aquilar
leak detection solutions

About Aquilar

Aquilar are a distributor and manufacturer of leak detection equipment providing solutions for detecting water, fuel, chemical and refrigerant gas leaks.

Aquilar Limited – providing world-leading systems for leak detection in critical industrial and commercial environments

Aquilar, founded in 2000, soon became the number one partner for the world leading TraceTek leak detection system, formally invented and manufactured by the Raychem Corporation.

Finding that one manufacturer did not offer a solution for all applications. Aquilar embarked on a customer focus program, speaking to many specifying engineers and customers to find out what other products were required. From this, development moved forward and a new range of brands were created including AquiWave, AquiTron, AquiNet and EcoLeak. R&D continues today with new products and solutions created to solve customers' challenges and to meet with new and changing standards within the building industry.

Aquilar prides itself on the level of service provided to its clients, offering step-by-step guidance, delivering the most effective solution for each project. A team of dedicated professionals can assist with design support, schematics, technical submittals, and quotations through to the delivery of the leak detection system along with product support required to complete the project to the highest standard.

Whilst Aquilar do not install leak detection directly, they do have a number of highly-trained partner installers around the country to ensure all systems are completed and maintained to the clients' specifications. Based in Broadbridge Heath, Horsham, West Sussex, Aquilar also benefits from ample warehouse space to keep good stock levels, providing off the shelf systems for the largest projects.

Aquilar has over 19 years' experience in design support and supplying leak detection systems into almost all market areas such as data centres, office buildings, banks, schools, hospitals, fuel storage facilities and laboratories. Aquilar have the right solution for all your leak detection needs.

Unit 30
Lawson Hunt Industrial Park
Broadbridge Heath
Horsham
RH12 3JR

+ 44 (0) 1403 216100
info@aquilar.co.uk
www.aquilar.co.uk

Can We Help You?

If you have a project that Aquilar can assist with, please call us on 01403 216100

AT-APA Addressable Pinpoint Alarm

- **Detects a leak at any point on the sensing cable or probe circuit**
- **4 independent sensing circuits (4 zones)**
- **Locates leaks to +/-1m**
- **Detects cable break faults**
- **40 addressable regions**
- **4 simultaneous leaks can be detected**
- **Touch-screen display**
- **Can monitor temperature and humidity with an additional sensor**
- **Modbus TCP/IP integration and SNMP traps**
- **Comprehensive event logging**
- **Built-in web server**

The AquiTron Addressable Pinpoint Alarm (AT-APA) is a highly efficient leak detection alarm panel for use with TraceTek sensing cables and AquiTron point sensors/probes.

Up to four hardwired separate leak detection channels (zone) can be connected to the panel.

Six leak detection probes or up to 100 metres of leak detection cable can be connected to each zone. Each circuit can be sub-divided into as many as 10 regions (zones) and each region individually named.

This, along with multiple connection methods available for external equipment, make this a panel to fit almost any application.

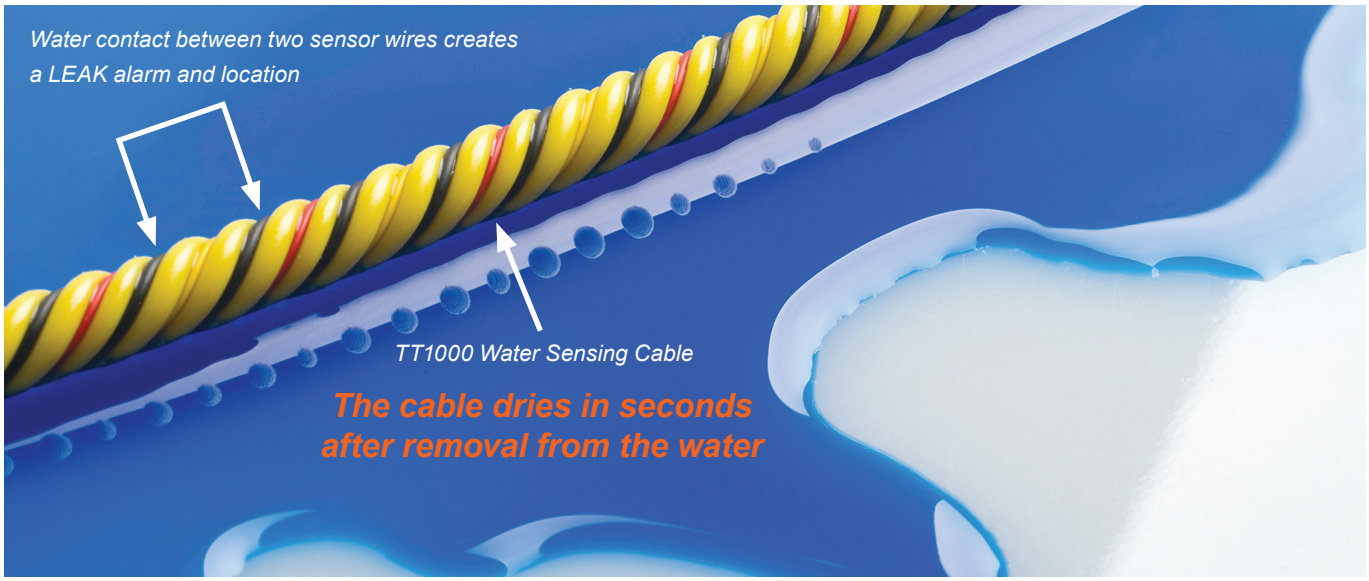
The unit has been designed for all fluid leak detection applications where fast localisation of the leak, automatic alarm reports and remote monitoring of the data are important. All detailed information about the alarm is also sent by email and is also available to the building management system via Modbus TCP/IP. An SNMP trap is also sent in the case of a leak.

This module also contains the necessary volt-free relay contacts per channel for alarm reports. The operator can constantly monitor the status of the leak detection loops; this can be done on site on the touch screen and a computer via the built-in web server.

The AT-APA panel is accurate and easy to use, ideal for small and medium applications where accurate leak location is required.

How The Technology Works

Minimise downtime and a costly clean-up – pinpoint the leak fast



TraceTek sensing cable:

- Detects leaks at any point along its length
- Fluoropolymer construction that resists corrosion, chemicals, dust and dirt
- Supplied with factory-installed connectors and modular lengths for easy installation and modifications
- Allows for easy maintenance and troubleshooting with an ohm-meter or portable test box because of its simple circuit design
- Uniform sensitivity all along the sensing cable length

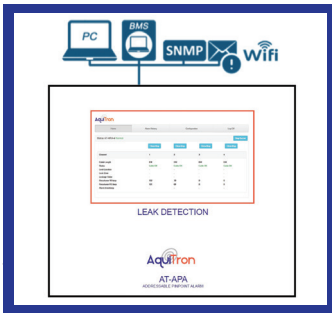
The AT-APA Alarm Panel:

- Offers simple touch screen instruction
- Ability to upload PDF drawings of the installation 'maps' for easy identification of the leak location
- Continuously monitors all four sensing circuits for fault condition 'cable break' and liquid spills
- Provides a clear display that differentiates leak alarms from cable break, sensing circuit continuity failure

AquiTron AT-APA Addressable Pinpoint Alarm panel combined with TraceTek water and fuel sensing cables provide a solution that, when a leak occurs, sounds an alarm and displays the exact distance to the leak; for example:

Leak 35 m – Leak Zone – Comms Room

Isolate the water supply using the leak relays to control the solenoid valve and reduce the damage and disruption within a building.



Remote monitoring of the panel via a webserver, easy integration to the buildings IT Network or BMS monitoring.

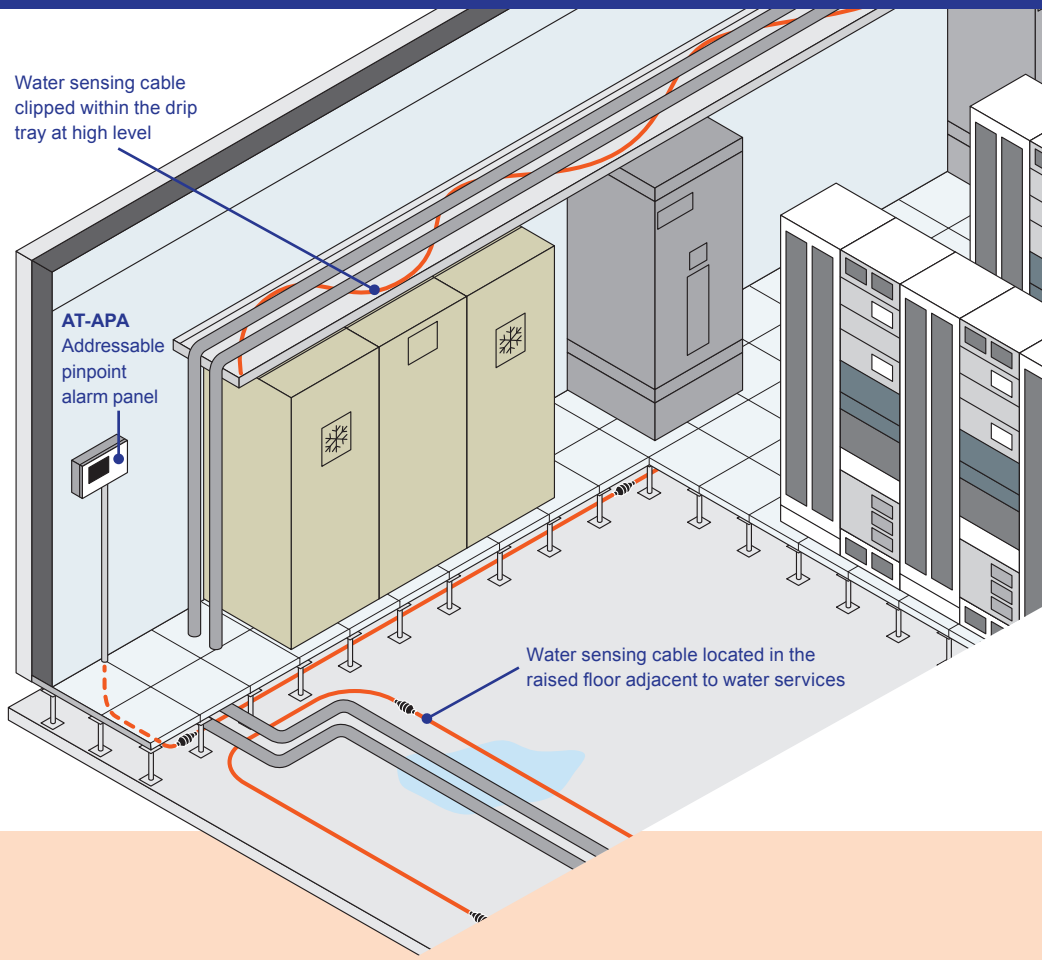
Typical Applications

Leak detection in data centre & server rooms

In data centre and server rooms an AquiTron leak detection system provides the best possible protection against leaks from air conditioning systems, cooling pipes or the ingress of water from adjacent rooms.

Very small leaks are detected with these systems before they can cause any major problems.

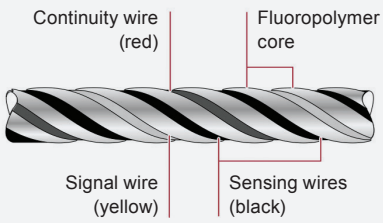
Two types of sensing cables (TT1000 and TT1100) are used in highly sensitive areas.

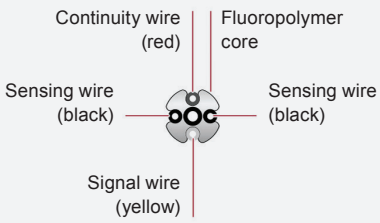


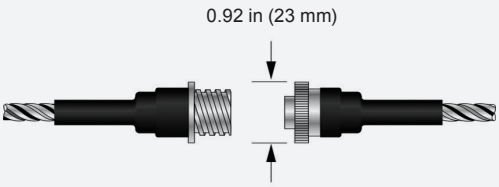
TT1000 water leak detection cable

TT1000 water sensing cable is installed under the raised access floor close to all the air conditioning units, chilled water and condensate pipework. The sensing cable can also be installed at high level within drip trays over critical pieces of equipment.

Technical specification: TT1000







Drawings not to scale

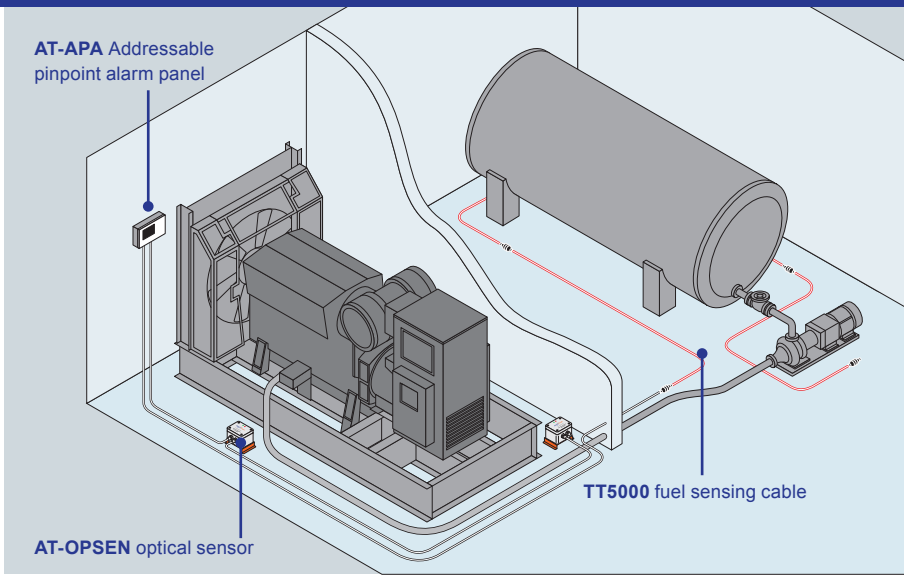
Typical Applications

Leak detection for fuels

There are various methods for protecting fuel pipelines, generators and tanks against leaks.

TraceTek TT5000 series of sensing cables detects the presence of liquid hydrocarbon fuels at any point along its length, yet does not react to the presence of water. Installed with an AT-APA alarm panel, the cable senses the liquid, triggers an alarm and pin-points the location of the leak within one metre.

The sensing cable can also be installed around the room perimeter, under the tanks on the floor.



If you have pipes that run externally, there is a specific version for these applications. TT5000-HUV has an synthetic fibre braid designed to wick fuel and provide ultraviolet protection to the sensor. The TT5000 series can also be used in a hazardous area with zener barriers.

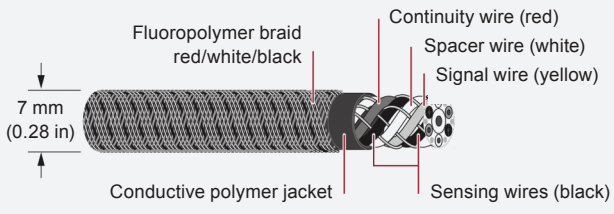
TT5000 fuel sensing cable

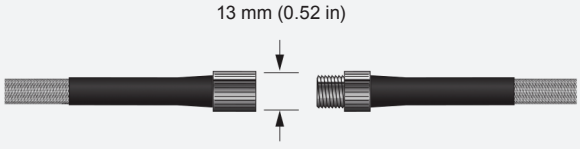
TT5000 is a fuel sensing cable that can detect and locate spills of gasoline, jet fuel, diesel, crude oil and similar hydrocarbon liquids. It will not detect or react to water. The cable is available in outdoor (above ground), underground and indoor versions.

AT-OPSEN

The AT-OPSEN offers fast detection of fuel oils, chemicals and water, suitable for generator, oil storage and day storage tank rooms, plant areas, bunds, drip-trays and floor gullies. For low point sensing in sumps, pits and bunded areas the AT-OPSEN optical sensor will detects fuels, coolants and water within seconds and is reusable after cleaning. The remote sensor version can also be screwed into the side of a pipe-in-pipe (double walled pipe) or double skinned tank.

Technical specification: TT5000





Drawings not to scale

Technical Ordering Information

Addressable Pinpoint Alarm panel

Four channel Addressable Pinpoint Alarm panel, 230Vac

AT-APA

SENSING CABLES AND PROBES

TT1000 Water Sensing Cable

Modular TT1000 water sensing cable lengths with factory installed connectors, pin type plastic connector at one end and socket type plastic connector at other end.

Standard lengths as shown below:

TT1000-1M/3FT-PC	TT1000-3M/10FT-PC	TT1000-5M/17FT-PC
TT1000-7.5M/25FT-PC	TT1000-15M/50FT-PC	TT1000-25M/76FT-PC

TT1100-OHP Water Sensing Cable

Modular TT1100-OHP water sensing cable lengths with factory installed connectors, pin type plastic connector at one end, and socket type plastic connector at other end. See TT1100-OHP Data Sheet for details. TT1100-OHP cable is ideally suited for overhead suspended pipe applications.

Standard lengths as shown below:

TT1100-OHP-1M-PC	TT1100-OHP-3M-PC	TT1100-OHP-7.5M-PC
TT1100-OHP-15M-PC	TT1100-OHP-30M-PC	TT1100-OHP-50M-PC
TT1100-OHP-100M-PC		

Bulk reels and connectors are also available

Water Sensing Probes

AT-PROBE-TS is a special purpose probe to detect water leaks in low spots, drip trays or sumps-where sensing cables are inappropriate. The AT-PROBE-TS can be interconnected with jumper cable to other AT-PROBE-TS or sensing cable segments and can be monitored with an alarm module.

AT-PROBE-TS	AT-PROBE-M

TT5000 Fuel Sensing Cable

Modular TT5000 fuel sensing cable lengths with factory installed connectors, pin type metal connector at one end, and socket type metal connector at other end.

Standard lengths as shown below:

TT5000-0.3M/1FT-MC	TT5000-1.5M/5FT-MC	TT5000-3M/10FT-MC
TT5000-4.5M/15FT-MC	TT5000-7.5M/25FT-MC	TT5000-15M/50FT-MC
TT5000-30M/100FT-MC		

Bulk reels and connectors are also available

Optical Liquid Sensor

AT-OPSEN is an optical liquid detection sensor which offers fast detection of fuel oils, coolants, water and other non-aggressive liquids. The sensor operates on a 12Vdc PSU listed below. AT-OPSEN-R is a version with the sensor element on a 1m leader allowing the sensor to be screwed into the side / bottom of a pipe-in-pipe or double-walled tank to detect leaks in the interstitial space.

AT-OPSEN	AT-OPSEN-R

Supporting products include: AT-OPSEN-CBL, 6-core cable to interconnect multiple sensors together and to link back to the panel. AT-PSU-12-1 is a 230Vac to 12Vdc PSU to power up to 10 OPSEN's in a circuit.

Power Supply Unit

Switch mode power supply using a regulated highly stable output (12Vdc) supplying full rated current to load and a universal mains voltage input range (90 to 264V ac). For use with AT-OPSEN, AT-RAP. 10 OPSEN sensors can be powered by this unit.

AT-PSU-12-1

Immersion probes

AT-600A is a screw-in water sensor to monitor overflow pipes for boilers, heating systems, unvented hot water cylinders, blow down pipes, drainage pipes and can be used in pipe-in-pipe, double containment tanks. Available in ¾" BSP and ½" BSP male threads. If multiple sensors are required an AT-BCB branch connector will be required for each sensor

AT-600A	AT-600B

Drip Tray probe AT-DTP-BRK

The AT-DTP drip tray probe simply hooks over the side edge of a drip tray to detect a small level of water within.
If multiple sensors are required an AT-BCB branch connector will be required for each sensor.

AT-DTP

Humidity & Temperature Sensor

Combined humidity and temperature sensor which can be directly connected and configured on the AT-APA panel.

AT-APA-HTS

Connects directly into the AT-APA panel and is supplied with a 5m lead

Technical Ordering Information

ACCESSORIES

Water shut Off Solenoid valves AT-V-NC

A range of 230Vac brass bodied WRAS approved (certified) N.1411048 pilot-operated diagram valves. Normally closed (fail safe) with manual release override. Suitable to shut off water supply following a leak alarm. Available in DN15 to DN54 (15mm to 54mm)

AT-V-NC-15	AT-V-NC-22	AT-V-NC-28
AT-V-NC-35	AT-V-NC-42	AT-V-NC-54

AT-RAP

The AT-RAP remote alarm panel interfaces to a main leak detection panel to provide an audible and visual alarm in an alternative part of the building such as the reception, security or outside the door of the main system. The AT-RAP incorporates a push button to mute. 12/24V ac/dc and 230Vac versions available. (see note A)

AT-RAP-12/24	AT-RAP-230

SYSTEM COMPONENTS

Modular Jumper cable

Modular Jumper cable, (yellow), LSZH rated with plastic connector pre-fitted. Pin type male plastic connector at one end and socket type female plastic connector at other end. Available in 6 lengths. (See note A)

AT-MJC-3M	AT-MJC-5M	AT-MJC-10M
AT-MJC-15M	AT-MJC-25M	AT-MJC-30M

Bulk Jumper Cable

Jumper cable, (yellow), LSZH rated on bulk reels for directly connecting into the PROBE-TS or for connection to the modular sensing cable after fitting the necessary connectors. Male and female connectors with a 250mm tail are available separately and can be spliced on to the bulk jumper cable with a splice kit TT-JSK-HS18 (kit contains parts for 5 cable joints)

AT-BJC-50	AT-BJC-100	AT-BJC-200
AT-MC-250	AT-FC-250	TT-JSK-HS18

Modular Leader Cable

Modular Leader cable with plastic connectors (yellow), LSZH rated. One end prepared for terminal connection in alarm panel (or for splicing to bulk jumper cable) and other end prepared with socket type female plastic connector. Available in 6 lengths. (see note A)

AT-MLC-5-PC	AT-MLC-10-PC	AT-MLC-15-PC
AT-MLC-20-PC	AT-MLC-25-PC	AT-MLC-30-PC

Modular End Termination

Modular end termination with pin type male plastic connector. Required at end of sensing circuit and all branches. (see note A)

TT-MET-PC

Branch Connectors

Two types of branching connector are available; a junction box version AT-BCB which allows for bulk jumper cable or AT-MC/FC-250 male/female connector to be directly fitted. A modular connector version with pre-fitted leads and plastic connectors. (See note A)

AT-BCB	TT-MBC-PC

Weighted Length

A weighted length is used to provide clear division between areas in a sensing circuit. The weighted length simulates 4.5m of sensing cable length. Two types are available: female version for inline splicing with bulk jumper cable or a pin type plastic connector at one end and a socket type plastic connector at other end. (See note A)

AT-FC-WL	TT-WL-4.5M/15FT-PC

Hold-Down Clips & Caution Tags

Fixing clips to secure sensing cable and jumper cable to the floor, drip tray of flat surface. Supplied in bags of 50, 100 and 200.

Caution / mapping tags used to identify sensing cable segments and record mapped distance. Supplied in bags of 50 or as mixed kits with hold-down clips

Mapping Tool

The Mapping Tool is also called a Mapping Brush. It provides an alternate method of simulating a leak on the TT1000 water sensing cable segments (Not for use with TT1100)

TT-MAP-TOOL	TT-MPT

TT-PTB-1000

Portable Test Box. Battery-operated device for testing TraceTek sensing cables. Allows testing of an individual length or up to 1000m of sensing cable. Useful for installation and maintenance of extensive systems. TT-PTB-1000 has plastic socket connector on flexible cord. Test box kit includes adaptors (plastic-to-metal and plastic-to-alligator clip) along with modular end terminations.

Note A: Metal connector versions with prefix 'mc' for TT5000 fuel sensing cable system
Note B: See individual product datasheets for further information