXX: Approval
- S00*: CE Mark

TR3101 Accessories
The TR3101 requires a proximity probe and extension cable to work as a system.

- TM0180: 8mm probe
- TM0105: 5mm probe
- TM0110: 11mm probe
- TM0181: Extension cable
- TM900: Power converter
- TM0200: 3-1/2 digit display unit

KS01: Probe holding system for reverse-mount probes
KS02: GAP tester for comfortable setting of probe distance
KS04: LoopChecker for dynamic testing of the complete measurement circuit
KS05: SensiChecker for easy determination of the loop sensitivity
BNC-3: BNC adaptor for portable data collector

Field-Wiring Diagram
TR3102 Proximity 3-Wire Transmitter for Axial Position

The TR3102 is a cost-effective solution for monitoring the axial position or phase reference on balance of plant machines. The TR3102 combines the proximity probe driver and the signal conditioning circuit into one package. It works with the proximity probe and extension cable as a system.

Features

- Does not require proximity probe driver
- Buffered output/GAP will transmit 300 meters (1,000 feet)
- Compatible with other manufacturers’ proximity probes (5mm, 8mm and 11mm)
- Aluminum cast case (copper free) with epoxy potting for better environmental protection and reliability
- Same size as a proximity probe driver

Specifications

**Electrical**

DCS or PLC Power Supply:
- 20-30VDC

Sensor Interface:
- Connection: Special 95Ω coaxial cable with connector
- Probe: 5 meter or 9 meter proximity probe and extension cable works with 5mm, 8mm, and 11mm probes
- Proximity probe includes: TM0180, TM0105, TM0110, 3300, 7200, 990 series.

Sensor Linear Range (reference with AISI 4140 steel):
- 5mm, 8mm probe: 2.0 mm (80mil) Approximately 0.25mm (10mil) to 2.25mm (90mil)
- 11mm probe: 4.0mm (160mil) Approximately 0.4mm (15mil) to 4.4mm (175mil)

4-20mA Transmission:
- 2-wire, source

Buffered Output (GAP V):
- Raw position signal
- Nominal 2-18VDC
- Impedance: 1,000Ω
- Maximum cable distance: 300m (1,000ft)
- Sensitivity: 8.0mV/um (200mV/mil) nominal
- Frequency response: 0 - 10 KHz

Maximum Load:
- 500Ω

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
Standard configuration:
TR3102-E00-G00-S00
  8mm probe:
  TM0180-07-00-05-10-02
  Extension cable:
  TM0181-040-000

TR3102-EXX-GXX-SXX
EXX: Probe and Cable (not included)
  E00*: TM0180, 8mm Probe, 5m Cable
  E01: TM0180, 8mm Probe, 9m Cable
  E02: 3300, 8mm Probe, 5m Cable
  E03: 3300, 8mm Probe, 9m Cable
  E04: 7200, 8mm Probe, 5m Cable
  E05: 7200, 8mm Probe, 9m Cable
  E06: TM0105, 5mm Probe, 5m Cable
  E07: TM0105, 5mm Probe, 9m Cable
  E08: TM0110, 11mm Probe, 5m Cable
  E09: TM0110, 11mm Probe, 9m Cable
  E10: 3300, 11mm Probe, 5m Cable
  E11: 3300, 11mm Probe, 9m Cable
  E12: 7200, 11mm Probe, 5m Cable
  E13: 7200, 11mm Probe, 9m Cable
  E14: 3309 Probe, 5m Cable
  E15: 3309 Probe, 7m Cable

TR3102 Accessories
The TR3102 works with a proximity probe and extension cable.

TM0180: 8mm probe
TM0105: 5mm probe
TM0110: 11mm probe
TM0181: Extension cable
TM900: Power converter
TM0200: 3-1/2 digit display unit

KS01: Probe holding system for reverse-mount probes
KS02: GAP tester for comfortable setting of probe distance
KS04: LoopChecker for dynamic testing of the complete measurement circuit
KS05: SensiChecker for easy determination of the loop sensitivity
BNC-3: BNC adaptor for portable data collector

Field-Wiring Diagram
GXX: Mount/ Function
TR4101 Proximity Loop Powered Transmitter for Radial Shaft Vibration

The TR4101 is a cost-effective solution for monitoring the radial vibration on the shaft of balance of plant machines. The TR4101 combines the proximity probe driver and the signal conditioning circuit into one package. It works with a proximity probe and extension cable as a system.

Features

✓ Loop powered transmitter
✓ Does not require proximity probe driver
✓ Buffered output/ GAP
✓ Compatible with other manufacturers’ proximity probes (5mm, 8mm and 11mm)
✓ Aluminum cast case (copper free) with epoxy potting for better environmental protection and reliability
✓ Same size as a proximity probe driver

Specifications

Electrical
Power Supply: 16-30VDC
Frequency Response (±3dB):

Physical
Height: 75mm (2.95")
Weight: 0.5 kg (1.0 lb)
Proximity Transmitters and Seismic Vibration Transmitters

Environmental
Temperature:
  Operation: -40°C to +70°C
  Storage: -40°C to +100°C
Humidity:
  90% non-condensing

Order Information
* Factory default
Standard configuration:
TR4101-A00-E00-G00-S00
8mm probe:
TM0180-07-00-05-10-02
Extension cable:
TM0181-040-00

TR4101-AXX-EXX-GXX-SXX
AXX: Full Scale
  A00*: 0 - 200um (8.0mil) pk-pk
  A01: 0 - 500um (20mil) pk-pk
  A02: 0 - 100um (4.0mil) pk-pk
  A03: 0 - 250um (10mil) pk-pk
  A04: 0 - 630um (25mil) pk-pk
  A05: 0 - 125um (5.0mil) pk-pk
EXX: Probe and Cable continued
  E00*: TM0180, 8mm Probe, 9m Cable
  E01: TM0180, 8mm Probe, 9m Cable
  E02: 3300, 8mm Probe, 5m Cable
  E03: 3300, 8mm Probe, 9m Cable
  E04: 7200, 8mm Probe, 5m Cable
  E05: 7200, 8mm Probe, 9m Cable
  E06: TM0105, 5mm Probe, 5m Cable
  E07: TM0105, 5mm Probe, 5m Cable
  E08: TM0110, 11mm Probe, 5m Cable
  E09: TM0110, 11mm Probe, 9m Cable
  E10: 3300, 11mm Probe, 5m Cable

GXX: Mount
  G00*: DIN rail mount
  G01: Plate mount

SXX: Hazardous Area
  S00*: Without approval. CE
  S01: Multiple approvals
    ATEX: II1G, EEx iaIICT4@Ta=-40°C ~ +70°C
    KEMA06ATEX0217X
    CSA: Non-incendive, Class I, Div. 2,
    Groups A, B, C, D & T4
    CSA: Intrinsically safe, Class I, Div. I,
    Groups A, B, C & D, T4
    PCEC: Ex iaIIC4
    GOST R: 0ExiaIIC4
    CE

TR4101 Accessories
The TR4101 requires a proximity probe and extension cable to work as a system.

TM0180: 8mm probe
TM0105: 5mm probe
TM0110: 11mm probe
TM0181: Extension cable
TM0200: 3-1/2 digit display unit
KS01: Probe holding system for reverse-mount probes
KS02: GAP tester for comfortable setting of probe distance
KS04: LoopChecker for dynamic testing of the complete measurement circuit
KS05: SensiChecker for easy determination of the loop sensitivity

BNC-2 : BNC adaptor for portable data collector
Field-Wiring Diagram

Note:
Other Barriers:
TM0406: (STAHL 9303/11-22-11)
TM0407: (STAHL 9180/13-11-11)
TR4102 Proximity Loop Powered Transmitter for Axial Position/Phase Reference

The TR4102 is a cost-effective solution for monitoring the axial position or phase reference on balance of plant machines. The TR4102 combines the proximity probe driver and the signal conditioning circuit into one package. It works with a proximity probe and extension cable as a system.

Features

- Loop powered transmitter
- Does not require proximity probe driver
- Buffered output/GAP
- Compatible with other manufacturers’ proximity probes (5mm, 8mm and 11mm)
- Aluminum cast case (copper free) with epoxy potting for better environmental protection and reliability
- Same size as a proximity probe driver

Specifications

**Electrical**

DCS or PLC Power Supply: 16-30VDC

Sensor Interface:

- Special 95Ω coaxial cable with connector
- Probe: 5mm, 8mm, and 11mm probes which includes: TM0180, TM0105, TM0110, 3300, and 7200 series
- Sensor Linear Range (reference with AISI 4140 steel):
  - 5mm, 8mm probe: 2.0 mm (80mil) Approximately 0.25mm (10mil) to 2.25mm (90mil)
  - 11mm probe: 4.0mm (160mil) Approximately 0.4mm (15mil) to 4.4mm (175mil)
- 4-20mA Transmissions:
  - 2-wire, load
  - Phase reference: frequency response: 0 - 10 KHz (G02 and G03)
- Buffered Output (GAP V):
  - Raw position signal
  - Nominal: 2-18VDC
  - Impedance: 20KΩ
  - Maximum cable distance: 3.0m (10ft)
  - Sensitivity: 8mV/um (200mV/mil) nominal
  - Frequency response: 0 - 10 KHz
- Maximum Load:
  - 50×(Vs-16)
  - Where Vs is the system power supply
- System Self-test:
  - System OK: output 4-20mA
  - System Not OK: output < 3.6mA
**Proximity Transmitters and Seismic Vibration Transmitters**

**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

Standard configuration:
- **TR4102-E00-G00-S00**
  - 8mm probe:
    - TM0180-07-00-05-10-02
  - Extension cable:
    - TM0181-040-00

- **TR4102-EXX-GXX-SXX**

  **EXX: Probe and Cable**
  - E00*: TM0180, 8mm Probe, 5m Cable
  - E01: TM0180, 8mm Probe, 9m Cable
  - E02: 3300, 8mm Probe, 5m Cable
  - E03: 3300, 8mm Probe, 9m Cable
  - E04: 7200, 8mm Probe, 5m Cable
  - E05: 7200, 8mm Probe, 9m Cable
  - E06: TM0105, 5mm Probe, 5m Cable
  - E07: TM0105, 5mm Probe, 9m Cable
  - E08: TM0110, 11mm Probe, 5m Cable
  - E09: TM0110, 11mm Probe, 9m Cable
  - E10: 3300, 11mm Probe, 5m Cable
  - E11: 3300, 11mm Probe, 9m Cable
  - E12: 7200, 11mm Probe, 5m Cable
  - E13: 7200, 11mm Probe, 9m Cable
  - E14: 3309 Probe, 5m Cable
  - E15: 3309 Probe, 7m Cable

  **GXX: Mount/ Function**
  - G00: DIN rail mount, measure position
  - G01: Plate mount, measure position
  - G02: DIN rail mount, measure phase
  - G03: Plate mount, measure phase

  **SXX: Hazardous Area**
  - S00*: Without approval. CE
  - S01: Multiple approvals
    - ATEX: II1G, EEx iaIICT4@Ta=-40°C ~ +70°C
    - KEMA06ATEX0217X
    - CSA: Non-incendive, Class I, Div. 2,
      Groups A, B, C, D & T4
    - CSA: Intrinsically safe, Class I, Div. I,
      Groups A, B, C & D, T4
    - PCEC: Ex iaIICT4
    - GOST R: 0ExiaIICT4X
    - CE Mark

**TR4102 Accessories**
The TR4102 requires a proximity probe and extension cable to work as a system.

- **TM0180**: 8mm probe
- **TM0105**: 5mm probe
- **TM0110**: 11mm probe
- **TM0181**: Extension cable
- **TM0200**: 3-1/2 digit display unit
- **KS01**: Probe holding system for reverse-mount probes
- **KS02**: GAP tester for comfortable setting of probe distance
- **KS04**: LoopChecker for dynamic testing of the complete measurement circuit
- **KS05**: SensiChecker for easy determination of the loop sensitivity
- **BNC-2**: BNC Adaptor for portable data collector
Field-Wiring Diagram

Note:

Other Barriers:
TM0406: (STAHL 9303/11-22-11)
TM0407: (STAHL 9160/13-11-11)
Introduction

The TM016 is a solid state loop powered transmitter which provides a 4-20mA output proportional to the machine case vibration level. The 4-20mA output interfaces directly to any PLC or DCS for shutdown, alarm or trending. The TM016 is easy to install on the machine case.

Applications include:

- Motors
- Pumps
- Fans
- Blowers
- Engines
- Compressors
- Centrifuges
- Generators
- Turbochargers
- Gear Boxes

Features

- Loop powered 4-20mA velocity or acceleration (peak or RMS) output
- Wide operating temperature range -40°C to +120°C (-40°F to +248°F)
- Stainless steel housing
- NEMA4X, IP65 or IP67 environmental rating
- Multiple hazardous area approvals
- Frequency filter options
- Wide selection of mounting studs
**Proximity Transmitters and Seismic Vibration Transmitters**

## Electrical

- **Overall vibration output:**
  - 4-20mA, load (loop powered)
- **Accuracy:** 3%
- **Frequency response (±3db):**
  - Acceleration: AAA= 200, 201, 202: 2 - 3,000 Hz
  - Velocity: AAA= 000 to 162: 2 - 3,000 Hz
- **Transverse sensitivity:** < 5%
- **Power supply:**
  - 12VDC - 30VDC
  - < 30mA
- **Maximum load resistance:**
  - 600 ohms @ 24VDC power supply
- **Isolation:**
  - 500Vrms, circuit to case
- **Case material:** Stainless steel
- **Output connection:**
  - Flying leads:
    - 2 cables for 4-20mA
    - 2 cables for buffered output
  - Mil connector:
    - 2 pins for 4-20mA
- **Buffered output:**
  - 100mV/g nominal
  - Maximum cable length 3m (10ft)
- **Filter option:**
  - 40dB/oct for hi-pass filter
  - 40dB/oct for low-pass filter
- **Intrinsically safe:**
  - ATEX: II 1G Ex ia IIC T4 @Ta=-40°C to +100°C
  - (Ui=30V, li=110mA, Pi=825mW, Ci=51.7nF, Li=84μH)
  - PCEC: Ex ia IIC T4

## Physical

- **Temperature:**
  - **Operation:**
    - Normal (G=0): -40°C to +100°C (-40°F to +212°F)
    - High (G=1): -40°C to +120°C (-40°F to +248°F)
  - **Storage:** -50°C to +125°C (-58°F to +257°F)
- **Dimensions:**
  - Diameter: 38mm (1.5”)
  - Height: Flying leads: 78mm (3.1”);
    - Mil connectors: 87mm (3.4”)
- **Weight:**
  - 240g (0.5lb)
- **Output Connections:**
  - 2-pin MIL-C-5015
  - Flying leads: 2 or 4 wires
  - 1 NPT
- **Environmental:**
  - Flying leads: NEMA 4X, IP65
  - 2-pin connector: IP67
Order Information

* Factory default

**TM016-AAA-BCD-EF-G**

AAA: Full Scale

- AAA=000: 20mm/s (0.8ips), pk
- AAA=001: 20mm/s (0.8ips), rms
- AAA=121: 25mm/s (1.0ips), pk
- AAA=122: 12.5mm/s (0.5ips), pk
- AAA=123: 50mm/s (2.0ips), pk
- AAA=124: 125mm/s (5.0ips), pk
- AAA=132: 75mm/s (3.0ips), pk
- AAA=151: 25mm/s (1.0ips), rms
- AAA=152: 12.5mm/s (0.5ips), rms
- AAA=153: 50mm/s (2.0ips), rms
- AAA=154: 125mm/s (5.0ips), rms
- AAA=162: 75mm/s (3.0ips), rms
- AAA=200: 5.0g, pk
- AAA=201: 10g, pk
- AAA=202: 20g, pk

B: Mounting Adaptor

- B=0: 1/4” NPT
- B=1: 1/2” NPT
- B=2: 3/8-24UNF X 1/2”
- B=3: 1/2-20UNF X 1/2”
- B=4: M8x1-12
- B=5: M10x1.25-12

C: Hazardous Area and Approvals

- C=1: CE
- C=2*: CE Explosion Proof Approval (D=0, 1)
  - CSA: Class I, Div. 1, Groups A, B, C & D
  - Class II, Div. 1, Groups E, F, G &
  - T4@Ta=-40°C to +120°C
  - ATEX: II 2G, Ex d IIC T4@Ta=-40°C to+120°C
  - KEMA06ATEX0275
  - PCEC: Ex d IIC T4
- C=3*: CE Intrinsically Safe Approval
  - ATEX: II 1G Ex ia IIC T4@Ta=-40°C to+100°C
  - KEMA06ATEX0228
  - GOST R: 0ExiaIICT4X
  - PCEC: Ex iaIICT4

D: Connection

- D=0: 4-20mA, flying leads
- D=1: 4-20mA, flying leads with buffered output
- D=4: 4-20mA, 2-PIN MIL connector (C=1, 3)

E: High-pass Filter

- E=0: None
- E=1: 5Hz
- E=2: 10Hz
- E=3: 20Hz
- E=4: 50Hz
- E=5: 100Hz
- E=6: 200Hz

F: Low-pass Filter

- F=0: none
- F=1: 500Hz
- F=2: 1000Hz
- F=3: 2000Hz

G: Temperature

- G=0: Normal temperature (-40°C to +100°C)
- G=1: High temperature (-40°C to +120°C)

**TM016-K1**

Vibration transmitter kit includes:

**TM016-D0 or -D1 with TM016-02**

CE mark

- CSA: Class I, Div. 1, Groups A, B, C & D
- Class II, Div. 1, Groups E, F, G & T4
- ATEX: II 2G, Ex dIICT4 @Ta=-40°C to+120°C
- KEMA06ATEX0275
Proximity Transmitters and Seismic Vibration Transmitters

Field-Wiring Diagram

![Field-Wiring Diagram](image)

Note:

Other Barriers:
- TM0404: (MTL 5542)
- TM0406: (STAHL 9303/11-22-11)
- TM0407: (STAHL 9160/13-11-11)
Accessories

(Standard cable length is 5 meters. XX = 05)

**TM0702-XX:** Aluminum MIL connector with XX meters cable, 6.35mm diameter.
< 120°C (250°F)

**TM0703-XX:** Sealed tight boot connector with XX meters cable, 6.35mm diameter.
< 120°C (250°F)

**TM0704-XX:** Stainless steel MIL connector with Armored XX meters cable, 4.83mm diameter. < 150°C (300°F)

**TM0705-XX:** Cornered MIL connector with XX meters cable, 6.35mm diameter.
< 120°C (250°F)

**TM016-01:** Aluminum conduit elbow & reducer. 1” to 3/4” NPT
**TM016-11:** Aluminum conduit elbow & reducer with terminal block. 1” to 3/4” NPT
Class I, Div. 1, Groups B, C & D; Class II, Div. 1, Groups E, F & G and NEMA 4X, IP65

**TM016-02:** Stainless steel conduit elbow with terminal block. 1” to 3/4” NPT
Class I, Div. 1, Groups A, B, C, D & T4; Class II, Div. 1, Groups E, F & G and NEMA 4X, IP65
(works with TM016)

**TM016-03:** Stainless steel flange mounting adaptor with 1/2” NPT mount; 3 holes of 7mm on the circle of 38mm (1.5”) in diameter

**TM900:** Power converter
**TM0200:** 3-1/2 digit display unit
**Accessories: TM900 Power Converter**

The TM900 power converter is designed for the DTM series transmitter-monitor and the TR 3-wire transmitter. Each TM900 supports up to seven DTM's and eight TR transmitters. The output of the power converter is isolated from its input. Additionally, the output is short-circuit protected and the input is ESD and fuse protected.

**Specifications**

**Electrical**
- AC Power Input: 90-250VAC@200mA
- Power Output:
  - Voltage: 24VDC ± 5%
  - Current: 800mA
- Isolation: 1000VAC
- Fuse: 2.0A, 250VAC

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

**Environmental**
- Temperature:
  - Operation: -40°C to +75°C
  - Storage: -50°C to +100°C
- Humidity: 90% non-condensing

**Certifications**
CE certified with EMC compliance

**Order Information**

TM900-GX
- GX: Mount
  - G0*: 35mm DIN-rail mount
  - G1: Plate mount

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**TM900 Plate Mounting**

**TM900 DIN Rail Mounting**