



Permanent Moisture Sensor Technical Data Sheet



This unit utilizes a 1kHz square wave signal to reduce the corrosion and degradation of the leak detection sensor as much as possible.

When the sensor is short circuited by water (or other cause) the unit will alarm. This alarm can be muted for a selectable time period set by the internal "SW1" switches.

This unit has in-built 50Hz noise reduction to help reduce false detections on longer cable runs.

For more than 8 channels, these units can be daisy chained so one of the channels feeds directly into the relay contacts of the next unit allowing one cable to be run back to the control room or switch panel. In this configuration, to activate the mute function you will need to press the mute button on all of the units that are alarming.

Battery backup will last approximately 5 days with a new battery (affected by age and quality of the battery installed).

We advise use of energizer lithium 9v batteries.

These batteries are non-rechargeable and should be replaced when necessary.

Recommend you treat them like smoke alarms and change batteries on the 1st April every year!

Connections

Relay	Relay operates in fail-safe mode (returns to “normal” when fault present) No Fault: N/O - S/C to COM. COM - Common Terminal. N/C - O/C to COM. Fault Present: N/O - O/C to COM. COM - Common Terminal. N/C - S/C to COM.
Power	Power Input “ + ” Positive Terminal (12VDC). “ - ” Negative Terminal (0VDC). Reverse polarity protection. Over-Voltage protection. Fused: 500mA (Self-Resetting)
CH1 - CH8	Leak Detector Circuits AC Signal out (5VAC [Peak to Peak]) A Short circuit on any of these outputs will cause the corresponding channel LED to illuminate and the buzzer to alarm. Faults will remain until the fault is removed/repared and the unit is power cycled via the power switch.

Functions

Power Switch	Located on the left side of the unit. Shuts down the unit (removing external power does not shut down the unit, it will automatically switch to using the battery).
Mute Button	Located on the top of the unit. Mutes the buzzer for the selected time period set by the internal Mute Options switches "SW1".
Status LED	Located on the front of the unit. Represents the Status of the unit: Green = No faults. Red = Power Loss (running on battery backup).
CH1 - CH8 LEDs	Located on the front of the unit. If a leak is detected the corresponding channels LED will illuminate. LEDs will remain illuminated until the fault is removed or repaired and the unit is power cycled via the power switch. These LEDs turn off during "Power Fail" and will re-illuminate upon return of external power.
	Located inside the unit.

Battery Backup	Battery backup is used to alarm for 1 out of every 30 seconds when power is removed. Giving the user a local audible sign that the unit has lost power and needs to be restored. The unit will not detect any new leaks whilst it is running on battery power. Existing faults will reappear on the "CH" LEDs when power is returned.
Mute Options	Located inside the unit. "SW1" on the PCB selects which mute time period will be used for the mute function. Changes will only take effect upon a power cycle.

Faults

Leak Detected	Corresponding "CH" LED will illuminate. Buzzer will sound constantly (unless muted). Relay will return to "normal" state (remote alarm will activate).
External Power Loss	Status LED will turn Red Buzzer will sound for 1 out of every 30 seconds. "CH" LEDs will turn off while battery power is being used and return once power has been returned to the unit. Relay will return to "normal" state (remote alarm will activate).

Specifications

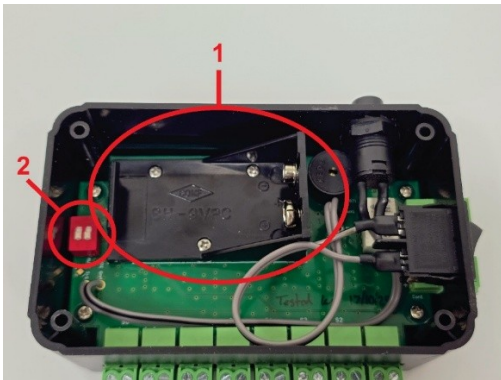
Voltage	12VDC (15VDC Max)
Current Draw	~7mA (70mA Max)
Battery	9V Lithium

Mute Options

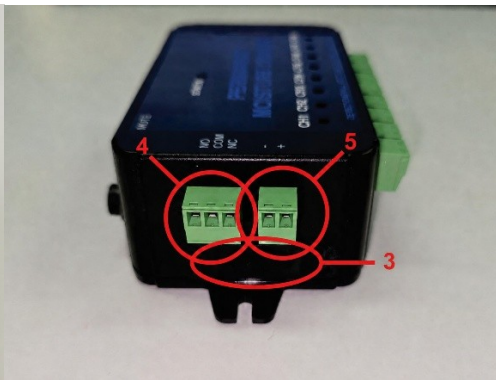
1 OFF - 2 OFF	12 Hours
1 ON - 2 OFF	24 Hours
1 OFF - 2 ON	72 Hours
1 ON - 2 ON	7 Days

Components

Internal:



Left Side:



- 1) 9V Battery holder
- 2) Mute Options switches (left 1, right 2) Up is ON, Down is OFF
- 3) Power Switch
- 4) Relay Contacts
- 5) Power Input

Top Side:



Bottom Side:



- 6) Mute Button
- 7) Sensing Connections (CH1 - CH8)

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