FG-ACS
Acids and Water Sense Cable

TTK LIQUID LEAK DETECTION SYSTEMS
CHEMICAL DIVISION

Product Datasheet

► Compatible with Locating Systems
► Acids, Corrosive Chemical Liquids and Water Detection
► Unique Dust-Proof Feature Efficiently Preventing False Alarms
► Available in Standard Lengths

Description

The TTK sense cable FG-ACS detects the presence of acids, corrosive chemical liquids and water at any point along its length. The FG-ACS sense cable connects to TTK's locating units (FG-NET, FG-SYS, FG-ALS8 & FG-ALS4) or non-locating units (FG-A), to immediately respond to any leaks of acids and corrosive chemical liquids.

Key Advantages

A RELIABLE SENSE CABLE

The FG-ACS sense cable performs the following functions:

- Rapidly detects the leak of acids, corrosive chemical liquids and water along the length of the cable.
- Detects and locates leaks when connected to a Locating Alarm Unit: FG-NET, FG-SYS, FG-ALS8 or FG-ALS4.
- Detects leaks when connected to a Non-locating Alarm Unit: FG-A.
- Detects any break or cut to the cable.
- Ingenious design: four sensing wires of helical construction, compressed and connected on an extruded central core, **efficiently prevent false alarms** that have been triggered by **dust and all kinds of conductive residue** from the environment that has accumulated on the cable surface.

A MODULAR SYSTEM

The FG-ACS cable ensures permanent protection in areas at risk. FG-ACS is available in standard and pre-finished lengths of 9, 22 and 49 ft (3, 7, 15 m). The sense cable is installed to provide the best possible protection in order to cover risks and limit the financial consequences of an undetected acids leak.

EASY INSTALLATION

A spliced junction with a length of 11.5 ft (3.5 m) of Plenum bus jumper cable and an end termination at each length of FG-ACS sense cable give immediate connection to the unit or to the sector diversion box.

Special fixing clips are used to fasten the sense cables in the chosen areas. A set of jumper cables and pre-finished connection accessories gives continuity to each circuit with the sector diversion box FG-DTCS.

A TOUGH AND STURDY DESIGN

Small in diameter, the FG-ACS sense cable is light, flexible and of an easily identifiable color. The FG-ACS sense cable is a non-absorbent design that **can be reused** after cleaning in most cases, thereby reducing the maintenance costs.

Technical Data

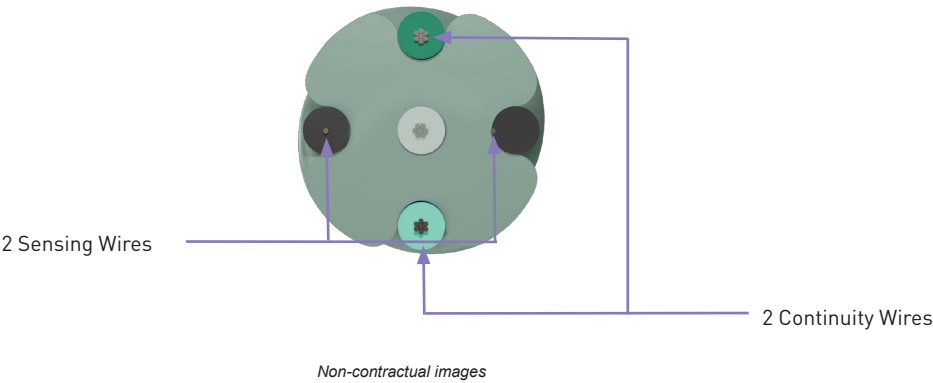|	
Compatibility	Locating units: FG-SYS, FG-NET, FG-BBOX (via Diversion Box: FG-DTCS, DCTL), FG-ALS8, FG-ALS4 Non-locating unit: FG-A
Reusability	Reusable, as long as the cable hasn't been damaged by prolonged immersion in liquid
Drying Time for Cable After Leak	Less than 10 seconds
Sense Cable Material & 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	PVDF
Sense Cable Weight	5.38 lbs / 100 ft (8 kg / 100 m)
Minimum Bend Radius	0.79 in (20 mm)
Sense Cable Color	Green and light gray
Operating Temperature	-40° to 185°F (-40° to 85°C)
Ingress Protection	IP 67

Product Diagram

FG-ACS Sense Cable Cutting View

2 Communication Wires and 2 Wires for Locating and Detection

Unique Dust-Proof Feature Efficiently Preventing False Alarms

- A black non-conductive wire containing a unique buried conductive constantan wire, concealed beneath the cable surface, designed to detect the ingress of acids, chemical liquids, or water.

2 Sensing Wires

2 Continuity Wires

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-ACS3	Acids Sense Cable in 9 ft (3 m) Sealed to 11.5 ft (3.5 m) of Neutral Cable
FG-ACS7	Acids Sense Cable in 22 ft (7 m) Sealed to 11.5 ft (3.5 m) of Neutral Cable
FG-ACS15	Acids Sense Cable in 49 ft (15 m) Sealed to 11.5 ft (3.5 m) of Neutral Cable
Accessories:	
FG-DTCS	Addressable Box
CF-EC100	100 Hold-down Clips with Adhesive
ES-EC	40 Signal Tags

Certification

CE   FM APPROVED

FG-ACS 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.**