



QUICK START GUIDE

HydroLITE Pump Controllers

V1.0

FPC-10000

Designed with simplified functionality and control at its core the HydroLITE has been specifically tailored for Pump and Motor control in Residential or Light Commercial applications.

The HydroLITE features control for up to two single phase pumps or motors up to 16A each, featuring the very latest in onboard control and protection. The system will constantly monitor the state of an attached pump, alternate between pumps, in a dual pump system, and provide warning and indication of any anomalies with hardware or system.

SAFETY

As this control panel is designed to be used in Domestic/Residential applications, where specific Wiring Rules in respect of 'electrical supply' protection may apply, it is the responsibility of the installing electrician to ensure compliance with relevant standards.

- Prior to installation, ensure power supply is isolated.
- Power supply must be circuit breaker protected (qualified electrician to determine appropriate amp rating).
- Electrical connection to the panel must be carried out in accordance with the following pages.
- Additions or modifications to the control panel are not permitted and will void warranty.
- The controller is not intended for use by children or infirm persons without supervision.
- Repairs to the controller must only be carried out by a suitably qualified electrician.



This quick start guide makes use of the following symbols to indicate warnings that must be paid specific attention to:



Damage to equipment or personal harm may occur if this instruction is not followed

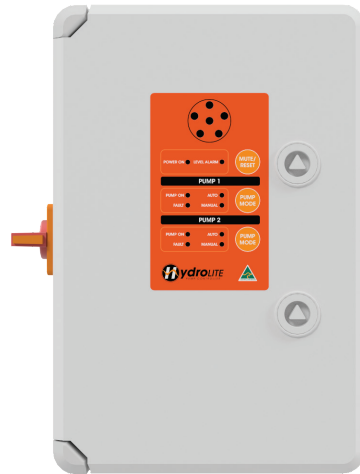


Electrical risk (electrocution hazard) may occur if this instruction is not followed

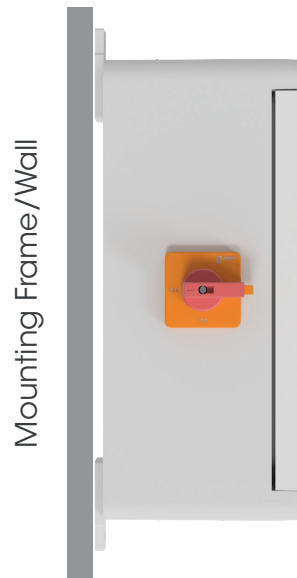
STEP 1 - INSTALLATION



- Indoor Installations only - not recommended for exposure to direct UV or weather.
- Controller enclosure must be mounted in a vertical position.
- Ensure mounting method does not compromise enclosure weatherproof rating.
- Ensure access to main isolator is not restricted.
- Ensure cables/conduits entering the panel are correctly tightened around the cable to ensure the weatherproof integrity of the design. If a conduit is brought directly into the controller for connection, ensure that the end of the conduit is sealed to stop gasses from the pit entering the controller.
- Ensure all terminal screws are checked for tightness prior to power up. Transportation can cause fasteners to loosen.



Front View



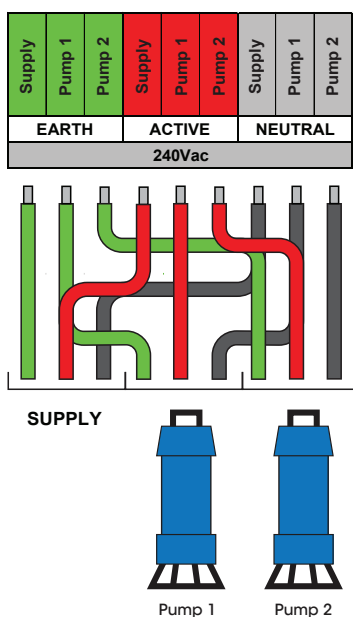
Side View

STEP 2 - CONNECTIONS

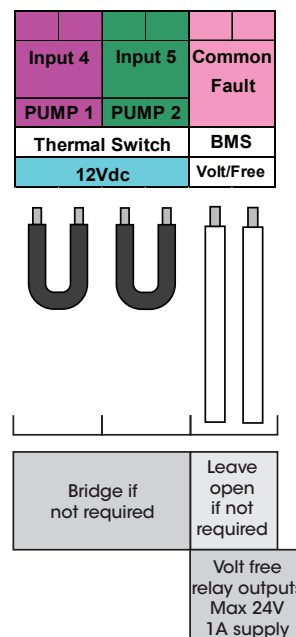


Warning: All electrical connections must be carried out by a suitably qualified and registered electrician

Supply & Pump Connections



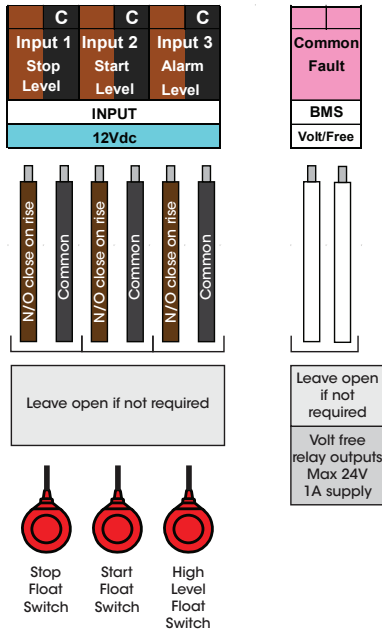
Thermal & BMS Connections



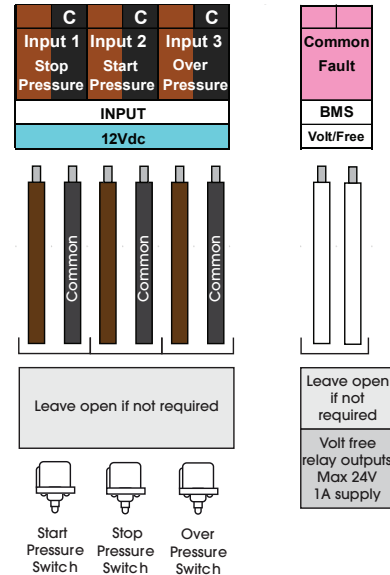
STEP 2 - CONNECTIONS CONT.



Level Control Connections



Pressure Control Connections

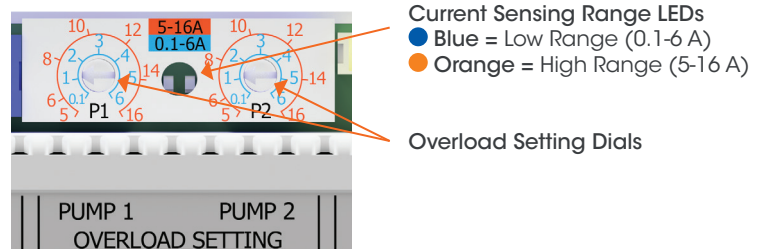
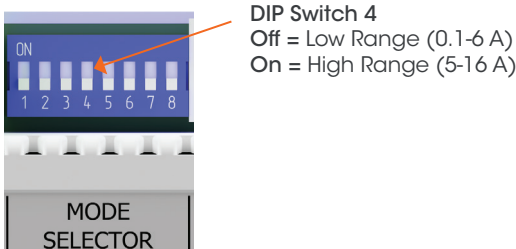


STEP 3 - CURRENT SENSING SETUP

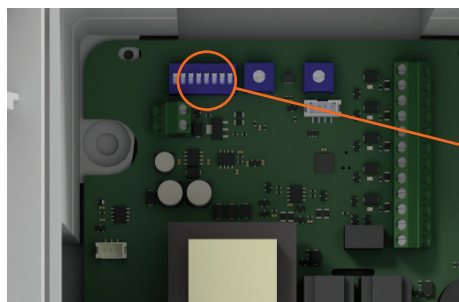


This step sets the current overload setting for the connected pump/s

- Ensure power is isolated before opening the enclosure to access the HydroLITE control module.
- Check that the current sensing range is correct according to the controller's model number suffix of LR (low range, 0.1-6 A) or HR (high range, 5-16 A). The range in use is also indicated by the LEDs in between the overload dials, and is selected via DIP Switch 4. Adjustments to Dip Switch 4 will require a power cycle to take affect.
- Set the pump overload trip settings according to the full load current (FLC) shown on the pump nameplate, via the overload dials shown in the image below. The value set corresponds with either the blue or orange scale, depending on which current sensing range is selected. If the trip value is set too high there is potential that the pumps may be damaged if an issue occurs. If set too low the pumps will go into fault prematurely during normal operation.



STEP 4 - DIP SWITCH CONFIGURATION



There are 8 DIP switches located on the upper side of the control module which are used to select the control mode and adjust the functions of the HydroLITE controller. The table below outlines these functions.

Important: Some Dip Switch changes will require a power cycle to take affect, Please see notes for relevant Dip Switch

DIP SWITCH	POSITION	FUNCTION
1	Off	Level Empty Control Mode The controller will operate in level empty control mode, controlled by up to 5 float switches. Input 1 = Low level/prime loss, Input 2 = Duty stop, Input 3 = Duty Start, Input 4 = Standby Start and Input 5 = High level.
	On	Pressure Boost Control Mode The controller will operate in pressure boost control mode, controlled by up to 3 pressure switches. Input 1 = Low level/prime loss, Input 2 is unused, Input 3 = Duty start, Input 4 = Standby start and Input 5 = Low pressure.
2		Not Used
3	Off	Standard Alternation Mode Duty pump alternates on every start or after 30 minutes of continuous running.
	On	Recirculation Alternation Mode Duty pump alternates after an accumulated running time of 6 hours, irrespective of starting/stopping and the system being enabled/disabled.
4	Off	Low Current Range Pump current sensing is configured for low range 0.1-6 A. The overload setting dials and CT scaling will use this range. Note: This is factory default & requires a power cycle to reconfigure.
	On	High Current Range Pump current sensing is configured for high range 5-16 A. The overload setting dials and CT scaling will use this range.
5	Off	Manual Mode Continuous If a pump is placed in manual mode, it will remain running in manual indefinitely.
	On	Manual Mode Timeout If a pump is placed in manual mode, it will revert to auto mode after 5 minutes of running in manual.
6	Off	High Level Stormwater The high level alarm will activate after the high level input (input 5) is closed for 15 minutes. The alarm will automatically reset once the high level input opens.
	On	High Level Sewage The high level alarm will activate after the high level input is closed for 1 minute. Manual reset via the mute/reset button on the keypad is required.
7	Off	Undercurrent And Zero Current Protection Off Undercurrent and zero current protections are disabled. Use for automatic pumps or pumps with low current.
	On	Undercurrent And Zero Current Protection On Undercurrent and zero current protections are enabled. Undercurrent - If a pump is running the current being sensed is less than 50% of the value set on the pump overload dial for 10 seconds, an undercurrent fault will be activated. Zero current - If a pump is running and the current being sensed is less than 100mA or 10% of the value set on the pump overload dial (whichever is higher) for 10 seconds, a zero current fault will be activated.
8	Off	Alternate Duty Duty alternation is enabled as configured by DIP switch 3.
	On	Static Duty Duty alternation or fault alternation is disabled. Pump 1 will always be the duty pump that starts first and pump 2 will always be the standby pump.

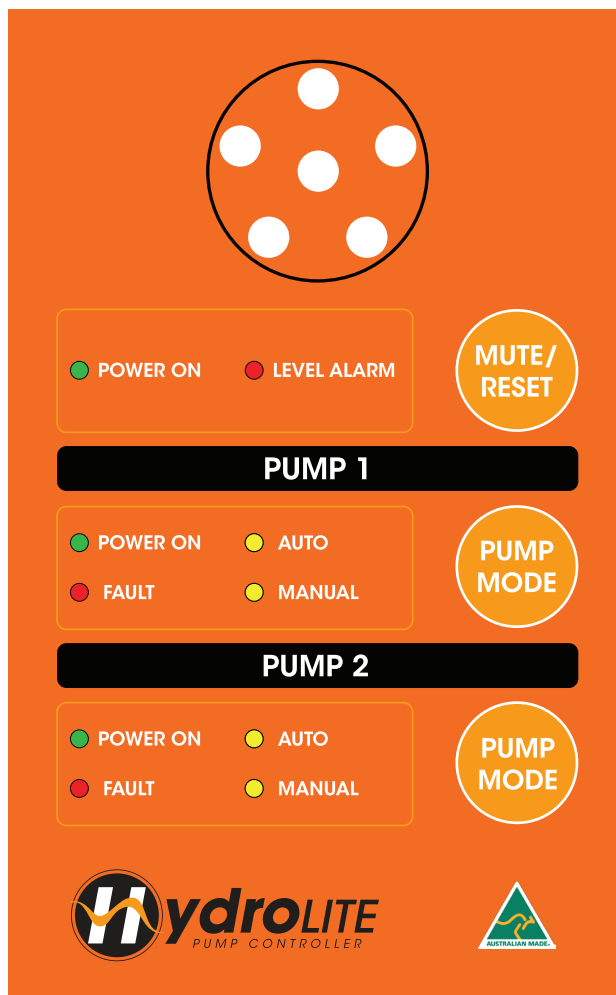
STEP 5 - POWERUP



When safe to do so, switch on electrical supply to panel. Check correct supply voltage before turning on the main isolator.

STEP 6 - KEYPAD OPERATION

The status of the HydroLITE controller is displayed via the various indicator lights on the keypad interface. The keypad features capacitive touch buttons for muting or resetting faults and selecting the pump mode. The keypad features an LED indication light for visual notification of a system fault as well as individual indication lights for system and pump status.



HydroLITE Keypad

SYSTEM INDICATOR LIGHTS

POWER ON

Off - Power off
On - Power on
1 flash - Alarm fault
2 flash - Settings fail fault
3 flash - Contact fault

LEVEL ALARM

Off - No faults active
On - High level fault
2 flash - Low pressure fault

PUMP INDICATOR LIGHTS

AUTO

Off - Pump not in auto mode
On - Pump in auto mode

MANUAL

Off - Pump not in manual mode
On - Pump in manual mode

Note - If both the auto and manual lights are off, the pump is in off mode

POWER ON

Off - Pump not running
On - Pump running

FAULT

Off - Pump healthy
On - Overload fault
1 flash - Input fault
3 flash - Max run fault
4 flash - Zero current fault
5 flash - Undercurrent fault

BUTTONS

MUTE/RESET

Press for 1 sec - Mutes the audible alarm
Press for 3 sec - Resets active faults, or starts the alarm test in which all indicator lights will illuminate and alarms will activate. The alarm test will stop when the button is released or after 10 seconds.

PUMP MODE

Press for 1 sec - Changes the pump mode from auto to manual, manual to off or off to auto.