

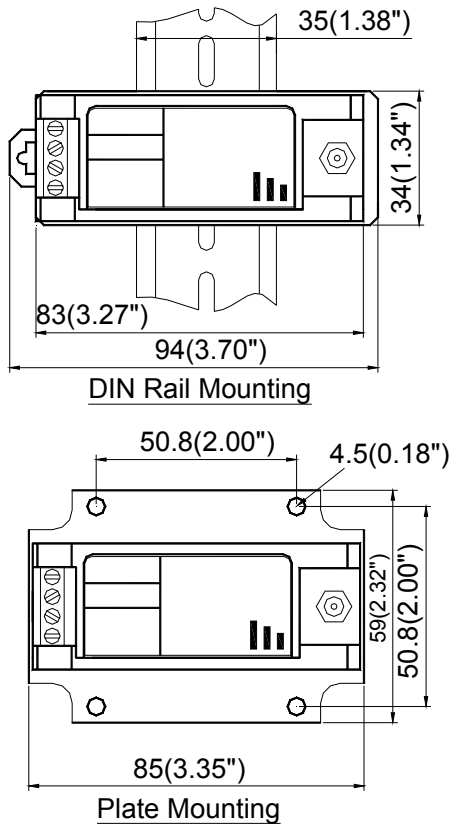


## TR4102 Proximity Loop Powered Transmitter for Axial Position/ Phase Reference

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



## 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
- E16: 3000, 190 Probe, 15 Feet Cable
- E17: 3000, 190 Probe, 20 Feet Cable
- E18: 3000, 300 Probe, 15 Feet Cable
- E19: 3000, 300 Probe, 20 Feet Cable
- E20: 7200, 5mm Probe, 5m Cable
- E21: 7200, 5mm Probe, 9m 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: II 1 G Ex ia IIC T4 Ga  
@Ta=-40°C ~ +70°C  
KEMA06ATEX0217X
  - IECEX: Ex ia IIC T4 Ga @Ta=-40°C ~ +70°C  
IECEX DEK 13.0020 X
  - 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
  - TR CU: 0Ex ia IIC T4 Ga X  
№ TC RU C-US.AA87.B.01245  
NANIO CCVE  
CE Mark

## TR4102 Accessories

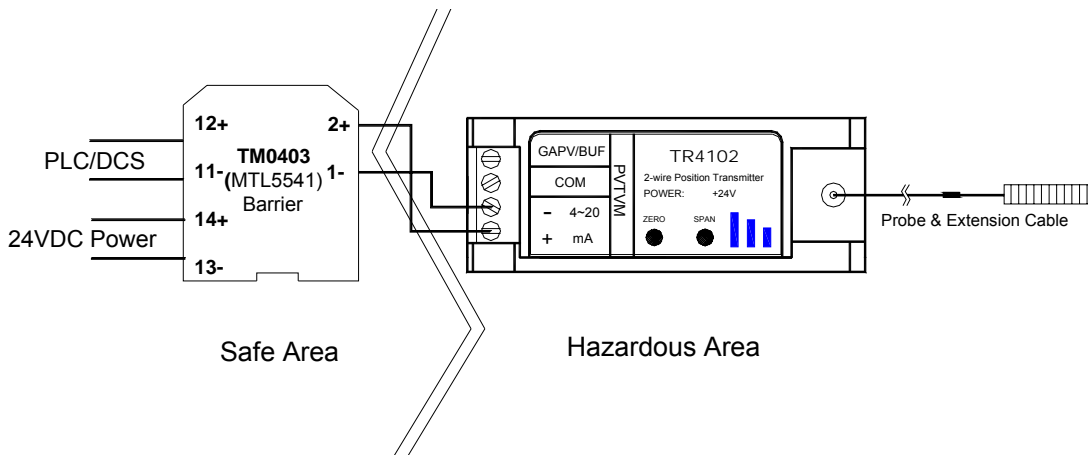
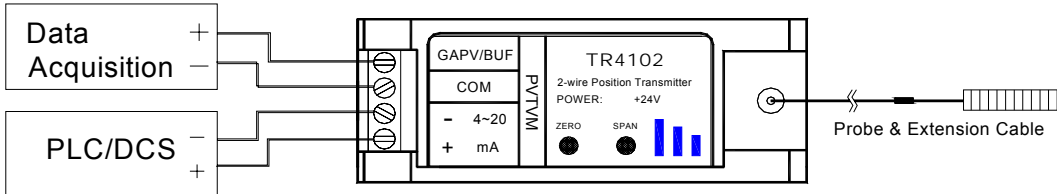
The TR4102 requires a proximity probe and extension cable to work as a system.

- 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 9160/13-11-10s)

TM0407: (STAHL 9160/13-11-11)