‘Overflow’ Monitoring System
Internal WC Overflows

aquilar - leak detection solutions

General Description

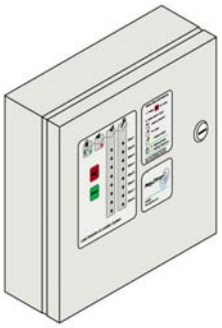
The system will electronically monitor individual cistern overflows. In the event of an overflow condition arising the system will provide a local alarm with a general alarm to the BMS.

AquiTron overflow sensor units are fitted to each WC cistern. The overflow sensors are wired to the locally positioned AquiTron Overflow Monitoring Panels.

Various options are available allowing for 21 to 8 zones/sensors to be monitored; each sensor is identified separately on the panel facia. In the event of a cistern overflow, the LED corresponding to the cistern overflowing will illuminate and an audible warning is provided by an internal sounder.

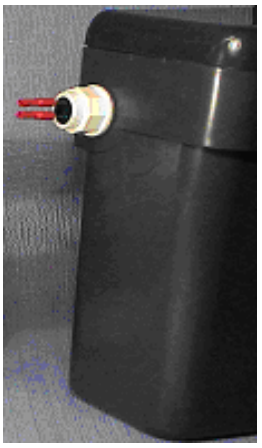
The system operates from mains power and is simply installed without the need for special test equipment or on-site calibration.

The low voltage wiring is installed in a continuous length between each sensor and the local indicator panel, without any intermediate terminals or connections.



Multi zone 2 to 8,
AT-MZA

Single zone,
AT-SZA



AquiTron Monitoring System for ‘Internal WC Overflows’

The system is designed to alert building management personnel with an audible and visual warning, to the wasteful discharge of overflowing water, directly to WC pans, by ‘internal WC cistern overflows’.

A sensor is inserted into the overflow hole at the side of concealed WC cisterns that incorporate an internal overflow arrangement discharging to the WC pan.

The sensor detection level can be set to occur at a point when an overflow situation is imminent but before water is wastefully discharged to the WC pan.

Sensors are available for standard concealed and Geberit type WC cisterns

Overflow Monitoring Panel, AT-SZA and AT-MZA

Construction comprises of a wall mounted metal enclosure sealed to IP32.

Power supply is provided from a 3 amp switched fused connection box.

External dimensions: (see AT-SZA and AT-MZA data sheets)

Volt free relay terminals are provided for remote overflow indication to the Building Management system.

Sensors in an overflow alarm condition are identified separately on the panel facia, an audible alarm is also activated.

Signals are conveyed to the Indicator Panel with low voltage twin cable.

Mute buttons
All overflow Monitoring panels can be supplied with an optional mute button. If enabled, this allows any overflow alarm on the system to be silenced but leaves relevant indicator light(s) lit. Although a new alarm from a different sensor will re-activate the sounder. To ensure each toilet overflow alarm is investigated we recommend this facility is used only in very carefully managed systems.

Master reset buttons
Some Monitoring panels have an optional master reset button. If enabled, this facility allows an overflow alarm to be globally cancelled without the source of the alarm or location being investigated. As there is a definite requirement in most applications for the alarm to be investigated before the panel is reset, this facility is normally only utilised in carefully managed applications. In most other instances we recommend this facility is disabled.

BMS Connection

Volt free connections shall be provided within the monitoring panel. These connections may be connected to the main BMS system, if required, to give a central common alarm.

Electrical Requirements

Monitoring Panel power supply requirement:	230Vac supplied from a switched fused spur rated at 3amps
Current consumption:	5 Va
Low voltage sensor circuit:	Less than 5Vac to sensor electrodes.
Recommended sensor cable size:	16 / 0.2mm (twin)

AT-450A AquiTron WC Cistern sensor units

The sensors comprise of stainless steel electrodes housed in a 3/4" BSP uPVC connector for fitting directly into the side overflow connection of concealed WC flushing cisterns. For exposed cisterns the sensor is fitted in an adjacent duct.

Low voltage electrical terminals are fitted to the sensors for wiring to the AT-OFM panel.

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AT-SZA
Single Zone Alarm

DATA SHEET

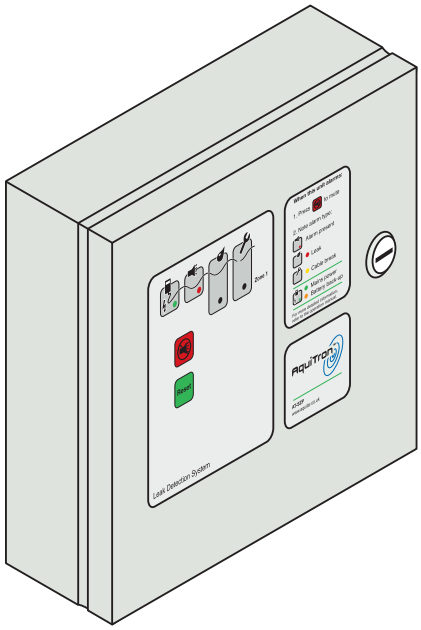
Description
The AquiTron™ AT-SZA Single Zone Alarm is designed for use with all TraceTek sensing cables, AquiTron™ probes and other sensing devices to detect leaks. The AT-SZA provides both visual and audible indication when a leak or cable fault has occurred and has relay contacts to connect to other external alarm equipment, BMS and PLC's.

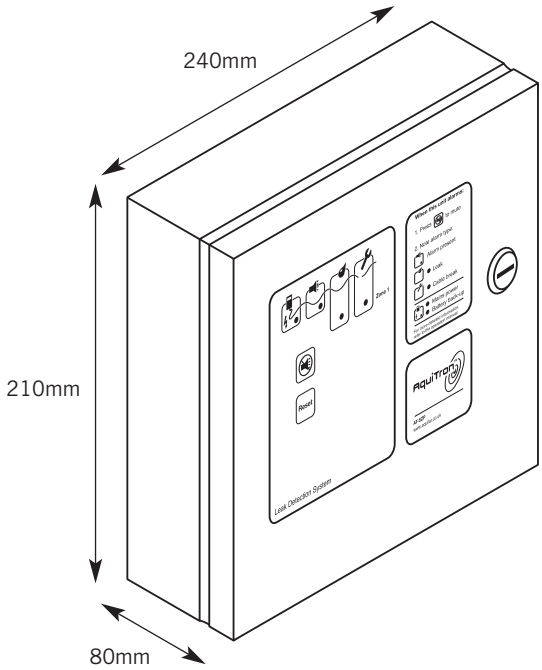
Simple operation
The operator silences the SZA alarm by pressing the mute button on the front face plate.

The LED's located on the front face plate indicate Power, (mains or battery back-up), Alarm, Leak alarm and Cable break. Once the alarm has been silenced, the red Alarm LED will stop flashing to indicate the system has been acknowledged and the appropriate Leak or Cable break LED will be illuminated. Once the cause has been located and corrected the corresponding LED will automatically be extinguished, and the panel can be Reset. Pressing the Reset button also resets the volt free alarm relay contacts.

Versatile design
The SZA metal enclosure can be easily mounted to a wall or other flat surface. A semi-flush mounting flange is also available. The enclosure is lockable, has an IP54 rating and a 90 decibel audible alarm. An auxiliary remote alarm (AT-RAP) can be added to the system and located in remote positions such as reception areas and security rooms. The AT-SZA unit operates on 230/120Vac (50/60HZ) and 12Vdc. A battery enclosure unit (AT-BU) for 72-hour operation is also available.

Applications
The AT-SZA is ideally suited for simple integration into centralised monitoring systems for computer rooms or large facilities, as well as interfacing into control systems for air conditioning and fan coil units, pump, booster and generator sets. Typical applications include monitoring leaks that could occur around individual air-handling units, water-cooled machinery, tanks, pumps, sumps, lift pits or other locations.





Technical Information

Sensing cable compatibility	All TraceTek sensing cable (TT1000, 3000, 5000, 5001, 7000)
Detection Probes	Water detection probes, optical oil sensors, float switches and immersion sensors
Maximum sensing circuit	100 metres (328 ft) of TraceTek sensing cable Combination of any 10 AquiTron™ probes
Enclosure	Powder coated steel, colour RAL 7032, IP54, lockable
Humidity	5% to 95% non-condensing
Power supply	230/120Vac, 50/60Hz , 12Vdc, 7 watts
Relay Output	3A 250Vac / 24Vdc. SPDT Volt free relay contacts activated by leak or cable fault (NC/COM or NO/COM)
Status LED	Power (Mains-Green, Battery-Red), Alarm (red flashing), Leak (Red), Cable break (Yellow)

AT-MZA
Multi Zone Alarm

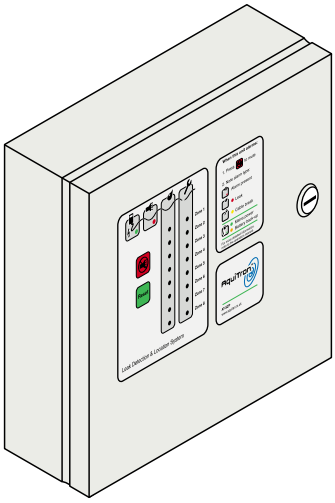
DATA SHEET

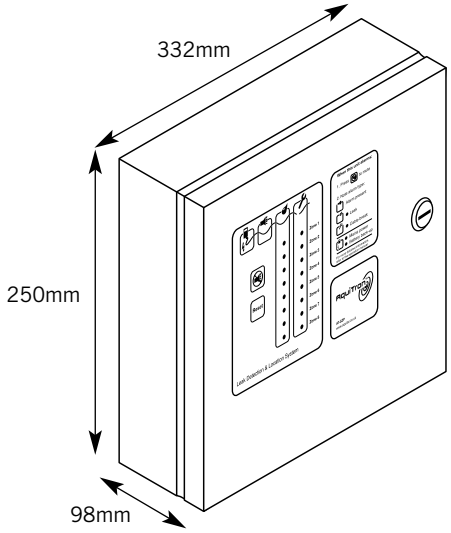
Description

The AquiTron™ MZA multiple zone alarm panel is designed for use with all TraceTek sensing cables and AquiTron(sensors to detect liquid and refrigerant - gas leaks. The MZA is capable of monitoring individual sensing zones in any of the following configurations 2, 4, 6 and 8 zones. Making it a truly versatile panel. The AT-MZA provides both visual and audible indication when a leak or cable fault has occurred. There are relay contacts to connect each zone to other equipment such as BMS, PLC's, other alarm and monitoring systems.

Versatile design

The MZA metal enclosure can be easily mounted to a wall or other flat surface. A semi-flush mounting flange is also available. The enclosure is lockable, has an IP54 rating and a 90 decibel audible alarm. An auxiliary remote alarm (AT-RAP) can be added to the system for remote locations such as reception areas and security rooms. The AT-SZA unit operates on 230/120Vac (50/60HZ) and 12Vdc. A battery enclosure unit (AT-BU) for 24-hour operation is also available.





Simple operation

The panel display includes LEDs for each zone. In the event of a leak, the alarm sounds and the LED indicates the zone where the leak has occurred. The operator silences the alarm by pressing the external MUTE button.

The LED's located on the front faceplate indicate Power, (mains or battery back-up), Alarm, Leak alarm and Cable break. Once the alarm has been silenced, the red Alarm LED will stop flashing to indicate the system has been acknowledged and the appropriate zone Leak or Cable break LED will be illuminated. Once the cause has been located and corrected the corresponding LED will automatically be extinguished, and the panel can be Reset. Pressing the Reset button also resets the volt free alarm relay contacts.

Any loss of system integrity, whether caused by an interruption of power or a break in a sensing circuit, will be indicated by the panel's display and the Fault relay contacts.

Applications

The AT-MZA is ideally suited for multiple integration into centralised monitoring systems for computer rooms or large facilities, as well as interfacing into control systems for air conditioning and fan coil units, pump, booster and generator sets. There are individual volt free alarm relays for each of the 8 zones, additional summary relays are included for leak and cable break/power failure. Remote external connection can also be provided to Speech auto diallers. Typical applications include monitoring leaks that would occur around individual air-handling units, water-cooled machinery, tanks, pumps, sumps, lift pits or other locations.

Technical Information

Sensing cable compatibility	All TraceTek sensing cable (TT1000, 3000, 5000, 5001, 7000)
Detection Probes	Water detection probes, optical oil sensors, float switches and immersion sensors
Maximum length of sensing cable	100 metres (328 ft) per zone
Enclosure	Powder coated steel, colour RAL 7032, IP 54, lockable
Humidity	5% to 95% non-condensing
Power supply	230/120Vac, 50/60Hz , 12Vdc, 7 watts
Relay Output	Volt free relay contacts activated by leak or cable fault (NC/COM or NO/COM)
Status LED	Power (Mains-Green, Battery-Red), Alarm (red flashing), Leak (Red), Cable break (Yellow)