

# AX-WLDF

Water Leak Detector - Four Zone with open/short-circuit detection

# AXIO



## Product Overview

The AX-WLDF is a four zone water leak detection module with open or short circuit sensor cable detection. The module must be used with one of the AX-WLDF-C or AX-WLDF-P range of sensor types. The AX-WLDF can have a total of 200m of cable connected to each input. Relay outputs provide alarm signals for each individual zone, together with a combined alarm relay. A multiplexed analogue 0-10V output signal indicates zone status. The input sensitivity of each zone is adjustable to ensure false returns are not given.

## Features

- A total of 200m cable on each zone
- Detects open or short circuit sensors
- Mixed sensor types can be used
- Audible alarm with mute contacts
- LED indication of each zone alarm
- Input sensitivity adjustable for each zone
- Relay output to BMS or Alarm annunciator
- Analogue output provides zone status indication

## Product Specifications

Supply Voltage:	WLDF-24	24Vac @ 50Hz ±10% and 24Vdc ±10% at 150mA max.
	WLDF-230	230Vac @ 50Hz ±15%
Common Alarm Relay:		SPCO rated 10A @ 250Vac resistive. NO Contact closed when OK
Individual Alarm Relays:		SPNO rated 5A @ 250Vac resistive. Contact closed when OK
Sensor Inputs / Types:		Cable or Point (Polarity independent)
Cable Length per Input:		200m (including header cable) maximum
Analogue Output:		0-10V at 5mA maximum
Sensor LEDs:		1 for each zone. Solid green = OK Flashing green = zone disabled (pot adjusted fully-anticlockwise) Solid red = water detected Flashing red = fault detected (open or short circuit) Red when fault detected
Alarm LED:		
Audible Alarm Output:		70db @ 10cm
Mute input:		Volt free contact (switching 5V at 1mA)
Electrical Connections:		Rising cage terminals for 0.5-1.5mm <sup>2</sup> cable
Dimensions / Weight:		156 x 85 x 60mm / 155gms
Ambient Temperature Range:		-10 to +50°C, 0-90% RH condensing
Country of Origin:		United Kingdom

## Order Codes

AX-WLDF-24	Four zone water leak detection module 24V
AX-WLDF-230	Four zone water leak detection module 230Vac
Compatible Sensors	Refer to AX-WLDF-C and AX-WLDF-P datasheets

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### Installation

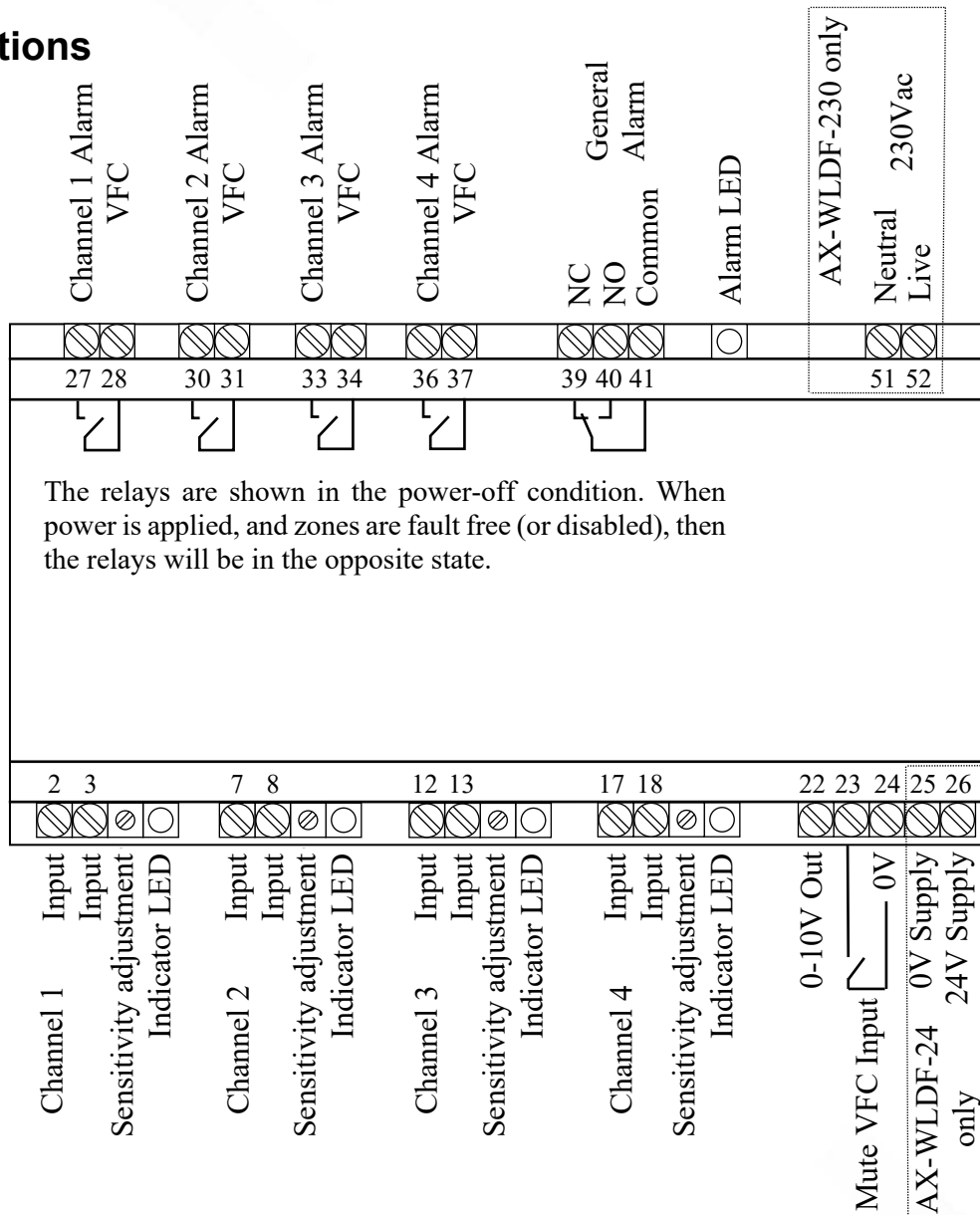
#### SAFETY NOTE

Ensure all installations are in compliance with applicable electrical codes and that the installation is carried out by qualified installers familiar with the relevant standards and proper safety procedures for high voltage installations. Never rely on status indication on any device to determine if power is present.

#### Mounting

The AX-WLDF clips easily on to standard DIN Rail. If it is necessary remove the module from the DIN rail, ensure to use a flat bladed screwdriver to release the DIN clip.

### Connections



### Operation

#### Disable zone

To disable a zone turn the relevant sensitivity preset fully anticlockwise. The zone LED will flash green every two seconds. The zone alarm relay will remain in the OK state and the 0-10V output will show the zones as OK.

### Sensitivity

Within 30 seconds of applying power to the AX-WLDF, with the cable connected, adjust the sensitivity potentiometers on each input by turning clockwise (increasing sensitivity) until the zone LED illuminates red, and then anti-clockwise (reducing sensitivity) until the zone LED goes off. Less sensitivity may be needed when long runs of cable are used. If the input is not used it should be disabled, see Disable zone.

### Testing

To test the installation, after the sensitivity has been set, put a wet cloth over the cable to simulate a water leak, the indicator zone LED will illuminate solid red. Remove the cloth, short across the mute input, and if the cable is dry the zone LED will be solid green.

### Audible alarm output

If the unit is in alarm and there is no mute switch in use, the alarm can be silenced by shorting across the mute terminals. If the audible alarm is not required the mute terminals can be permanently shorted.

### Alarm relay outputs and alarm LED

Only when the fault is removed and the mute contacts closed will the alarm relay contacts return to normal, and the Alarm LED extinguish.

### Cable fault

The unit monitors the cable for open and short circuit conditions. Only 1 cable or sensor should be connected to each zone input. Connecting two cables or sensor to one zone input will interfere with the cable fault detection and unit sensitivity. When a fault is detected the the Zone relay and General relay will go into the alarm state, the 0-10V will show an alarm for the zone and the zone LED will flash red.

### Analogue 0-10V output:

The table below indicates the output voltage for each fault condition (Alarm = water detected, open circuit or short circuit) (OK = No alarm or input disabled):

Channel 1	Channel 2	Channel 3	Channel 4	Analogue Output
OK	OK	OK	OK	10.00V
ALARM	OK	OK	OK	9.33V
OK	ALARM	OK	OK	8.67V
ALARM	ALARM	OK	OK	8.00V
OK	OK	ALARM	OK	7.33V
ALARM	OK	ALARM	OK	6.67V
OK	ALARM	ALARM	OK	6.00V
ALARM	ALARM	ALARM	OK	5.33V
OK	OK	OK	ALARM	4.67V
ALARM	OK	OK	ALARM	4.00V
OK	ALARM	OK	ALARM	3.33V
ALARM	ALARM	OK	ALARM	2.67V
OK	OK	ALARM	ALARM	2.00V
ALARM	OK	ALARM	ALARM	1.33V
OK	ALARM	ALARM	ALARM	0.67V
ALARM	ALARM	ALARM	ALARM	0V