FG-ALS8

Eight Zones Alarm & Locating System Unit

Installation Notice

Installation Notice FG-ALS8

1 Panel Mounting

- Fix the panel to the wall using 4 screws.
- Six push through holes are available for the installation of the PG11 glands.
    1. Power supply
    2. Outputs 1&2 and relays 1&2
    3. Outputs 3&4 and relays 3&4
    4. Outputs 5&6 and relays 5&6
    5. Outputs 7&8 and relays 7&8
    6. 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
- Nine relays are available on FG-ALS8:

Relay 1 = leak zone 1	Relay 2 = leak zone 2
Relay 3 = leak zone 3	Relay 4 = leak zone 4
Relay 5 = leak zone 5	Relay 6 = leak zone 6
Relay 7 = leak zone 7	Relay 8 = leak zone 8
Relay 11 = cablebreak all zones	

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

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

3 Capacity

The FG-ALS8 panel is designed to receive up to 100m (328 ft) 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:

- Touch the first button (flag) to change the language:
    - English
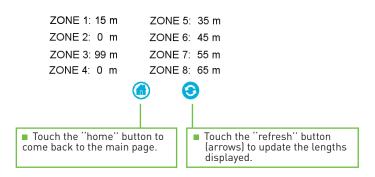   - French
    - German

  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 8 zones (refer to step 5).

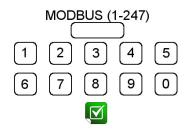- Touch the third button (gears) to change the MODBUS slave number.

5 Settings

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

ZONE 1: 15 m	ZONE 5: 35 m
ZONE 2: 0 m	ZONE 6: 45 m
ZONE 3: 99 m	ZONE 7: 55 m
ZONE 4: 0 m	ZONE 8: 65 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 (1-247)

| 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.

ZONES

1:	CAPTEUR	5:	CAPTEUR
2:	30 m	6:	OK
3:	99 m	7:	OK
4:	OK	8:	45 m

DÉTECTION DE FUITE DE LIQUIDE

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

Sensitivity
- The sensitivity of the unit is adjustable via the potentiometer on the PCB.
  - Clockwise : more sensitive
  - Counter-clockwise : less sensitive

6 MODBUS

The MODBUS protocol implemented on FG-ALS8 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.
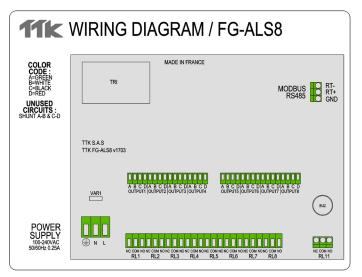
The physical support of the MODBUS is two-wire RS485.

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 247
Maximum number of read registers	16
MODBUS Addresses in the memory	Register 1 = length zone 1 Register 2 = leak zone 1 Register 3 = cablebreak zone 1 Register 4 = leak location zone 1 Register 5 = length zone 2 Register 6 = leak zone 2 Register 7 = cablebreak zone 2 Register 8 = leak location zone 2 Register 9 = length zone 3 Register 10 = leak zone 3 Register 11 = cablebreak zone 3 Register 12 = leak location zone 3 Register 13 = length zone 4 Register 14 = leak zone 4 Register 15 = cablebreak zone 4 Register 16 = leak location zone 4 From register 17 to 32 for zones 5,6,7, 8

Format of the answer:

Slave number	Function	Num. of bytes read	Byte 1	Byte 2	...	Byte N	CRC 16
1, 2, ..., 247	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-ALS8 panel.
- Slave number 0 inhibits the MODBUS operation.
- It is recommended to leave at least 200 ms between the successive requests.

TTK WIRING DIAGRAM / FG-ALS8

COLOR CODE :
A=GREEN
B=WHITE
C=BLACK
D=RED

UNUSED CIRCUITS :
SHUNT A-B & C-D

MADE IN FRANCE

TRI

MODBUS RS485
RT-
RT+
GND

TTK S.A.S
TTK FG-ALS8 v1703

VAR1

A B C D | A B C D | A B C D | A B C D
OUTPUT1 | OUTPUT2 | OUTPUT3 | OUTPUT4

A B C D | A B C D | A B C D | A B C D
OUTPUT5 | OUTPUT6 | OUTPUT7 | OUTPUT8

BUZ

POWER SUPPLY
100-240VAC
50/60Hz 0.25A

N L

NC COM NO NC COM NO NC COM NO NC COM NO NC COM NO NC COM NO NC COM NO NC COM NO
RL1 RL2 RL3 RL4 RL5 RL6 RL7 RL8

NC COM NO
RL11