TRM Sensors LLC   Data Sheet

TRM-Easy5-SDR

Leak Detection Monitor Relay with Status Display

Product Description

TRM–Easy5-SDR is a micro-PLC that has been programmed to monitor several types of TRM sensor probes and 4-wire sensor cable .   The unit has 4 relay contact outputs and a display panel that indicates the relay's current operating mode and leak detection status.

The micro-PLC hardware is manufactured by Eaton Corporation and programmed by TRM Sensors LLC.   There are 4 digital inputs and 4 analog 0-10V inputs.   Alarms are signaled by 4 output relays (8A single pole, single throw) that are programmatically assigned to provide signals to external BMS panels, PLCs or similar site level alarm systems.

The TRM-SDR-Relay is manufactured to global standards for industrial control devices and is agency approved by UL to Canadian and US standards and approved by DNV for offshore/maritime uses.   The relay is CE marked and complies with RoHS. When programmed for use as a TRM-Easy5-SDR operates on either 12 Vdc or 24 Vdc.

The relay is programmed to support 7 different sensor configurations:
- TRM-DFS-3 indoor fuel sensor only –up to 20
- TRM-WLS water and coolant sensors (max 10) by themselves or in combination with TRM-DFS-3 sensor (max 10)
- TRM-CC outdoor sump sensors (2 per relay)
- TRM-UST fuel/water sensors for double wall tanks and pipe (2 per relay)
- TRM-IOS hydraulic and mineral oil sensors (up to 3)
- TRM-IOS in combination with TRM-WLS for elevator pit monitoring (2 of each type)
- Sensor Cable mode for TRM-Waterwire®-HT or TraceTek sensor cables

Operating mode is selected on screen at startup

The TRM-SDR-Relay is also available in a UL508A Certified NEMA1 industrial control panel ready for indoor installation.

Key Features

- DIN Rail module with display panel
- cULus DNV approvals,   CE marked
- Operates on either 12 Vdc or 24 Vdc
- 8 inputs, 4 From-A output relays
- Color keyed, on screen status display

Product Specifications

- Power Source: 12 Vdc or 24 Vdc
- IP20 DIN rail module
- 8 digital inputs; 4 can be configured as 0-10 Vdc analog inputs
- 6 x 16 character, LCD display, color back lighting
- 4 SPST (Form-A) output relays rated for 250V / 8A
- Dimensions: W 2.81″ H 4.33″ D 2.28″
- Weight: 7 oz. (0.2 kg)
- User selectable operating modes
- Operating Temperature: -13˚F to 131˚F (-25˚C to +55˚C)   (-40˚C to + 70˚C storage)
- Relative Humidity 5% to 95%, non-condensing
- Approvals: cULus, DNV, CE marked, RoHS compliant
- Full tech spec at https://www.trmsensors.com/documents
- Optional panel version is 12″ x 12″ x 6″ in a painted steel NEMA1 enclosure, UL508A Certified. Line voltage power with fused disconnect and terminal blocks for all field wiring
- An accessory remote alarm, TRM-Remote Alarm Type-RO, is available for both relay and panel option

TRM Sensors LLC   TRM-SDR-Relay

Operating Modes

DFS Only Mode:
    Inputs: Up to 20 x DFS-3 indoor fuel sensors in two loops of 1 to 10 sensors per loop
    Outputs: Status via display screen; one relay for leak detection on loop 1, one relay for leak detection on loop 2, one summary relay for any leak detection and one relay for any trouble including loss of power. Cable breaks are reported as alarms.

Combo WLS/DFS Mode:
    Inputs: Up to 10 x WLS (water coolant) and/or up to 10 DFS-3 (fuel) sensors
    Outputs: Status via display screen; one relay for fuel detection, one relay for water/coolant detection, one summary relay for any leak detection and one relay for any trouble including loss of power.

TRM-CC Mode:
    Inputs: Up to 2 TRM-CC outdoor sump sensors of any height
    Outputs: Status via display screen; one relay for fuel leak detection on probe 1, one relay for cable break on probe 1, one relay for fuel leak detection on probe 2, one relay for cable break on probe 2.

TRM-UST Mode:
    Inputs: Up to 2 TRM-UST interstitial probes for double wall tanks and pipe
    Outputs: Status via display screen; one relay for fuel leak detection on probe 1, one relay for cable break on probe 1, one relay for fuel leak detection on probe 2, one relay for cable break on probe 2.

TRM-IOS Mode:
    Inputs: Up to 2 TRM-IOS hydraulic / mineral oil sensors
    Outputs: Status via display screen; one relay for fuel leak detection on probe 1, one relay for leak on probe 2 one relay for loss of power, one relay for leak on either probe (summary).   Cable breaks are reported as alarms.

TRM-IOS/WLS "Elevator Pit" Mode:
    Inputs: 2 TRM-IOS and 2 TRM-WLS
    Outputs: Status via display screen; one relay for hydraulic leak in pit 1, one relay for water leak in pit 1, one relay for hydraulic leak in pit 2 and one relay for water leak in pit 2.

Sensor Cable Mode
    Input: Up to 1000 ft of TRM Waterwire-HT or TraceTek 1000/3000/5000 sensor cable.
    Output: Leak location and status via display screen: one relay for leak detection, one relay for trouble; one summary relay

Sample Setup / Status Screens:

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Operating Modes:        TRM SENSORS        TRM SENSORS        TRM SENSORS        TRM SENSORS
3 - TRM-CC Mode           DFS MODE          TRM-CC MODE        TRM-IOS MODE     ELVATOR PIT MODE
 Select Mode: 0
(Press ALT, then        SYSTEM NORMAL       CABLE BREAK       SYSTEM NORMAL       WATER LEAK!
 Up/Dwn and OK)
                                          TRM-CC PROBE #1                      WATER SENSOR #2
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