TraceTek TTSIM-1A
SENSOR INTERFACE MODULE WITH RELAY

PRODUCT OVERVIEW

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 Microsoft Windows™ based PC, or a TraceTek 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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>Sensor compatibility</td>
<td>All TraceTek sensor cables and point sensors or contact closure devices</td>
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<tr>
<td>Maximum length of sensing cable</td>
<td>150 m (500 ft)</td>
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<tr>
<td>Precision</td>
<td>0.5% of sensor length ± 0.6 m (2 ft)</td>
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</table>
TTSIM-1A

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 mm²)

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Catalog number</th>
<th>Part number</th>
<th>Description</th>
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<tbody>
<tr>
<td>TTSIM-1A</td>
<td>P000000046</td>
<td>24 Vac TTSIM-1A</td>
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<tr>
<td>TTSIM-1A-120</td>
<td>P000000047</td>
<td>120 Vac TTSIM-1A</td>
</tr>
<tr>
<td>TTSIM-1A-230</td>
<td>P000000048</td>
<td>230 Vac TTSIM-1A</td>
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<tr>
<td>TTSIM-1A-12VDC</td>
<td>P000000899</td>
<td>12 Vdc TTSIM-1A</td>
</tr>
<tr>
<td>TTSIM-1A-24VDC</td>
<td>P000000906</td>
<td>24 Vdc TTSIM-1A</td>
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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 TraceTek sensors located in hazardous locations, as shown below.

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 Pentair Thermal Management to select proper zener barrier.

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