

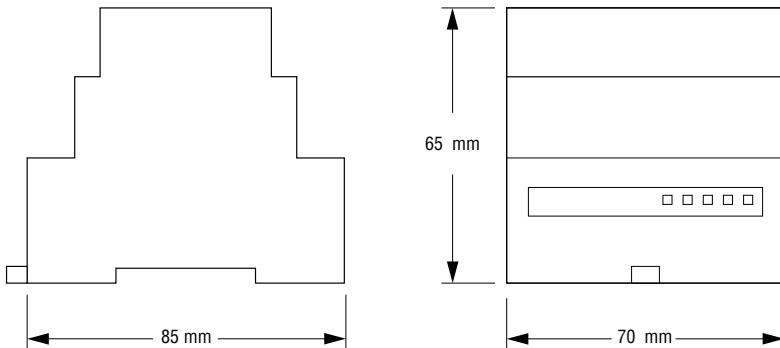
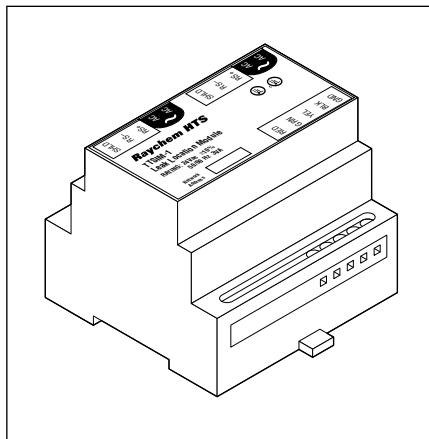
**Easy setup and simple operation**

The TTSIM-1 Sensor Interface Module monitors up to 5000 feet (1500 m) of TraceTek sensing cable. When liquid is detected, the TTSIM-1 unit communicates either with a TTDM-PLUS Master Module or directly to a PLC or other host system using the standard modbus protocol. Although massive sensor cable systems are possible with networked TTSIM-1's, their low cost makes it economical to build very robust systems with many small independent sensing cable segments. No field calibration is required other than a map to show where the sensor cable has been installed.

**Design Features:**

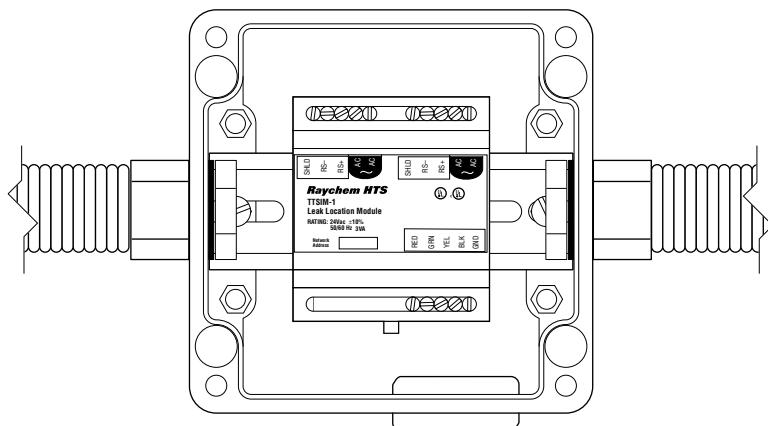
- Responsive to two different communication protocols: proprietary when networked to a TTDM-PLUS Master Module or generic modbus when networked to a PLC, building management system or similar factory automation system. Protocol selection is automatic with no user intervention required.

- LED's to indicate power, status, and communication progress.
- Simple twisted pair serial RS-485 communications out to 4000 feet without amplification. Industry standard amplifying bridges and optical links available for greater distances.
- Operates on 24 Vac 50/60 Hz either from a local supply or provided in the same cable that is used for data transfer.
- Each SIM unit has a unique address assigned with software - no dip switches.
- Up to 31 SIM units when networked to a TTDM-PLUS Master Module.
- Up to 123 SIM units when connected via twisted pair to an RS-485 communication port.
- DIN rail mounted for easy installation.
- NEMA-4X enclosure available for harsh or outdoor locations.

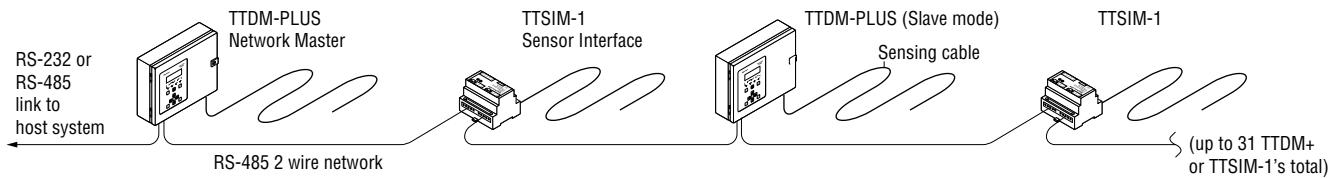


<b>General features</b>	Sensing cable compatibility	All TT1000, TT3000, and TT5000 series sensing cables
	Maximum length of sensing cables	5000 ft (1500 m) per TTSIM-1
	Precision	±0.1% of connected sensing cable length
	Units	Feet or meters (selectable)
<b>Temperature</b>	Storage	0°F to 140°F (-18°C to 60°C)
	Operating	32°F to 122°F (0°C to 50°C)
<b>Humidity</b>		5% to 95% noncondensing
<b>Power consumption</b>	3 VA (3W)	
<b>Ordering information</b>	<b>Catalog number</b>	<b>Description</b>
Supply voltage	TTSIM-1	24 Vac ±10%

## TTDM-SIM Sensor Interface Module



## TraceTek network arrangement



TraceTek is a trademark of Raychem HTS.

## Interfaces

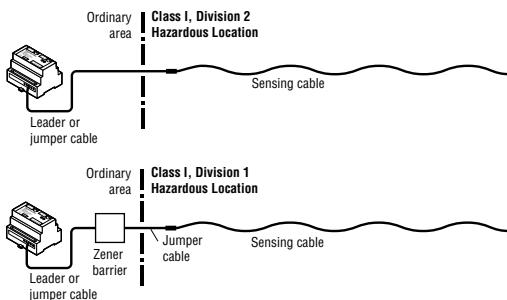
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TraceTek Network Port

### RS-485 (2-wire connection)

## Approvals and certifications

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 sensing cables located in hazardous locations, as shown below.



TraceTek sensing cable 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 sensing cable in Class I, Division 1, Groups A, B, C, D Hazardous Locations (Zone 0 or Zone 1 in Europe). Contact Raychem to select proper zener barrier.

The TTSIM-1 standard enclosure is NEMA-1, IP20. An optional NEMA-4X, IP54 enclosure is available.

## Electromagnetic compatibility



Compliant with standards for immunity  
Compliant with standards for emissions

EN50082-1 (light industrial)  
EN50081-1 (residential/commercial)  
EN55022 and FCC Part 15, Class B

ISO 9001

The TraceTek products group is a part of Raychem HTS which is ISO 9001 certified worldwide.

Ravchem HTS

Raychem H.S.  
300 Constitution Drive  
Menlo Park, California 94025-1164  
Tel (800) 545-6258  
Fax (800) 611-2323  
Fax-on-Demand (800) 329-4494  
info@raychemhs.com  
[www.tracetek.com](http://www.tracetek.com)

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