

## ropeFuel Sensor (FLKS)



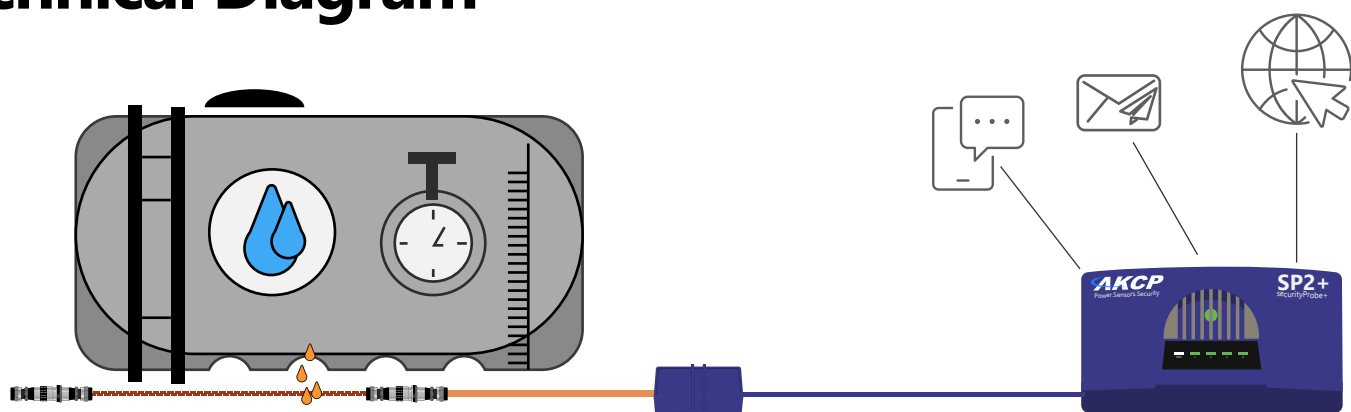
The AKCP ropeFuel sensor is a rope-type leak detector that connects to any AKCP sensorProbe or securityProbe RJ-45 Intelligent Sensor Ports and facilitates the detection of fuel and other liquids. The AKPP rope Fuel sensor provides distributed leak detection for a wide range of applications such as monitoring for fuel leaks beneath or around backup generator fuel tanks, fuel storage areas, or fuel transfer stations.

## Fuel and Oil Leak Detection

The ropeFuel sensor detects the presence of liquid hydrocarbon fuels at any point along its length. Installed with the AKCPro sensor module, the sensor detects the liquid, triggers an alarm, and pinpoints the location of a leak within a meter, or a foot. Typically this sensor can detect:

- Gasoline
- Diesel #1
- JetA\B\5\8
- JP-4\5\7
- Kerosene

## Technical Diagram



# FLKS - Technical Specification

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement Range                | Wet or Dry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Sensor Type                      | Open/Closed contact input switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Measurement Rate                 | Multiple readings every second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                  | Capable of detecting the presence of fuel and oil at a specific location within 1 meter, or 1 foot along the length of the sensing rope                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Response Time                    | <p>Typical response time at 20°C (68°F)</p> <ul style="list-style-type: none"> <li>• Gasoline : 2-12 minutes (depending on the grade and type)</li> <li>• Diesel #1 : 60 minutes</li> <li>• Jet A\B\5\8 : 50 – 70 minutes</li> <li>• JP-4\5\7 : 15 - 70 minutes</li> <li>• Kerosene : 47 minutes</li> </ul>                                                                                                                                                                                                                                                                                  |
| Nonresettable                    | Must be replaced after exposure to hydrocarbon liquids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Indication                       | LED for Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Operating Temperature            | <p>-20 °C~60 °C</p> <p>4 °F~140 °F</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Pull Force Limit                 | Not to exceed 50 lb                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Bend Radius                      | 2 in. (50 mm) minimum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Pressure                         | Loads greater than 20 lb (9 kg) per linear inch at 20°C (68°F) may immediately trigger an alarm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Interface                        | Interface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Communications Cable             | RJ-45 jack to sensor using UTP Cat 5 wire                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Communications Cable Max. length | <p>The FuelRope Sensor can be extended from the RJ-45 Intelligent Sensor ports on the base units up to 100 feet, or 30 meters using standard CAT5/6 LAN cable.</p> <p>Comes fully assembled and includes the rope portion that is the liquid sensing cable, the non-sensing leader cable (from the rope to the sensing module) and the main sensing module. Also includes a 5 foot CAT5 extension cable</p> <p>Sensing Rope Cable can be pre-ordered from a 1 meter minimum to any custom run length of up to 5 meters.</p> <p>Non-sensing cable comes in a standard 20 feet run length.</p> |
| Power Source                     | Powered by the controller unit. No additional power needed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                  | Full autosense including disconnect alarm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Power Consumption                | Typical 125 mWatt, 25 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Dimensions                       | 56 x 55 x 33.3 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Mounting                         | <p>DIN rail mounting</p> <p>Screw mounting</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Cable Diameter                   | 0.28 in. (7 mm) nominal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Important Note                   | <p>* The AKCP ropeFuel sensor in most cases is for single usage only and must be replaced after exposure to hydrocarbon liquids.</p> <p>* AKCP does not recommend the ropeFuel Sensor to be placed on a conductive surface.</p>                                                                                                                                                                                                                                                                                                                                                              |
| Sensor count                     | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

# FLKS - Technical Drawing

