



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 available for portable vibration analyzer
- ✓ Work 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:

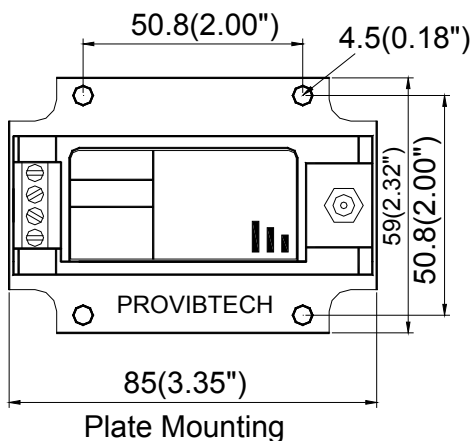
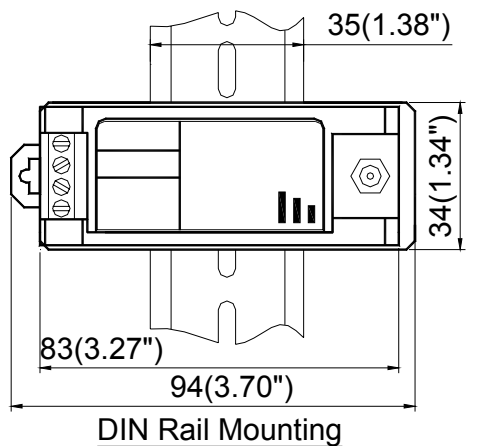
50×(Vs-16)

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: Mounting/ Function

G00: DIN rail mounting, measure position
G01: Plate mounting, measure position
G02: DIN rail mounting, measure phase
G03: Plate mounting, measure phase

SXX: Hazardous Area

S00*: Without approval. CE
S01: Multiple approvals
ATEX: II1G, Ex ia IIC T4@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 ia IIC T4
GOST R: 0Ex ia IIC T4X
CE Mark

TR4102 Accessories

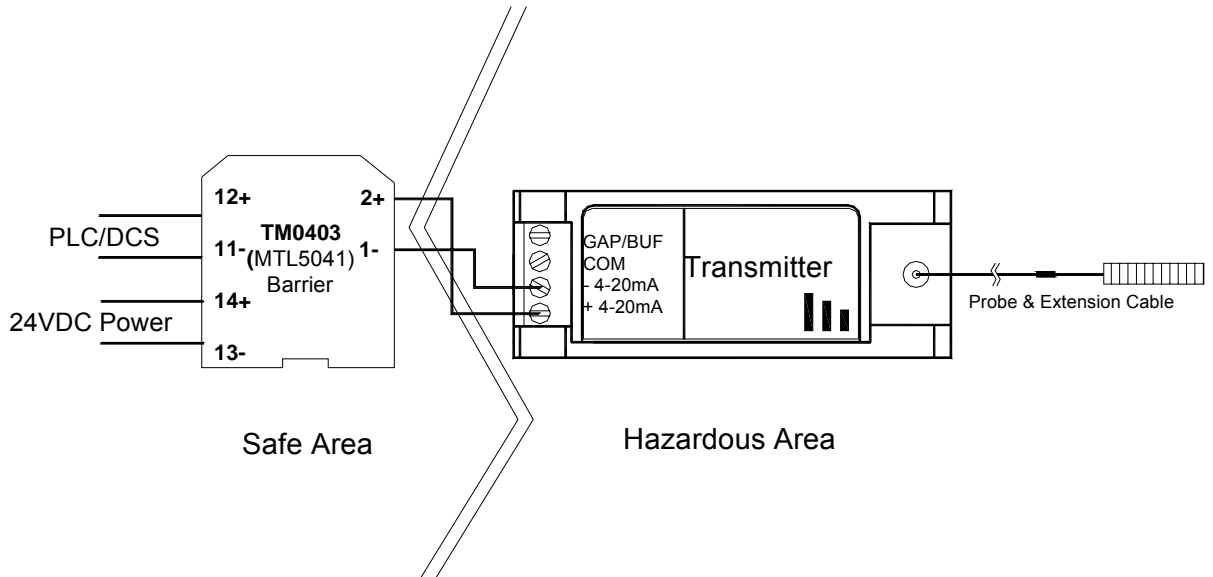
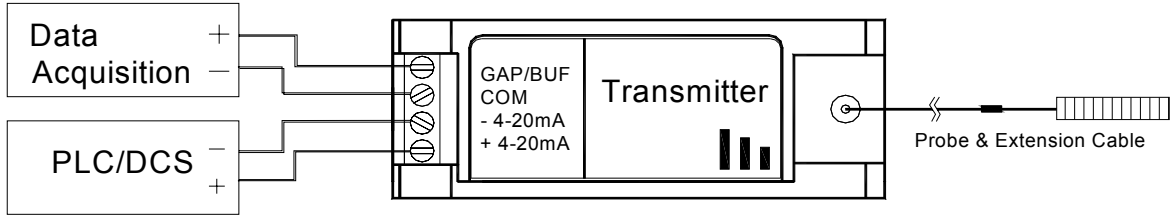
The TR4102 requires a proximity probe and extension cable to work as a system.

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