PowerSync™ PS4 LS6550

INSTALLATION INSTRUCTIONS

LOW VOLTAGE DATA INJECTOR

Product Warranty is void if product is not installed as per installation instructions and in compliance with the local electrical code.

NO POWER TOOLS

DO NOT USE SILICONE ON OUTSIDE SURFACE

KEEP ELECTRONICS FREE FROM DIRECT AND MOISTURE

DO NOT HOSE OR PRESSURE CLEAN

READ ALL SAFETY INSTRUCTIONS FIRST

- Follow instructions carefully; failure to do so will void warranty.
- Ensure installation complies with local laws and applicable standards
- Only use Lumascape power supply, control equipment and leader cables.
- Ensure mains input power is surge protected.
- Never make connections whilst power is connected.
- Do not make modifications or alter product.
- Connectors are to be kept clean and dry at all times.
- Once installed, all connectors are to be mated and a PowerSync™ terminator is required on the last fitting of run.

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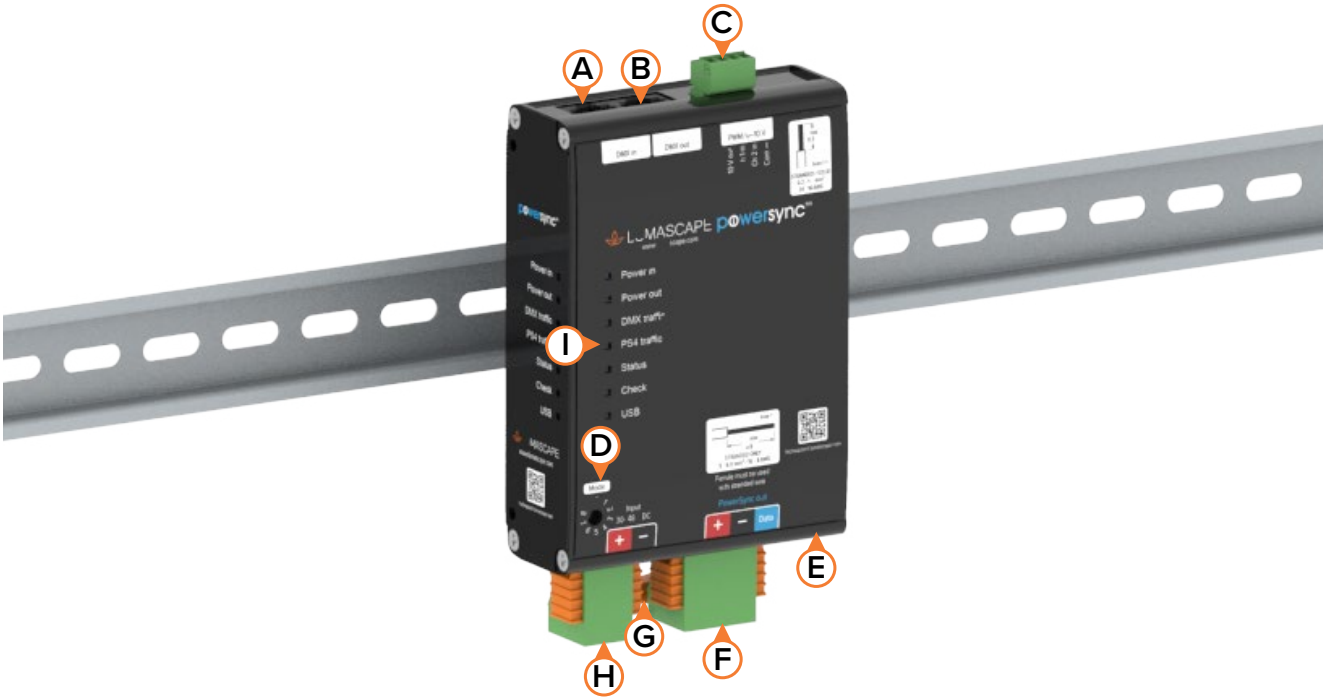
Product Overview

The PowerSync™ LV Data Injector translates control signals into a digital format that delivers integrated power and data to intelligent LED luminaires.

This allows highly granular addressing and high-speed digital control of every luminaire, using only four wires.

The LV Data Injector is DIN rail mountable, designed to be installed in a switchborad next to the powersupply and circuit breaker that is supplying power to the controlled lighting circuit.

The LV Data Injector accepts a growing list of standard protocols (0-10V, DMX / RDM), for simple integration with a wide selection of control systems using these industry standard protocols.



COMPONENT LIST

A	DMX In via RJ45 Connector
B	DMX Out via RJ45 Connector
C	0-10 V / PWM Control Input
D	Mode Switch
E	USB Port
F	PowerSync™ Out via Leader Cable
G	DIN Rail Bracket Release Tab
H	30-48 Vdc Input from Power Supply
I	Status Indicators

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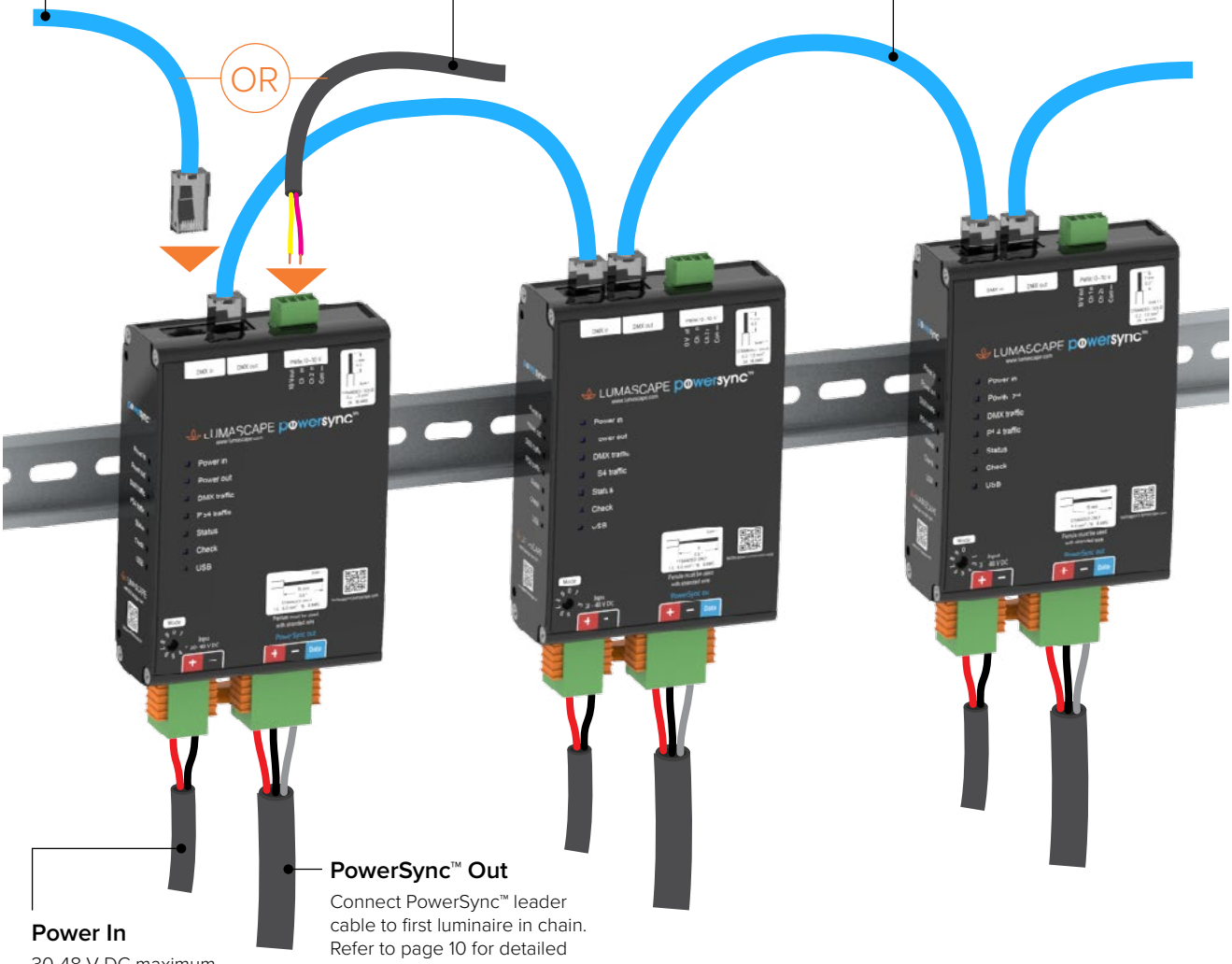
Setup Overview

Control Options

The LS6550 can be controlled by either DMX or 0-10 V or PWM. See below for details.



Attaching and Removing Terminal Blocks

Attaching Terminal Blocks

To attach a terminal block, simply push it into place. The 'power' connectors at the bottom of the device will make a 'click' sound as they lock into place.

Removing Terminal Blocks

The terminal block at the top can be removed by simply pulling on it. To remove either one of the 'power' connectors at the button push in the orange tabs up to release, then pull on the terminal block to remove.

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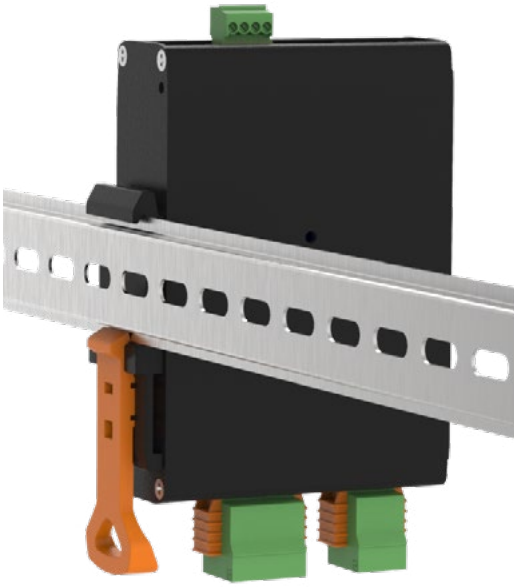
DIN Rail Mounting (Side Mount)

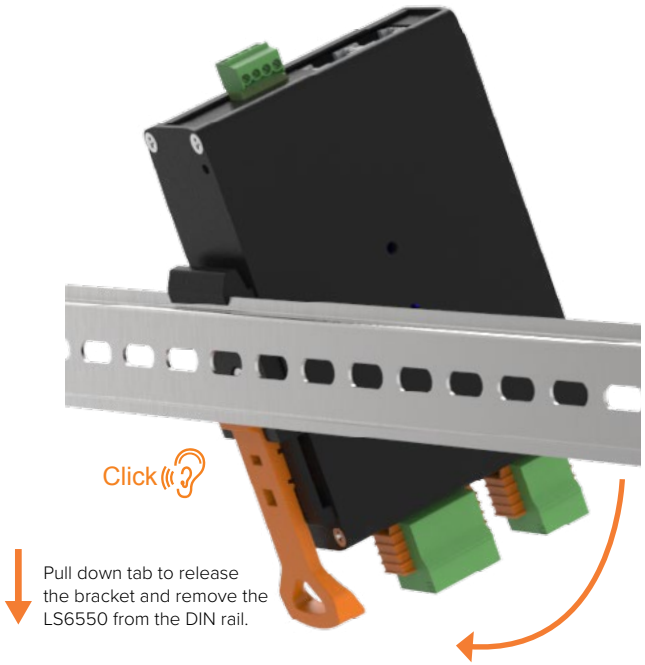
Step 1

Slide the top hook of the mounting bracket over the DIN rail.



Step 2

Push the LS6550 into a vertical position and the DIN rail bracket will snap into place.



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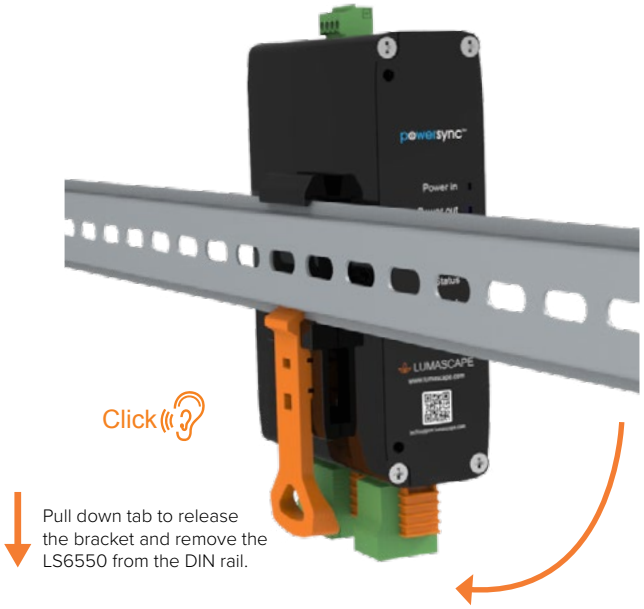
DIN Rail Mounting (Front Mount)

Step 1

Slide the top hook of the mounting bracket over the DIN rail.

Step 2

Push the LS6550 into a vertical position and the DIN rail bracket will snap into place.



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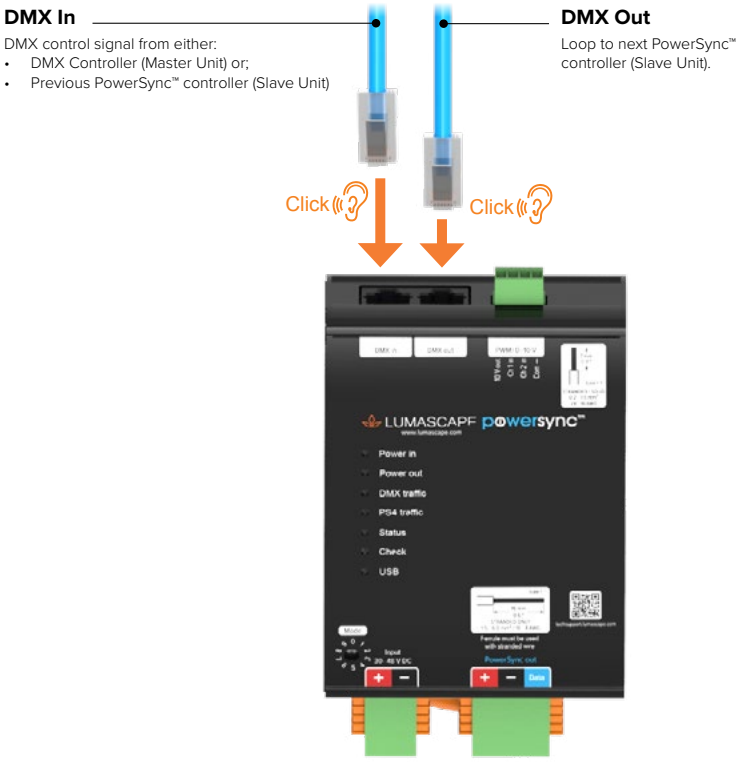
Connecting DMX via RJ45 Connector

Connect the DMX via the RJ45 connector, applicable to Mode 0 (refer to Mode Switch on Page 12). The master controller can either have an input signal from a DMX controller or a 0-10 V or a PWM input signal (Refer to page 10 for details 0-10 V or a PWM control signal setup).

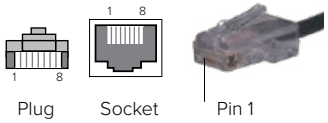
Slave units will loop-in / loop-out to pass the control signal from one PowerSync™ controller to the next in DMX format.



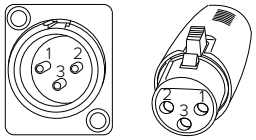
DMX Pin Designations

Signal	Connector Type		
	3 Pin XLR	5 Pin XLR	RJ45 Std
Data +	3	3	1
Data –	2	2	2
Ground	1	1	7

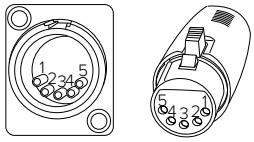
RJ45



3-Pin XLR



5-Pin XLR



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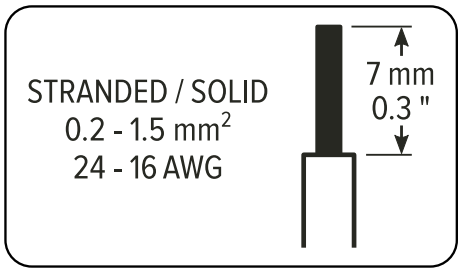
Luminaire Control via 0-10 V or PWM Input

Step 1

Strip the individual wire strands of the data cable as per the specifications below.

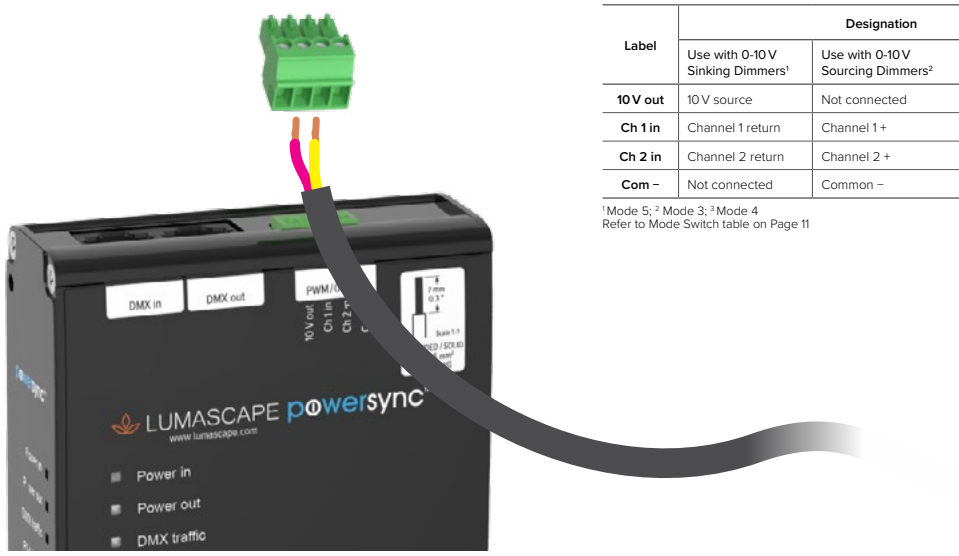


Step 2

If required remove the terminal block from the body of the PowerSync™ controller by simply pulling it out.

Step 3

Using the terminal screws connect the conductors to the terminal block as required (refer to table for details). Once you are done, re-connect the terminal block to the body.



Label	Designation		
	Use with 0-10 V Sinking Dimmers[1]	Use with 0-10 V Sourcing Dimmers[2]	PWM[3]
10 V out	10 V source	Not connected	Not connected
Ch 1 in	Channel 1 return	Channel 1 +	Channel 1 +
Ch 2 in	Channel 2 return	Channel 2 +	Channel 2 +
Com –	Not connected	Common –	Common –

[1] Mode 5; [2] Mode 3; [3] Mode 4
Refer to Mode Switch table on Page 11

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Testing Functions

To assist with installation, the **LS6550** provides three (3) test modes for PowerSync™ luminaires. These require only connected luminaires and power, and no connected input signal.

If an input signal is connected, the **LS6550** will not respond to this signal in any of the modes below.

NOTE: These test signals apply to the relevant unit's PowerSync™ output only –– it will not be passed through on the DMX / RDM connectors if multiple **LS6550** units are connected.

10 Position Mode Switch	Output
7	Cycle channels 1-4 (and multiples thereof) on all connected luminaires at full brightness
8	Turn on all channels on all connected luminaires to full brightness
9	Turn off all channels on all connected luminaires

16 Position Mode Switch	Output
2	Turn off all channels on all connected luminaires
3	Turn on all channels on all connected luminaires to full brightness
4	Cycle channels 1-4 (and multiples thereof) on all connected luminaires at full brightness

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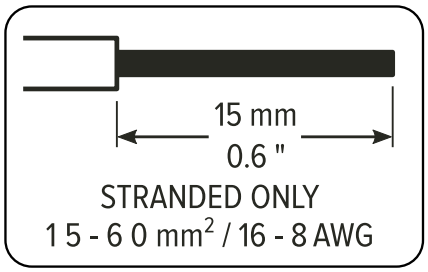
PSU Connections

Step 1

Strip the individual wire strands of the data cable as per the specification below. NOTE: Ferrules must be used with standard wire.

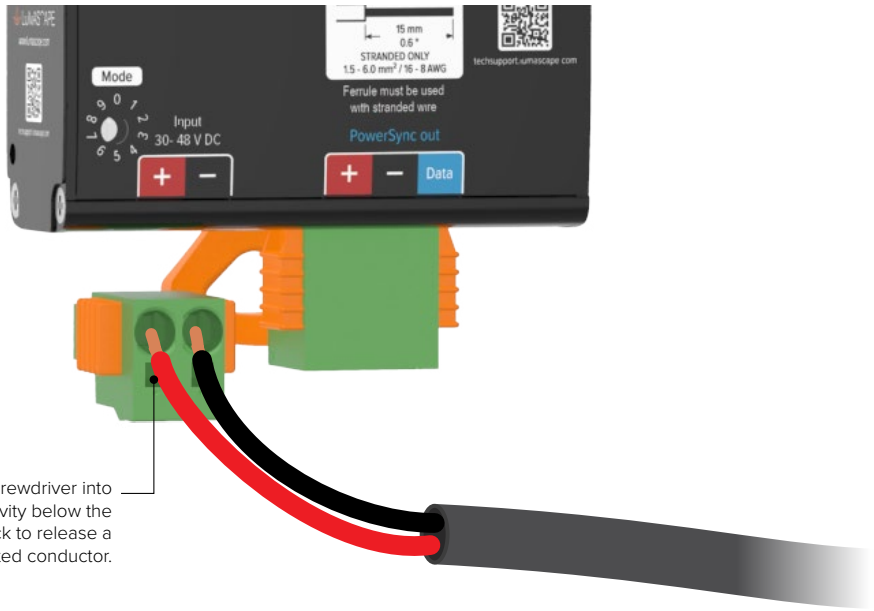


Step 2

If required, remove the terminal block from the body of the PowerSync™ controller by pushing down the orange tabs and then pulling on the terminal block.

Step 3

Simply push the prepared conductor strands into the terminal blocks. Re-connect the terminal block.

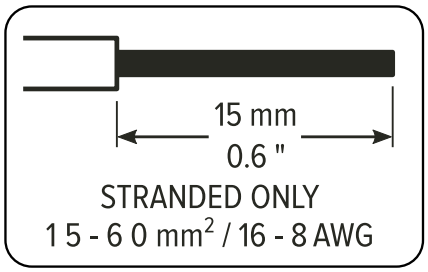


Products and specifications are subject to change without notice.

Connecting Luminaires via PowerSync™ Leader Cable

Step 1

Strip the individual wire strands of the data cable as per the specification below. NOTE: Ferrules must be used with standard wire.

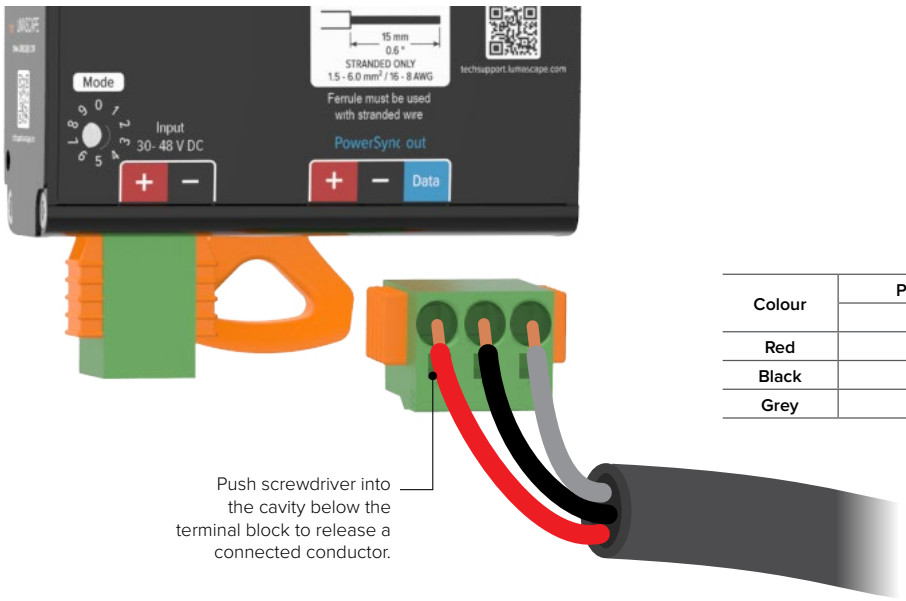


Step 2

If required, remove the terminal block from the body of the PowerSync™ controller by pushing down the orange tabs and then pulling on the terminal block.

Step 3

Simply push the prepared conductor strands into the terminal blocks. Re-connect the terminal block.



Colour	PowerSync™ Cable
	3 - Core
Red	Power +
Black	Power −
Grey	Data +

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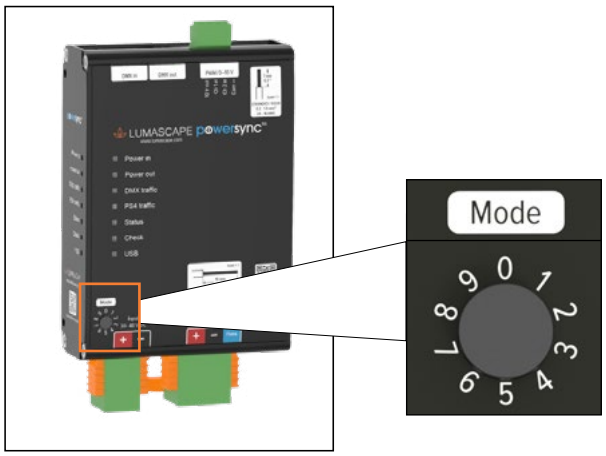
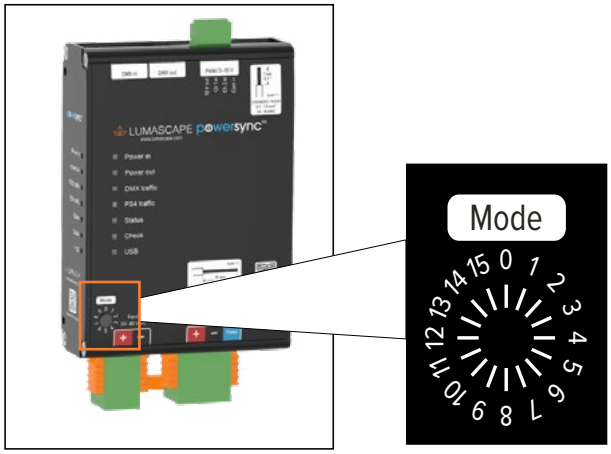
Mode Switch



10 Position Mode Switch

Label	Designation
0	DMX/RDM
1	DMX/RDM with SIP*
2	–
3	0-10 V Dimming: Sourcing
4	PWM Dimming
5	0-10 V Dimming: Sinking
6	–
7	TEST: Cycle 4 channels
8	TEST: All channels on
9	TEST: All channels off

*System Information Packet



16 Position Mode Switch

Label	Designation
0	DMX/RDM
1	DMX/RDM with Relay Control
2	TEST: All channels OFF
3	TEST: All channels ON
4	TEST: Cycle 4 channels
5	0-10 V Dimming: Sourcing / PWM Dimming
6	0-10 V Dimming: Sinking / PWM Dimming Inverted
7	–
8	USB
9	–
10	DMX/RDM with SIP
11	–
12	–
13	–
14	–
15	–

*System Information Packet

QUESTIONS

Contact us at details below

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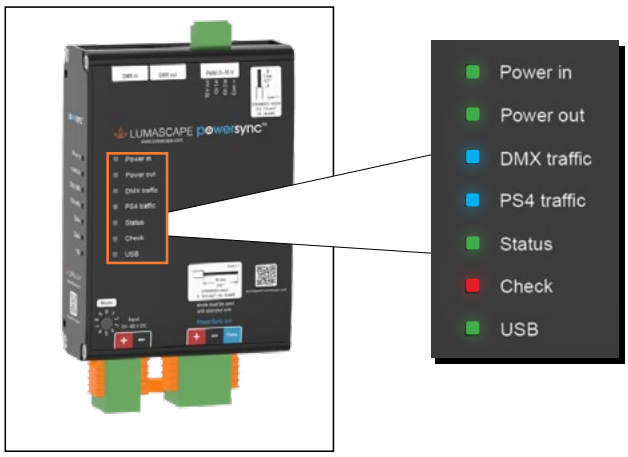
Indicator Lights



Indicator Lights

LED Indicator	Event	Appearance
Power In	Main input power	Illuminates
Power Out	Output power relay closed	Illuminates
DMX Traffic	DMX Traffic Detected Dimming Signal Detected	Flashing with signal 1-20Hz blinking, proportional to input level
PS4 Traffic	PowerSync output enabled	Illuminates
Status	Startup Normal operation	3 flashes 1 flash, every 5 seconds
	Circuit fault detected: Over voltage Short circuit	 2 flashes, every 5 seconds 3 flashes, every 5 seconds
	PowerSync Fault Detected: Power Fault / Over Temperature	 4 flashes, every 5 seconds
Check	Relay Open: Manual Override Startup / Fault Detected	 Flashing Iluminates
USB	USB connected	Illuminates / flashes with data

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