# TRACETEK  TTDM-128
# LEAK DETECTION MASTER MODULE



300 mm
(11.81 in)

20 mm
(0.79 in)

261 mm
(10.28 in)

20 mm
(0.79 in)

85 mm
(3.35 in)

25 mm
(1 in)

200 mm
(7.87 in)

TRACETEK  *TTDM-128*

CH01 SIM
SIM Normal

240 mm
(9.45 in)

7 mm (5/16 in) mounting hole (4 places)
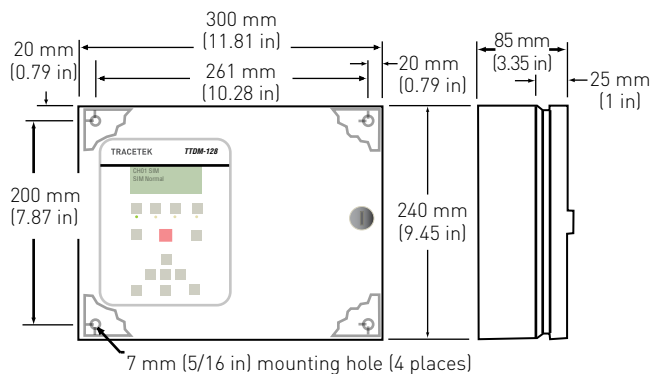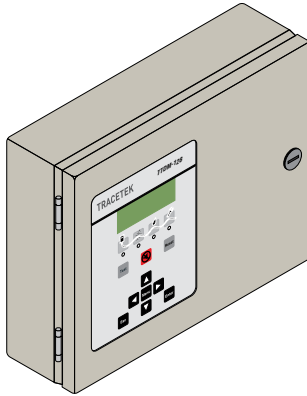
## PRODUCT OVERVIEW

### Easy setup and simple operation

The 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.
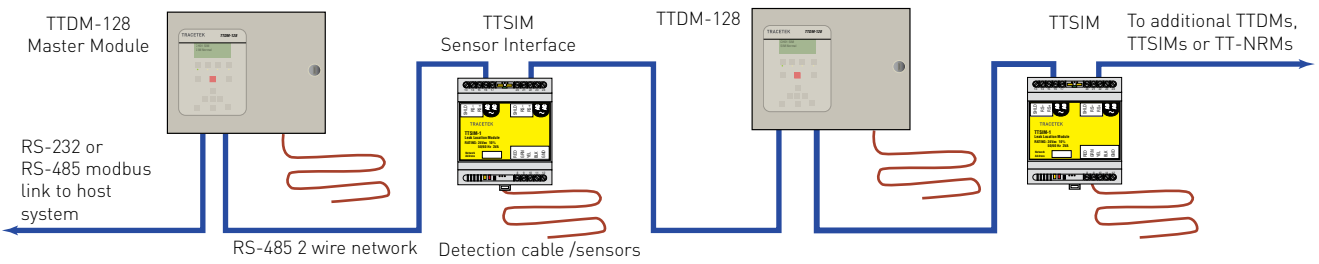
When liquid is detected on any of the sensors, the TTDM-128 sounds an alarm, closes relay contacts, turns on a front panel LED and displays the circuit identification and location of the leak on the alphanumeric display. The leak detection event is logged to a non-volatile event history file. All status 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.
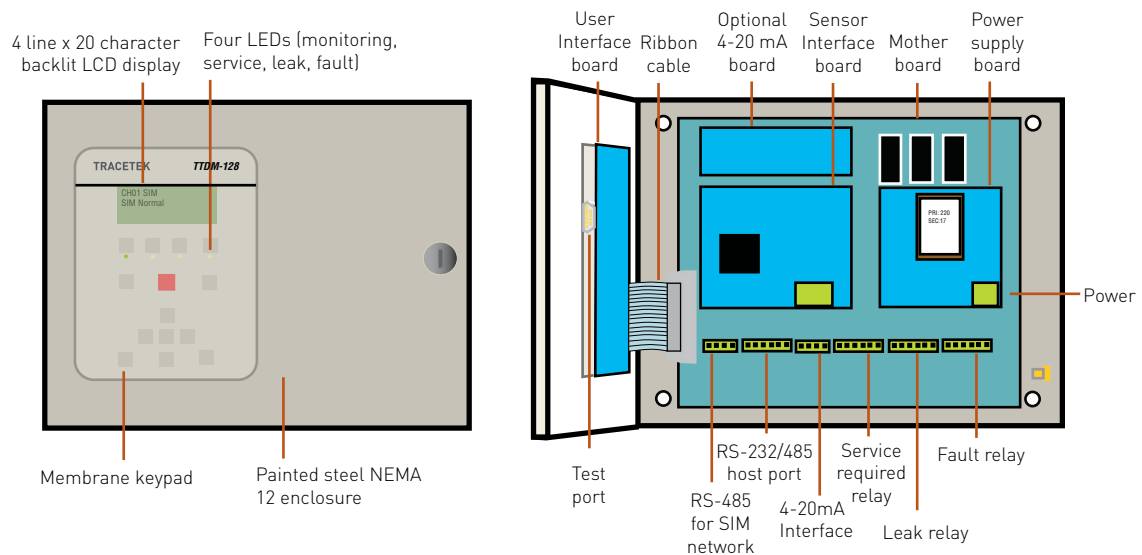
# TTDM-128

## TRACETEK NETWORK ARRANGEMENT



TTDM-128 Master Module

RS-232 or RS-485 modbus link to host system

RS-485 2 wire network

TTSIM Sensor Interface

Detection cable /sensors

TTDM-128

TTSIM

To additional TTDMs, TTSIMs or TT-NRMs

## GENERAL FEATURES

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

| | Catalog number | Part number | Description |
|---|---|---|---|
| **Supply voltage** | 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% |
| **Accessories** | 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 |

## TTDM-128 LEAK DETECTION MASTER MODULE



4 line x 20 character backlit LCD display

Four LEDs (monitoring, service, leak, fault)

Membrane keypad

Painted steel NEMA 12 enclosure

User Interface board

Ribbon cable

Optional 4-20 mA board

Sensor Interface board

Mother board

Power supply board

Power

Test port

RS-485 for SIM network

RS-232/485 host port

4-20mA Interface

Service required relay

Leak relay

Fault relay

## ENVIRONMENTAL

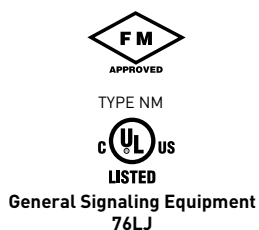| | |
|---|---|
| Storage temperature | –18°C to 60°C (0°F to 140°F) |
| Operating temperature | 0°C to 50°C (32°F to 122°F) |
| Humidity | 5% to 95% non-condensing |

## AUDIBLE ALARM

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

## POWER CONSUMPTION

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

## 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

FM APPROVED

TYPE NM

cULus LISTED

**General Signaling Equipment 76LJ**

TÜV SÜD
Production monitored
Safety tested

emc
EUR • USA • JPN

CE

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.



TTDM-128

Ordinary area | Class I, Division 2 Hazardous Location

Leader or jumper cable | Sensor cable
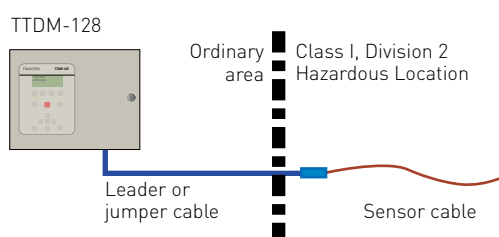
TraceTek sensors in Class I, Division 2, Groups A, B, C, D Hazardous Locations (Zone 2 in Europe).



TTDM-128

Ordinary Area | Class I, Division 1 Hazardous Location

Leader or jumper cable | Zener Barrier | Sensor cable
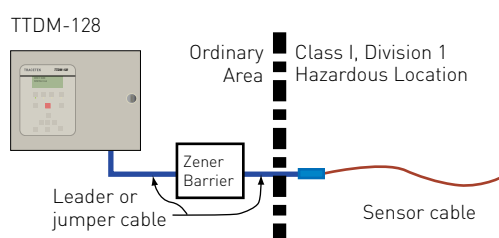
If protected by an agency approved zener barrier, TraceTek sensors in Class I, Division 1, Groups A, B, C, D Hazardous Locations (Zones 0 and 1 in Europe). Contact Pentair Thermal Building Solutions to select proper zener barrier.

The TTDM-128 enclosure is NEMA 12 (IP 54).