Raychem
TraceTek

TT-TAR

TraceTek Analog Current Transducer Installation Instructions



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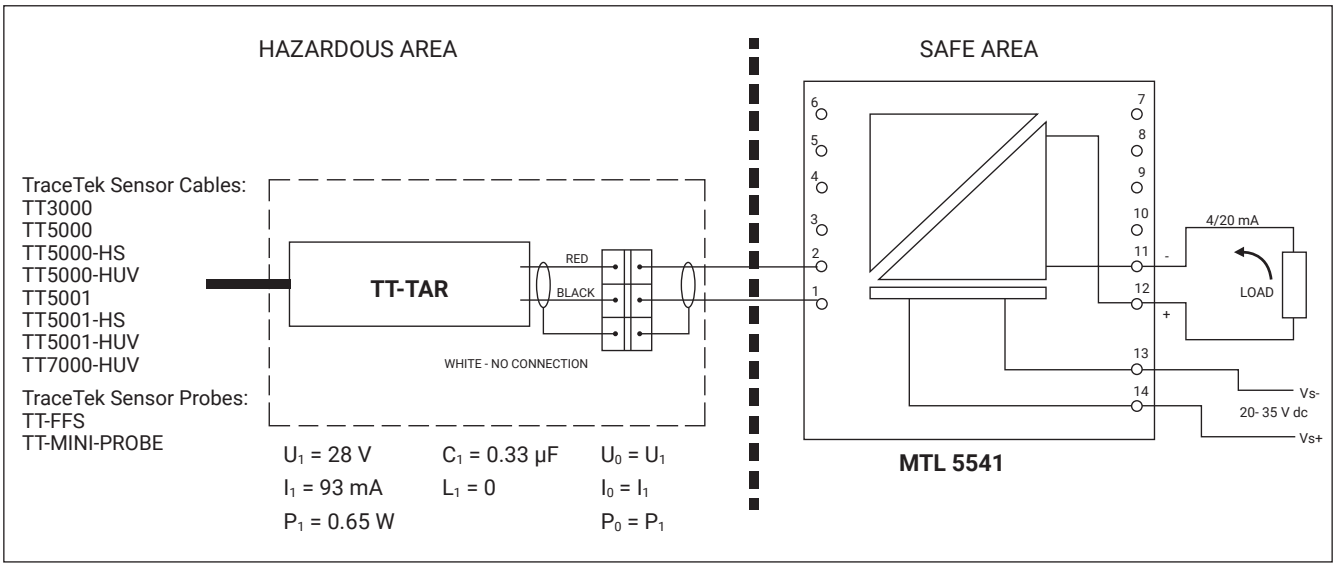


Description

These instructions provide guidance for installation and use of the Raychem TraceTek TT-TAR 4–20 mA transducer.
The TT-TAR transducer is suitable for installation in hazardous areas and controls an analog current loop signal that transmits status information to monitoring equipment installed in a safe area. When installed with TraceTek sensor cable or TraceTek sensor probes, the TT-TAR controls a current loop signal such that the condition of the sensor cable or probe is indicated by the magnitude of the current flowing in the loop.

Required Accessories

- Enclosure, junction box or marshalling panel in the hazardous area to provide mechanical protection for TT-TAR transducer
- 3 position terminal block
- Repeater Power Supply:
  - Measurement Technologies Ltd.
  - Model MTL5541 or MTL5541AS
- Two-conductor interconnection wire/cable meeting local site requirements with minimum cross-section of 1.0 mm² (18 AWG)



INSTALLATION NOTES

Do not exceed 250 m (820 ft) of TraceTek sensor cable,
10 TT-Mini-Probes or 4 TT-FFS probes.

Use TT-MBC-MC-BLK to connect more than one sensor cable/probe.

- The connection between TT-TAR and MTL5541 requires two conductors.
- Minimum cross-section conductor size is 1.0 mm² (18 AWG).
- Cable construction should conform to local wiring practices.
- Maximum distance between MTL 5541 Repeater Power Supply and TT-TAR is 1000 m (3280 ft).

Install MTL5541 Repeater Power Supply (Galvanic Isolation Barrier) in accordance with MTL 5500 Series Instruction Manual INM5500.

(Note that MTL5541AS can be substituted if the host system requires a current sink device).

APPROVALS

TT-TAR Unit	TT-TAR SYSTEM
Baseefa11ATEX0276X	Baseefa11Y0277
BAS21UKEX0510X	IECEx BAS 11.0142
IECEx BAS 11.041X	Ex ia IIA T4
Ex II1G Ex ia IIA T4 Ga (–40°C =< ta =< 60°C)	

OPERATION

The TT-TAR is energized by the MTL5541 when a 20–35V dc power supply is connected to Terminals 13 and 14 of the MTL5541 Repeater Power Supply. No local power is required at the TT-TAR.

The amount of current that flows in the current loop between the MTL5541 and the TT-TAR is dependent on the condition/status of the sensor cable or sensor probes connected to the TT-TAR.

The magnitude of current flowing in the loop between the MTL5541 and the TT-TAR is repeated between terminals 11 and 12 of the MTL5541.

Sensor cable/probe status is indicated according to this table:

- 0 mA = Wire break between MTL5541 and TT-TAR
- 4 mA = Sensor cable/probe disconnected from TT-TAR or Sensor cable/probe damage
- 6–9 mA = Sensor cable/probe NORMAL
- >18 mA = LEAK detected

For host systems with limit settings, the recommended low alarm is 5 mA and the recommended high alarm is 10 mA.

SPECIFIC CONDITIONS OF USE

The plastic enclosure poses a potential electrostatic hazard; do not rub or use solvents, clean only with a damp cloth.

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