



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

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

Control

Interface	Lumascap PowerSync™
Protocols¹	DMX/RDM, ArtNet, sACN, 0-10 V (sink or source) ²
Systems	Range of third-party controllers

¹ Some protocols require additional hardware. For more information and other available protocols contact Lumascap.

² Not available for color-changing or tunable white.

Physical

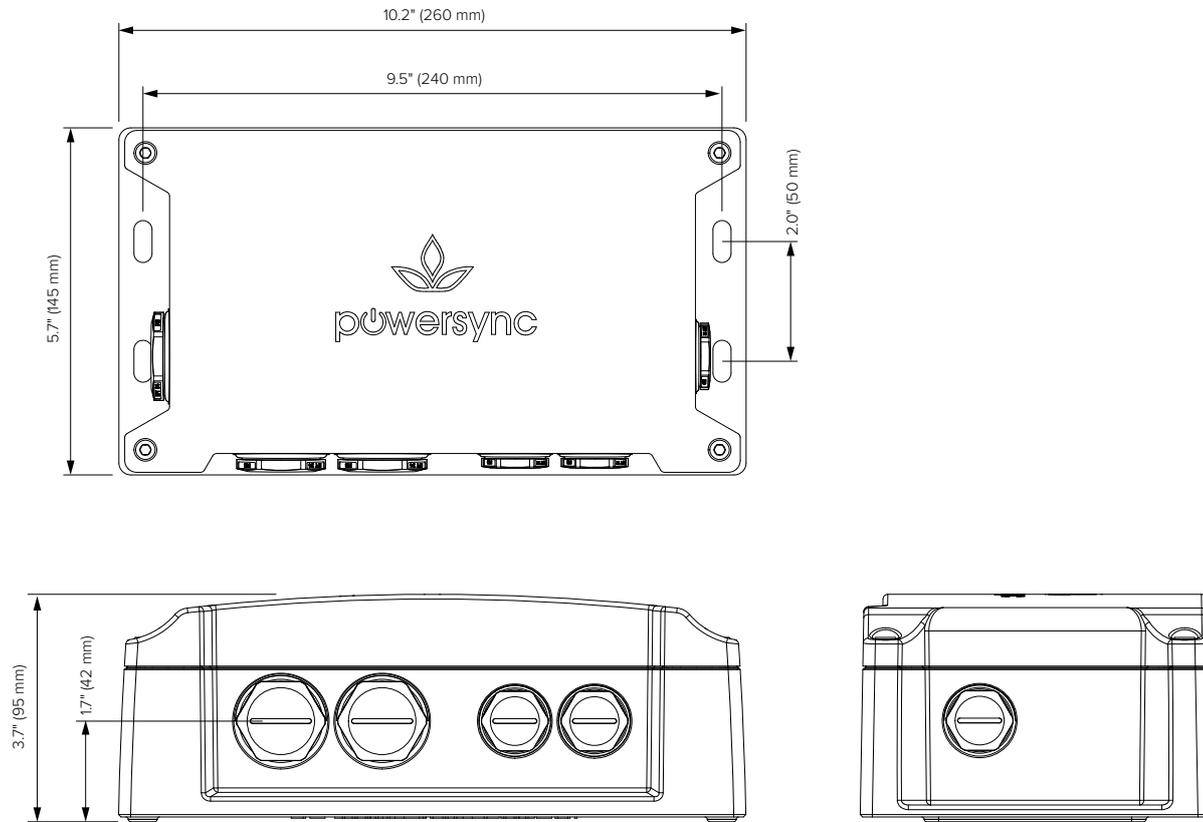
Housing	Marine-grade die-cast aluminum
Finish	Superior 9-step powder-coating process, including marine-grade epoxy undercoat and polyester top coat
Installation	Surface-mounted
Mounting Hole Pattern	9.45" x 1.97" (240 mm x 50 mm)
Mounting Hole Size	Clearance for 1/4" (M6)
Ambient Operating Temperature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

Certification & Compliance

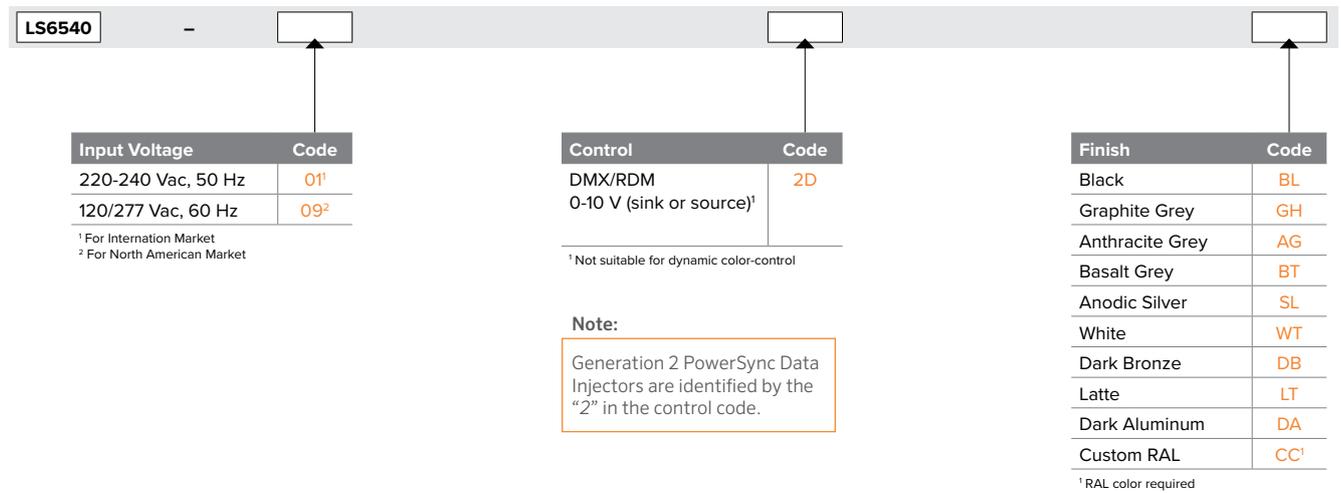
IP Rating	IP66
Environment	Dry, Damp, Wet locations
Certifications	UL, CE, RCM



Dimensions



Specification Matrix



Input Voltage	Code
220-240 Vac, 50 Hz	01 ¹
120/277 Vac, 60 Hz	09 ²

¹ For International Market
² For North American Market

Control	Code
DMX/RDM 0-10 V (sink or source) ¹	2D

¹ Not suitable for dynamic color-control

Note:

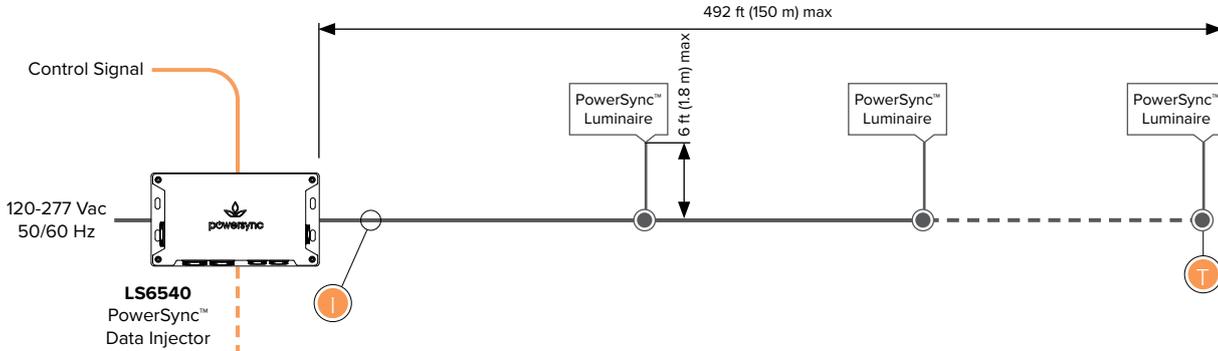
Generation 2 PowerSync Data Injectors are identified by the "2" in the control code.

Finish	Code
Black	BL
Graphite Grey	GH
Anthracite Grey	AG
Basalt Grey	BT
Anodic Silver	SL
White	WT
Dark Bronze	DB
Latte	LT
Dark Aluminum	DA
Custom RAL	CC ¹

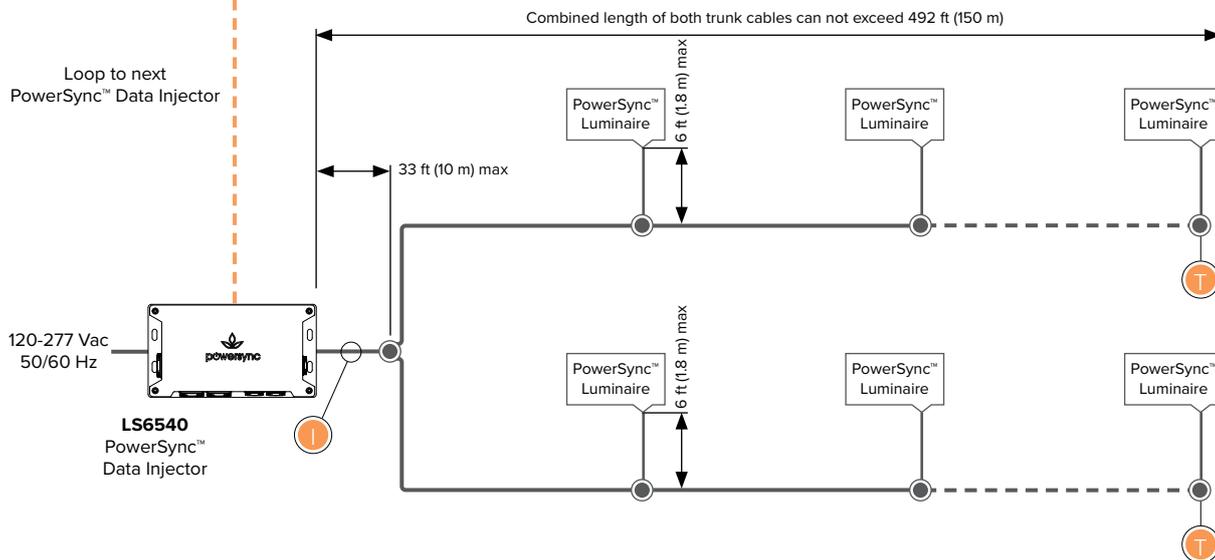
¹ RAL color required

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 mm²).
- 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
1.5 mm ²	LS6402C
2.5 mm ² (4-core only)	LS6402C-2.5

Control Type	Code
PowerSync	PD
Non-Dimmable (4-core cable)	ND
DALI (5-core cable)	DL ¹

Length	Code
3 m / 10 ft	010
10 m / 33 ft	032
15 m / 50 ft	050

¹ Available in 1.5 mm² 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
14 AWG (1.5 mm ²)	LS6402U

Control Type	Code
PowerSync	PD
Non-Dimmable (4-core cable)	ND
0-10 V (5-core cable)	AH

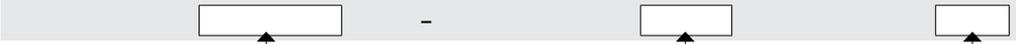
Length	Code
3 m / 10 ft	010
10 m / 33 ft	032
15 m / 50 ft	050

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.

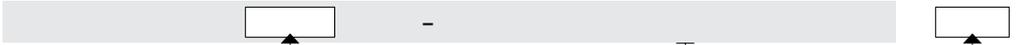


Cable Type	Code	Control Type	Code	Length	Code
1.5 mm ²	LS6404C	PowerSync	PD	1 ft / 0.3 m	001
2.5 mm ² (4-core only)	LS6404C-2.5	Non-Dimmable	ND	2 ft / 0.6 m	002
		DALI (5-core cable)	DL ¹	3 ft / 1 m	003
				4 ft / 1.2 m	004
				6 ft / 2 m	006
				10 ft / 3 m	010
				16 ft / 5 m	016
				26 ft / 8 m	026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

¹ Available in 1.5 mm² cable only

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.



Cable Type	Code	Control Type	Code	Length	Code
14 AWG (1.5 mm ²)	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 ¹	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 1.5mm² or 2.5mm² mains voltage Y-Connectos with Souriau plug for use in CE/CCC installations.

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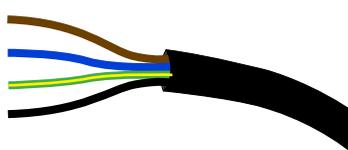
Product	Code
1.5mm ²	LS6425C
2.5mm ²	LS6425C-2.5



Fixture Wire Colors & Designations

Mains Voltage – International

Designation	Color
Active	Brown
Neutral	Blue
Earth	Green / Yellow
Not used	Black



Mains Voltage – North America

Designation	Color
Active	Black
Neutral	White
Earth	Green / Yellow
Not used	Grey or Red

