

# AquiTron

# AT-OPSEN

Optical Sensor



**INSTALLATION  
INSTRUCTIONS**



**aquilar**  
leak detection solutions

# AT-OPSEN

## Optical Sensor

Please read these instructions carefully and keep them in a safe place for future reference. These instructions must be followed carefully to ensure proper operation.

### A. GENERAL INFORMATION

The OPSEN optical sensor has been specifically designed for use with TraceTek and AquiTronleak detection systems. The OPSEN is designed for use in ordinary areas with temperatures of 0°C to 50°C (32°F to 122°F).

#### ZONES & REGIONS

AT-OPSEN probes have built in resistors (weighted lengths) equal to 8 metres (25 feet) for the first sensor and 16 metres (50 feet) for each subsequent sensor when used on the TraceTek TTDM or TTSIM-1 / 1A / 2 alarm & locator panels. If sensors are used alone on a circuit, without sensing cable, the 'zones' setting within 'units' can be used on the panels.

#### TOOLS REQUIRED

- Phillips (cross-head) screwdriver
- Small flat-head screwdriver

#### STORAGE

Keep the module in a dry place prior to installation to avoid possible damage to internal components.

#### ADDITIONAL ITEMS

AT-PSU - 1 OPSEN Power Supply Unit (max 10 sensors)  
AT-OPSEN-CBL Bulk OPSEN Cable (50 metre reel).

### B. PRODUCT INFORMATION

#### POWER SUPPLY

Each OPSEN requires a 12Vdc power supply. Power is available from a separate power supply unit: AT-PSU-1 for 1 to 10 sensors. The 12Vdc should be connected as detailed below, care should be taken when connecting the power as the sensor is polarity sensitive. The Bulk OPSEN cable is colour coded for connection into the TraceTek and AquiTron™ panels: white 12Vdc (+) and blue OV (-) should be used for the power cables.

#### POWER INDICATION

The sensor unit is provided with a GREEN LED to indicate power present.

#### ALARM INDICATON

In the event of a leak being detected the units RED LED will illuminate. Indication will also be displayed on the following leak detection panels:

AT-SZA, single zone indication.

AT-MZA, individual zone indication.

TTDM, distance or zone number/region/area name.

TTSIM-1/1A/2, via the master panel or BMS a distance or zone number/region/area name is available.

#### DETECTION TIME

The Optical sensor head will detect the presence of a liquid within seconds of it making contact. The alarm activation on the OPSEN (Red LED) will be immediate, however, alarm indication on the leak detection control panel will depend on the model selected.

#### MAXIMUM NUMBER OF SENSORS

TTDM and TTSIM panels - 100  
AT-SZA and TTSIM-1A - 10  
AT-MZA - 10 per channel/zone

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### APPLICATION LIQUIDS

The OPSEN has been designed for use with hydrocarbon based liquids such as fuels and oils. The sensor will also detect other non aggressive liquids. The OPSEN optical sensor head will also detect water and many other chemicals. For further liquids please contact Aquilar.

### TEMPERATURE

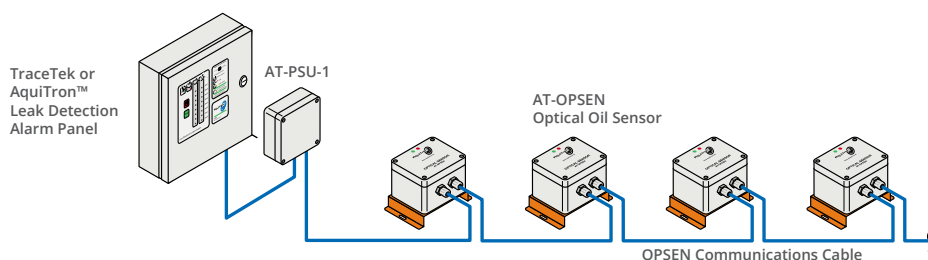
**Environment:**

**Storage:** -18°C to 60°C (0°F to 140°F)

**Operating:** 0°C to 50°C (32°F to 122°F)

**Liquid:**

**Operating:** 0°C to 50°C (32°F to 122°F)



### Single / Multiple sensors

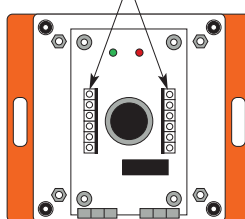
#### Wiring/connection Notes

Match colour coding in sequence through the chain of probes:

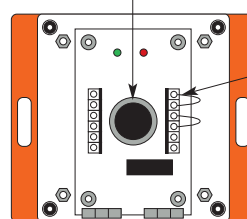
- Black - Black
- Yellow - Yellow
- Red - Red
- Green - Green
- 12Vdc - 12Vdc (White)
- 0V - 0V (Blue)

Connect to TraceTek /  
AquiTron™ Leak  
Detection Panel

Terminals can be pulled from the  
circuit board for ease of wiring



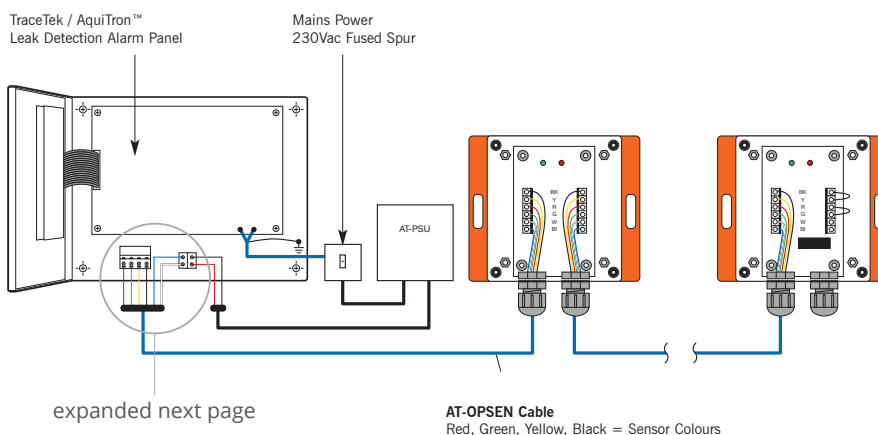
Small height adjustment can be achieved  
by twisting the optical sensor,  
up = anti clockwise, down = clockwise



End of line  
connection  
Loop,  
Black & Yellow  
Red & Green  
(Remove  
for future  
extension)

Connect Bulk Cable  
AT-OPSEN-CBL

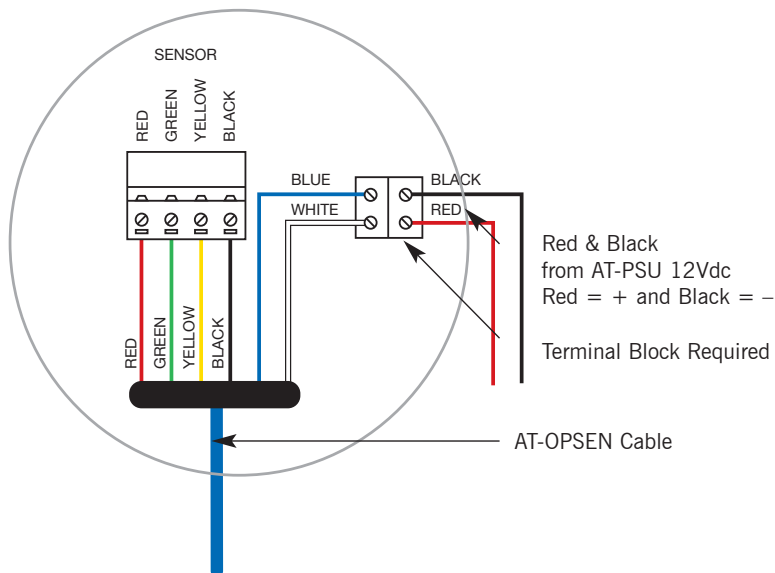
Adjust cable glands to  
provided strain relief to  
the cables



expanded next page

**AT-OPSEN Cable**  
Red, Green, Yellow, Black = Sensor Colours

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Connection in AquiTron or TracTek alarm panel.

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