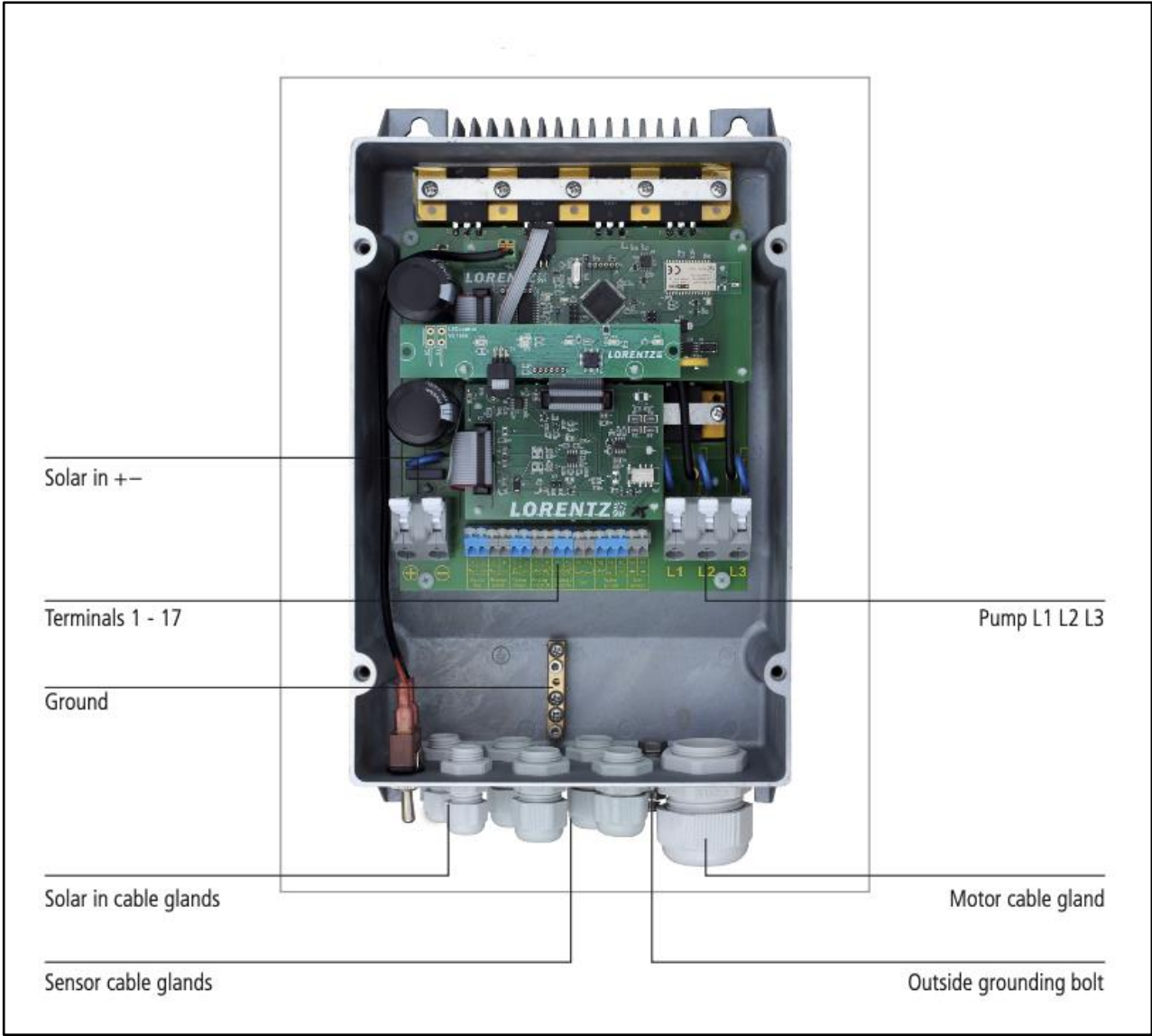
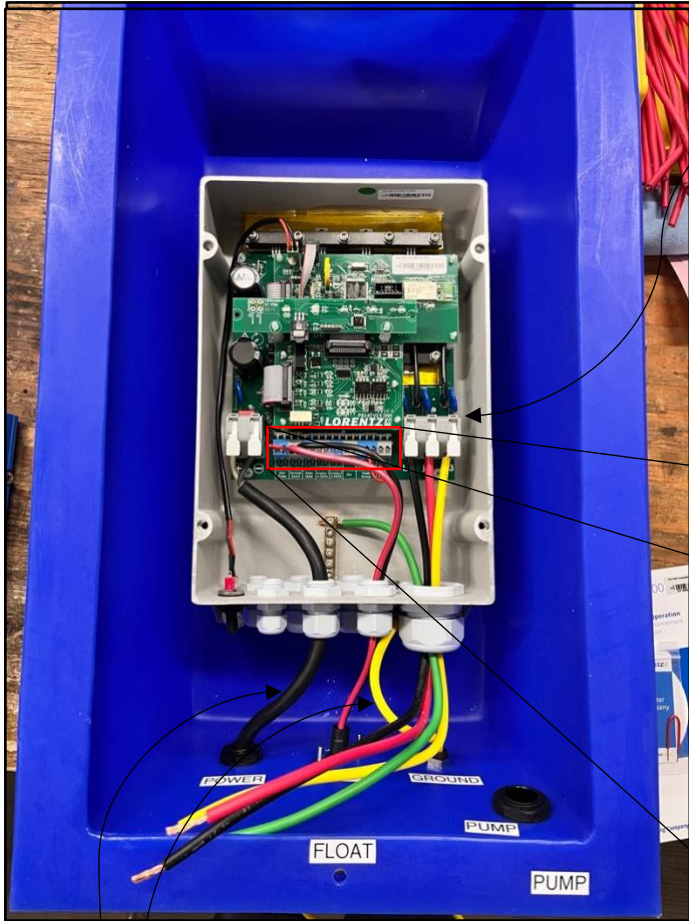


Lorentz Pump Controller

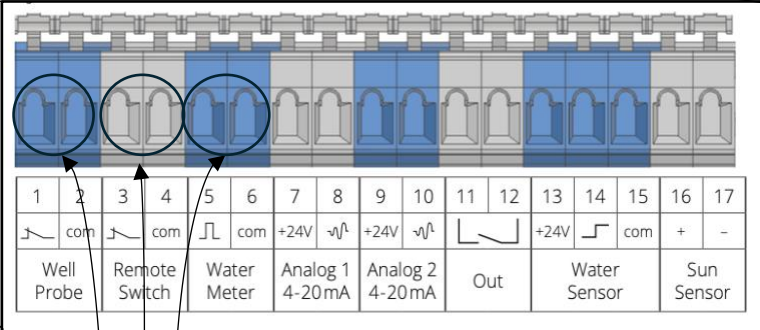
We mount the Victron pump controller in a large blue enclosure – with drilled holes and cord grips for the various wiring needed for the system. This document will break down the main components of this controller, so you have a better idea as to how your system is wired.

This is an overview of the inside of the Lorentz Pump controller.





- The **black, red and yellow** Lorentz wires are attached to terminals **L1, L2, L3** – and are fed through the Large “pump” cord grip and attach to the Lorentz wire from connected to your **pump**. The green Lorentz wire bends to the left and slides through a grounding mount and screw.



This is a close-up view of the terminals 1-17

- The Thicker Black wire – is for the power supply. It will plug into the battery box with a twist lock plug

- The single yellow or green wire will be attached on the outside grounding bolt of the pump controller. The other end will be grounded somewhere on your trough.

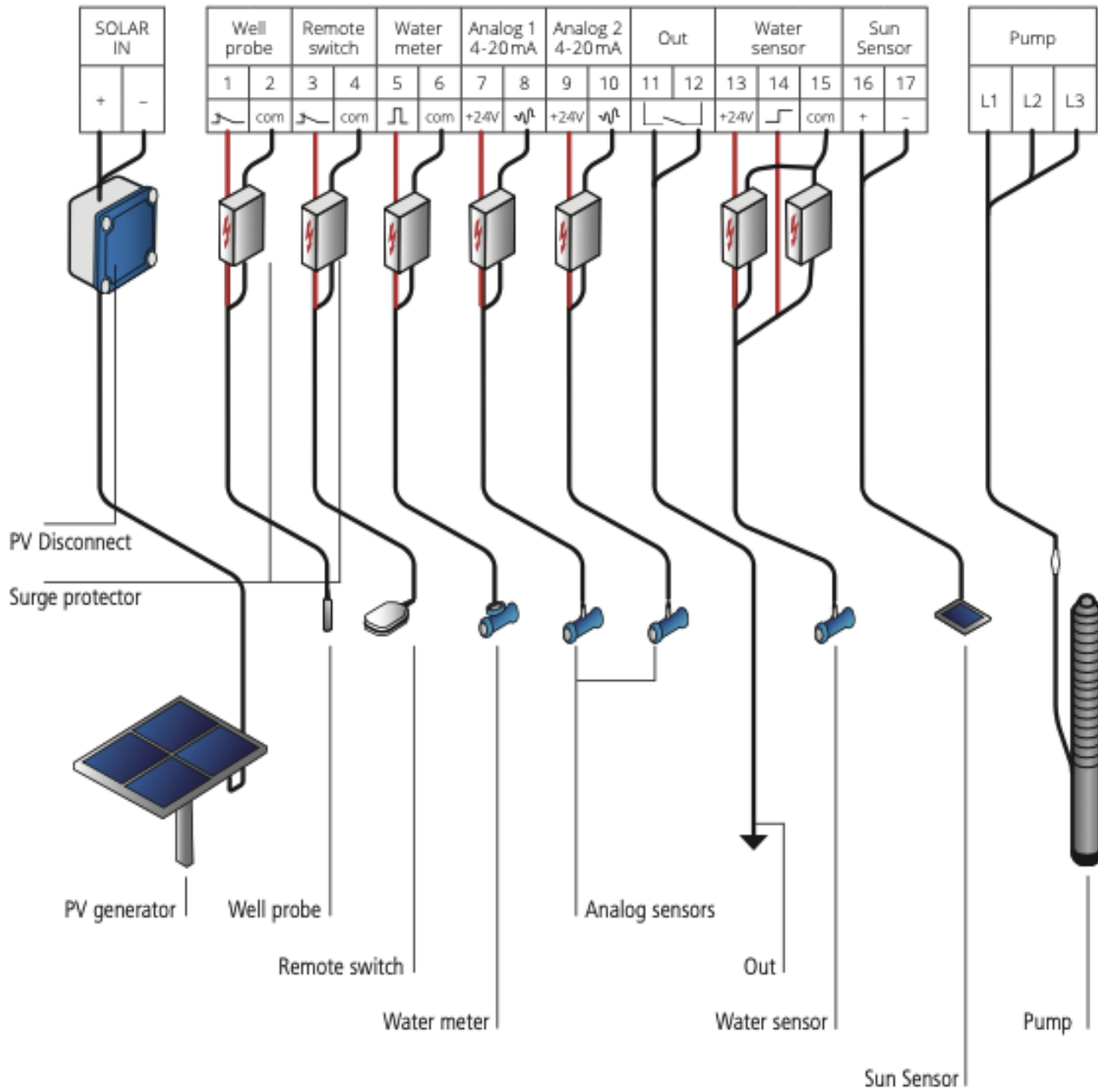
- The **black and red** pin connector is for the **float switch** – it connects to **terminals 3 & 4** under remote switch (Positive is 3)
- If you have a **Liquid pressure sensor (LPS)** it will attach to the 5 & 6 terminals under “Water Meter” (positive is 5) **An LPS will replace the Float Switch**
- And if you have a well probe it will be connected to the controller at 1 & 2

Full list of terminals 1-17 and explanation

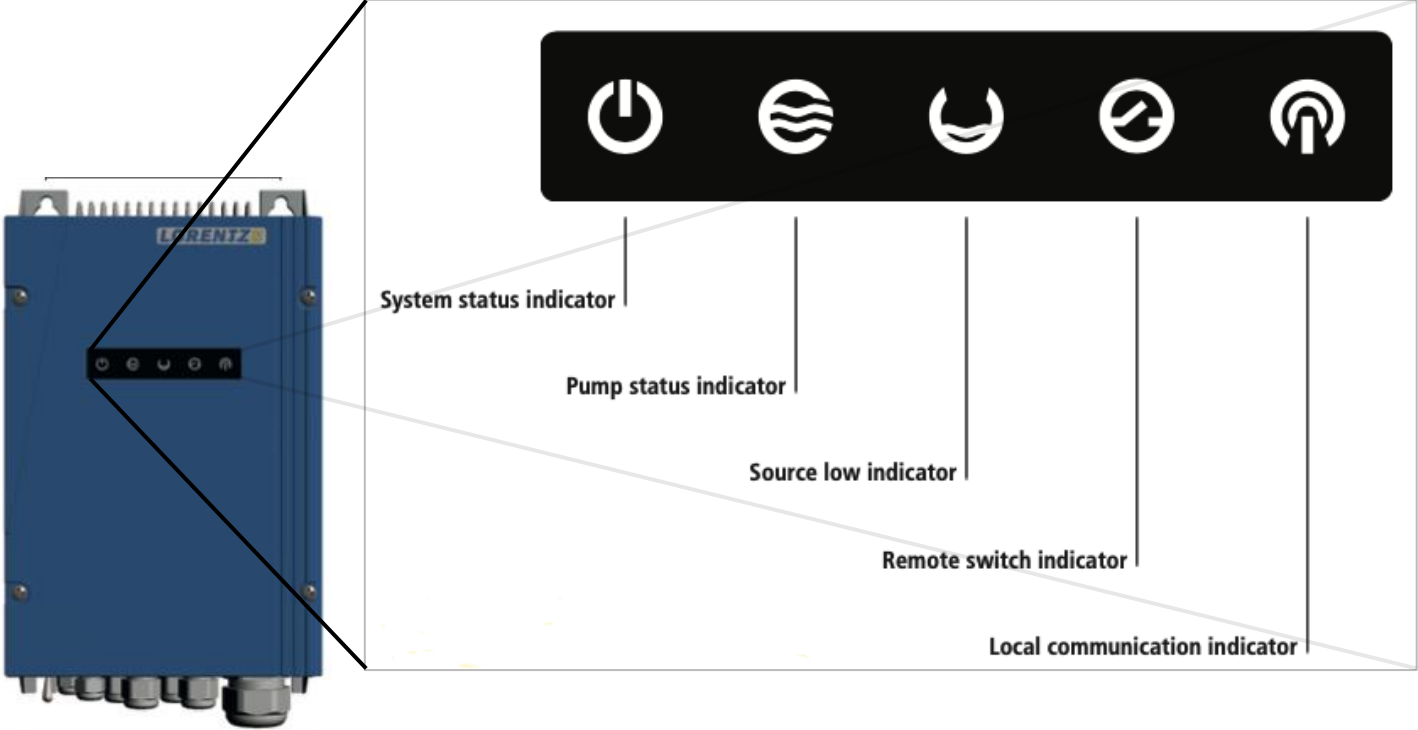
Socket	Terminal	Connection	Function
Power in	+	connect to positive terminal of PV module	Connect the PV array to the controller.
	-	connect to negative terminal of PV module	
Well probe (Source low switch)	1	connect to NC	Connect well probe or float switch to protect the pump system from running dry.
	2	connect to COM	
Remote switch	3	connect to NC	Connect a float switch, pressure switch or any other suitable remote switch. (Factory setting: jumper installed)
	4	connect to COM	
Water meter	5	connect to Imp	Connect a water meter with pulse output. I/imp must be configured with PumpScanner.
	6	connect to COM	
Analog input 1	7	connect to positive (+)	Connect a 4–20 mA signal sensor; supply voltage +24V load; must be configured with PumpScanner.
	8	connect to signal	
Analog input 2	9	connect to positive (+)	Connect a 4–20 mA signal sensor; supply voltage +24V load; must be configured with PumpScanner.
	10	connect to signal	
Out	11		Potential-free signal output to control third party devices; must be configured with PumpScanner.
	12		
Water sensor	13	connect to positive (+)	Connect a water detection sensor for surface pumps. (Factory setting: jumper installed between 14 and 15)
	14	connect to signal	
	15	connect to COM	
Sun Sensor	16	connect to positive (+)	Connect the LORENTZ SunSensor for irradiation based pump control; must be configured with PumpScanner.
	17	connect to negative (-)	
Output to motor	L1	connect to the L1 phase of the motor	Connect the power wires of the LORENTZ pump motor.
	L2	connect to the L2 phase of the motor	
	L3	connect to the L3 phase of the motor	

Terminal Wiring Example

Figure 8: Terminal wiring example








Lorentz Pump Controller LED and what they mean



LED Status

LED Status Light indicators

 <p>System status of controller</p>	green light	Power is present, ON/OFF switch is in ON position
	green light flashing	Pump in standby mode due to settings or ON/OFF switch in OFF position
	no light	Insufficient power input
 <p>Pump status indicator</p>	green light	Pump is on
	green light flashing	Flashing frequency indicates pump rpm
	no light	Pump is not running
	red light	Check with PumpScanner
 <p>Source low indicator</p>	red light flashing	Flashing indicates overtemperature of the controller
	red light	Well probe or water sensor has detected a low water source
	red light flashing	Flashing indicates a "source low" incident since the controller was switched on
 <p>Remote switch indicator</p>	no light	Water source is okay
	red light	Remote switch triggered, pump stopped
 <p>Local communication</p>	no light	Remote switch not triggered
	blue light	Bluetooth connection active
	blue light flashing	Update
	no light	Currently no Bluetooth connection