

FG-ALS Alarm Locating Unit Installation

1. Fixing the FG-ALS Alarm Location Unit

The FG-ALS Alarm Location Unit is available in wall mounted version (165 x 85 x 55 mm).

Two of the three cable glands are placed on the FG-ALS Alarm Unit, the last one can be screwed in the place of plug PG7.

Use the two fixing holes in the lower part of the unit box. Release the higher part of the box of the lower part which is maintained by two screws. These two parts could be easily dismantled after mural fixing. Withdraw carefully the higher part with the PCB (printed circuit board).



The FG-ALS Alarm Location Unit wall mounted version contains:

- 1 FG-ALS Alarm Unit: 230-240 VAC
- 3 PG cable glands: 2 PG7 + 1 PG9
- 1 plug PG7
- 1 Installation Instructions
- 1 Certificate of Compliance

2. Connection and Adjustment

2.1 Power Connection	FG-ALS Alarm Unit is powered into 230-240 VAC only. The maximum section of the cable is of 14 AWG for 230-240 VAC. Use PG9 cable gland for the cable 230 V.
2.2 Connection of the Dry Relays	The dry relays are free of potential. The maximum section of the cables is of 18 AWG. - Dry Contact for Leak: The leak contact transfers the information of leak to a PC (or supervisor), allowing automated equipment control. - Dry Contact for Cable Break: A specific contact is activated in case of cable break. A power supply failure also activates this contact. Relay of Leak and Relay of Cable Break: Simple relay: COM-NO-NC Max. commutated Voltage: 125 VAC / 60 VDC
2.3. Serial Interface Physical Support	Opto-isolated Two-Wire RS485
2.4. Serial Link Parameters	9500 Bauds, 8 Data Bits, 1 bit Stop, no Parity
2.5. Supported Protocol	Modbus, Functions 3 and 4
2.3. Adjustment of the Detection Sensitivity	You can adjust the detection sensitivity, using the potentiometer (P1). The adjustment factory corresponds to the maximum sensitivity (1 turn).

FG-ALS Alarm Locating Unit Description

The FG-ALS Alarm Location Unit is designed to be used with two kinds of TTK analogue sense cables: random FG-ECS, FG-ACS and pre-connected sense cables FG-ECX, FG-ACX. It allows the leak detection and location of liquids.

The appearance of a fault (leak, cable break) is detected in the following way:

- An audible alarm is triggered;
- A luminous diode turns on;
- A dry contact is activated to transfer the alarm information to remote monitoring equipments.
- JBUS/MODBUS protocol is communicated to BMS.
- The display on the front face shows the leak location (in metre).

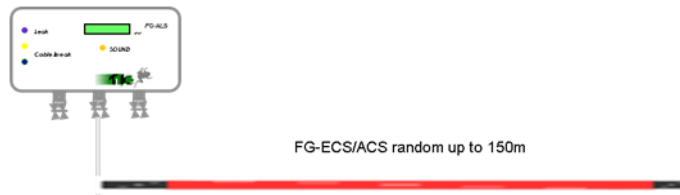
To stop the audible alarm, press the "reset" button. The diode and the dry contact remain activated as long as the fault is present. When the fault disappears, the diode switched off, the relay returns to its original normal status and the content of the display disappears.

The maintenance of the system is recommended for every six months minimum.

Sense Cables Connection

1. Connection of Sense Cables FG-ECS or FG-ACS

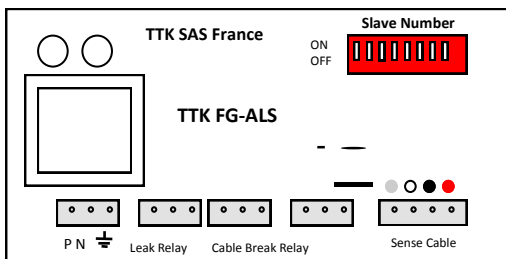
A junction with a length of 3,5 metres of Belden jumper cable on each length of FG-ECS and FG-ACS, allows a simple connection to the FG-ALS alarm locating unit.



2. Connection of Sense Cables FG-ECX, FG-ACX or FG-HC2

To connect the FG-CLX leader cable, refer "FG-SYS installation guide" chapter 1, sector 3.3 "Connection of FG-CLC leader cable".

The FG-CLX leader cable, connected to the FG-ALS alarm unit with a female connector, at its extremity. The beginning of the sense cable thus corresponds at its extremity with a male connector. Connect the first sense cable to the leader cable, coming from the FG-ALS alarm unit.



To connect the various cables (leader cable, power supply and relays) at the corresponding connector block.

Power supply 230-240 V ca	N : Neutral P : Live ⏏ : Earth
RS485	R1 : COM R2 : RT+ R3 : RT-
Cable Break Relay	R1 : NO R2 : COM R3 : NC
Leak Relay	R1 : NO R2 : COM R3 : NC
FG-ECS or FG-ACS or FG-ECX or FG-ACX	A : Green wire B : White wire C : Black wire D : Red wire
Potentiometer (in blue colour) P1 for adjusting sensitivity of detection	

Material recommended (*) for a complete installation with FG-ALS Alarm Locating Unit:

FG-ALS	Wall Mounted Alarm Location Unit
FG-ECS	Water Sense Cable Cut to Length in Roll of 400m
FG-ACS	Acids Sense Cable Cut to Length in Roll of 400m
FG-ECX15/7/3	Water Sense Cable in 15/7/3m
FG-ACX15/7/3	Acids Sense Cable in 15/7/3m
CFC100	Hold-down Clips and Adhesive (Set of 100)
ES40	Signal Tags (Set of 40)



Caution: All connections of the connector blocks must be done with FG-ALS Alarm Locating Unit supply switched off.

Commissioning Guide

Normal Operation

- Switched on the FG-ALS Alarm Unit
- An audible alarm is triggered, 3 diodes switch on, the display shows the total length of sense cable installed.
- Alarm turns off, the green diode remains on, the display switches off.
- The Alarm Location Unit is under operation.

Simulation of leak

- Place water directly on the sense cable.
- The red diode switches on, the audible alarm resounds and the leak contact is activated. The display shows the location of the origin of the leak, in metre.
- Press on the button to switch off the audible alarm.
- Absorb water with a dry duster.
- The red diode turns off, the displays switches off and the dry contact back to its normal position.

Simulation of cable break

- Disconnect the sense cable from FG-ALS Alarm Unit, block Cable Break.
- The yellow diode switches on, the audible alarm is triggered and the cable break contact is activated.
- Press on the button to switch off the audible alarm.
- Connect the cable to the FG-ALS Alarm Location Unit.
- The yellow diode turns off and the dry contact back to its normal position.

ABC steps:

A. Carry out and place a clear and precise installation drawing close to the FG-ALS Alarm Location Unit.

B. Make sure that the following documents are at the disposition of the Customer:

- FG-ALS Alarm Location Unit data sheet
- Drawing of the installation
- Installation Instructions
- Certificate of Compliance

C. Inform the Customer, it is recommended to take out maintenance operation twice per annum on the system.

Company _____

Operator name _____

Date __/__/__

This brochure with its photos, illustrations and charts were carefully prepared, but may only be taken as examples. TTK cannot guarantee that the information given contains no errors or omissions and will accept no responsibility related to the usage of its equipment. TTK's only obligations are those set forth in the Standard Terms and Conditions of Sale and will not under any circumstances be held liable for any incidental, indirect or consequential damages arising from the sale, resale or misuse of this product. The purchasers are the sole judges of the product's adaptability to the use for which it is destined. FROGSYS and TOPSurveillance are trademarks of TTK SAS.

TTK S.A.S. headquarter 4 rue du Chemin Vert, 92110 Clichy, France Tel: +33.1.56.76.90.10 Fax: +33.1.55.90.62.15 www.ttk.fr ventes@ttk.fr