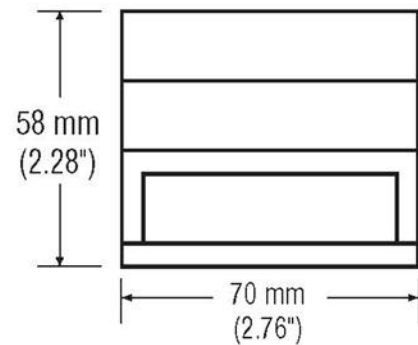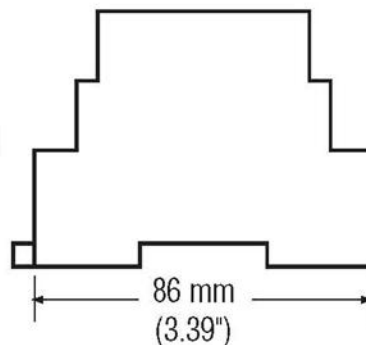**TraceTek.**

### Easy setup and simple operation

The TTSIM-1 is a Sensor Interface Module capable of monitoring up to 1500 meters (5000 feet) of TraceTek sensing cable. When liquid is detected, the TTSIM-1 locates the leak and communicates the leak details to the host monitoring system. The TTSIM-1 can communicate to a variety host monitoring systems including a TraceTek TTDM-128, a PLC, DCS or Building Management System using standard protocols. No field calibration is required.

The TTSIM-1 is well suited to applications where large areas are being monitored, or long sensor circuit lengths are required. Since it incorporates multiple sensor monitoring algorithms, the TTSIM-1 is capable of performing several specialized leak detection measurements. These algorithms make TTSIM-1 especially well suited to monitoring long circuits of TraceTek hydrocarbon sensing cables that are installed in demanding applications.

### Design Features

- LEDs to indicate power, status and communication.
- Responsive to a variety of communication protocols. Protocol selection is automatic.
- Simple twisted pair serial RS-485 communications up to 1200 meters (4000 feet) without amplification.
- Operates on 24 Vac 50/60 Hz or 12 Vdc or 24 Vdc power supply.
- Each TTSIM-1 unit has a unique address assigned with software – no switches.
- Special leak detection algorithms provide enhanced capability for difficult applications.
- DIN rail mounted for easy installation.
- Enclosures available for stand-alone indoor or harsh outdoor installations.



| General features | Sensor compatibility | All TraceTek sensor cables and point sensors or contact closure devices |
|---|---|---|
| | Maximum length of sensing cable | 1500 m (5000 ft) |
| | Precision | 0.1% of sensor length |
| **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-1 | 22 to 26 Vac, 50/60 Hz, 3 W (SELV level for Europe) |
| | Wire sizes | #22 AWG to #14 AWG (0.5 to 2.5 mm$^2$) |
| **Ordering information** | Catalog Number | Description |
| | TTSIM-1 | 24 Vac TTSIM-1 |
| | TTSIM-1-12VDC | 12 Vdc TTSIM-1 |
| | TTSIM-24-24VDC | 24 Vdc TTSIM-1 |

# TTSIM-1 Sensor Interface Module

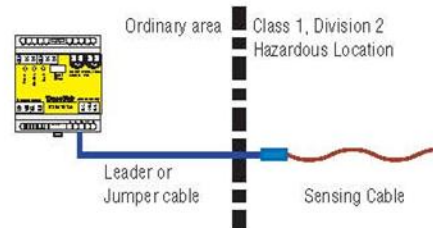| Serial interface | Network configuration | RS-485 two wire network, 9600 baud, addressable from 1 to 127 |
| --- | --- | --- |
| | Communication protocol | MODBUS™, OptoMux™ or Johnson Controls Metasys™ |

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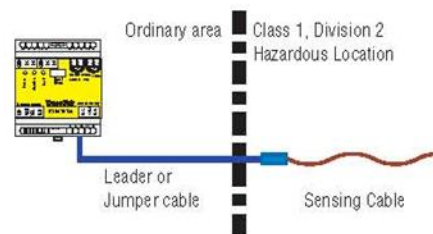
The TTSIM-1 unit is approved for use in ordinary areas. The module must be located in an ordinary area, but may monitor intrinsically safe TraceTek sensors located in hazardous locations, as shown below.

LISTED
76LJ
SIGNAL SYSTEM UNIT
TYPE NM



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



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

Only 24 Vac version is UL listed and VDE Certified.
For DC models use a Listed Class 2 Power Supply.

## Electromagnetic compatibility

| C E | Compliant with standards for immunity | EN50082-1 (light industrial) |
| --- | --- | --- |
| | Compliant with standards for emissions | EN50081-1 (residential/commercial) EN55022 and FCC Part 15, Class B |
| ISO 9001 | The TraceTek products group ia a part of Raychem HRTS which is ISO 9001 certified worldwide. | |

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