



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 casted 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 95 Ω 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

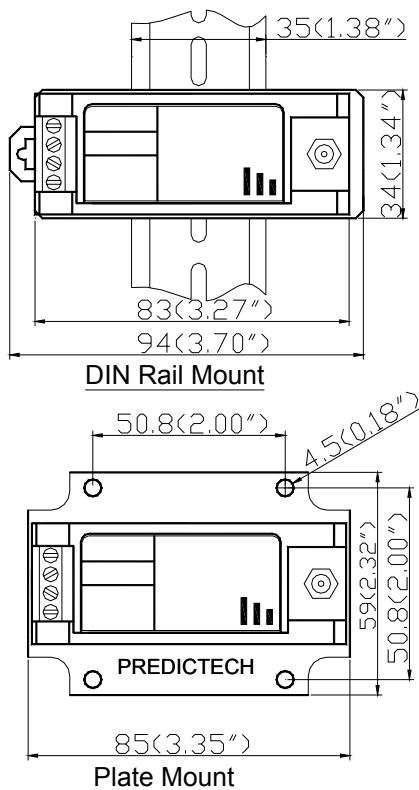
Nominal: 2-18VDC

Impedance: 1,000Ω

Maximum cable distance: 3.0m (10ft)

Sensitivity: 7.87mV/um (200mV/mil) nominal

Frequency response: 0 - 10 KHz





Electrical specifications continued

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

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

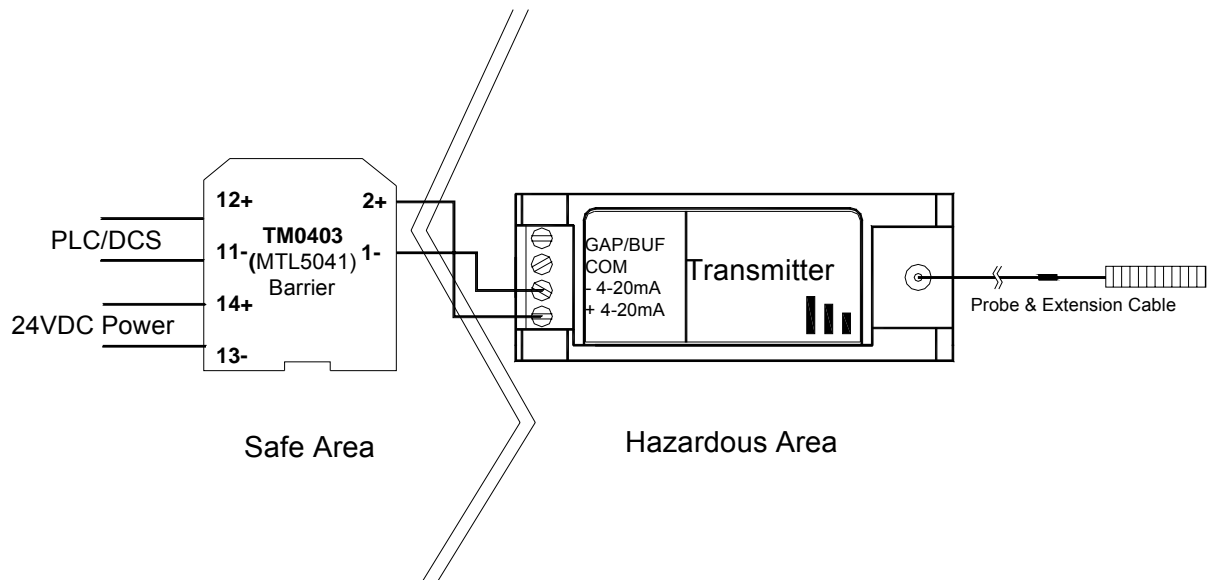
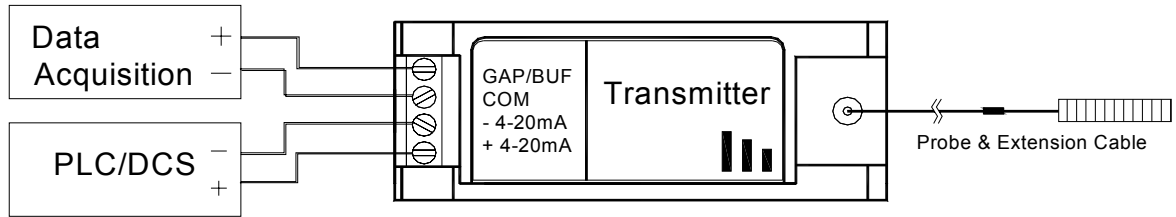
TM0200: 3-1/2 digit display unit

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)