

Features and Benefits

- LED Status of leak status
- VFC output
- Audible alarm
- Auto or manual reset alarm output
- Uses an isolated AC signal which prevents oxidation or erosion of sensing modules

Technical Overview

The WD-AMX water leak detection modules are designed for use with WD-CS, WD-PS, and WD-RS sensors. They feature LED status indication and an optional sounder.

The relay output supports manual or auto reset and can be used for alarm signalling to a BMS controller or remote annunciation panel, such as the UI-AA-1-F.

An isolated AC cable excitation prevents oxidation or erosion of the detector cable, avoiding degradation associated with DC systems.

Product Codes

WD-AMX-1	24Vac/dc water detection alarm module
WD-AMX-2	230Vac water detection alarm module

Specification

Supply Voltage:	
WD-AMX-1	24Vac/dc $\pm 10\%$
WD-AMX-2	230Vac @ 50/60Hz
Supply current	50mA max.
Output	12A @ 250Vac
LED Status indication for:	
Error condition	
Input sensitivity	
Relay output mode	
Learning Mode	
Response time	<1 sec. after exposure
Max. sensor cable length	200m with leader cable
Alarm hysteresis	Dependent on sensitivity
Clockwise	Minimum
Anticlockwise	Maximum
Audible alarm output	85dB@2.3Hz @ 10cm
Electrical	Terminals for 0.5-2.5 ² cable
Connections	Rising cage
Ambient:	
Temperature	0 to 40°C
RH	0 to 80% non-condensing
Dimensions	74 x 76 x 50mm
Weights:	
WD-AMX-1	100g
WD-AMX-2	240g
Country of origin	UK
Conformity	EMC, LVD, CE & UKCA Marked



Warning

When installed, the output relay contacts may carry 240Vac. Special care must be taken to isolate the switched voltages prior to any work being undertaken.

WEEE Directive:



At the end of the products useful life please dispose as per the local regulations.
Do not dispose of with normal household waste
Do not burn.



Do's & Don'ts

Do's

- Keep the WD-CS in their original containers prior to installation.
- Installation of WD-CS sensors should be carried out after major construction is finished to avoid and damage to the cables or point sensors.
- Cut off excess water leak detection cable, do not leave coiled up.

Don'ts

- Allow any contaminates to come into contact with the sensing cables.
- Use damaged sensing cables.
- Avoid soldering or welding work near the cable, if this has to be done cover sensing cable.
- Use non-conductive fixings like the WD-FC, do don't use any conductive fixings or glues.
- If used on pipe work, place a non-conductive barrier between the cable and pipe work.

Installation Tips

In a server room or data centre a typical installation would be to install the sensor cable around the air conditioning equipment or any other areas that might be a source of a water leak, Fig a.

Another possible configuration is to install the water leak cable around the server(s) that you want to protect, fig b.

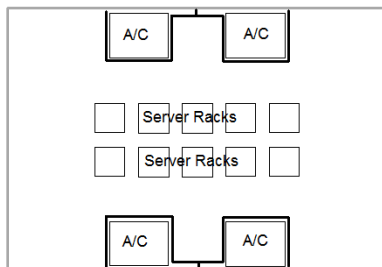


Fig a

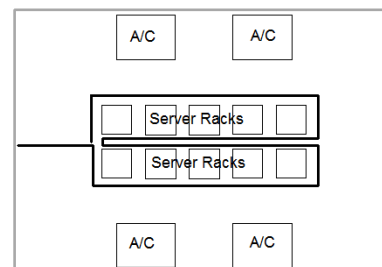


Fig b

Under floor installation can be either by setting the cable around the room, fig c, or by coving the entire area for maximum protection. Fig d. For maximum protection sensing cable snakes up and down the room.

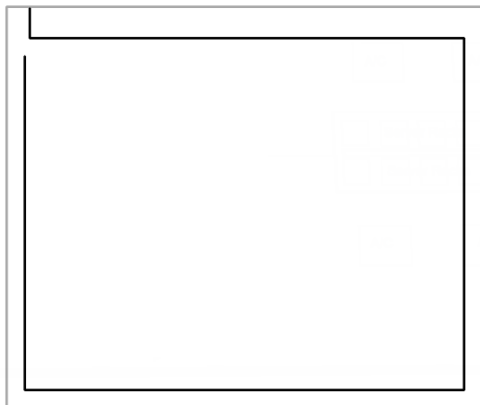


Fig c

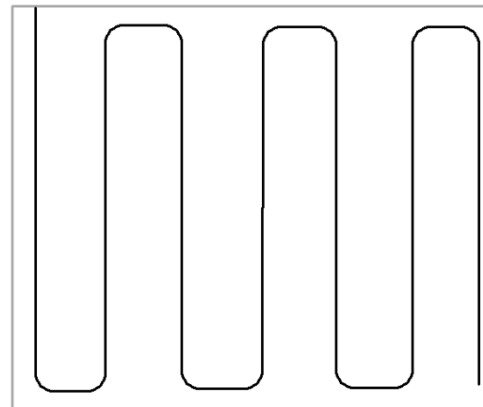


Fig d

These are all examples, actual installation would depend on the size and shape of the room that needs to be monitored.

Using Multiple Sensors

You can connect more than one WD-PS or WD-CS to a single WD-AMX input, and connections are made in parallel.

This will result in a common alarm so should any of the sensors detect a water leak an alarm will be raised. The only limitation of connecting multiple detectors is that the total cable run should not exceed 200 meters. This includes sensor cable and any 2-core cable between this and the WD-AMX.

Installation

Handling & Precautions:

- Use **antistatic precautions** – static discharge can damage the PCB.

Installation Steps:

- 1) Install only by trained technicians experienced with hazardous voltages.
- 2) Disconnect all power before working on the unit.
- 3) Maximum cable size is 2.5mm², do not over-tighten terminals.
- 4) Avoid stressing the PCB when mounting on DIN rail; use a flat screwdriver to release DIN clips when removing.
- 5) The WD-AMX-1 operates on 24Vac/dc and WD-AMX-2 operates on a 230Vac supply.
- 6) Relay outputs are SPCO and can be wired N/O or N/C.

Operation

On power-up or reset, the unit enters "learning" mode for about 20 seconds. During this time, the sensor sensitivity and alarm threshold can be adjusted using the trimmer and mode jumper. After 20 seconds, the unit switches to "run" mode, where further adjustments have no effect.

Pressing reset will trigger the alarm (if enabled) for at least two seconds as part of startup. Settings should be checked before leaving the unit to operate independently.

At startup, the sounder activates (if enabled), LEDs are tested, and the relay remains de-energised for at least two seconds to signal a reset. Once energised, the relay stays active for a minimum of two seconds, even if a flood is detected immediately.

LED Status

- **Green:** On during normal operation (off in "off" mode or if there's an error).
- **Yellow:** On when the sensor exceeds 33% of the threshold.
- **Orange:** On when the sensor exceeds 66% of the threshold.
- **Red:** Solid when the threshold is exceeded. Flashing indicates "test" mode or an error (if the green LED is off).

Error Indication

If an error is detected (e.g. suspected sensor short circuit), the red LED flashes continuously, the relay de-energises, and the sounder activates (if enabled) with a three-tone pattern. The green LED remains off to distinguish this from "Test" mode.

The error state remains until reset, or may clear automatically in "Reset" mode.

Sensitivity Adjustment

To adjust the sensitivity press the reset switch, the green LED will rapid flash

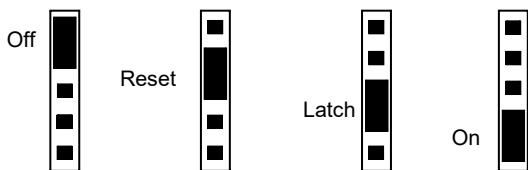
- Potentiometer fully anticlockwise Most sensitive
- Potentiometer fully clockwise Least sensitive

Relay Output Modes

- **Off:** Relay de-energised and sounder off regardless of sensor. In "learning" mode, green and yellow LEDs flash alternately; in run mode, green flashes continuously. Other LEDs operate normally.
- **Reset:** On flood detection, the relay releases and sounder activates (if enabled) for at least two seconds. The unit resets automatically when the flood condition clears.
- **Latch:** On flood detection, the relay releases and sounder activates (if enabled) and remain active until the reset button is pressed. LEDs always show the actual sensor status.
- **On (Test):** Relay and sounder energised for testing. Green and red LEDs flash alternately for ~2 minutes, then green stays on while red continues flashing.

Jumper Settings & Connections

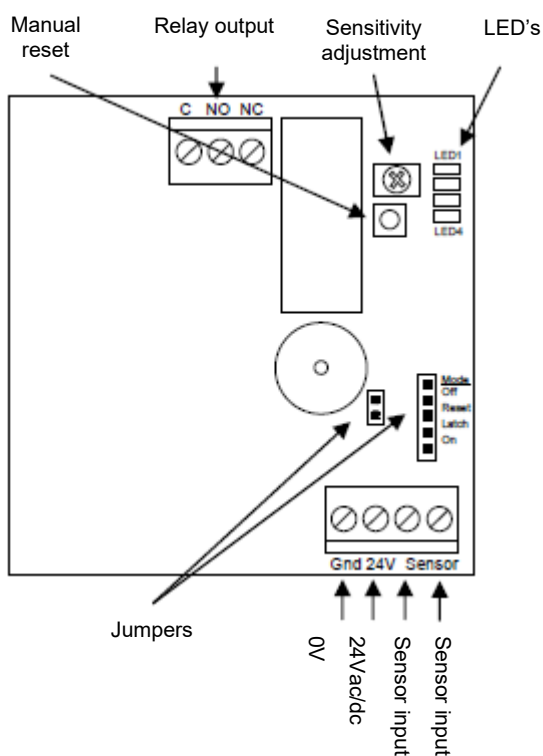
Relay Mode Link:



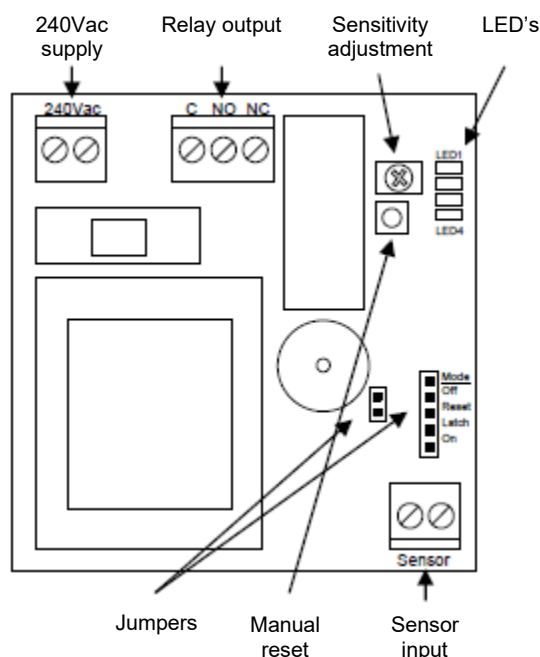
Sounder link:



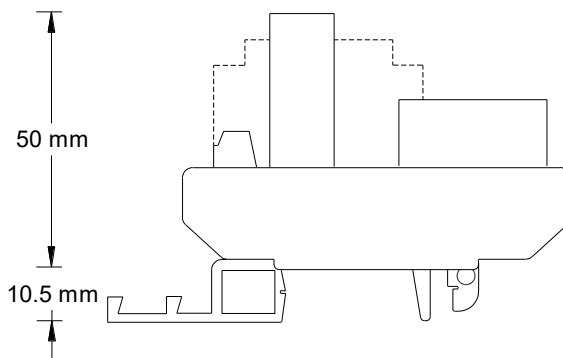
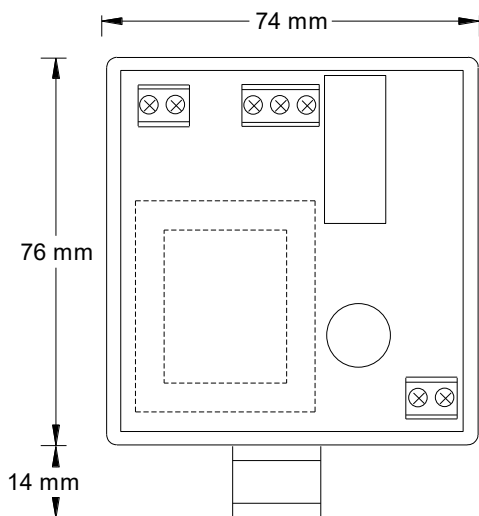
WD-AMX-1:



WD-AMX-2:



Dimensions



Whilst every effort has been made to ensure the accuracy of this specification, Sontay cannot accept responsibility for damage, injury, loss or expense resulting from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

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