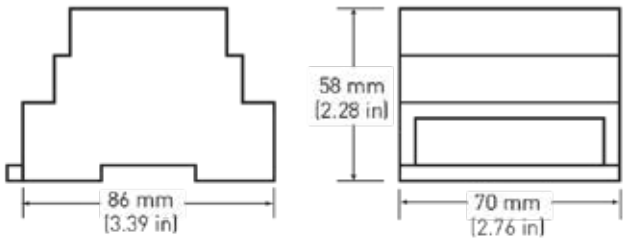
TTSIM-1A

CONNECT AND PROTECT

Sensor interface module

PRODUCT OVERVIEW



Easy setup and simple operation

The nVent RAYCHEM TraceTek TTSIM-1A Sensor Interface Module monitors up to 150 meters (500 feet) of nVent RAYCHEM TraceTek sensing cable. When liquid is detected, the TTSIM-1A unit indicates the leak with an LED, and switches a relay to provide local voltage-free contact closure. The TTSIM-1A can also communicate to a host monitoring system such as nVent RAYCHEM TraceTek TTDM-128 or directly to a PLC or other host system using standard protocols. The low cost of the TTSIM-1A makes it economical to build very robust systems with many small independent sensing cable segments. No field calibration is required.

The TTSIM-1A can be used as a stand-alone leak detection alarm unit or in networks with other nVent RAYCHEM TraceTek TTSIM, TT-NRM, or TTDM-128 modules. The TTSIM-1A can be configured using a Microsoft Windows-based PC or TTDM-128 network master module.

Design features

- Voltage-free contacts for alarm signaling
- LEDs to indicate power, leak, cable trouble, and communication status
- Simple twisted pair serial RS-485 communications up to 1200 meters (4000 feet) with automatic protocol selection (Modbus, Opto 22 and Metasys)
- Available for 24, 120 or 230 Vac 50/60 Hz or 12 or 24 Vdc power supply
- Each TTSIM-1A unit has a unique address assigned with software – no switches
- Relay software selectable for normally energized or normally de-energized operation
- DIN rail mounted for easy installation
- Enclosures available for stand-alone indoor or outdoor installations

GENERAL FEATURES

Sensor compatibility	All nVent RAYCHEM TraceTek sensor cables and point sensors or contact closure devices
Maximum length of sensing cable	150 m (500 ft)
Precision	0.5% of sensor length ± 0.6 m (2 ft)

ENVIRONMENTAL RATINGS

Storage temperature	–18°C to 60°C (0°F to 140°F)
Operating temperature	0°C to 50°C (32°F to 122°F)
Humidity	5% to 95% non-condensing

POWER REQUIREMENTS

TTSIM-1A	22 to 26 Vac, 50/60 Hz, 3 W (SELV level for Europe)
TTSIM-1A-120	92 to 132 Vac, 50/60 Hz, 3 W
TTSIM-1A-230	216 to 253 Vac, 50/60 Hz, 3 W
TTSIM-1A-12VDC	12 Vdc +/– 10%, 2 W
TTSIM-1A-24VDC	24 Vdc +/– 10%, 2 W
Wire sizes	#22 AWG to #14 AWG (0.5 to 2.5 mm^2)

ORDERING INFORMATION

Catalog Number	Part Number	Description
TTSIM-1A	P000000046	24 Vac TTSIM-1A
TTSIM-1A-120	P000000047	120 Vac TTSIM-1A
TTSIM-1A-230	P000000048	230 Vac TTSIM-1A
TTSIM-1A-12VDC	P000000899	12 Vdc TTSIM-1A
TTSIM-1A-24VDC	P000000906	24 Vdc TTSIM-1A

SERIAL INTERFACE

Network configuration	RS-485 two wire network, 9600 baud, addressable from 1 to 127
Communication protocol	Modbus, OptoMux or Johnson Controls Metasys

RELAY CONTACTS

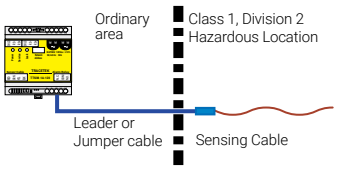
Type	Form C (SPDT)
Action	Software selectable; normally energized or normally de-energized; alarm on leak; leak or fault; or leak, fault or service
Rating	2 Amps maximum, 250 Vac or 30 Vdc (30 V SELV level max for Europe)

APPROVALS AND CERTIFICATIONS

The TTSIM-1A unit is approved for use in ordinary areas. The module must be located in an ordinary area, but may monitor intrinsically safe nVent RAYCHEM TraceTek sensors located in hazardous locations, as shown below.

FM APPROVED

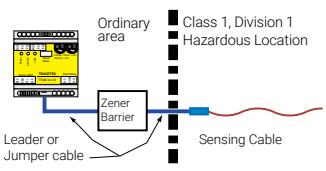
TYPE NM
c UL us
LISTED
General Signaling Equipment
76LJ



nVent RAYCHEM TraceTek sensors in Class I, Division 2, Groups A, B, C, D Hazardous Locations (Zone 2 in Europe).

VDE
REG.-Nr. 1290

CE



If protected by an agency approved zener barrier, nVent RAYCHEM TraceTek sensors in Class I, Division 1, Groups A, B, C, D Hazardous Locations (Zones 0 and 1 in Europe). Contact nVent to select proper zener barrier.

Only AC versions are UL Listed and VDE Certified. For DC models use a Listed Class 2 Power Supply.

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