

FG-DTM Modbus Interface

Product Datasheet





- Merge Analog and Digital Systems
- Compatible with TTK's 3 Digital Panels
- ► Easy to Configure and Operate
- ▶ Real-Time Status Indication 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.

Key Advantages

- The LED on the front of the enclosure displays its real-time status:
 - Blinking green: successful response from the Modbus slave (analog control panel);
 - Blinking red: no response from the Modbus slave (analog control panel).
- FG-DTM is capable of monitoring up to 60 m of sense cables on each analog circuit of the FG-ALS8 panel; and up to 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 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.

- 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 Data

Compatibility	Digital units: FG-NET, FG-SYS, FG-BBOX Analog units: 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 acids 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
Ingress Protection	IP68
Dimensions (W,H,D)	105 x 75 x 55mm
Operating Temperature	-15°C to 55°C

Connection Schematic

Wires connection on FG-DTM box.

ANALOG PANEL

MODBUS RS485
TO Analog PANEL

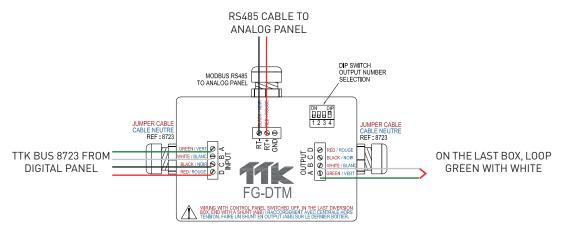
DIP SWITCH
OUTPUT NUMBER
SELECTION

TTK BUS 8723 FROM
DIGITAL PANEL

TTK BUS 8723 FROM
DIGITAL PANEL

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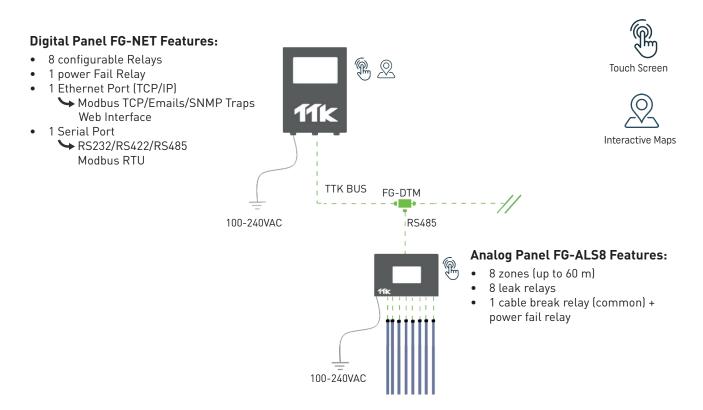
Wires connection and loop on the last FG-DTM box on a circuit.



Design Schematic

Schematic 1

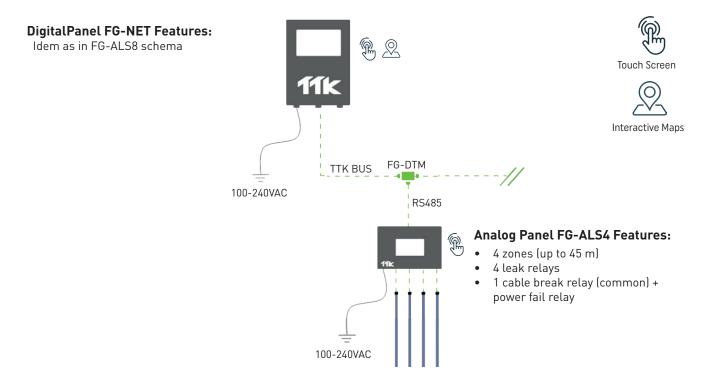
Basic integration of one analog detection panel FG-ALS8 and analog sense cables into a circuit of FG-NET digital panel.



Design Schematic

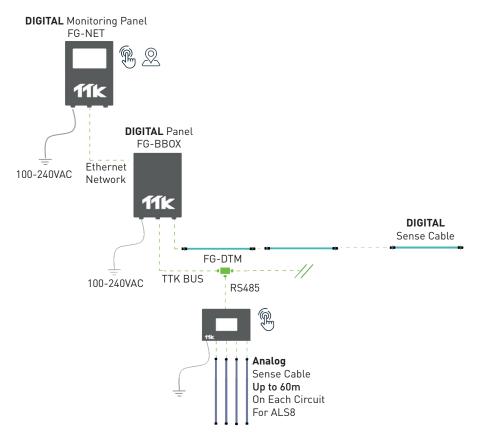
Schematic 2

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



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.



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.

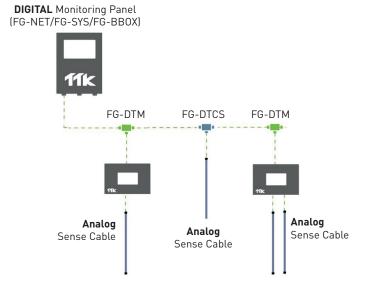
DIGITAL Monitoring Panel (FG-SYS/FG-BBOX) Up to 10 FG-DTM on a Jumper cable (TTK BUS 8723) FG-NET circuit between 2 FG-DTM up to 150m **DIGITAL DIGITAL** FG-DTM FG-DTM FG-DTM FG-DTM Sense Cable Sense Cable Analog Detection Panel Analog Detection Panel FG-ALS4 FG-ALS8 Analog Analog Sense Cable Sense Cable Up to 45m Up to 60m

Schematic 5

On Each Circuit

For ALS4

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



Certification



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On Each Circuit

For ALS8