



TTK FG-ALS4 Four-Zone Alarm and Location System Unit Installation Guide

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Panel Mounting

- Fix the panel to the wall using 4 screws (not included).
 - Five push-through holes are provided for installing the PG11 glands.
1. Power supply
 2. Relays
 3. Outputs 1&2
 4. Outputs 3&4
 5. JBUS/MODBUS
- Knock out the push-through holes from the outside.
 - Connect all plug-in terminals (refer to step 2).
 - Plug the terminals.
 - Close the box, starting by inserting the top side, and then push the bottom down. Lock, using the two available screws.
 - Power up from the circuit breaker

Electrical Connections

- Connect the sense cables following this color code:
 - A: Green
 - B: White
 - C: Black
 - D: Red
- Terminate unused outputs with two loops between connectors A & B and C & D.
- The wiring diagram is on the back page.
- Connect the relays:
 - COM: Common
 - NC: Normally Closed
 - NO: Normally Open
 - Five relays are available on FG-ALS4:
 - Relay 1 = leak zone 1
 - Relay 2 = leak zone 2

Relay 3 = leak zone 3

Relay 4 = leak zone 4

Relay 5 = cable-break all zones

- Connect the power supply following the signs:

Ground sign: Ground

N: Neutral

L: Live

Power supply : 100-240 V AC 50/60 Hz 0.25 A

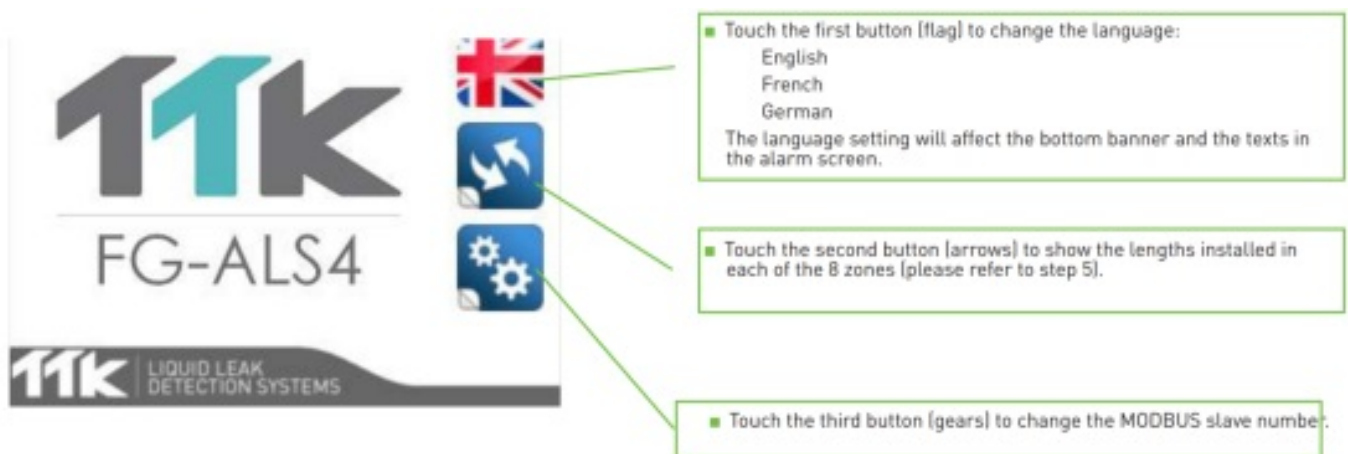
Capacity

The FG-ALS4 panel is designed to receive up to 45m (147 ft) of sense cable (FG-ECS, FG-ACS, FG-ECX, FG-ACX) per zone.

Powering-on the System

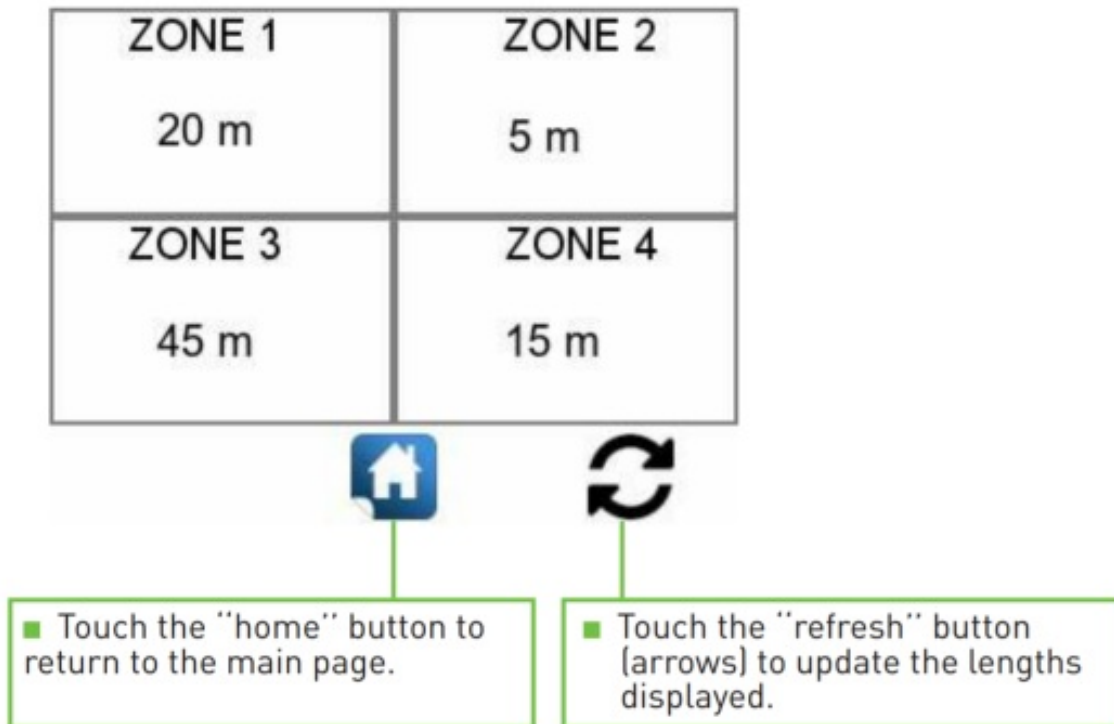
Power on from the circuit breaker:

The panel will sound and show "SYSTEM TEST" for 20 seconds on the display, and will then show the "home" screen:



Settings

- Touch the second button (arrows), the touch screen shows the lengths installed on each of the four zones:



- Alarm screen:

If a fault occurs (leak or cable-break), the leak alarms are represented by a drop of liquid;
 Cable-break alarms are represented by scissors and the "sensor" label.



The system will return to the "home" screen after 30 seconds of inactivity.

MODBUS

The MODBUS protocol implemented on FG-ALS4 allows the current status of the system to be supervised. The two types of alarm (leak and cable-break) are coded using different Modbus registers for each individual zone. The physical support of the MODBUS is two-wire RS485.

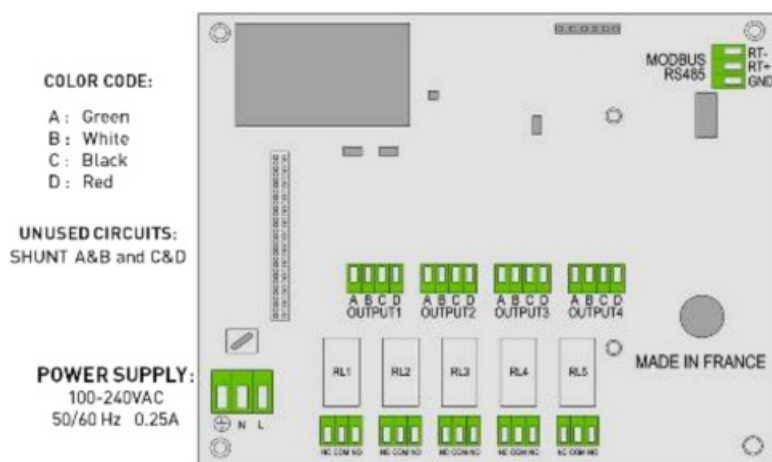
Serial port configuration	9600 B, 8 data bits, 1 stop bit, no parity
Communication protocol	MODBUS or JBUS, functions 3 or 4
Maximum number of FG-ALS connected to the same controller	31
Slave number	1 to 255
Maximum number of reading registers	16
MODBUS addresses in the memory	Register 1 = length zone 1 Register 2 = leak zone 1 Register 3 = cable-break zone 1 Register 4 = leak location zone 1 Register 5 = length zone 2 Register 6 = leak zone 2 Register 7 = cable-break zone 2 Register 8 = leak location zone 2 Register 9 = length zone 3 Register 10 = leak zone 3 Register 11 = cable-break zone 3 Register 12 = leak location zone 3 Register 13 = length zone 4 Register 14 = leak zone 4 Register 15 = cable-break zone 4 Register 16 = leak location zone 4

Format of the solution:

Slave number	Function	No. of bytes read	Byte 1	Byte 2	...	Byte N	CRC 16
1, 2, ..., 255	3 or 4	up to 32	XXh	XXh	...	XXh	XXXXh

• **Remarks:**

- The last panel on the serial link should be terminated with a 120 Ohms / 1W resistor between points RT- and RT+. The shielding of the data transmission cable should be connected to the controller's earth and to the terminal COM of each FG-ALS panel.
- Slave number 0 inhibits the MODBUS operation.
- It is advisable to leave at least 200 ms between the successive requests.



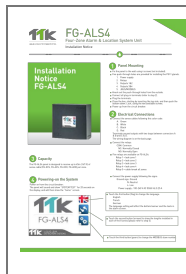
FG-ALS4 wiring diagram

FG-ALS4 Installation Notice EN_v1.0.8_062021

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