**Easy setup and simple operation**

The TTSIM-1A Sensor Interface Module monitors up to 150 meters (500 feet) of 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 a 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 TraceTek TTSIM, TT-NRM or TTDM-128 modules. The TTSIM-1A can be configured using a Palm™ OS or Pocket PC™ handheld PDA, a Microsoft Windows™ based PC, or a TraceTek TTDM-128 network master module.

Design Features

• Voltage-free contacts for alarm signaling.
• LED's to indicate power, leak, cable trouble, and communication status.
• 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.
• Available for 24, 120 or 230 Vac 50/60 Hz 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 harsh outdoor installations.

58 mm (2.28")		
86 mm (3.39")	70 mm (2.76")	
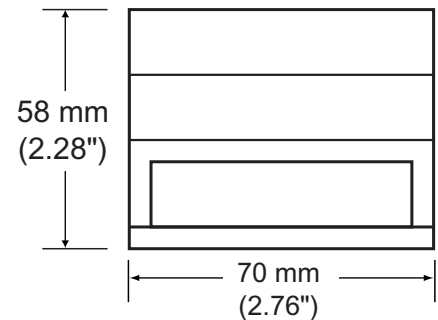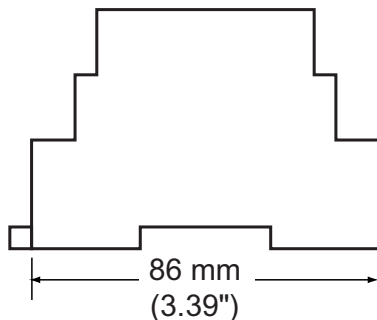
General features	Sensor compatibility	All TraceTek sensor cables and point sensors or contact closure devices
	Maximum length of sensing cable	150 m (500 ft)
	Precision	0.5% of sensor length ± 0.6 m (2 ft)
Environmental ratings	Storage temperature	-18°C to 60°C (0°F to 140°F)
	Operating temperature	0°C 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

Ordering information	**Catalog Number**	**Description**
	TTSIM-1A	24 Vac TTSIM-1A
	TTSIM-1A-120	120 Vac TTSIM-1A
	TTSIM-1A-230	230 Vac TTSIM-1A

TTSIM-1A 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™
Relay contacts	Type	Form C (SPDT)
	Action	Software selectable; normally energized or normally de-energized; alarm on leak or alarm on leak and sensor fault
	Rating	2 Amps maximum, 250 Vac or 30 Vdc

Approvals

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 TraceTek sensors located in hazardous locations, as shown below.

c(UL)us

Listed
76LJ
Signal System Unit
TYPE NM

D▽E

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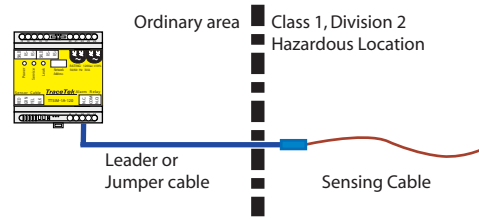
TraceTek sensors in Class I, Division 2, Groups A, B, C, D Hazardous Locations (Zone 2 in Europe).

Ordinary area | Class 1, Division 2 Hazardous Location

Leader or Jumper cable

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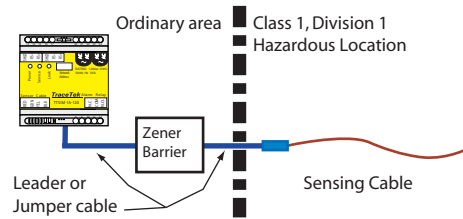
If protected by an agency approved zener barrier, TraceTek sensors in Class I, Division 1, Groups A, B, C, D Hazardous Locations (Zones 0 and 1 in Europe). Contact Tyco Thermal Controls to select proper zener barrier.

Ordinary area | Class 1, Division 1 Hazardous Location

Zener Barrier

Leader or Jumper cable

Sensing Cable