iPETRO Lite FLUIDS MANAGEMENT
CONTROLLER

Quick Setup Guide

LITE CONTROLLER HARDWARE SPECIFICATIONS

Device Specifications	
Main power	+5V, +6%/-2%
Pump input power	+12V, +/-10%
Pump input, active low	+4.4V or lower
Pump input, active high	+5.5V or higher
Operating temperature	-20℃ - +85℃
Storage temperature	-30℃ - +100℃

Pump Relay Specifications	
Nominal switching current	20A
Maximum switching current	30A
Maximum switching voltage	277VAC

## LITE CONTROLLER BOARD SETUP

Address Selection

The Address Selector unit SW1 contains 4 switches, 1-4. For normal operation, switch 1 should be ON, the rest OFF, as shown in the drawing to the right. This will set the device to address 1 in the communication protocol. Switch 4 is only set ON in test mode. In normal mode, switches 1-3 determine the device address in the range 0-7.
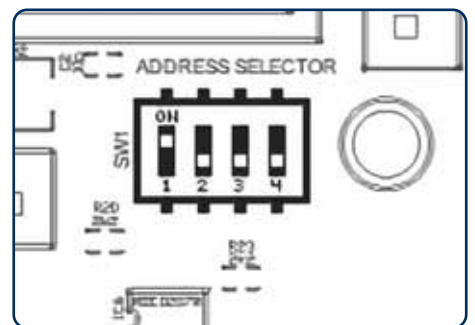

Serial Port Mode Selection

The serial port on CON8 should be set to RS485 mode. The mode is selected by means of two jumpers on J1 (just below the speaker), which should be mounted in a horizontal position, as shown in the drawing to the right.
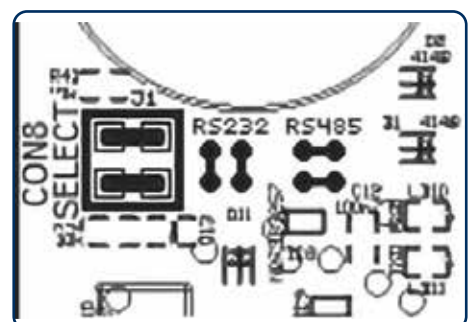
Communication Cable to IPETRO Lite

Connect a shielded twisted pair cable from IPETRO Lite, CON13, to the Lite Controller, CON8, as shown in the drawing to the right. The minimum wire thickness is 0.25mm² (24AWG), and maximum cable length is 30m. Also, mount jumpers on J2 and J3 for correct RS485 termination.
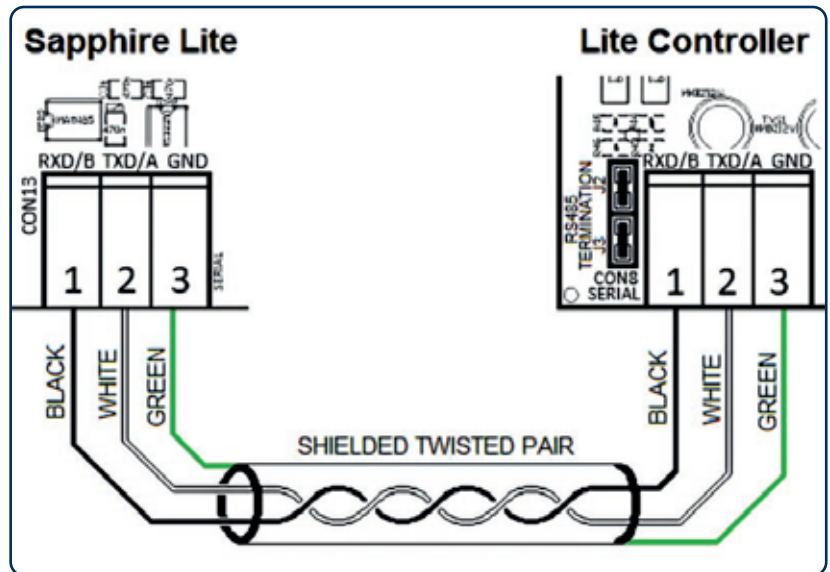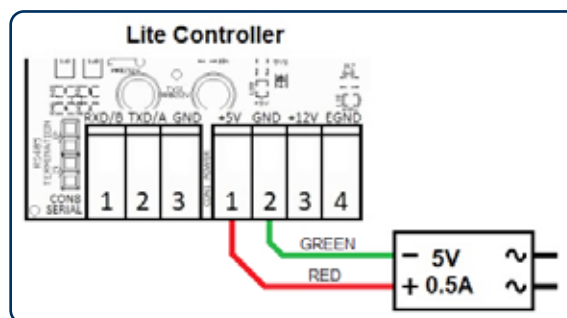

5V Power Cable from IPETRO Lite

When the Lite Controller gets +5V from IPETRO Lite, follow this drawing. Since there is no external +5V connection terminal on IPETRO Lite, the voltage is taken from the modem connector CON10, pin 3. The minimum wire thickness is 2.5mm² (14AWG), and maximum cable length is 4m.
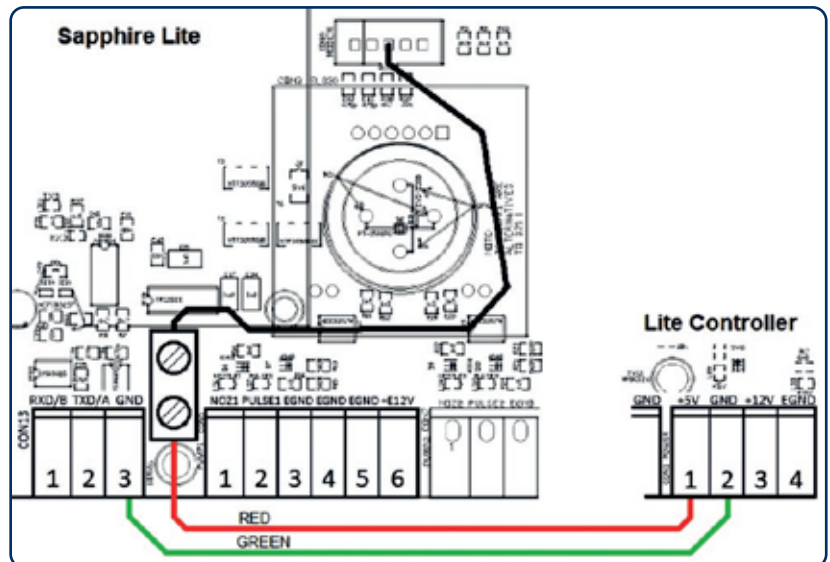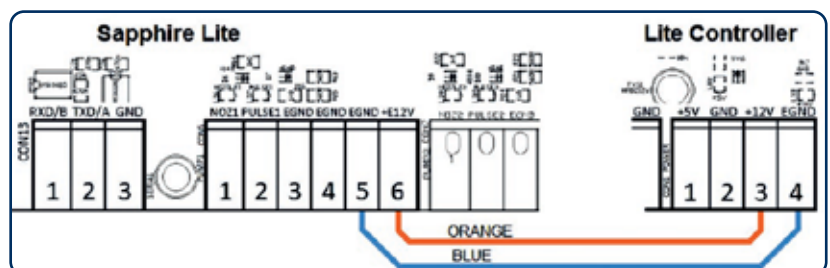

5V Power Cable from External Power Supply

When the Lite Controller get +5V from an external power supply, follow the drawing to the right. The minimum wire thickness is 2.5mm² (14AWG), and maximum cable length is 5m.


12V Power Cable from IPETRO Lite

When the Lite Controller gets +12V for pump connections from IPETRO Lite, follow the drawing to the right. The minimum wire thickness is 1mm² (17AWG), and maximum cable length is 5m.

12V Power Cable from External Power Supply

When the Lite Controller gets +12V for its pump connections from an external power supply, follow the drawing to the right. The minimum wire thickness is 1mm² (17AWG), and maximum cable length is 5m.
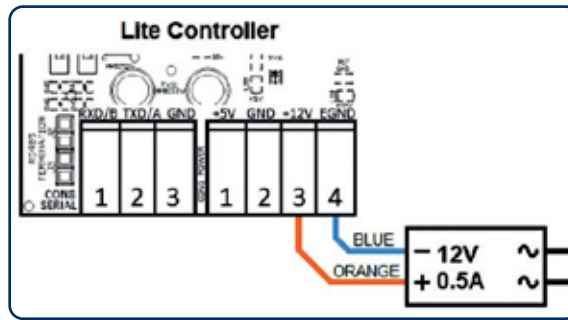
Pump Connections WITH Nozzle Switch

When a nozzle switch is available, connect the nozzle switch, flow meter and pump motor according to the drawing below. For the nozzle switch and flow meter, the minimum wire thickness is 1mm² (17AWG), and maximum cable length is 5m. For the pump motor, follow local guidelines regarding wire thicknesses.

Always remember to connect EARTH!
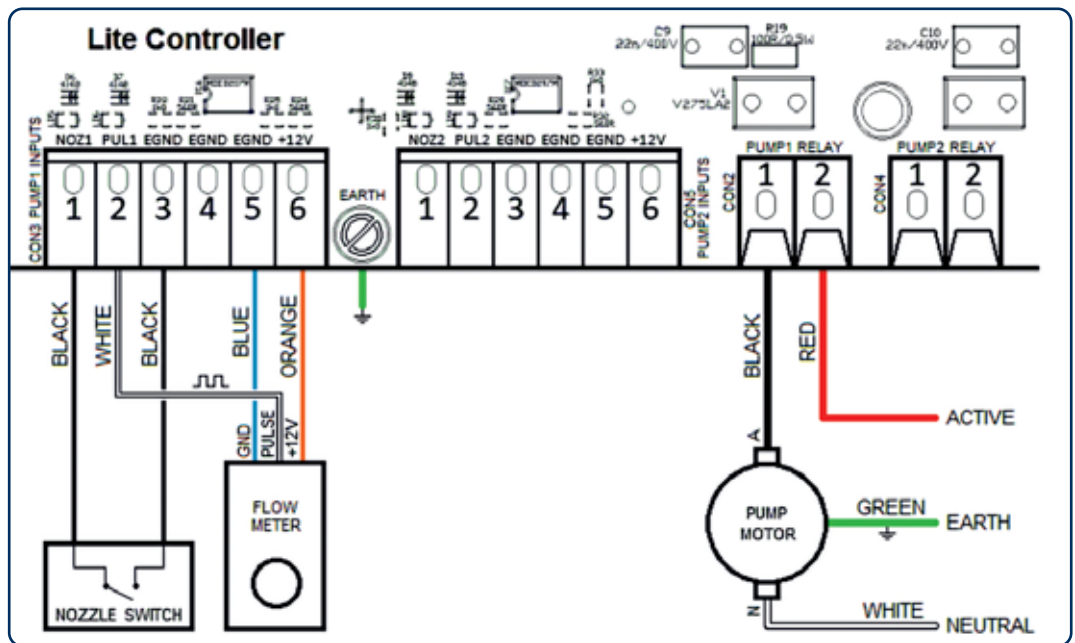
Pump Connections WITHOUT Nozzle Switch

When a nozzle switch is NOT directly available, but is an integral part of the pump motor assembly, connect the flow meter and pump motor according to the drawing below. The Lite Controller will then use the internal current sensor to detect when the pump is running. The drawing below uses the Fill-Rite 300V pump motor as an example. For the flow meter, the minimum wire thickness is 1mm² (17AWG), and maximum cable length is 5m. For the pump motor, follow local guidelines regarding wire thicknesses.

Always remember to connect EARTH!

Note:
**In this pump configuration, 'Current sensor' in iPETRO Lite must be set to 'Yes'!**
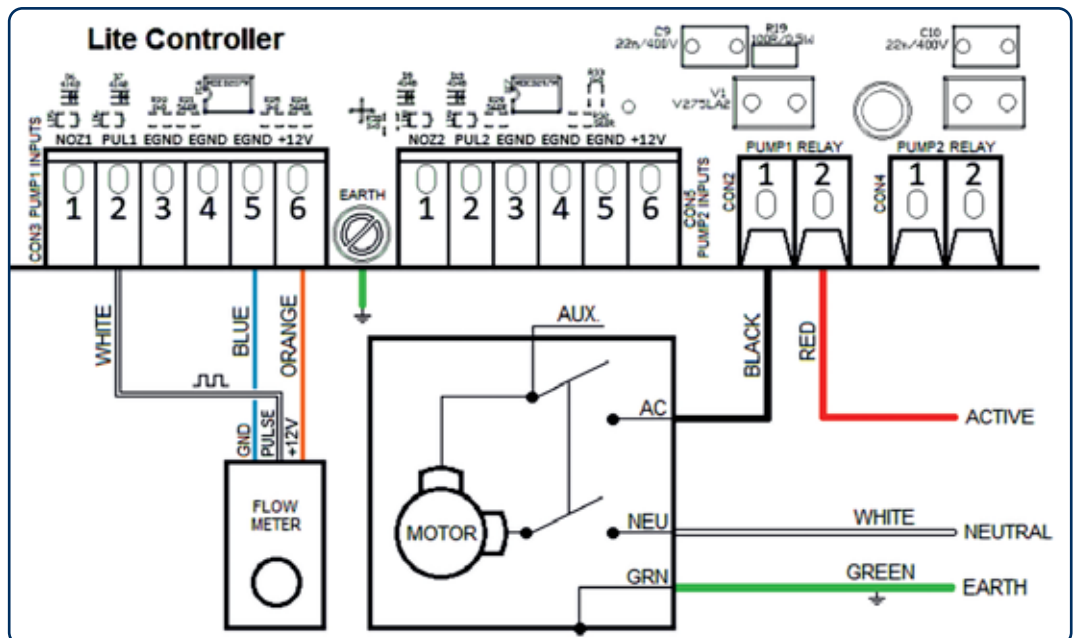
Note:

The iPETRO Lite is using the tank gauge serial port on CON13 to communicate with the Lite Controller. Thus, the communication protocol is 'piggy-backed' on one of the tank gauge protocols. Hence the need for selecting a tank gauge driver on Connect.

Serial Port Mode Selection

The serial port on IPETRO Lite should be set to RS485 mode. The mode is selected by means of two jumpers on J2 (to the left of CON13), which should be mounted in a horizontal position, as shown in the drawing to the right.
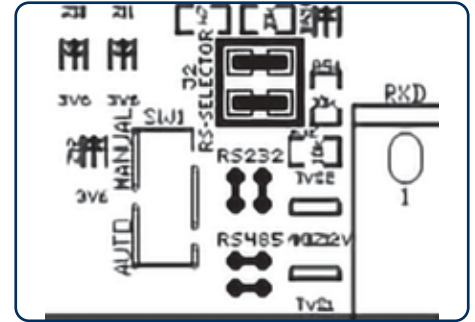
Menu Setup

Enter the setup menu on IPETRO Lite (Hold down <Clear>, enter Response code), scroll down to 'Tank setup' and enter. Adjust the settings according to the table below, press <Enter> and Yes to save the changes. The table below displays the settings when using the OCIO2 (Lite Controller) tank gauge protocol:

Item	Setting
Run OCIO2	Yes
Baudrate	9600
Parity	N
Product A	0
YearMon A	0
SerNo A	0
Product B	0
YearMon B	0
SerNo B	0
Beeps	No

If the pump configuration is NOT using a nozzle switch, the current sensor setting for that pump must be set to Yes. Scroll up to the 'Pump x setup' in question (the two pumps on the Lite Controller are Pump C and D) and enter, scroll down to 'Current sensor' and adjust to 'Yes', press <Enter> and Yes to save the changes.