FG-AC
Digital Acids and Water Sense Cable

Product Datasheet

► Digital Pin-Point Leak Location
► Embedded Microprocessor
► Acids, Corrosive Chemical Liquids and Water Detection
► Unique Dust-Proof Feature Efficiently Preventing False Alarms

Description

■ The TTK digital sense cable FG-AC detects and pin-points the location of acids, corrosive chemical liquids and water at any point along its length.

■ The FG-AC sense cable is designed for the FG-SYS or the FG-NET digital units to smartly respond to 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 acids leak. The typical application are in laboratories, fab plants, semi-conductor plants, cleanrooms, etc.

■ The FG-AC sense cable can be reused after cleaning. It is recommended to install FG-AC in a dry and clean environment for an efficient detection.
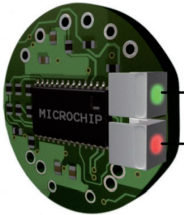
Key Advantages

■ Available in standard and pre-connected lengths. 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 light gray color.
■ 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.
■ Detects and pin-points the location of acids and water leak to the nearest meter along the entire length of the cable.
■ Detects and localizes cablebreak on the cable.
■ Offers short drying time.
■ The FG-AC sense cable is a non-absorbent design that **can be reused** after cleaning, reducing the maintenance costs.
■ **Efficiently prevents 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

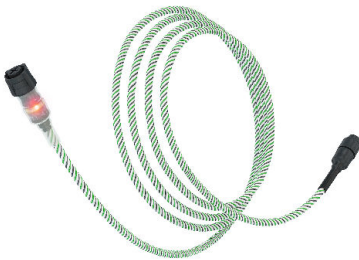|	
Compatibility	Digital units: FG-SYS; FG-NET; FG-BBOX Diversion box: FG-DTC
Reusability	Reusable, as long as the cable hasn't been damaged by prolonged immersion in liquid
Drying Time for Cable After Leak	Less than 10 seconds
Sense Cable Material & Nominal Diameter	PVDF, 0.3 in (± 0.02 in) (7.5 mm (± 0.5 mm)
Sensor Wires Material & Diameter	PVDF, 0.05 in (1.2 mm)
Core Material	Plenum cable
Sense Cable Weight (9, 22, 49 ft)	0.66 lb, 1.10 lb, 2.65 lb (0.3 kg, 0.5 kg, 1.2 kg)
Minimum Bend Radius	0.79 in (20 mm)
Sense Cable Color	Green and light gray
Operating Temperature	5°F to 131°F (-15°C to +55°C) (Note: The sense cable itself is rated for temperatures up to +185°F (+85°C).)
Ingress Protection	IP 67

Product Diagram

**Embedded Microprocessor
in Female Connector:**

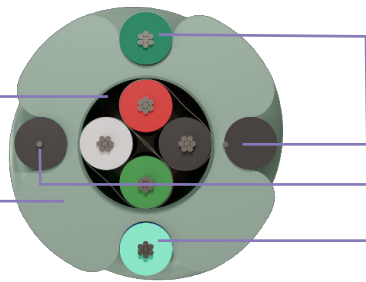→ Green LED: Normal Status

→ Red LED: Leak Detected
on the Cable

This ingenious cable structure allows the cable to:
- **sense only ingress acids/ 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

FG-AC Sense Cable

FG-AC Sense Cable Cutting View

Core Material: Plenum Cable

Sense Cable Material: PVDF

Four Sensor Wires Material: PVDF

Non-contractual images

Chemical Resistance

In an aqueous environment, the cable's resistance to various products is categorized as follows:

- A: The cable is resistant but experiences slow corrosion over time.
- B: The cable corrodes rapidly when exposed to the liquid in question.

In all cases where a leak is detected, it is recommended to quickly identify and repair the source of the leak. Avoid leaving the cable in contact with the liquid. In most instances, the contaminated FG-ACS cable can be cleaned and reused.

This list is not exhaustive. For information regarding other chemicals, specific concentrations, or temperatures, please consult 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-AC3	Addressable Acids Sense Cable in 9 ft (3 m) with Connectors
FG-AC7	Addressable Acids Sense Cable in 22 ft (7 m) with Connectors
FG-AC15	Addressable Acids Sense Cable in 49 ft (15 m) with Connectors
Accessories:	
FG-CLC-PL	Plenum Leader Cable 11.5 ft (3.5 m)
FG-NC'N'-PL	Plenum Neutral Cable 'N': 9, 22, 49 or 98 ft (3, 7, 15 or 30 m)
FG-TMC	End Termination
FG-DTC	Digital Diversion Box
CF-EC100	100 Hold-down Clips with Adhesive
ES-EC	40 Signal Tags

Certification

**FG-AC sense cable is compliant to NFPA 262 (known also as UL910). NFPA: National Fire Protection Association
All TTK sense cables are designed as a part of the leak detection system and were used for the approval certification for TTK monitoring panels.**
- **FG-NET and FG-SYS are UL Listed.**
- **FG-NET system is certified FM7745.**