



The Aqualeak Environmental Monitoring System (EMS) Water Leak Detection System series are standalone leak detection systems designed to be integrated into larger Building Management Systems (BMS) and networks.

Designed for continuous operation with minimal human intervention, the EMS series is also compatible with a wide variety of sensing technologies (sold separately) to detect the presence of water and other liquids.

The Aqualeak EMS-01 is designed to monitor for water leaks in single-zone critical areas such as Tea Points, Satellite Equipment Rooms (SERs), and Main Equipment Rooms (MERs).

Sensitivity to moisture and delays to alarms may be adjusted to better tailor the system to intelligently respond to a wide range of environments, situations and user requirements.

If a leak is detected, an audible alarm is activated, an LED illuminated, and, if connected, the EMS will report its alarm status to any connected device (BMS/SMS/beacon, valve) via its volt free contacts.

Benefits

- Configurable to suit a wide range of environments
- Minimum human intervention required
- Reduced risks of flooding
- Activates an audible alarm when leak is detected

Features

- Capacitive touch-sensor buttons
- Analyses data samples gathered in real time
- Built-in visual and audible alarms
- Connects to a variety of sensor types & ancillary devices
- Wall-mounted and mains powered
- Built-in visual and audible alarms
- Sensitivity to moisture and delay to alarm configurable
- CE Compliant

Operation

In operation, the EMS-01 continuously monitors the sensing equipment connected to it for both circuit integrity and the presence of water. If a leak is detected, the EMS-01 will and/or can be configured to:

- Activate a visual (LED) alarm
- Continuously monitors sensing equipment
- Sound a buzzer
- Shut off local water supplies
- Report alarm status to a connected Building Management System (BMS / SMS) or device

EMS Series Models

In addition to the EMS-01, the Aqualeak EMS series also includes the following models:

- EMS-05: 5 input channels (scalable and modular for multiple zones)
- EMS-10: 10 input channels (scalable and modular for multiple zones)
- EMS-0S: Multiple input channels (scalable and modular for large scale applications)

Technical Specifications

EMS-01	Specification
Dimensions	146 x 86 x 69 mm - Width x Height x Depth
Weight	300 Grams (0.3 Kilograms)
Supply Voltage	100-240 (VAC Volts / Alternating Current) 60 Hz frequency
Motherboard Output Relay Voltage	250 VAC Max.
Motherboard Output Relay Current	8 Amps. Maximum into resistive load
Relay Minimum Load	10 Milliamps - at 5 VDC (Volts / Direct Current)
Leader Cable	Belden 9534 EIA RS-232 Multicore Cable (4 Core, 24 AWG, 0.2 mm ²). Variable length
Detection Response Time	1 second
Alarm (Audible)	85 dB. Within 0.6 m range
Alarm (Visible)	LED Indicator - Front Panel
Operating Temperature	0 to +50 °C (Degrees Centigrade). Ambient temperature
Operating Humidity	10 to 95% Relative humidity (non-condensing) at 45 °C
Operating Altitude	0 to 3,000 Metres
Storage Temperature	-20 to +70 °C
Input channels	1
Maximum Sensor Cable Length	100 m (with maximum 20 probes). Use recommended yellow Sensor Cable (SCY). Also requires End of Line (EOL) terminator

Input-Output

Item	Name	Notes
1	Power Fault Relay	NC NO COM
2	Sensitivity Measure	Used with Sensitivity Adjustment
3	DC Out	12V / 24V Selectable Output Maximum 250mA
4	Fault Relay	Maximum 250mA

Relay Abbreviations	Mains Abbreviations
NO = Normally Open	LS = Live Supply
NC = Normally Close	LL = Live Loop
COM = Common	NS = Neutral Supply
	NL = Neutral Loop
	ES = Earth Supply
	EL = Earth Loop

Dip Switch Settings

Switch	Function	Default	Switch	Function	Default
1	Unit Sounder	ON	5	NOT USED	
2	Disable Relay Latch	OFF	6	Timed Latch	OFF
3	1 Minute Alarm Delay	OFF	7	NOT USED	
4	5 Minute Alarm Delay	OFF	8	12/24V DC Out Selector	OFF (12V)