LIQUID LEAK DETECTION SYSTEMS

FG-DTM

Modbus Interface

Product Datasheet

- ▶ Merge Analog And Digital Systems
- ▶ Compatible With TTK 3 Digital Panels
- ▶ Easy To Configure And Operate
- ▶ Real-Time Status Via LED

Description

FG-DTM is a Modbus interface, designed to merge the product line of digital and analog systems. It collects information from analog panels and integrates them into the digital system. Therefore, the digital panel acts as central monitoring unit on which analog panels and all connected sense cables circuits can be supervised. Meanwhile, each analog panel acts as an independent local detection module.

In the event of a leak being detected on a local panel, it sounds an alarm, activates local relays, displays the location on the module and simultaneously sends signals to the digital panel, where all circuits are monitored. As a result, alarms are displayed at the same time on both the local panel and central monitoring panel. When the BMS is configured, all alarms will also be reported on this.

Features & Benefits

FEATURES

- FG-DTM is designed to be used with all 3 digital control panels of TTK:
  - FG-SYS: digital leak detection and location monitoring panel
  - FG-NET: digital leak detection and location monitoring panel
  - FG-BBOX: satellite device of FG-NET unit
- FG-DTM is fully compatible with FG-ALS4 and FG-ALS8 panels. More compatibilities will come up with other analog panels.
- The LED on the lid of the box indicates the box's status in real time:
  - Green blinking: correct response from the Modbus slave (analog control panel);
  - Red blinking: no response from the Modbus slave (analog control panel).
- FG-DTM is capable of monitoring up to 196 ft (60 m) of sense cables on each analog circuit of the FG-ALS8 panel; and up to 147 ft (45 m) for the FG-ALS4 panel.
- Up to 10 FG-DTM boxes can be connected on a FG-NET / FG-SYS / FG-BBOX circuit.
- Up to 98 ft (30 m) of distance of the RS485 line between a FG-DTM box and an analog panel.
- In the event of loss of the link with the analog control panel, all the activated addresses will transmit a cable break alarm.

BENEFITS

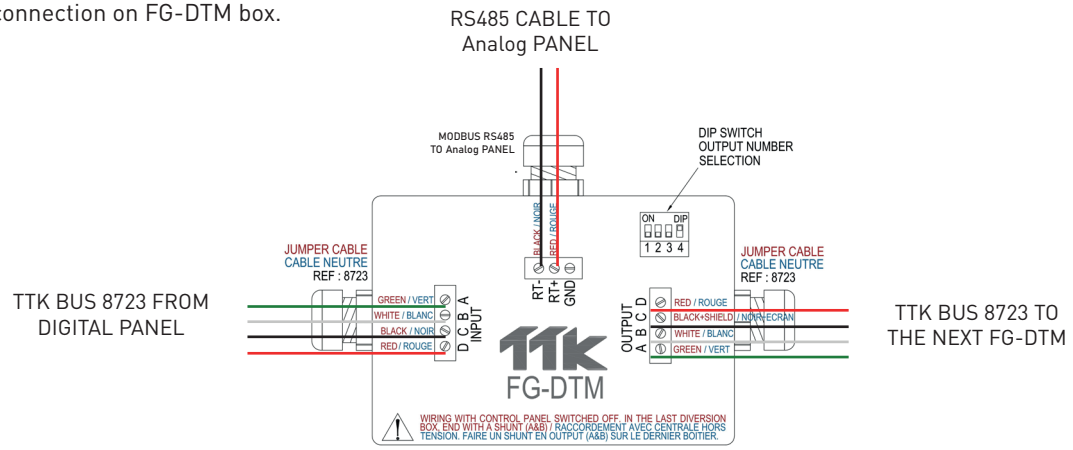
- FG-DTM is ideally suited for medium and large facilities where both centralized interface and local interface are required.
- In the event of alarm, both analog panel (local detection module) and digital panel (central monitoring unit) can display the alarm information simultaneously.
- Redundancy: In the event of a connection failure with the digital monitoring panel, the analog panel continues to operate independently.
- Fail-Safe: In the event of a system failure, the BMS continues to receive information through the local relays.
- Local relays can be activated automatically by the analog panel allowing the system to drive the external equipment such as a solenoid valve.

Technical Specifications

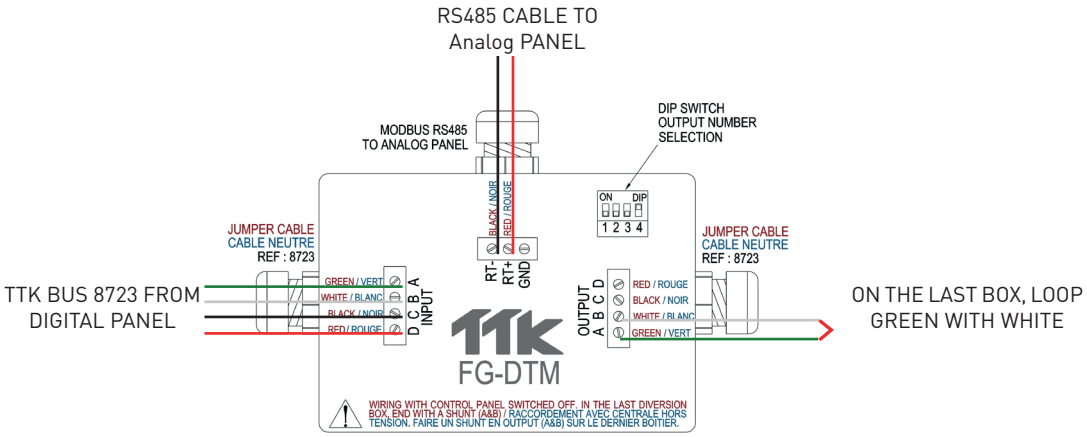
Compatibility	Analog panels: FG-ALS4, FG-ALS8 FG-DTM can be mixed on a digital system along with the following material: • FG-EC water sense cable • FG-ECP water point sensor • FG-AC acid sense cable • FG-OD sense cables via FG-DOD OD bus interface box Diversion boxes: • FG-DTCS addressable box • FG-DCTL addressable box • FG-DTC bus diversion box
Enclosure Type	• ABS POLYAC 707 (a natural ABS) • Rated UL94 HB • Halogen Free • IP67
Dimensions (W,H,D)	4.13'W x 2.95'H x 2.16'D (105 x 75 x 55mm)

Connection Schematic

Wires connection on FG-DTM box.



Wires connection and loop on the last FG-DTM box on a circuit.



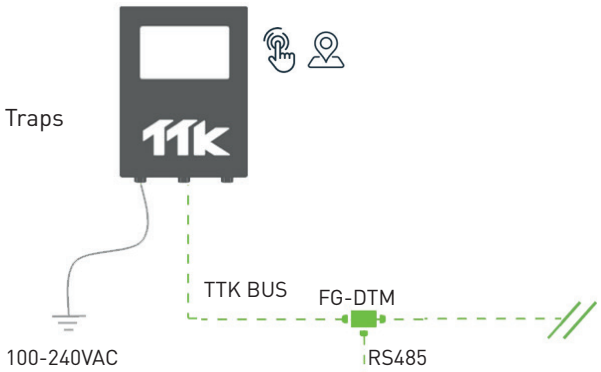
Design Schematic

Schematic 1

Basic integration of one analog detection panel FG-ALS8 and analog sense cables into a circuit of FG-NET digital panel.

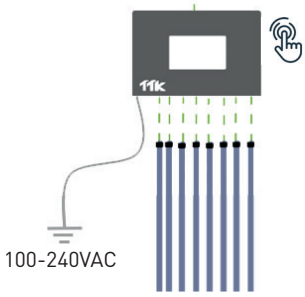
Digital Panel FG-NET Features:

- 8 configurable Relays
- 1 power Fail Relay
- 1 Ethernet Port (TCP/IP)
  - ↳ Modbus TCP/Emails/SNMP Traps
    Web Interface
- 1 Serial Port
  - ↳ RS232/RS422/RS485
    Modbus RTU



Touch Screen

Interactive Maps



Analog Panel FG-ALS8 Features:

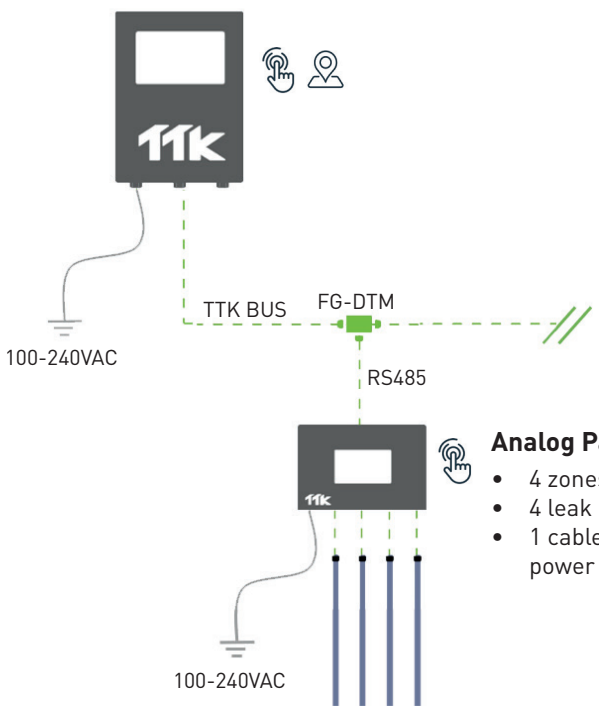
- 8 zones (up to 196 ft (60 m))
- 8 leak relays
- 1 cable break relay (common) + power fail relay

Design Schematic

Schematic 2

Basic integration of one analog detection panel FG-ALS4 and analog sense cables into a circuit of FG-NET digital panel.

DigitalPanel FG-NET Features:
Idem as in FG-ALS8 schema



Touch Screen

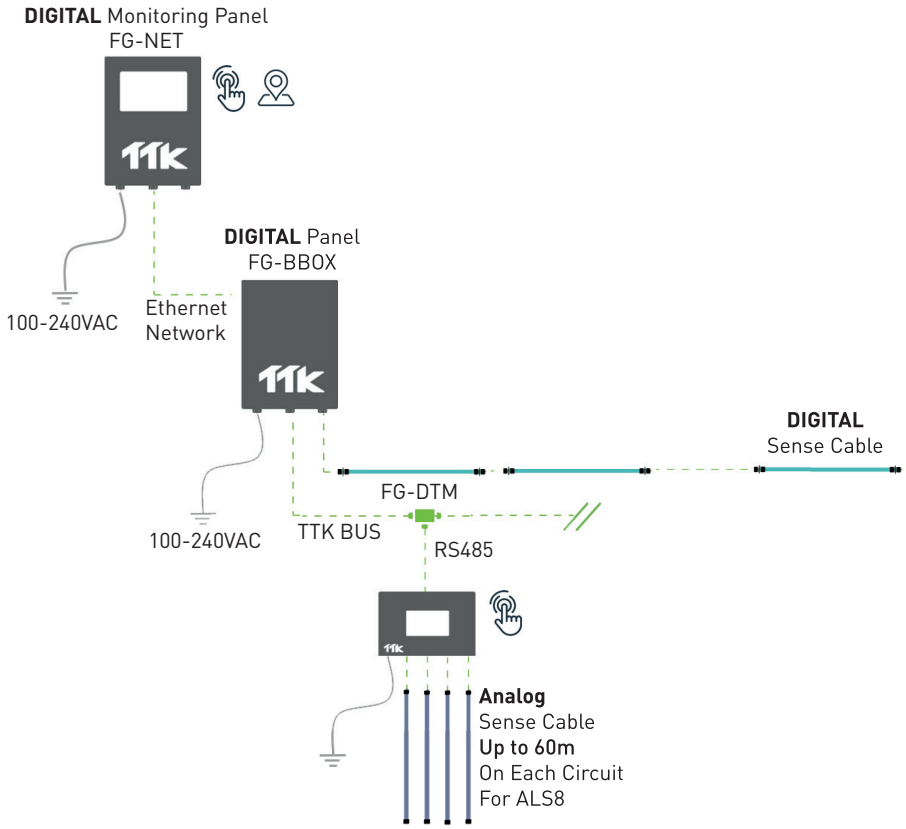
Interactive Maps

Analog Panel FG-ALS4 Features:

- 4 zones (up up to 147 ft (45 m))
- 4 leak relays
- 1 cable break relay (common) + power fail relay

Schematic 3

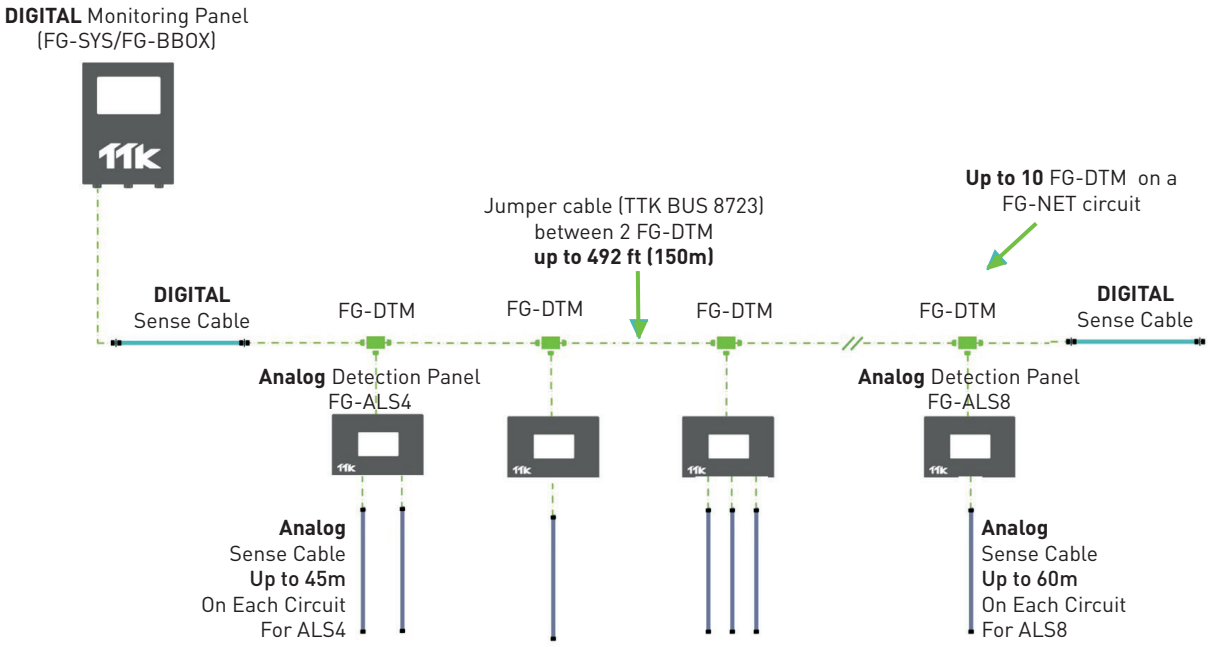
Integration of one analog detection panels FG-ALS8 and analog sense cables into a circuit of FG-BBOX panel, monitored by FG-NET panel via a standard Ethernet network.



Design Schematic

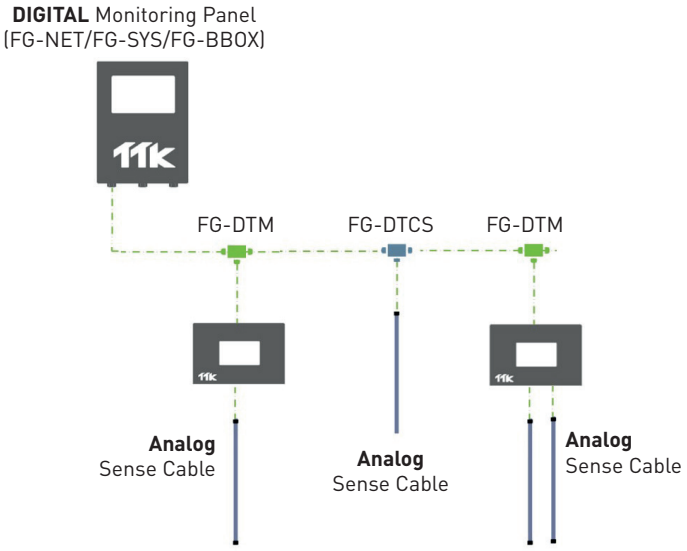
Schematic 4

Integration of 4 analog detection panels and analog sense cables into a circuit of FG-SYS digital panel, where other digital sense cables are connected.



Schematic 5

Integration of 2 analog detection panels into a circuit of FG-NET digital panel where a diversion box and analog sense cables are connected.



Certificates

CE

The FG-DTM unit meets the requirements of all European Standards in EN 50081 and EN 50082 EMC.
FG-DTM meets the TÜV requirements, according to IEC 61010-1/A2.

All the connections in the FG-DTM must be done with the power supply switched off.

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