



**Diamond
Controls**

Leak Detection & Trace Heating Systems

DATASHEET



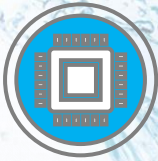
Monitors water, fuel oil, chemical & refrigerant gas leaks over several rooms / floors at any one time



Locates a leak digitally to within 1 meter anywhere on the system



Simultaneously monitors up to 128 SIM controllers (Slave units)



Can detect multiple leaks or spreading leaks



WATER LEAK DETECTION

TTDM-128

Leak Detection Master Module

The nVent RAYCHEM TTDM-128 module directly monitors up to 1500 m (5000 ft) of sensor cable and a network of up to 128 remote Tracetek modules. The remote modules may be a combination of sensor interface modules (TTSIM), relay modules (TT-NRM) or additional TTDM-128 modules. With its networking capability, the TTDM-128 provides tremendous flexibility in terms of system layout options and monitoring capability.



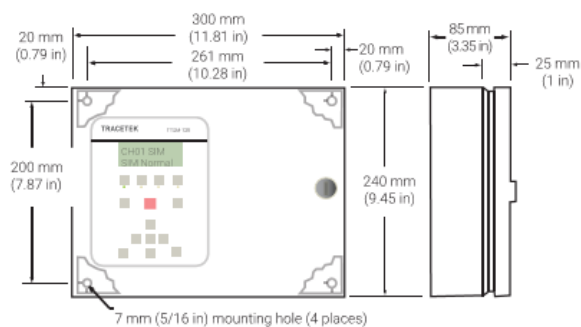
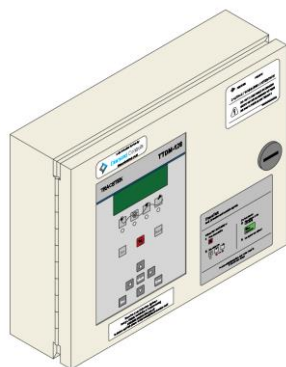
EASY SETUP AND SIMPLE OPERATION

When liquid is detected on any of the sensors, the TTDM-128 sounds an alarm, closes relay contacts, turns on a front panel LED and displays the circuit identification and location of the leak on the alphanumeric display. The leak detection event is logged to a non-volatile event history file. All status and event information is made available via the front panel keyboard or RS232/RS485 modbus digital communication to a host computer, PLC or plant/building automation system.

Each sensor circuit detects, locates and tracks leaks independently from any other circuits connected to the TTDM-128. There is no loss of sensitivity and no re-mapping required after an initial leak is detected. A simple map showing where the sensors are installed is the only field calibration requirement.

DESIGN FEATURES

- Multiple event tracking capability for up to 128 independent sensor circuits.
- Summary relay contacts, LED status lights, LCD information display at the TTDM-128 panel.
- Standard external interface modes include: dry contacts, and RS232/RS485 modbus communication. A 4-20 mA analog output option is available.
- Event history accessible from the front panel or via serial port to identify type of event, time, location, and other parameters for all sensor events or user adjustments and interventions.
- Layered password protection for setup changes.
- Adjustable sensitivity and selectable measurement units.
- Universal power supply for 110/220 Vac 50/60 Hz (24 volt option available).
- Non-volatile memory for event history, setup and network configuration.
- Complete remote operation and monitoring through modbus communications or using optional TT-SUPERVISOR Windows software.



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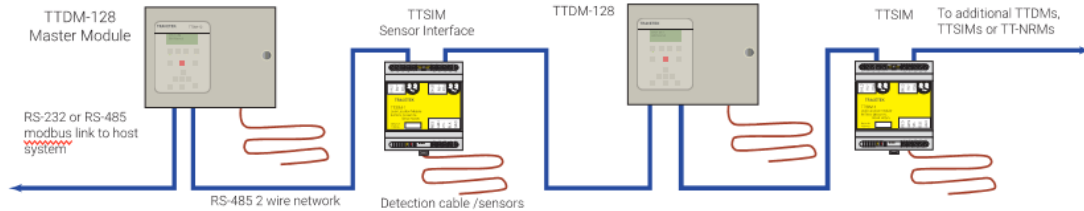
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| Procedure: | OPS08 | Document ref: | TTDM128 | Publish date: | 01/05/24 | Approved by: | Lee Blackett | Review date: | As Required |
|-------------------|-------|----------------------|---------|----------------------|----------|---------------------|--------------|---------------------|-------------|



TRACETEK NETWORK ARRANGEMENT



TECHNICAL INFORMATION

| | | |
|--------------------------------|---|--|
| Sensor compatibility | All Tracetek sensor cables and point sensors or contact closure devices | |
| Maximum size of network | Number of TTSIM modules | 128 (less number of TT-NRMs installed) |
| | Maximum number of TT-NRM | 10 |
| Precision | ± 0.1% of circuit length | |
| Units | Feet, meters or zones | |
| Display language | English, French, German, Spanish, Japanese, Italian | |

ORDERING INFORMATION

| Catalogue Number | Part Number | Product Description |
|------------------|-------------|---|
| TTDM-128 | P000000091 | 115 V + 15%, - 20% ; 230 V ± 10% ; 50/60 Hz |
| TTDM-128-24V | P000000092 | 24 V AC + 5%, - 35% ; 24 V DC ± 20% |
| TT-NRM | E03411-000 | Network relay module |
| TTSIM-1 | see H56858 | Network sensor interface module |
| TTSIM-1A | see H57387 | Network sensor interface module with relay |
| TTSIM-2 | see H57346 | Network sensor interface module with relay |
| TTDM-4/20 | 688799-000 | 4-20 mA analog output board |
| TT-SUPERVISOR | 591416-000 | Windows based PC software |

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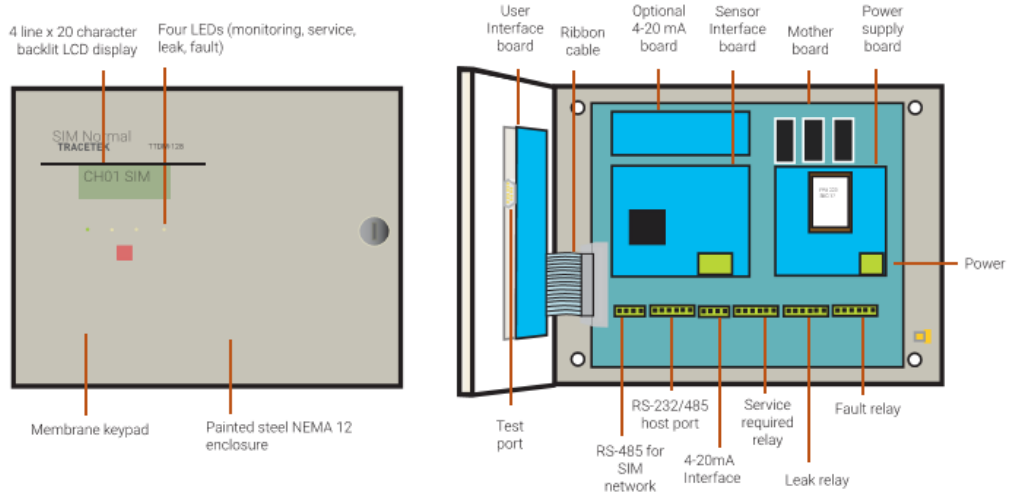
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TTDM-128 LEAK DETECTION MASTER MODULE



ENVIRONMENTAL

| | |
|------------------------------|------------------------------|
| 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 |

AUDIBLE ALARM

| | |
|-----------------------|--|
| Piezo electric | |
|-----------------------|--|

POWER CONSUMPTION

| | |
|---------------------|-------|
| TTDM-128 | 10 VA |
| TTDM-128-24V | 12 VA |

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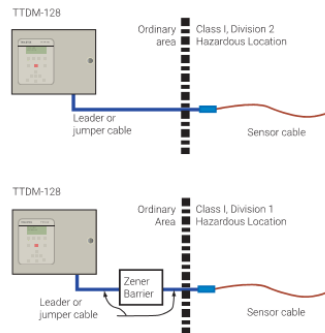
INTERFACES

| | | |
|---------------------------------------|---------------------------------------|-----------------------------------|
| Relays | Number | 3 (service required, leak, fault) |
| | Type | DPDT |
| | Ratings | 5 A at 250 V AC / 24 V DC |
| Tracetek network port | RS-485 (2 wire) | |
| External serial port (to host) | RS232 (3 or 5 wire) or RS485 (2 wire) | |

APPROVALS AND CERTIFICATIONS



The TTDM-128 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.



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 nVent Solutions to select proper zener barrier. The TTDM-128 enclosure is NEMA 12 (IP 54).

Important: All information, including illustrations, is believed to be reliable. Users, however, should independently evaluate the suitability of each product for their application.

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