

- ▶ Digital Pin-Point Leak Location
- ▶ Embedded Microprocessor
- ▶ Detects Water, Acid and Corrosive Chemical Liquids
- ▶ Pre-connected in Standard Lengths
- ▶ Unique Dust-Proof Feature Efficiently Preventing False Alarms

## 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 9, 22 and 49 ft (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.
- Minimum bend radius for FG-AC sensing cable: 1.38" or 35mm.

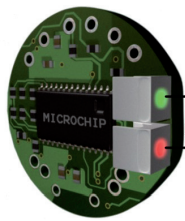
### BENEFITS

- 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).
- Belden 8723 for plenum rated applications.

## Technical Data

<b>Compatibility</b>	Digital units: FG-SYS; FG-NET; FG-BBOX Diversion box: FG-DTC
<b>Operating Temperature</b>	-40° to 140°F (-40° to 60°C)
<b>Minimum Bend Radius</b>	790 mils (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>	0.27 oz/ft (25 g/m)
<b>Min. bending radius</b>	1.38" (35mm)
<b>Breaking Strength for Sense Cable</b>	Minimum 165.35 lb (75 kg)
<b>Sense Cable Diameter &amp; Material</b>	310 mils (8 mm) (without connector) in PVDF jacket
<b>Four Sensor Wires Diameter &amp; Material</b>	47 mils (1.2 mm) in PVDF jacket
<b>Core Material</b>	Plenum cable
<b>Liquid Quantity to Active Alarm</b>	1.97-3.94 in (50-100 mm) on the sense cable
<b>Drying Time</b>	10 seconds after drying the sense cable
<b>FG-AC Color</b>	White and green

# Product Diagram



## Embedded Microprocessor in Female Connector:

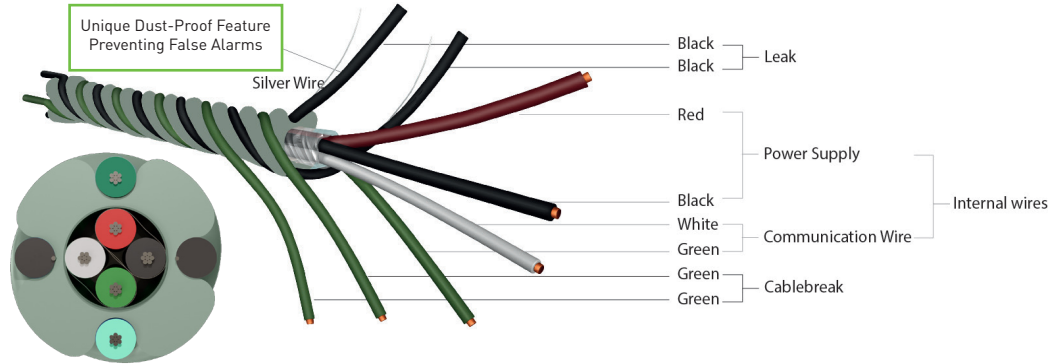
- Green LED: Normal Status
- Red LED: Leak Detected on the Cable

## 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.



## 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 (49 ft) With Connectors
FG-AC7	Addressable Acids Sensing Cable in 7m (22 ft) With Connectors
FG-AC3	Addressable Acids Sensing Cable in 3m (9 ft) With Connectors
Accessories	
FG-CLC	Leader Cable 11.5 ft (3.5 m), on 'TTK Bus 8723'
FG-NC(x)	Belden jumper cables in variety of lengths (x): 9, 22 or 49 ft (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



FG-AC sense cable is compliant to NFPA 262 (known also as UL910). NFPA: National Fire Protection Association

FG-AC sense cable has passed successfully the UL719 test for abrasion resistance of jacket on flat cable.

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.

This brochure has been carefully prepared to ensure technical accuracy but is only intended for promotional use. TTK cannot guarantee that the information contained herein contains no errors or omissions, and hence does not accept responsibility related to the use of its equipment. TTK maintain its obligations set forth in the Standard Terms and Conditions of Sale and will not, under any circumstances, assume liability for any incidental damages, indirect or consequential, arising from the sale, resale, use or misuse of this product. The purchaser(s) accept their responsibility as the sole judge(s) of the adaptability of the product for the intended use.

FG-NET, FG-SYS and TOPSurveillance are trademarks of TTK S.A.S. © TTK 2024

- 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 : 0207 729 6002 / F : 0207 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) / [cgalmiche@ttk.fr](mailto:cgalmiche@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)