

AquiTron

AT-LDM

Liquid Detection Module



**INSTALLATION
INSTRUCTIONS**



aquilar
leak detection solutions

AT-LDM

Leak Detection Module

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

A. GENERAL INFORMATION

The AT-LDM single zone alarm has been designed for use with TraceTek sensing cables (TT1000, TT3000, TT5000, TT5001 and TT7000 sensing cables) although a special AquiTron leader & end termination will be required. The AT-LDM can monitor up to 45 m (150 ft) of sensing cable, or 10 water detection probes - optical probes, float switches and level indicators can also be incorporated into the system.

STORAGE

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

B. PRODUCT INFORMATION

AT-LDM

AT-LDM24 24v ac/dc

AT-LDM24-S 24v ac/dc with sounder

AT-LDM 230vac

AT-LDM-S 230vac with sounder

POWER CONSUMPTION

24v option - 50mA

230v option - 11mA

RELAYS

Number: 1 x Leak

Type: SPDT

Rating: 5 A at 230 Vac/24 Vdc

TEMPERATURE

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

HUMIDITY

0-90% (non-condensing)

ORDINARY AREAS

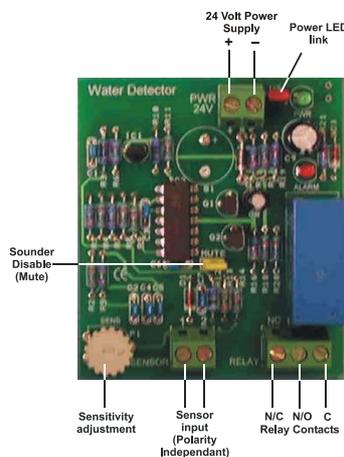
The LDM is approved for use only in ordinary areas.

APPROVALS

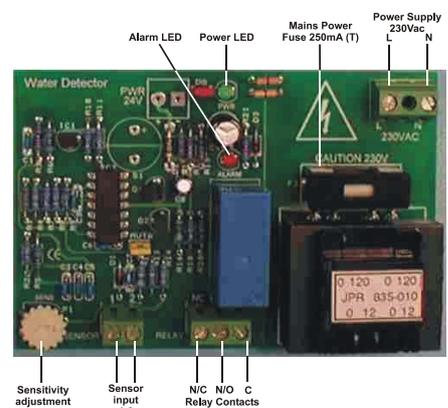
Electromagnetic compatibility (EMC)

Installation Category IEC 664 Category II

Pollution Degree IEC 664 Degree 1



24v Connection Diagram



230V Connection Diagram

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C. SELECT A MOUNTING POSITION

Choose a location indoors where the module will be protected from the elements and temperature extremes

WARNING: Ignition hazard. Do not mount the AT-LDM unit in a hazardous location. Sensing cable connected to the AT-LDM may (subject to approvals restrictions) be located in hazardous locations, but the module itself must

PREPARE THE MODULE FOR MOUNTING

Important: The LDM is an electronic unit. During installation, take the following precautions to avoid damage to its electronic components:

- Handle with care, avoid mechanical damage.
- Keep the electronics dry.
- If handling circuit boards, hold them by their edges to avoid physical contact with electronic components.
- Avoid exposure to static electricity.
- Avoid contamination with metal filings, liquids, or other foreign matter.

D. PREPARE SENSING CABLE/SENSING PROBE/DEVICE

Ensure that the sensing cable (sensing device) has been installed in accordance with the instructions provided. **Note;** the specific wiring of the sensing device into the LDM.

MAKE CONNECTIONS

- Feed the end of the leader cable (or jumper cable) through the adapter/bushing.
- Using TraceTek sensing cables, connect only the Black and Green to the "SENSOR" terminals 1 + 2. 1 Black 2 Green
- **Note:** The AT-LDM sensing circuit is power limited, so the leader or jumper cable and the power supply cable must not run in the same conduit.
- Fit conduit bushings / adapters as required.

CONNECT THE ALARM RELAY

The AT-LDM has one alarm relay, which is type Form C relay contacts, normally open, normally closed and common. The relay is energised to indicate an alarm condition.

Note: The terminals can accept wires 1.5mm² cable conductors, care must be taken not to over tighten the terminals.

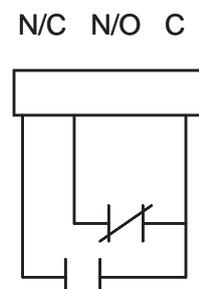
Cable should have a temperature rating of 65°C. **Note: Maximum load for relays is 5 amps.**

SENSITIVITY ADJUSTMENTS

- Adjust the sensitivity to suit the conductivity of the water and the sensing cable system length.
- Testing with the "testing brush" (mapping Tool) will only prove the alarm functions.

END OF LINE (END TERMINATION)

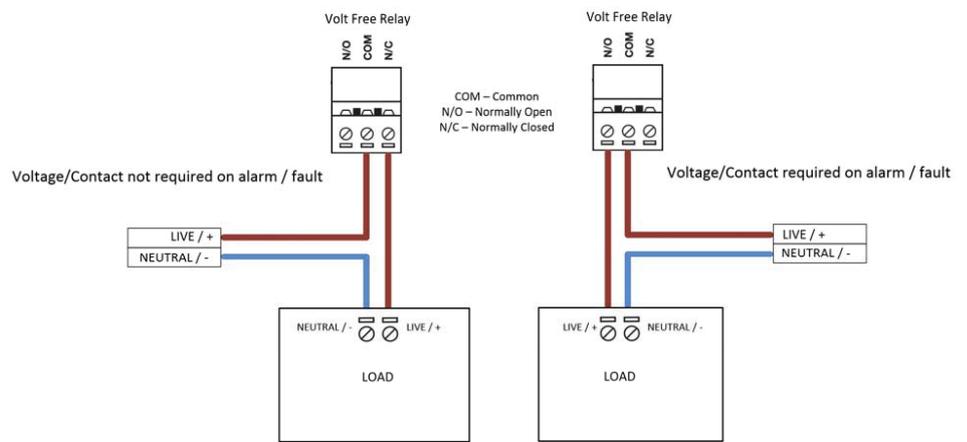
When using TraceTek sensing cables, the end termination should be left off, alternatively a special LDM-MET end termination is available.



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VOLT FREE RELAY OPERATION

All leak detection alarm panels supplied by Aquilar are provided with, at least one, volt free relay. These are also known as volt free contacts or dry contacts. They are used to operate auxiliary equipment such as – valves, sounders, pumps, beacons etc., sending closed or open contact signals to Building Management Systems (BMS) or other logic level controls. As the name suggests, there is no voltage present at the terminals. So, to operate a valve, for example, you need to have a dedicated power supply which is then fed through the relay (typically the live feed) to switch it on or off accordingly. Typical wiring is as follows:



Please ensure that the load does not exceed the ratings of the volt free relay. This is stated in the relevant product’s data sheet / installation instructions.

Wiring of volt free relays should be undertaken by a suitably qualified technician and in accordance with the regulations and standards in their industry/country. These notes are only intended as a guide and Aquilar Ltd bears no responsibility for the installation or operation of the unit.

E. CONNECTING THE POWER CABLE AND RELAYS

CONNECTING THE POWER WIRING

- Pass the power cable through the adapter/ bushing as fitted.
- Connect the power supply wires to the two-pin terminal block observing the polarity.

- The electrical supply should be fused at no more than 3 amps via an un-switched fused spur adjacent to the unit. (230v version only) **Note:** The terminals can accept wires 1.5mm² cable conductors, care must be taken not to over tighten the terminals.
- **Note:** Do not exceed maximum voltage.

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F. TESTING THE MODULE

TEST AFTER SUPPLYING POWER

- When power is supplied, the green LED illuminates.
- Place water on the probe or sensing cable and the LDM should report an alarm condition. Adjust the sensitivity to suit the conductivity of the water and the sensing cable system length.
- Testing with the "testing brush" (mapping Tool) will only prove the alarm functions.
- Verify that the red Alarm LED is illuminated.
- The Buzzer (if fitted) will sound and will only be silenced when the probe or sensing cables are dried.

If unit still does not appear to operate properly contact your supplier for assistance.

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.

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