

Installation And Operation Manual



TEA POINT

MODEL NUMBER: TP1

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For more information on this product and Knight Alarms range of sensors please visit.

www.knightalarms.com

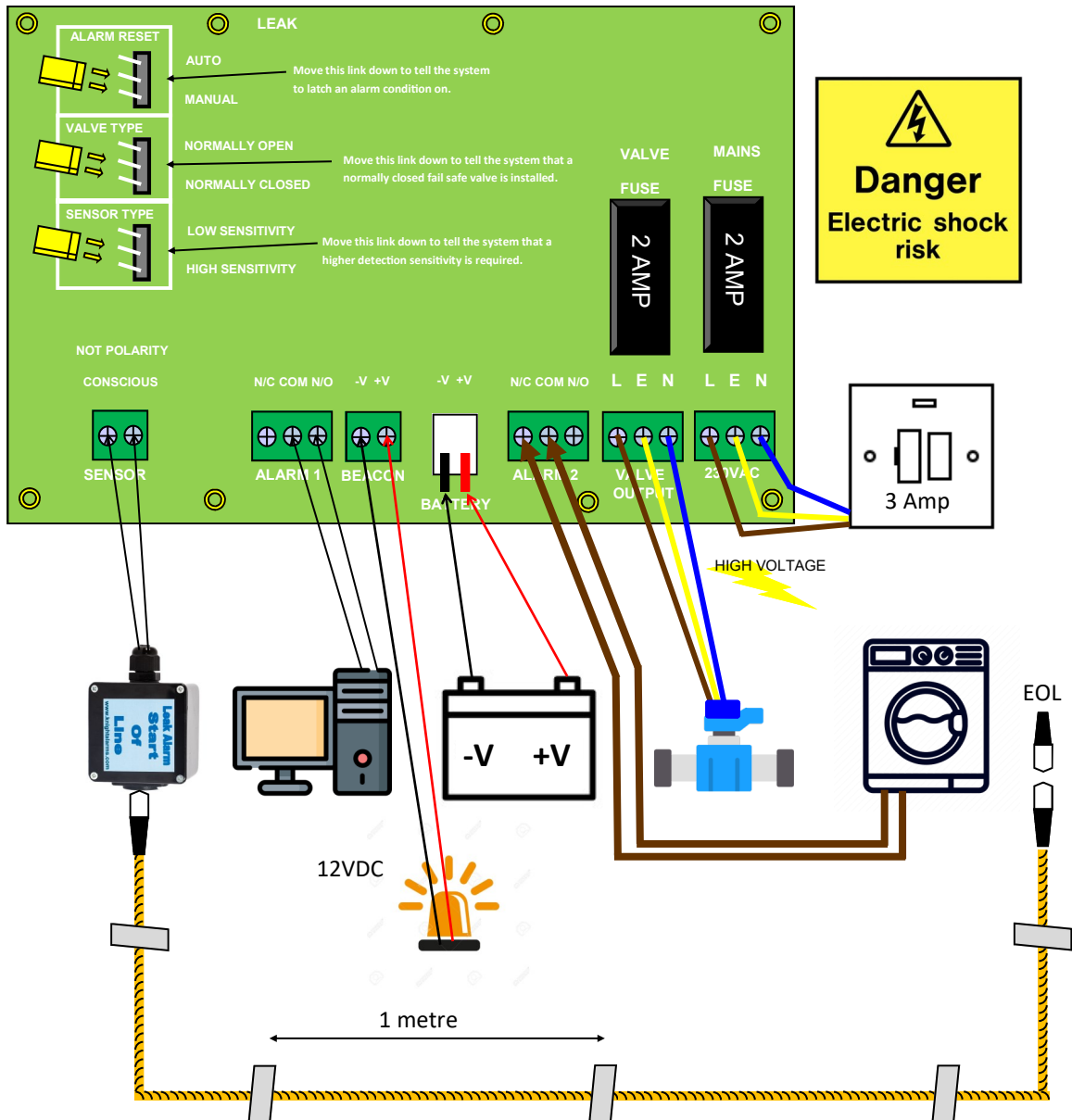
Or email us at:

sales@knightalarms.com

Technology is constantly updating, Information given via this manual was current on the given date.



A copy of this guarantee is available on our website.



!! WARNING !! – MAINS ELECTRICAL SUPPLY

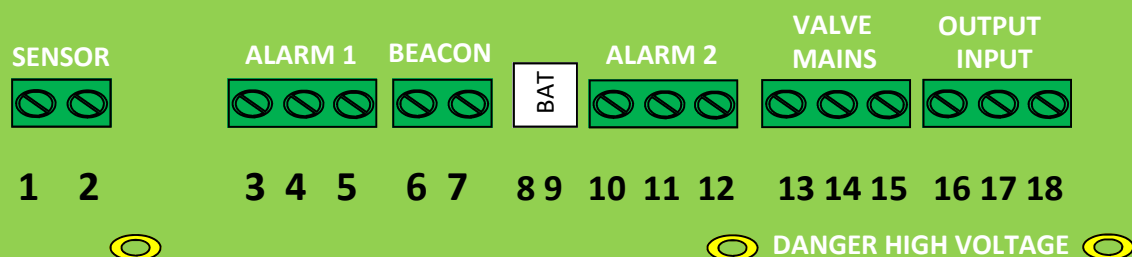
The panel must be permanently connected to the mains supply in accordance with current IEE wiring regulation. A 3 amp fused spur, installed by a qualified electrician, is strongly recommended. Any fault which could be mains related must be diagnosed and corrected by a qualified electrician to ensure continued safe operation.

!! WARNING !! – MAINS ELECTRICAL SUPPLY

ALWAYS DISCONNECT THE MAINS SUPPLY BEFORE YOU WORK ON THIS EQUIPMENT.

HIGH RISK OF ELECTRIC SHOCK.

DO NOT WORK ON THIS EQUIPMENT UNLESS YOU ARE QUALIFIED TO DO SO.



TERMINAL NUMBER	DESCRIPTION	VOLTAGE	
1	SENSOR OUTPUT (SELV)	5V DC POS	LOW
2	SENSOR RETURN (SELV)	0V DC NEG	LOW
3	RELAY ENERGISES ON ALARM	NORMALLY CLOSE VOLT-FREE	Assume
4	RELAY ENERGISES ON ALARM	COMMON VOLT-FREE	Assume
5	RELAY ENERGISES ON ALARM	NORMALLY OPEN VOLT-FREE	Assume
6	BEACON OUTPUT ZERO VOLTS	-12V DC NEG	LOW
7	BEACON OUTPUT ON ALARM	+12V DC ON ALARM POS	LOW
8	FLOAT CHARGED BATTERY	-13.6 V DC NEG	LOW
9	FLOAT CHARGED BATTERY	+13.6 V DC POS	LOW
10	RELAY ENERGISES ON ALARM	NORMALLY CLOSE VOLT-FREE	Assume
11	RELAY ENERGISES ON ALARM	COMMON VOLT-FREE	Assume
12	RELAY ENERGISES ON ALARM	NORMALLY OPEN VOLT-FREE	Assume
13	SHUT-OFF VALVE OUTPUT	230V AC LIVE OUTPUT	HIGH
14	SHUT-OFF VALVE OUTPUT	GROUND / EARTH	LOW
15	SHUT-OFF VALVE OUTPUT	230V AC NUETRAL OUTPUT	HIGH
16	MAINS POWER INPUT	110 TO 230 VAC LIVE POWER INPUT	HIGH
17	MAINS POWER INPUT	GROUND / EARTH	LOW
18	MAINS POWER INPUT	110 TO 230 VAC NEUTRAL POWER INPUT	HIGH

When a leak is detected an internal buzzer will sound, a valve (if connected) will shut off the water, the alarm relay will energise and the red LED will light.

Press the mute button to silence the alarm

When the leak has been rectified and the sensor dried the system will self reset. The valve will reopen and the red LED will go out. The system is now ready to detect the next leak.

Test the system periodically by pressing the LED Test button. When pressed the system will do a routine test of its circuitry then return back to normal.

If a sensor becomes faulty the alarm will sound and the yellow LED will be lit.

Once the sensor fault has been rectified the system will automatically return back to healthy.

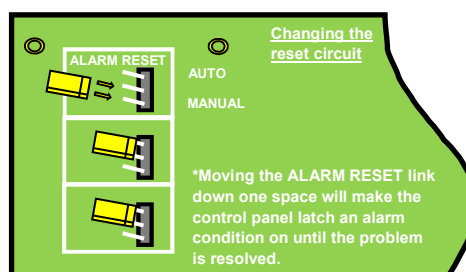


Mute button. Short Press to silence the audible alarm and long press to reset a historic alarm

LED Test. Short press to test all the LED's. Long press to test all system functions

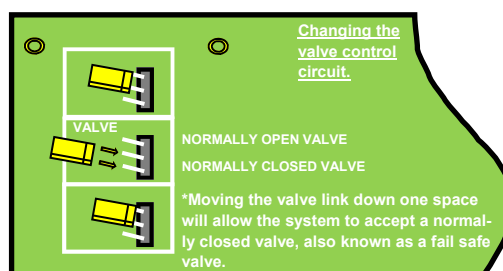
Every install is unique so with this in mind there are 3 internal links allowing you to adjust the systems behaviour. The links work by moving them up or down one space on the connector.

LINK 1 (ALARM RESET). As standard this link will be set to auto. Auto makes the system automatically self-reset when an alarm condition has been rectified. If the install is unmanned set the link to manual. The system will now need the mute button pressed (acknowledged) before it will turn valves back on etc.



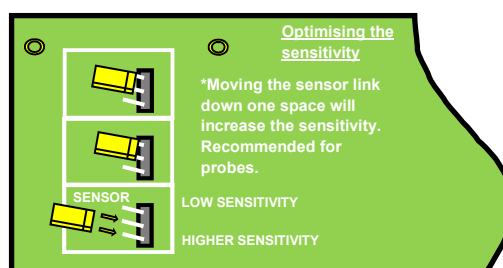
LINK 2 (VALVE TYPE). As standard this link will be set to a normally open valve. This type of valve requires power to close.

Setting this link to Normally Closed will allow control of a normally closed valve sometimes called fail safe. Normally closed valves require power to open.



LINK 3 (SENSOR TYPE). As standard this link will be set to tape or pad sensor. This is an optimised sensitivity designed for Tape (Cable) sensor or Minipad sensors.

If a probe sensor is installed link 3 needs to be set to probe. This will optimise the sensitivity designed for probes.



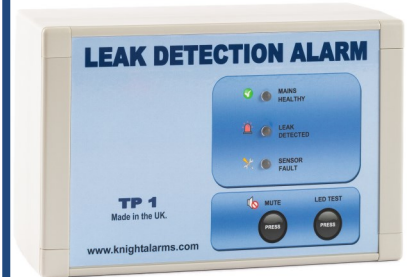
The TP-1 control panel has a leak-detected LED, a mains healthy LED and a sensor fault LED.

In the event of a leak, the leak LED will illuminate, buzzer will sound, valve will operate & the relays energise. Pressing the mute button will silence the buzzer. The Leak LED will remain illuminated until the sensor has been dried.

In the event of a sensor fault, the sensor fault LED will illuminate and the internal buzzer will sound. The mute button can be pressed to silence the buzzer. The fault LED will remain illuminated until the sensor fault has been rectified.

The panel will self-reset in both instances unless the alarm reset link is set to latch.

The TP-1 control panel test button can be pressed to test the functionality of the TP-1



Model Number TP-1

Technical Specifications	Single Zone TP-1	Compatible Sensors
Dimensions	H190mm x W120mm x D60mm	 Cable Sensor
Weight	570g	 Probe Sensor
Material	ABS, UL94-V0	 Mini Probe
Operating Temperature	Resistant up to 55°C down to -25°C	 Mini Pad Sensor
Protection Class	IP54 as standard	 Overflow Sensor
Input Main Voltage	110-240 VAC @50Hz	 Over-Temperature
Valve Output	230V AC @ 3 A MAX	
Alarm 2 Relay Contact Output	230V change-over volt-free Max 8A	
Battery Backup	1 x 12V 0.8Ah sealed lead acid	
Beacon Output	12V DC @ 500mA	
Alarm 1 Relay Contact Output	230V change-over volt-free Max 1A	
Sensor Output	5V DC 2 mA SELV	
Sounder Output	3400Hz 95 dB @ 10cm	
Valve Exercise Duration	Every 40 days of continuous use	
Mains Fuse PCB Mounted	2A quick blow 20mm glass	
Valve Fuse PCB Mounted	2A quick blow 20mm glass	

Technical Specifications	Single Zone TP-1
LED Test Button	Sets a test routine for full system functionality
Mute Button	1. Silences the internal sounder 2. Acts as a system acknowledgement
Mains Healthy LED	Indicates when the system has a healthy Power supply connected.
Leak Detected LED	Will illuminate when the connected sensors are active.
Sensor Fault LED	Will illuminate when a sensor has become damaged or disconnected.
Alarm Reset Link	Sets alarm to latch on or Auto reset
Valve Type Link	Auto configures for either a normally open or normally closed valve
Sensor Type Link	Select cable for least sensitivity or select Probe for MAX sensitivity
Battery Backup	Connected to maintain system functionality in the event of power loss
Power Supply	110—230V AC switch mode 12V DC
Valve Output	Pre-configured N/O or N/C Valves
Valve Exercise Mode	Fully Automatic valve exercise cycle
Beacon Output	Pre-configured to output 12V DC when in alarm or fault condition.
MAX Sensor Cable Length	100M of Sensor cable and 100M Connection cable.
Optimised Self Learning	Minimises spurious alarms

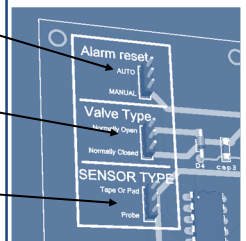
Compatible Sensors



Repeater Alarm



Oil Sensor Probe



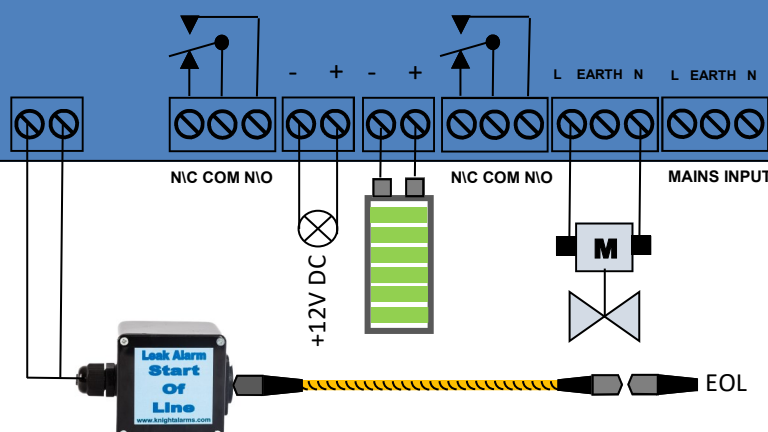
Over-Temperature



Humidity Sensor

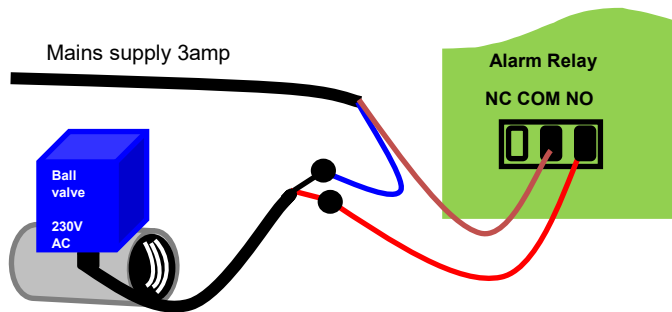


Metal Water Probe



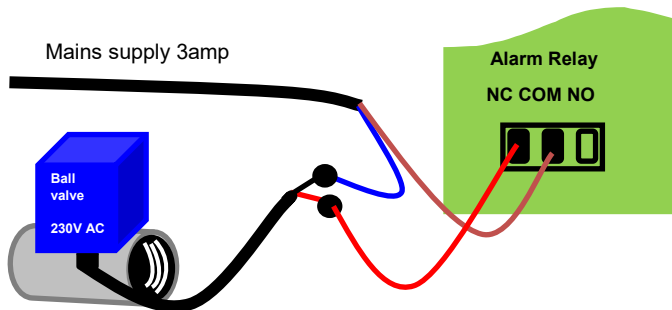
Valve Wiring Normally Open Valve.

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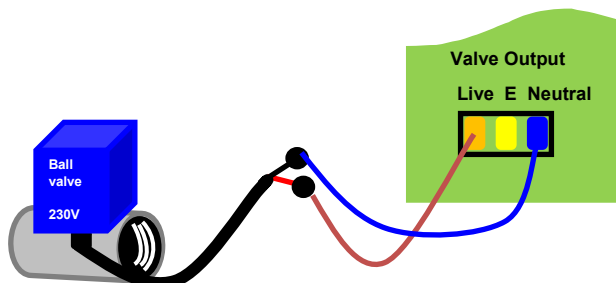
A normally open valve will allow water to flow. When voltage is applied the valve will close and turn off the water. When the power is taken away from the valve it will automatically open again.

Valve Wiring Normally Closed Valve.



A normally closed valve also known as a fail safe valve will not let water flow until a voltage is applied. When the voltage is removed the valve will automatically close. When the voltage is applied the valve will re-open.

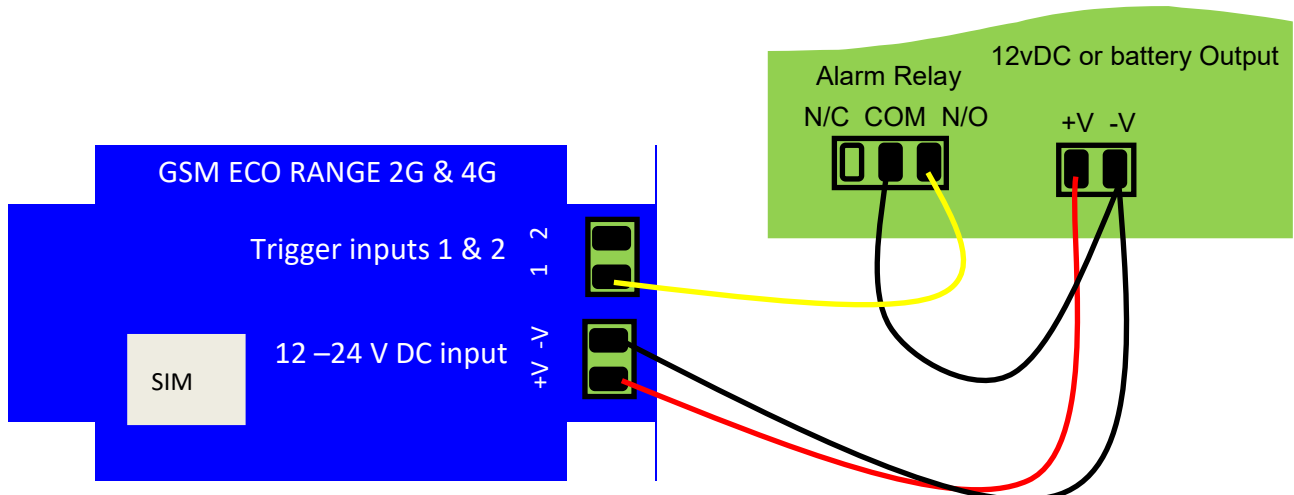
Dedicated Valve Output Terminal.



When a dedicated valve terminal is available the valve wiring has already been configured. Live is connected to red and black to neutral. Valves are typically normally open but in case of a normally closed please adjust the valve link.

Please note: Valves are automatically exercised for 3 seconds every month to flush out debris and eliminate seizure.

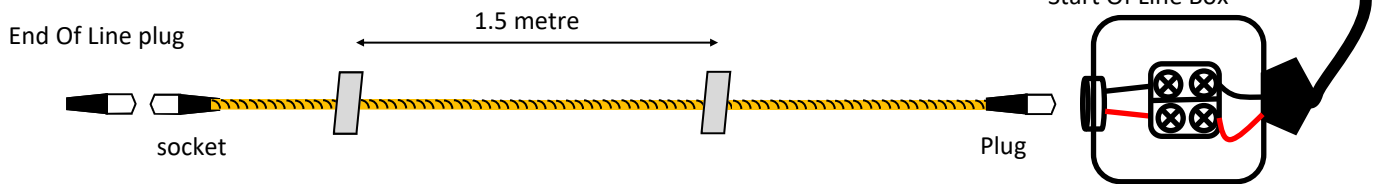
SMS Text dialler wiring.



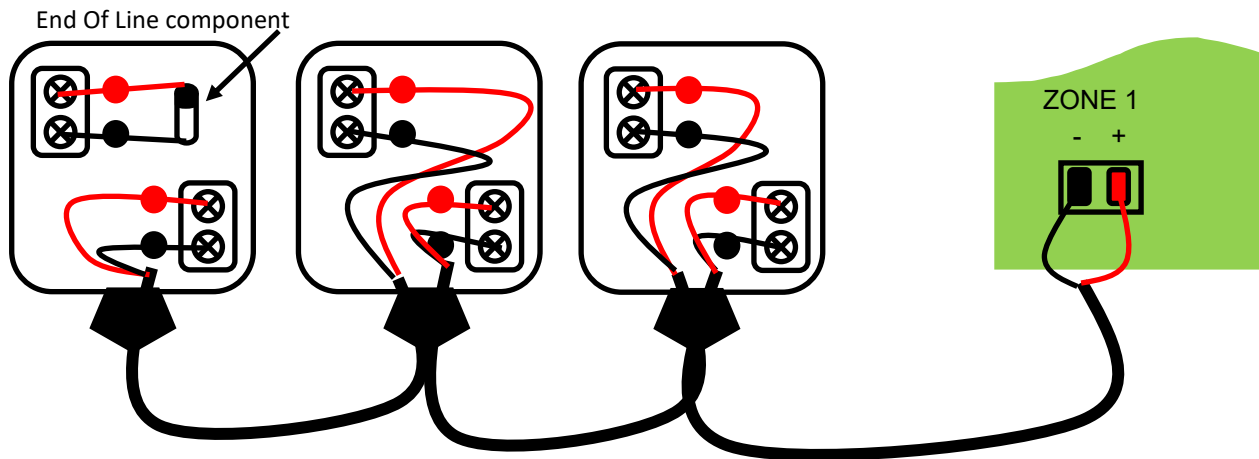
Sensor cable wiring.

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- Cables can be installed up to 200 metres away from the control panel.
- Sensor cables must not exceed 100 metres.
- Metal work should be avoided wherever possible.
- It is recommended clipping the cables to the floor slab every 1.5M.
- Sensor cables can be wiped clean and dry.
- Do not paint or use mastic sealants on the sensor cable.
- It is recommended installing cables in a clean dry environment.

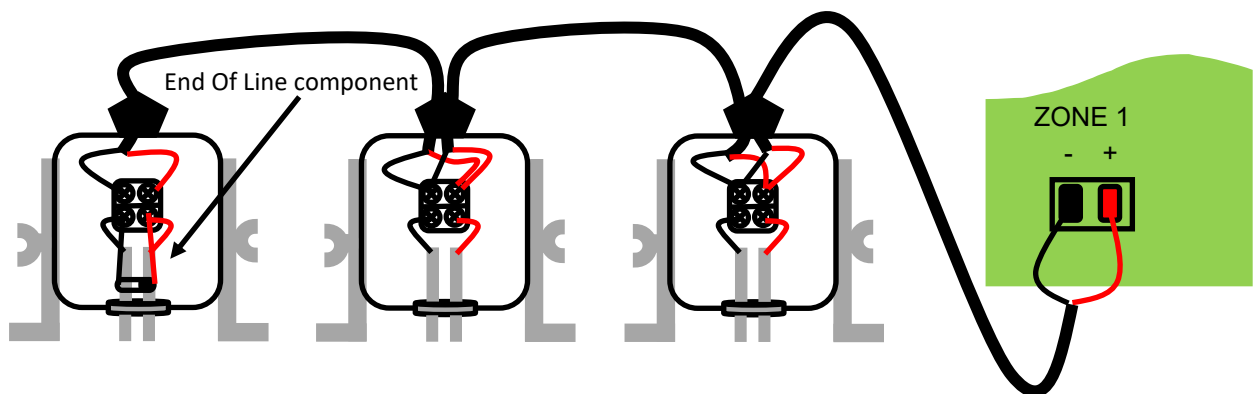


Mini Pad Sensor Wiring.



- Minipad Sensors can be installed up to 200 metres away from the control panel.
- Minipad sensors must not be laid directly on metal work.
- Maximum 100 minipad sensors can be wired in series parallel per zone.

Probe Sensor Wiring.



Problem	Solution
System is displaying leak detection but no leak can be found	• Is the sensor touching anything metallic. • Is the sensor tape is it coiled up and shorting out on its self. • Wipe the cable with a dry cloth there maybe conductive material that is invisible to the eye. • Check for conductive debris along the sensor route. Check bends and floor posts. • Check the wiring from the panel to the beginning of the sensor. • Sensor still damp from a detected leak. Dry with a cloth. • Adjust system sensitivity.
System is displaying sensor Faulty.	• Make sure an end of line component is installed at the end of the sensor run. • Check the wiring from the panel to the very end of the sensor, • Check the continuity of the cable from panel to sensor making sure there are no breaks or snagged cable. • Using the process of elimination, break the system down into sections. Put the end of line directly on the panel then to your next point until you discover where you no longer have continuity.
System has no power healthy green LED	• No mains power. Check the adjacent fused spur. • Check the onboard 20mm glass fuses. • Check mains wiring and that the terminals plugs sit neatly in there plugs.
Valve is not turning off water	• Check the onboard 20mm glass valve fuse. • Check 230v AC voltage is present at the valve when the control panel is in an alarm condition. • Check the valve is not stuck and there is no debris blocking its gate.