



Combines the convenience of standard wiring methods to translate control signals into a digital format than can be transmitted over standard copper wire. This allows highly granular addressing and high-speed digital control of every luminaire, using only four wires. The PowerSync Data Injector accepts a growing list of standard protocols (0-10 V, DMX/RDM) for simple integration with a wide selection of control systems using these industry standard protocols.

### Electrical

<b>Power Consumption</b>	<5 W	
<b>Input Voltage</b>	International	220-240 Vac, 50 Hz
	North America	120/277 Vac, 60 Hz
<b>Connected Current</b>	16 A	
<b>Electrical Connections</b>	Line Voltage In (Active, Neutral, Earth) PowerSync™ Out (Active, Neutral, Earth, Data)	
<b>Electrical Control Inputs</b>	DMX 512 / RDM, 2 x 0-10 V USB (programming, commissioning and DMX/RDM over FTDI)	
<b>Entries (International Market)</b>	3 x M20 (threaded) for Power In / PowerSync™ Out 3 x M12 (threaded) for Data / Control looping	
<b>Entries (North American Market)</b>	3 x 3/4" clearance for Power In / PowerSync™ Out 3 x 1/2" clearance for Data / Control looping	

### Control

<b>Interface</b>	Lumascap <b>PowerSync™</b>
<b>Protocols<sup>1</sup></b>	DMX/RDM, ArtNet, sACN, 0-10 V (sink or source) <sup>2</sup>
<b>Systems</b>	Range of third-party controllers

<sup>1</sup> Some protocols require additional hardware. For more information and other available protocols contact Lumascap.

<sup>2</sup> Not available for color-changing or tunable white.

### Physical

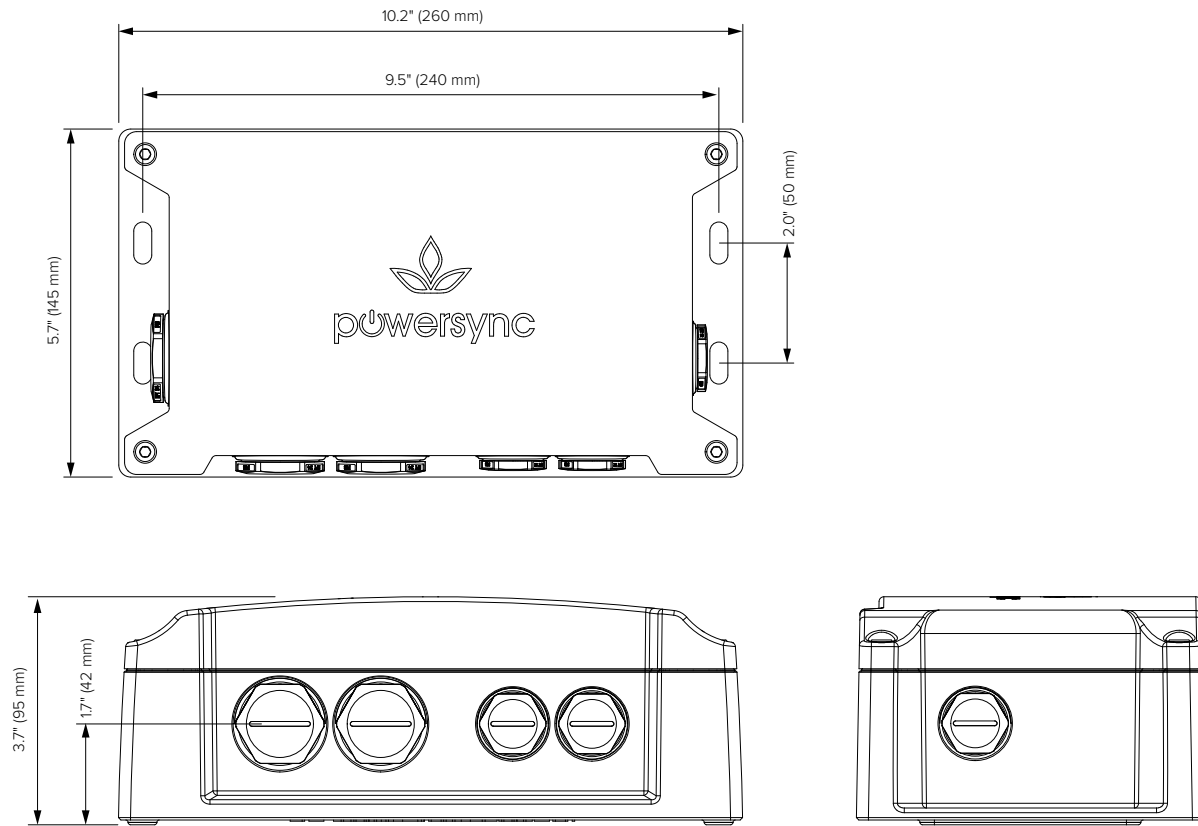
<b>Housing</b>	Marine-grade die-cast aluminum
<b>Finish</b>	Superior 9-step powder-coating process, including marine-grade epoxy undercoat and polyester top coat
<b>Installation</b>	Surface-mounted
<b>Mounting Hole Pattern</b>	9.45" x 1.97" (240 mm x 50 mm)
<b>Mounting Hole Size</b>	Clearance for 1/4" (M6)
<b>Ambient Operating Temperature</b>	-40 °F to 122 °F (-40 °C to 50 °C)
<b>Weight</b>	8.0 lbs (3.6 kg)

### Certification & Compliance

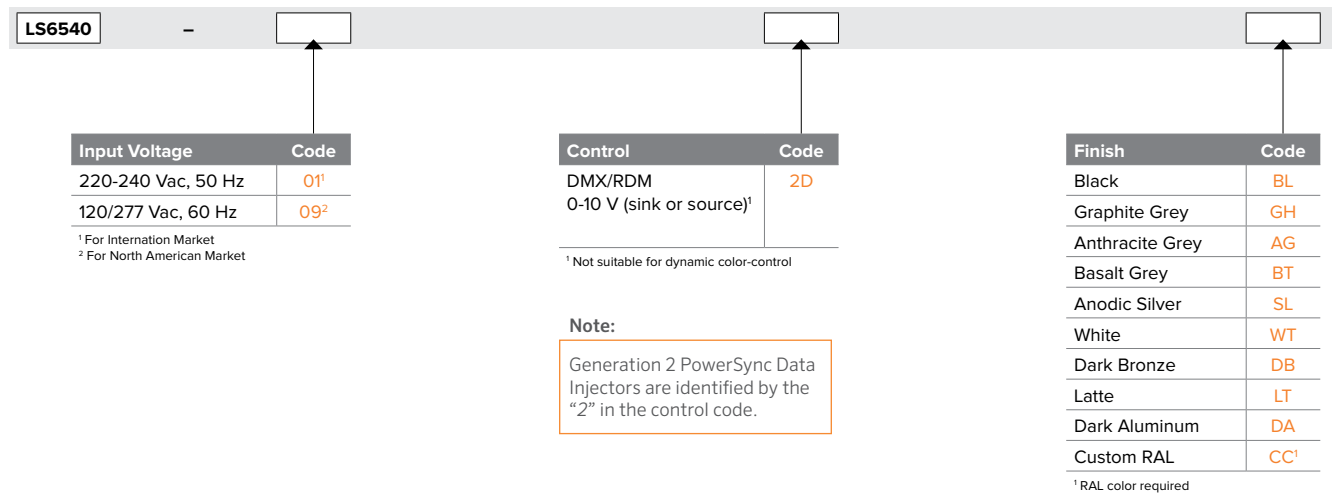
<b>IP Rating</b>	IP66
<b>Environment</b>	Dry, Damp, Wet locations
<b>Certifications</b>	UL, CE, RCM



Dimensions

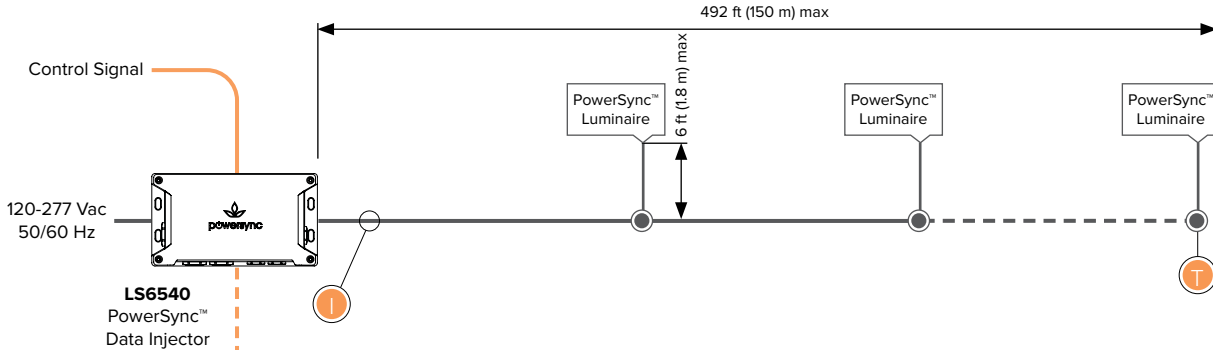


Specification Matrix

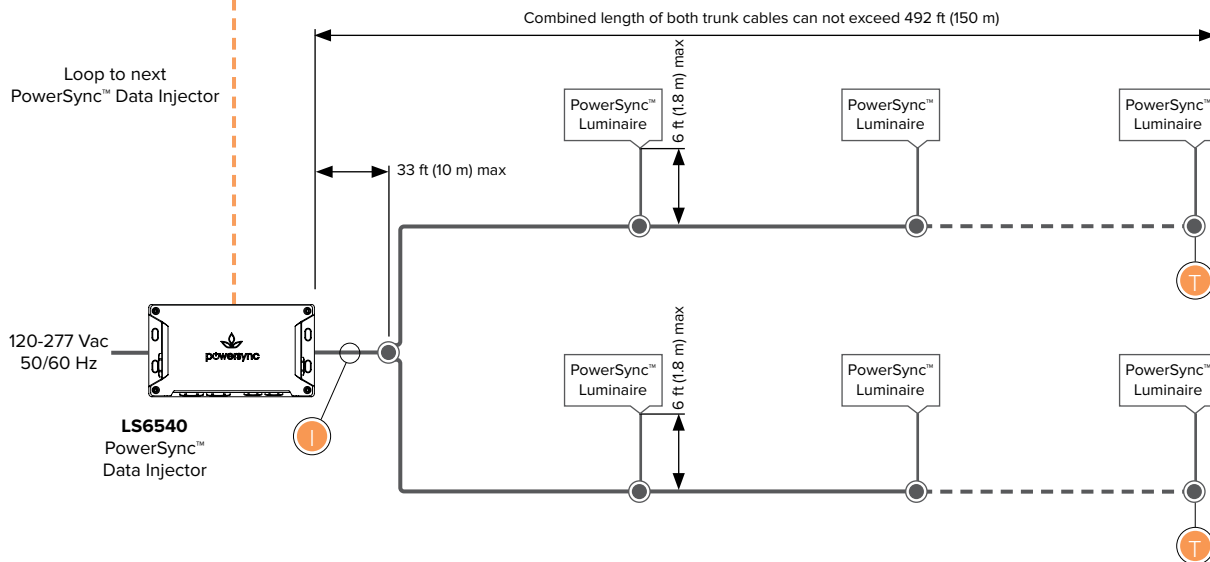


Network Topology - Dimmable and Color-Changing via PowerSync

PowerSync™ Topology 1 - Single Trunk Cable



PowerSync™ Topology 2 – Split Trunk Cable



Up to 45 luminaires per run under the following conditions:

- Max total cable run length 492 ft (150 m) in up to two trunk cables.
- For run lengths in excess of 100 ft (30 m), the data wire gauge cannot exceed 14 AWG (2.5 mm<sup>2</sup>).
- For run lengths up to 100 ft (30 m), the data wire gauge is not governed.
- Refer to 'Maximum Circuit Load' table for circuit limitations.
- Always observe local electrical codes for branch circuit current limitations.

**T Terminator**  
Use PowerSync™ terminator, supplied with leader cable to terminate last luminaire in chain.

**I Maximum Current**  
≤16 A through LS6540 PowerSync™ Data Injector.


**● Connection Type**  
Circuits can be configured as either connectorized or hardwired. For details refer to installation instructions and comply with local electrical codes.

Connectorized Accessories

Leader Cables

Line Voltage (For Connection Type 73 or 77 Only) – International

For use in CE installations. Compatible with Type 73 or 77 connectorized supply cable options. Supplied fitted with an IP68 connector for pairing with the first connectorized luminaire in a line voltage circuit. Comes complete with a matching end of circuit, line voltage terminator plug.

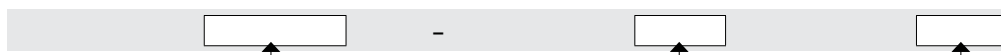


Cable Type	Code	Control Type	Code	Length	Code
1.5 mm <sup>2</sup>	LS6402C	PowerSync	PD	3 m / 10 ft	010
2.5 mm <sup>2</sup>	LS6402C-2.5	Non-Dimmable (4-core cable)	ND	10 m / 33 ft	032
		DALI (5-core cable)	DL <sup>1</sup>	15 m / 50 ft	050

<sup>1</sup> Available in 1.5 mm<sup>2</sup> cable only

Line Voltage (For Connection Type 73 or 77 Only) – North America

For use in UL installations. Compatible with Type 73 or 77 connectorized supply cable options. Supplied fitted with an IP68 connector for pairing with the first connectorized luminaire in a line voltage circuit. Comes complete with a matching end of circuit, line voltage terminator plug.



Cable Type	Code	Control Type	Code	Length	Code
14 AWG (1.5 mm <sup>2</sup> )	LS6402U	PowerSync	PD	3 m / 10 ft	010
		Non-Dimmable (4-core cable)	ND	10 m / 33 ft	032
		0-10 V (5-core cable)	AH	15 m / 50 ft	050

Connectorized Accessories

Jumper Cables

Line Voltage (For Connection Type 73 or 77 Only) – International

For use in CE installations. Compatible with all luminaires with Type 73 or 77 connectorized supply cable options.

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		↑			↑	↑
Cable Type	Code	Control Type	Code	Length	Code	
1.5 mm <sup>2</sup>	LS6404C	PowerSync	PD	1 ft / 0.3 m	001	
2.5 mm <sup>2</sup> (4-core only)	LS6404C-2.5	Non-Dimmable	ND	2 ft / 0.6 m	002	
		DALI (5-core cable)	DL <sup>1</sup>	3 ft / 1 m	003	
		<sup>1</sup> Available in 1.5 mm <sup>2</sup> cable only				
				4 ft / 1.2 m	004	
				6 ft / 2 m	006	
				10 ft / 3 m	010	
				16 ft / 5 m	016	
				26 ft / 8 m	026	
				33 ft / 10 m	032	
				50 ft / 15 m	050	

Line Voltage (For Connection Type 73 or 77 Only) – North America

For use in UL installations. Compatible with all luminaires with Type 73 or 77 connectorized supply cable options. Supplied fitted with an IP68 connector for pairing with the first connectorized luminaire in a line voltage circuit.

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		↑			↑	↑
Cable Type	Code	Control Type	Code	Length	Code	
14 AWG (1.5 mm <sup>2</sup> )	LS6404U	PowerSync	PD	1 ft / 0.3 m	001	
		Non-Dimmable (4-core cable)	ND	2 ft / 0.6 m	002	
		0-10 V (5-core cable)	AH <sup>1</sup>	3 ft / 1 m	003	
				4 ft / 1.2 m	004	
				6 ft / 2 m	006	
				10 ft / 3 m	010	
				16 ft / 5 m	016	
				26 ft / 8 m	026	
				33 ft / 10 m	032	
				50 ft / 15 m	050	

### Connectorized Accessories

#### Terminator (Hardwired Installation)

Used in hardwired PowerSync™ installations.

Terminator	Code
DMX Terminator Hardwired	LS6407
PowerSync Terminator Hardwired, Mains / Low Voltage (CE/CCC)	LS6406-01
PowerSync Terminator Hardwired Mains/Low Voltage (UL)	LS6406-09
PowerSync Terminator Connectorized, Mains Voltage	LS6417

**Note:**

Terminator ships with every **LS6540** PowerSync Data Injector. Order separately for spare parts only.

#### PowerSync™ Y-Connectors

4 x 1.5mm<sup>2</sup> or 2.5mm<sup>2</sup> mains voltage Y-Connectos with Souriau plug for use in CE/CCC installations.

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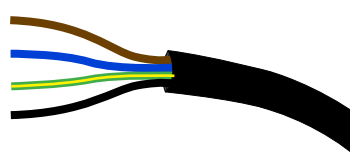
Product	Code
1.5mm <sup>2</sup>	LS6425C
2.5mm <sup>2</sup>	LS6425C-2.5



### Fixture Wire Colors & Designations

#### Mains Voltage – International

Designation	Color
Active	Brown
Neutral	Blue
Earth	Green / Yellow
Data	Black



#### Mains Voltage – North America

Designation	Color
Active	Black
Neutral	White
Earth	Green / Yellow
Data	Grey or Red

