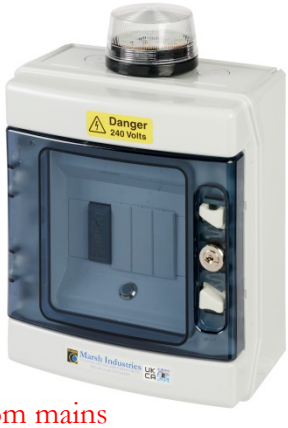
Troubleshooting Guide

Updated January 2025

MAHLA and MAHLAPS

Scan the QR code above to go to the installation guides



Please read all of the notes below.

General Notes

Whenever an enclosure is opened for fault finding, it should be initially isolated from mains power and checked for water ingress or damage before restoring mains power for testing and operation. Any electrical diagnosis should be undertaken by a suitably qualified person.

MAHLA and MAHLAPS

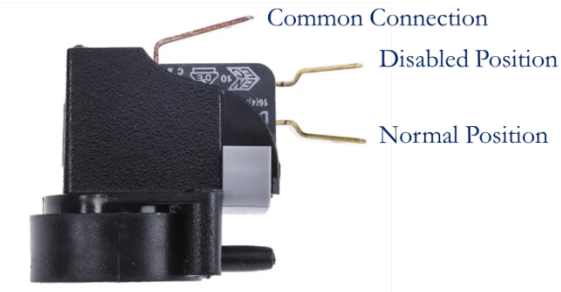
The only difference between these two alarm models is that the PS version has an air pressure switch to monitor the running of the air compressor for the plant.

If you have the PS model with the pressure switch and you do not want to monitor the pressure you can either:

Disconnect one or both wires between the pressure switch and the alarm board or move the spade connector on the pressure switch from the Normal Position to the Disabled Position.

Ensure that if you disconnect wires from the board that uninsulated ends are not left floating as this could cause a short circuit and damage the product.

If you move the spade connector, a compressor must not be connected to the switch by an air-line as this will activate the alarm when the compressor is started.



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Water / Condensation Inside the Alarm Enclosure

There are a number of reasons why this can occur, mostly due to the method of installation.

The alarm enclosure should ideally be installed in a partially sheltered area away from permanent direct sunlight and heavy rain, however the alarm enclosure is tested and certified to IP65 if installed using the recommended procedure detailed in the installation guides.

A certain amount of condensation can occur over a long period of time in certain environments. This is a natural phenomenon. Your installer can drill a 3mm drain in the base of the enclosure in the marked position to allow condensation to drain without affecting the IP65 rating. It also allows the enclosure to breathe and reduces the likelihood of water being sucked into the enclosure if the enclosure is cooled rapidly by rain.

Also, the enclosure installation guide recommends that the enclosure is secured to a surface using the indicated pass-throughs. This allows the integrity of the enclosure to be retained. Water ingress will occur if the enclosure is installed where it will get wet and water can run down the back of the enclosure and gain access through installer drilled holes. Holes should not ideally be drilled in the back of the enclosure for fastening or cable ways unless they are adequately protected against water ingress.

Ensure the beacon is tightened and that the neoprene washer is in place. Do not over-tighten the wing nut. A small amount of silicon can be added between the enclosure and neoprene washer and between the neoprene washer and the beacon if additional protection is required.

Finally, a certain amount of condensation will occur in the compressor air hoses. This will create condensation in the panel if the 6mm air pressure line to the pressure switch is leaking inside the enclosure. The 6mm hose should be connected firmly to the switch and tightening the air hose gland will hold it firmly in place. If everything is connected correctly and there is air from the compressor audible in the alarm enclosure, then the pressure switch is damaged and leaking and will need to be replaced.

Electrical Connection

The alarm is supplied with a fused 3 pin standard UK plug. This supply must not be used to supply power to any other devices. The cord can be replaced and extended but it must always be adequately protected and fused.

The alarm enclosure must not be used as a consumer / distribution unit.

Additional High Level Float Switches

You can add an additional high level switch by doubling up the connection to the board with another Normally Open float switch in parallel to the existing switch. They are not polarity sensitive

Faults and Resolution

This is general for alarms MAHLA and MAHLAPS as appropriate. **Status / Fault**	**Possible Cause**
Water in enclosure	See previous section
Compressor failure – no immediate alarm	After a compressor failure or during testing at installation, it will take a few minutes for the pressure to disperse in the hoses before the alarm is activated. This is normal.
Beacon flashing, alarm sounding	This will occur if: 1. The high level float has been activated. Check the plant for flooding and the position of the float switch in the plant. 2. Air pressure has been lost. Check that the compressor is running and that aeration is operating in the plant. Check for an air leak inside the alarm enclosure. 3. Mains power to the alarm has failed and the alarm has switched to battery backup. Check that the LED is illuminated inside the clear alarm panel door, check the fuse to the alarm supply, check the supply at source, open the enclosure and check the status LED's on the alarm circuit board explained below.
Alarm activated (or during test), no sounder	Check the silence button inside the panel door is in the down (sounder active) position. Check the silence button cable is connected to the alarm circuit board connector inside the enclosure. Test the sounder using the battery as a supply, if no sound then the sounder is likely to need replacing. The beacon can also be tested direct to the battery.
Completely dead	Power to the alarm has been lost and the battery is exhausted. If power is traced to the supply of the alarm transformer but 12-14V is not present on the transformer output, the transformer needs to be replaced.

Compressor air leaking into the enclosure and condensation.	See previous section "Water inside the Alarm Enclosure". There should be no air leaks or sound of air leaking inside the enclosure. This would indicate a faulty / leaking switch requiring replacement or a leak between the switch and the 6mm hose.
Circuit Board LED's	**PWR fail** indicates that the circuit board is not being supplied with 12V power via the transformer and the alarm is operating from the internal battery. In this case the beacon will flash and the sounder will operate until it is silenced using the button inside the alarm door. Normally this should be off. **Mains** indicates that the circuit board is being supplied with 12V via the transformer and mains power is being supplied to the transformer. Normally this should be on. **UPS** indicates that the battery will be charging or that the Battery is powering the alarm if the power has failed. This should normally be on. If there are no LEDS lit at all without mains power, the battery is most likely to be the cause of the fault. This can occur if the battery has been frozen for a long period of time. It can be checked with a volt meter and replaced if necessary.
Condensation / Water in Beacon	The beacon is independently IP66 rated. If you find a small amount of condensation after a long period of time the cover can be unscrewed and dried. Check that the rubber ring seal is still in place on the threaded portion of the beacon and replace the cover. Do not over-tighten the cover.

All Marsh alarms have been designed to have replaceable parts that do not require a skilled technician to fit. This is to reduce the need for a full replacement and possibly an electrician visit. This lowers the cost of maintenance and the overall cost of ownership. However, maintenance and parts replacement should only be undertaken by someone competent to do so. Electricity is dangerous. To re-iterate as stated previously - Do not remove the cover of the alarm for inspection or repair without first isolating the device from mains electricity ,particularly if you suspect water ingress or water damage.

Please check for updated documents using the QR code as documents are updated regularly to support customer feedback. Please get in touch if you need further assistance.