



Adjust your flow settings carefully. Repeated false dead-end detection indicates that the Cal value should be increased (less sensitive).

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. If air in the system causes false dead-end detection, increase Cal value (less sensitive).

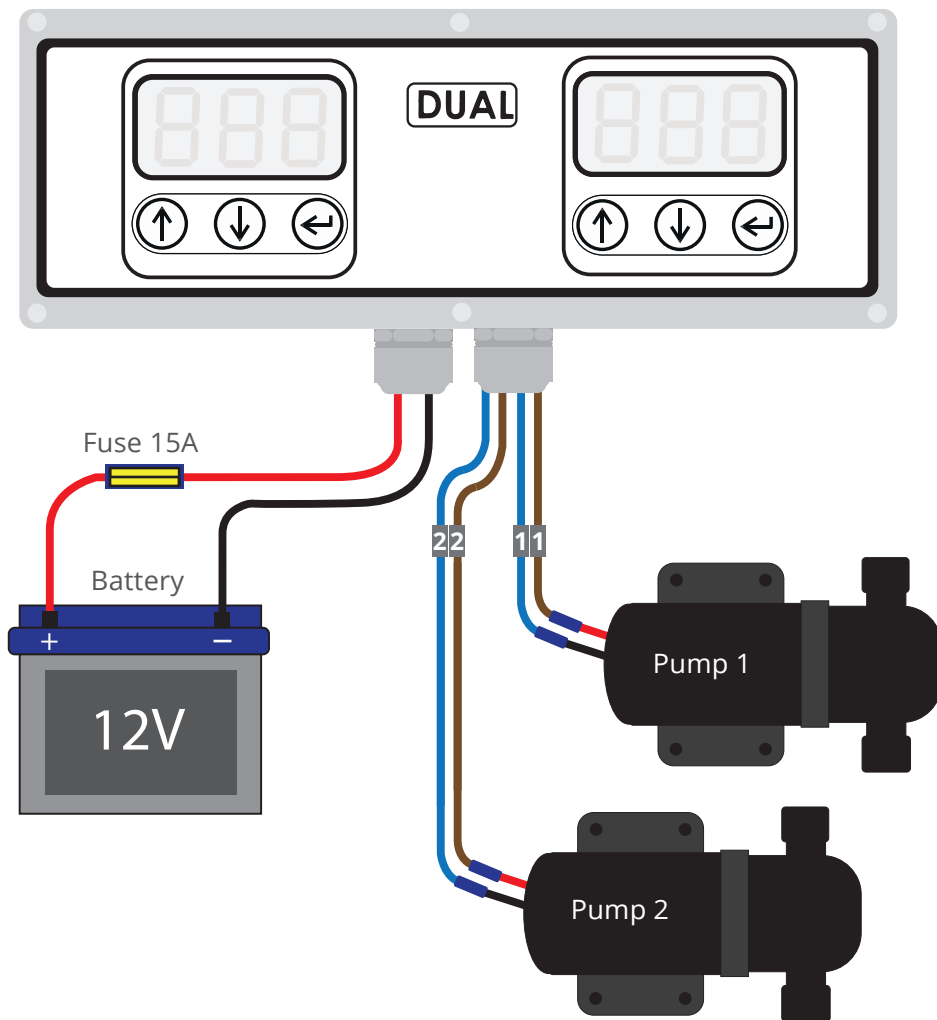
Do not set the Cal value too high. Setting it higher than necessary places extra strain on both the pump and the controller in a dead end situation. This can result in damage to both the pump and your controller.

Specification	Value
Supply Voltage	11 - 15 VDC
Maximum Current	15A
Typical Drive Current	7-9A
Voltmeter Accuracy	+/- 100mV
Enclosure Material	ABS
Water Resistance	IP65
Dimensions	195 x 80 x 55 (mm)
Working Temperature	0 to 40 Deg C

*** Your battery is at risk of permanent damage if you disable low battery cutoff and continue to use your controller for long periods when the battery voltage has fallen below +10.5V.**

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 and videos on how to use Spring controllers please visit: www.springltd.co/videos



Connect the pump controller in accordance with this diagram. NOTE: only fit the fuse once all connections are made.



**Make sure correct fuse is fitted inline. Failure to do so will result in damage to the unit.
Observe correct battery polarity. Failure to do so will result in damage to the unit.**

Connect your hose and brush to the pump.

Turn on the controller by pressing the up or down button. Keep the button held until the display lights up.

Press up until the display shows 30.



Press and hold the up and enter buttons to calibrate. CAL will be displayed.



Press the down button to select Auto Cal, AUt will be displayed. Press the enter button to start. Auto Cal starts from C99.



After several moments the calculated CAL value (e.g. C50) will be displayed and the controller is ready to use. Press enter to exit calibration.

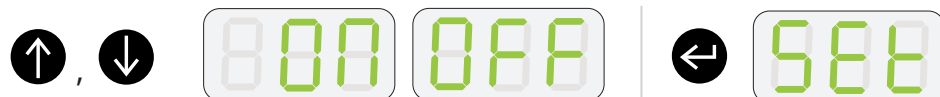


The CAL value can be adjusted manually by following the same steps and adjusting the CAL value by pressing the up or down button instead of using AUt.

To enable or disable the low battery cut-off (that stops your pump when the battery voltage is below 10.5V) press and hold the down and enter buttons on PUMP 1.



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



NOTE: 'ON' keeps your battery protected.

Press up or down to set a suitable flow of water.



Press enter (PUMP 1 only) to display the current battery voltage.



Press enter again to return to the current flow rate.



To turn the controller off, press and hold enter.



Message	Description
	An error has occurred while using AutoCal. This will happen when the motor is not connected or the enter button has been pressed to cancel it.
	Pressure switch has activated or the motor is disconnected.
	A dead end has been detected. If this is not the case, try increasing the calibration value.
	This message will start to flash when the battery is low (<11.0V). If the battery is below 10.5V the pump will be disabled to protect the battery (unless low battery cutoff is disabled*).