

- ▶ Digital Pin-Point Leak Location
- ▶ Embedded Microprocessor
- ▶ LED Status Indicator
- ▶ Detects Water, Acid and Corrosive Chemical Liquids
- ▶ Pre-connected in Standard Lengths
- ▶ Dust-proof Feature

## Description

- The TTK digital sense cable FG-AC detects and pin-points the location of water, acid and corrosive chemical liquids at any point along its length.
- The FG-AC sense cable is designed for the FG-SYS or the FG-NET digital units to respond intelligently in the event of any leaks of liquids.
- The FG-AC sense cable is installed in critical areas in order to provide permanent protection to limit the financial consequences of an undetected water and acid leak. The typical application are in laboratories, fab plants, semi-conductor plants, cleanrooms, etc.
- The FG-AC sense cable is made in corrosion and abrasion resistant cable that can be reused after cleaning. It is recommended to install FG-AC in a dry and clean environment for an efficient detection.

## Features & Benefits

### FEATURES

- Available in standard and pre-connected lengths of 3, 7 and 15 m. They can be interconnected to provide an expandable network of leak detection.
- Each FG-AC sense cables contain an embedded microprocessor; it intelligently monitors the cable status, it provides continuous real-time communication to the TTK digital units.
- Each cable has a high visibility LED to provide quick green/red identification of the cable status:
  - Green LED: normal status, no alarm raised;
  - Red LED: leak detection on the cable;
  - LED off: cablebreak on this or any upstream cable.
- Small diameter, light, flexible and in an easily identifiable green and white colour.
- Ingenious design: four sensing wires of helical construction, compressed and connected on an extruded central core, **insensitive to dust contamination**.

- Fixing clips available to fasten the sense cables.
- A set of Belden 8723 jumper cables and connection accessories gives continuity to each circuit.
- Minimum bend radius for FG-AC sensing cable: 1.38' or 35mm.

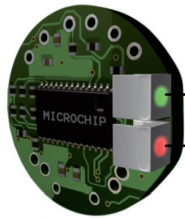
### BENEFITS

- Detects and pin-points the location of water and acid leak to the nearest meter along the length of the cable.
- Detects and localizes cablebreak on the cable.
- Short drying time.
- The FG-AC sense cable is a non-absorbent design that **can be reused** after cleaning, reducing the maintenance costs.
- **Efficiently prevent false alarms** that have been triggered by **dust, condensation and metal parts**, thanks to the unique and patented cable structure.
- Easy installation with pre-finished male and female connectors.
- Flexible design: in both liner and sector mode (via FG-DTC box).

## Technical Data

<b>Compatibility</b>	Digital units: FG-SYS; FG-NET; FG-BBOX Diversion box: FG-DTC
<b>Operating Temperature</b>	-40° to 60°C
<b>Minimum Bend Radius</b>	20 mm
<b>Maximum Length of Digital Sense Cable per Unit</b>	Up to 120 lengths of FG-AC, connected to 3 circuits
<b>Connector Type</b>	FCI-Clipper
<b>Weight</b>	25 g/m
<b>Sense Cable Diameter &amp; Material</b>	8 mm (without connector) in PVDF jacket
<b>Four Sensor Wires Diameter &amp; Material</b>	1.2 mm with PE jacket
<b>Core Material</b>	PE-based polymer
<b>Liquid Quantity to Active Alarm</b>	50-100mm on the sense cable
<b>Drying Time</b>	10 seconds after drying the sense cable
<b>Breaking Strength for Sense Cable</b>	Minimum 75 kg
<b>FG-AC Colour</b>	White and green

# Product Diagram



## Embedded Microprocessor in Female Connector:

- Green LED: Normal Status
- Red LED: Leak Detected on the Cable

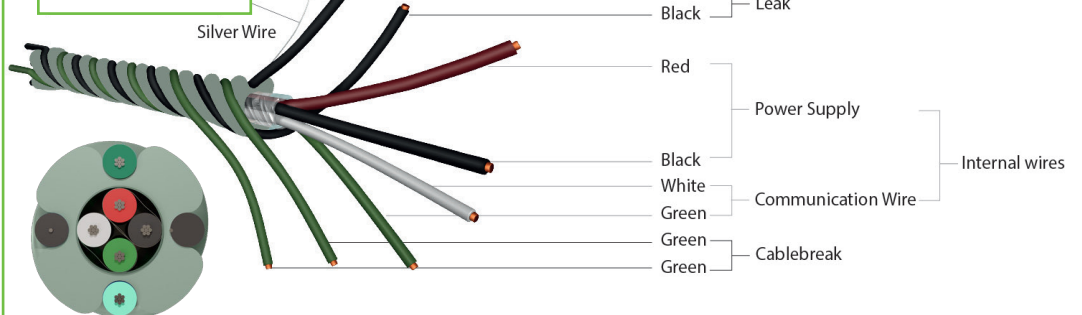
## Female Connector with Addressable Electronic Module:



This ingenious cable structure allows the cable to:

- sense only ingress acid/ water,
- and not to be disturbed by the presence of dust and all kinds of conductive residue from the environment that has accumulated on the cable surface; thus, efficiently preventing contamination alarms.

Unique Dust-Proof Feature Preventing False Alarms



## Technical Information

In an aqueous environment, the resistance of the following products is as follows:

- A = The cable completely resists in the presence of the liquid considered.
- B = The cable resists, but undergoes a slow corrosion.
- C = The cable corrodes rapidly in the presence of the liquid considered.

In all cases where a leak is detected, it is advisable to identify the source of the leak and to repair the leak quickly. In most cases the contaminated FG-AC cable can be washed and re-used.

This list is not exhaustive, for other chemicals, specific concentrations or temperatures please consult with your TTK representative.

Acetic acid	A	Hydrofluoric acid	A	Sea water	A
Ammonium hydroxide	B	Liquid Chlorine	A	Silver nitrate	A
Carbonic acid	A	Nitric acid	A	Sodium hydroxide	B
Caustic soda	A	Peracetic acid	B	Sodium hypochlorite	A
Formic acid	A	Phosphoric acid (95%)	A	Sodium sulfate	A
Glucose	A	Potassium hydroxide	B	Sulfuric acid	A
Hydrochloric acid	B	Salicylic acid	A		

## Identification Codes

FG-AC15	Addressable Acids Sensing Cable in 15m With Connectors
FG-AC7	Addressable Acids Sensing Cable in 7m With Connectors
FG-AC3	Addressable Acids Sensing Cable in 3m With Connectors
Accessories	
FG-CLC	Leader Cable 3.5 m, on 'TTK Bus 8723'
FG-NC(x)	Belden jumper cables in variety of lengths (x): 3, 7, or 15 m
FG-TMC	Digital End Plug for FG-EC/AC Cables
FG-DTC	Diversion Box for 'TTK Bus 8723'
CF-EC100	100 Hold-down Clips with adhesive for Water & Acids Cables
ES-EC	40 Tags for Water & Acids Cables

## Certificates



- All TTK sensing cables are designed as a part of the leak detection system thus included in the approval certification for TTK monitoring panels.
- FG-NET and FG-SYS systems meet the requirements of all European Standards in EN 50081 and EN 50082 EMC.
  - FG-NET and FG-SYS systems meet the TÜV requirements, according to IEC 61010-1/A2.
  - FG-NET and FG-SYS systems are UL Listed.

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