



# Installation Instructions FG-ALS4



## 1 Panel Mounting

- Fix the panel to the wall using 4 screws (not included).
- Five push through holes are available for the installation of 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 enclosure by inserting the top side, then push the bottom. Lock with the two available screws.
- Power up from the fuse spur.

## 2 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 the connectors A&B and C&D.

The wiring diagram is on the back page.

- Connect the relays :
  - COM : Common
  - NC : Normally Close
  - 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 = cablebreak all zones

- Connect the power supply following the signs:
  - Ground sign : Ground
  - N : Neutral
  - L : Live

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

■ Touch the first button (flag) to change the language:  
 English  
 French  
 German  
 The language setting will affect the bottom banner and the texts in the alarms screen.

■ Touch the second button (arrows) to show the installed lengths on each of the 4 zones (refer to step 5).

■ Touch the third button (gears) to change the MODBUS slave number.

## 3 Capacity

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

## 4 Powering on the System

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



## 5 Settings

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

ZONE 1 3 m	ZONE 2 7 m
ZONE 3 15 m	ZONE 4 0 m



Touch the "home" button to come back to the main page.

Touch the "refresh" button (arrows) to update the lengths displayed.

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

- Touch the third button (gears) to change the Modbus slave number.

MODBUS (1 - 255)

1	2	3	4	5
6	7	8	9	0

- Alarms screen:

In the case of faults (leak or cablebreak), the leak alarms are represented by a drop of liquid;  
Cablebreak alarms are represented by scissors and the "sensor" label.

ZONE 1 5 m	ZONE 2 Sensor
ZONE 3 OK	ZONE 4 Sensor

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

## 6 MODBUS

The MODBUS protocol implemented on FG-ALS4 allows the supervision of the current status of the system. The two types of alarms (leak and cablebreak) are coded using different MODBUS registers for each individual zone.

The physical support of the MODBUS is two-wire RS485.

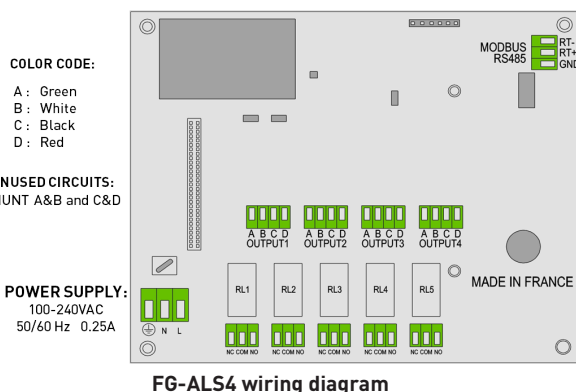
Serial port configuration	9600 B, 8 data bits, 1 stop bit, no parity
Communication protocol	MODBUS or JBUS, functions 3 or 4
Maximum number of FG-ALS connected to the same supervisor	31
Slave number	1 to 255
Maximum number of read registers	16
MODBUS Addresses in the memory	<p>Register 1 = length zone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

Format of the answer:

Slave number	Function	Num. 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 by a 120 Ohms/1W resistor between points RT- and RT+. The shielding of the data transmission cable should be connected to the supervisor's ground and to terminal COM of each FG-ALS panel.
- Slave number 0 inhibits the MODBUS operation.
- It is recommended to leave at least 200 ms between the successive requests.



FG-ALS4 wiring diagram

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- TTK Headquarters** / 19, rue du Général Foy, 75008 Paris, France / T : +33.1.56.76.90.10 / F : +33.1.55.90.62.15 / [www.ttk.fr](http://www.ttk.fr) / [ventes@ttk.fr](mailto:ventes@ttk.fr)
- TTK UK Ltd.** / 3 Luke Street London EC2A 4PX / United Kingdom / T : +44 207 729 6002 / F : +44 207 729 6003 / [www.ttkuk.com](http://www.ttkuk.com) / [sales@ttkuk.com](mailto:sales@ttkuk.com)
- TTK Pte Ltd.** / #09-05, Shenton House, 3 Shenton Way / Singapore 068805 / T : +65.6220.2068 / M : +65.9271.6191 / F : +65-6220.2026 / [www.ttk.sg](http://www.ttk.sg) / [sales@ttk.sg](mailto:sales@ttk.sg)
- TTK Asia Ltd.** / 2107-2108 Kai Tak Commercial Building / 317 Des Voeux Road Central / Hongkong / T : +852.2858.7128 / F : +852.2858.8428 / [www.ttkasia.com](http://www.ttkasia.com) / [info@ttkasia.com](mailto:info@ttkasia.com)
- TTK Middle East FZCO** / Building 6EA, Office 510 PO Box 54925 / Dubai Airport Free Zone / UAE / T : +971 4 70 17 553 / M : +971 50 259 66 29 / [www.ttkuk.com](http://www.ttkuk.com) / [cgalniche@ttk.fr](mailto:cgalniche@ttk.fr)
- TTK Deutschland GmbH** / Berner Strasse 34, 60437 Frankfurt / Deutschland / T : +49(0)69-95005630 / F : +49(0)69-95005640 / [www.ttk-gmbh.de](http://www.ttk-gmbh.de) / [vertrieb@ttk-gmbh.de](mailto:vertrieb@ttk-gmbh.de)
- TTK North America Inc** / 1730 St Laurent Boulevard Suite 800 / Ottawa, ON, K1G 5L1 / Canada / T : +1 613 566 5968 / [www.ttkcanada.com](http://www.ttkcanada.com) / [info@ttkcanada.com](mailto:info@ttkcanada.com)
- TTK USA Inc** / 7200 W 66th St / Bedford Park, IL 60638 / The United States / T : +1 630-518-4724 / [www.ttkusa.com](http://www.ttkusa.com) / [dmolk@ttkusa.com](mailto:dmolk@ttkusa.com)