

# AquiTron | AT-OPSEN

Optical Sensor



**INSTALLATION  
INSTRUCTIONS**



# 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 INDICATION

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

## AT-OPSEN Optical Sensor

### APPLICATION LIQUIDS

The OPSEN has been designed for use with hydrocarbon based liquids such as fuels and oils. The sensor will also detect other none aggressive liquids. The OPSEN optical sensor head will also detect water and many other chemicals. For further liquids please contact Aquilar.

### TEMPERATURE

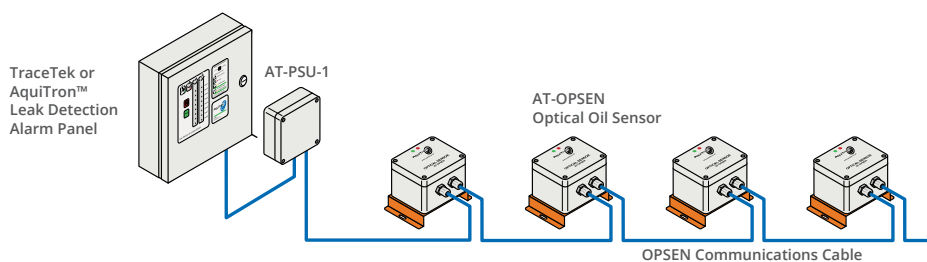
**Environment:**

**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

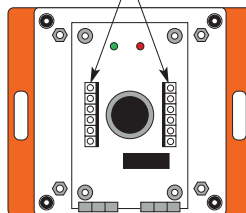
##### Wiring/connection Notes

Match colour coding in sequence through the chain of probes:

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

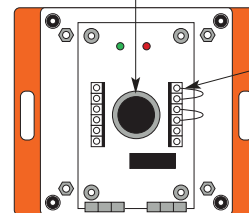
Connect to TraceTek /  
AquiTron™ Leak  
Detection Panel

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



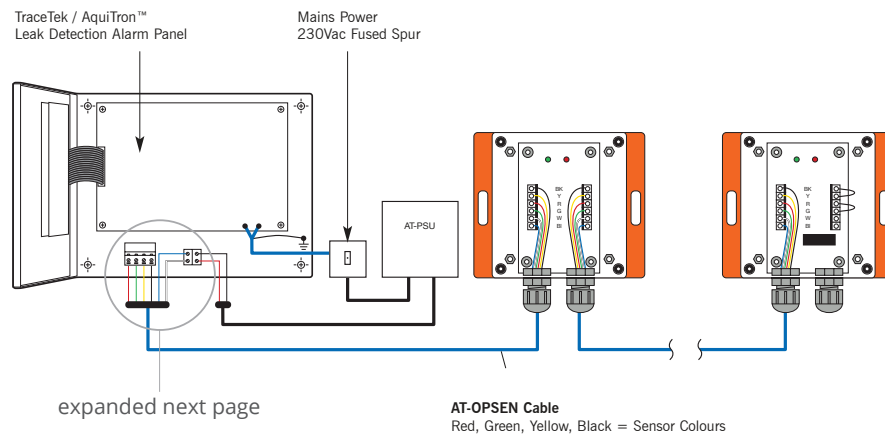
Connect Bulk Cable  
AT-OPSEN-CBL

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

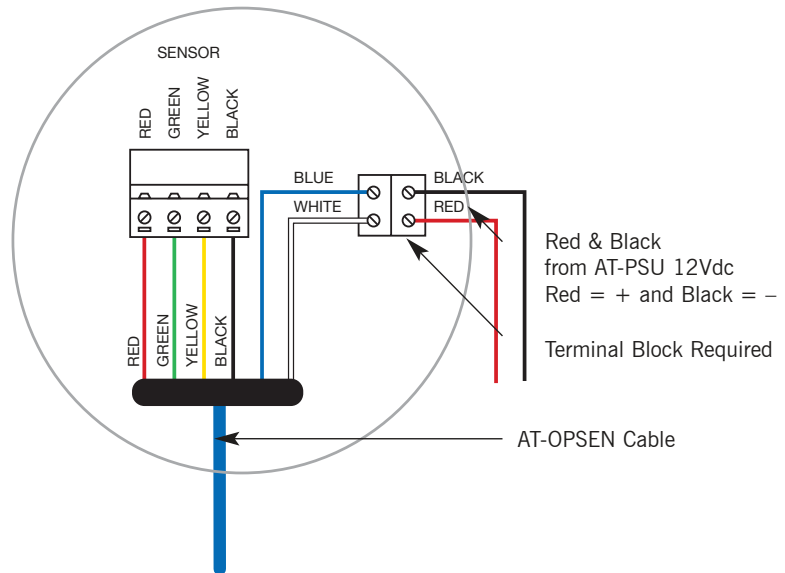


End of line  
connection  
Loop,  
Black & Yellow  
Red & Green  
(Remove  
for future  
extension)

Adjust cable glands to  
provided strain relief to  
the cables



**AT-OPSEN**  
Optical Sensor



Connection in AquiTron or TraceTek alarm panel.

**Important:** All information, including illustrations, is believed to be reliable. Users, however, should independently evaluate the suitability of each product for their application. Aquilar Limited makes no warranty as to the accuracy or completeness of the information, and disclaims any liability regarding its use. The only obligations of Aquilar Limited are those in the Aquilar Standard Terms and Conditions of Sale for this product, and in no case will Aquilar Limited be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use or misuse of the product. Specifications are subject to change without notice. In addition, Aquilar Limited reserves the right to make changes – without notification to Buyer – to processing or materials that do not affect compliance with any applicable specification.

*AquiTron is a trademark of AquiTron Limited  
Aquilar is a trademark of Aquilar Limited*