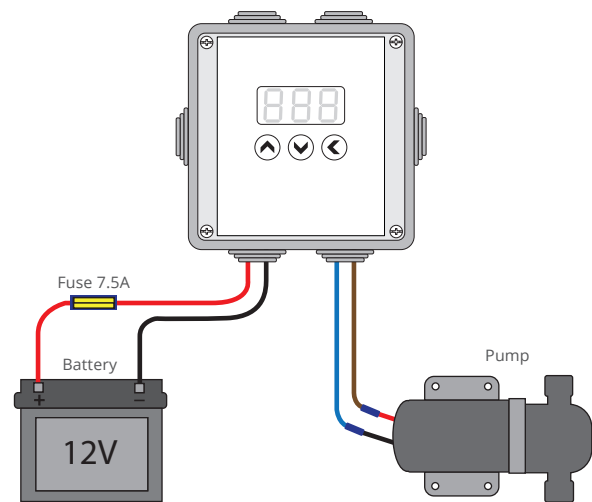


VARIABLE FLOW CONTROLLER

QUICK START GUIDE

WIRING GUIDE



Connect the pump controller as shown above.

We advise fitting an external 7.5A fuse on the red wire close to the 12V battery. Failure to do so will mean that the controller and wiring are not protected.

NOTE: only fit the fuse once all connections are made.



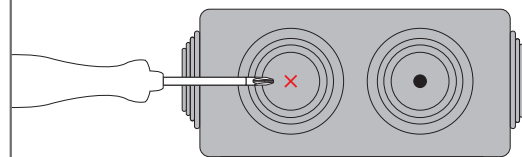
Make sure correct fuse is fitted inline. Failure to do so may result in damage to your installation.

Observe correct battery polarity. Failure to do so will prevent the unit from working.

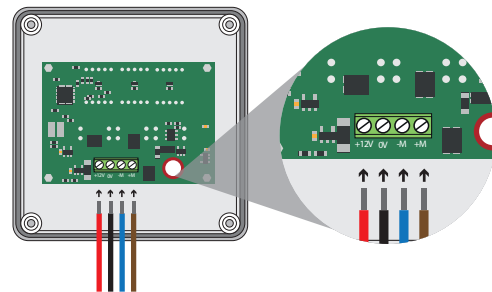
WIRING GUIDE

The controller does not come fitted with wires. Follow the diagram below to connect the wires. We recommend 1mm² tri-rated cable is used. Failure to wire the controller correctly could result in damage to the unit.

Before wiring pierce the flexi gland with a sharp pointed object and push the wires through. Making this hole small will decrease the chance of water ingress. Wires should exit from below the controller.



Wire the controller according to the diagram below. Start with the pump wires (brown +M and blue -M), then the negative battery wire (black 0V), and lastly the positive battery wire (red +12V).



CALIBRATION

Turn on the controller and press the up or down button until desired flow rate value is achieved (eg 30).



Press and hold the up and enter buttons to go into calibration.



Use the up or down button to adjust the CAL value.



Press the enter button to set the calibration value and return to flow rate.



BATTERY CUTOFF

To avoid damage to the battery, the controller will shut down the pump if the battery voltage drops below 10.5V. To enable or disable the low battery cutoff, press the down and enter buttons.



Then use the up or down button to select ON or OFF. Press enter to set.



CONTROLLER MESSAGES

808

An over current has been detected and the controller has shut down the pump to protect itself. Lower the flow rate and check the hose for blockages.

888

Pressure switch activated or pump disconnected.

888

A dead end has been detected and the pump has been paused. This can occur when operating a pole valve or kinking the hose. If this is not the case, try increasing the CAL value.

888

This message will start to flash when the battery is below 11.0V. If the battery is below 10.5V the pump will be disabled to protect the battery (unless low battery cutoff has been disabled*).

800

FLO is displayed when returning to the current flow rate settings.

888

CAL is displayed when going into the calibration menu before viewing or changing the value.

OPERATION

To turn the pump controller on or off press and hold the up or down button until the display lights up.



Flow rate can be set from 0-99 using the up and down buttons accordingly.



880, 899

Press the enter button to display current battery voltage.



888, 82.8

Press the enter button to return to the current flow rate.



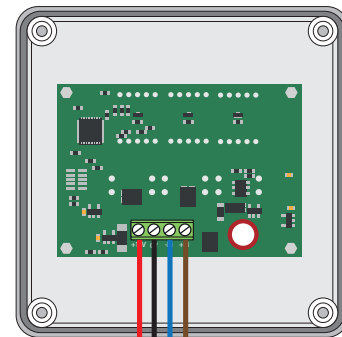
800

To turn off the controller press and hold the enter button.



When the pump controller is turned off correctly, the last flow rate used will be retained. Failure to turn off the pump controller using the buttons (for example by disconnecting the battery) will cause the flow rate to revert to the previously used flow rate.

TROUBLESHOOTING



Battery+
(+12V)

Battery-
(0V)

Motor +
(Pump)

Motor -
(Pump)

If the unit fails to turn on, check the wiring against the diagram above. If the wiring is correct, check the connections to the battery and the pump.

When wiring, do not over tighten screws as this could cause damage.

Make sure the enclosure front panel screws are done up tightly to avoid water ingress. Ideally the wires should be inserted through glands in the bottom of the enclosure. This will help to prevent the chance of water ingress.

OPERATING WARNINGS

Adjust your flow settings carefully.

For absolute safety always wire through the pump pressure switch. (The pressure switch can be bypassed if absolutely necessary - the unit will protect itself under normal conditions.)

This is a WATER pump controller: it will not work with AIR in the system. Always prime your system before starting work.

Do not set the CAL value too high. Setting it higher than necessary places extra strain on both the pump and the controller in a dead end situation. This can result in damage to both the pump and controller.

SPECIFICATION

| | |
|-----------------------|-------------------|
| Supply Voltage | 11 - 15 VDC |
| Maximum Current | 8A |
| Typical Drive Current | 5A |
| Voltmeter Accuracy | ± 300mV |
| Enclosure Material | ABS |
| Water Resistance | IP55 |
| Dimensions | 120 x120 x60 (mm) |
| Working Temperature | 0 to 40 Deg C |

DISCLAIMER: THE MANUFACTURER RESERVES THE RIGHT TO MAKE CHANGES TO ANY PRODUCT HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. THE MANUFACTURER DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN.

For more information please contact your distributor.

*The battery is at risk of permanent damage if the low battery cutoff is disabled and the controller continues to be used for long periods when battery voltage has fallen below +10.5V.