Signify

Product Guide

Coded Mains

An innovative way of communicating dimming signals over mains wiring.

Coded Mains

Introduction

Coded Mains is a way to communicate dimming information over mains power wiring to a large set of luminaires.

A transmitter sends a coded signal (dimming information) over the mains wiring, which is decoded in the luminaires. The signal is small (2 V or 2.6 V), so other devices on the same mains grid are not affected. The signal is low frequency (150 Hz or 180 Hz) so it reaches several kilometers. Signify LED drivers are available which decode the Coded Mains signal directly. For other drivers, a small external receiver is available.

Features and Benefits

- Remote control of LED lamp dimming over the existing mains wiring.
- Easy to install and use in retrofit installations
- High power (63 A) 3-phase control with one single transmitter and transformer.
- Long distance control over several kilometers
- Continuous streaming of signal over mains ensures robust communication.
- Products designed for outdoor and indoor use – temperature and humidity.
- No changes to luminaire designs using selected Xitanium sX drivers.
- No new approbation for luminaire designs using selected Coded Mains enabled Xitanium sXt drivers.
- Easy to interface to all SCADA (supervisory control and data acquisition) systems via dry contacts.
- Easy to interface to CityTouch cabinet control via DALI.
- No commissioning needed for most of the applications.
- The LLC7730 receiver is available to interface with 1 – 10 V or DALI drivers.
- A Coded Mains signal does not disrupt other devices in the same mains grid unlike in traditional power line technology.
- No issues with signal interference from external sources, as in RF based communication technology.

Coded Mains transmitter and transformer

The coded mains transmitter synchronizes with the power grid to the luminaries and uses amplitude modulation via a transformer to send digital scene codes to the luminaries. The mains power of the transmitter should be taken from the same power grid to the luminaries to guarantee a reliable dimming.

The transmitter can receive dim signals over DALI interface or via three dry contacts from external controller. It has wide operating voltage ranging from 120 Vac to 277 Vac suitable for most of the countries. It comes with built-in DM (differential mode) 6 kV and CM (common mode) 2 kV surge protection. Each transmitter has a built-in DALI power supply of 15 V at 8 mA.

The transmitter has an emergency input - when it is enabled set the light levels to 100%. It is equipped with a powerful Atmel 32-bit processor and LED indicators to show operational status.

Coded Mains Receiver

The luminaires in a Coded Mains installation typically use Signify Coded Mains Xitanium SNLCDAE ... sX LED drivers that directly translate the dimming signals into the appropriate output current for a LEDgine. If other LED drivers need to be used, the LLC7730 receiver is available to translate the Coded Mains dimming signal into DALI or 1 to 10 V.

The receiver is equipped with an Atmel 32-bit processor. It has inbuilt 6 kV surge protection. This intelligent receiver automatically detects the type of driver (DALI or 1 to 10 V) connected and will auto configure accordingly.

It has an additional switched line input through which external trigger device (for example, a motion sensor) can be connected to override the Coded Mains signal to 100% light output.

Coded Mains Receiver Adapter

For luminaires working on a 380 to 480 V line-line application, a Coded Mains receiver adaptor is used in conjunction with a Coded Mains receiver LN to step down the supply mains from 380 to 480 Vac to 220 to 277 Vac. Each adaptor is specifically designed to work with a single coded mains receiver and needs to be fused 2A max. No other devices connected to ensure performance of Coded Mains.

Applications

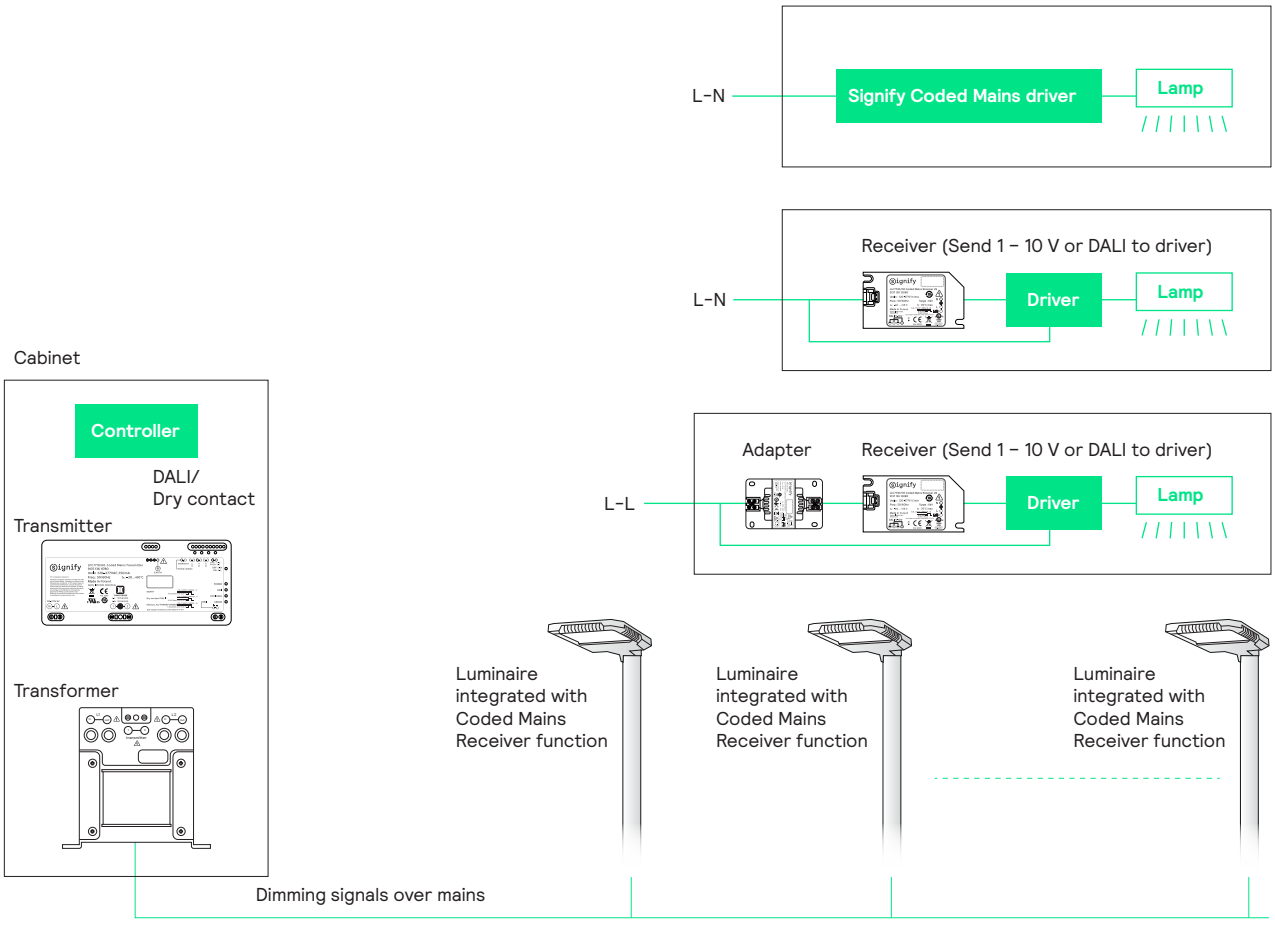
Road and Street
For use in conjunction with remote street light management systems for central dimming application.

Tunnels
For use in conjunction with tunnel control system for tunnel stage control.

Sports
For use in conjunction with local GUI to control sports field lighting.

Area lighting
For use to control parking lots, industrial areas, and so on.

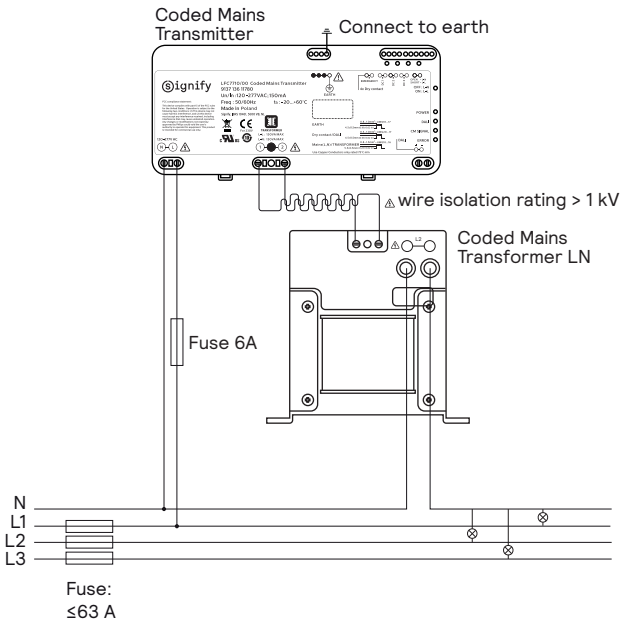
Others
Greenhouses, city farming, supermarkets, and so on.



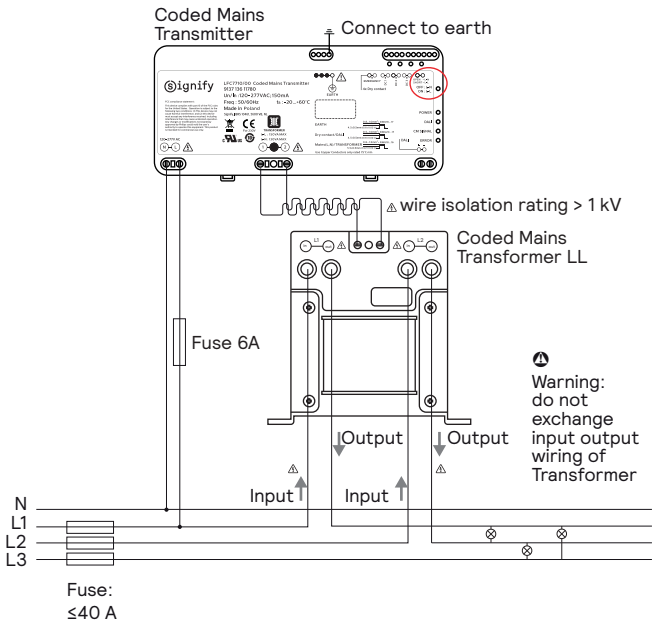
A typical application of Coded Mains

Typical connection of Coded Mains Transmitter and coded mains Transformer for Line-Neutral & Line-Line applications.

Line-Neutral



Line-Line



Warnings

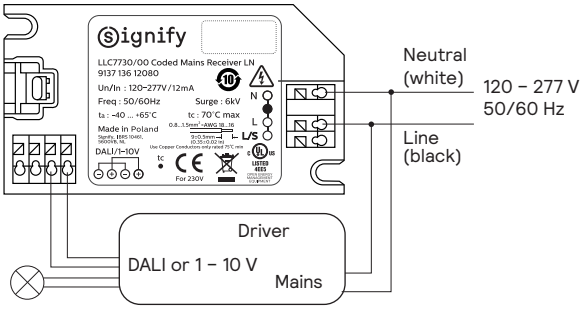
Mains power to coded mains transmitter and mains power through coded mains Transformer to luminaries, shall be from the same mains power grid for the coded mains dimming to function. This is applicable even while using an Uninterrupted power supply [UPS].

While using coded mains transformer LN, Neutral line shall not be Earthed between coded mains transformer and the luminaire load for dimming to function.

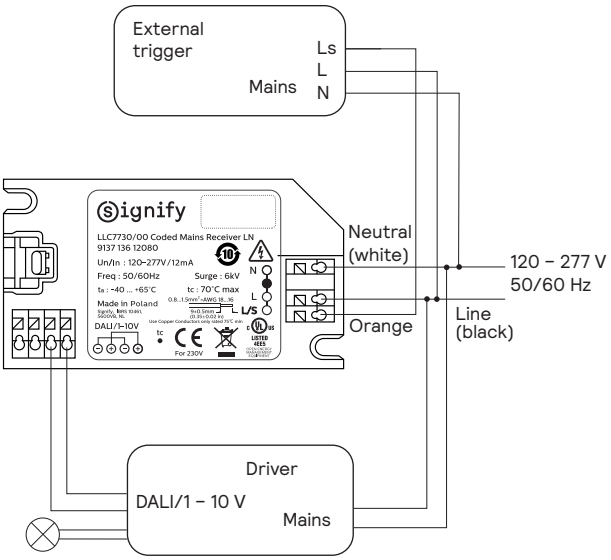
Coded mains transmitter shall be always powered ON before or together with the load connected to the Coded mains Transformer for dimming to function.
For recovery procedure refer to troubleshooting guide.

Typical connection of Coded Mains Receiver and Adapter for Line-Neutral & Line-Line applications.

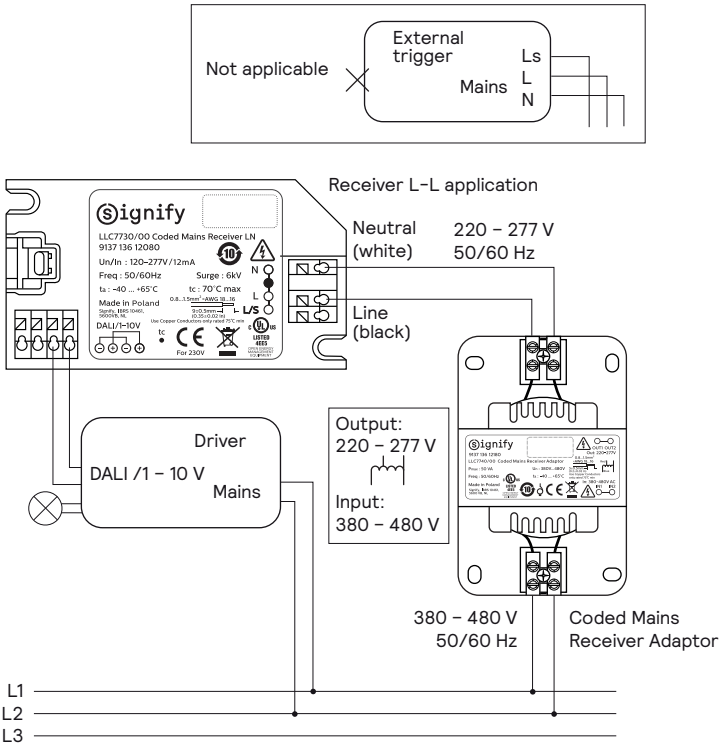
Wiring diagram for L-N 120 – 277 V application



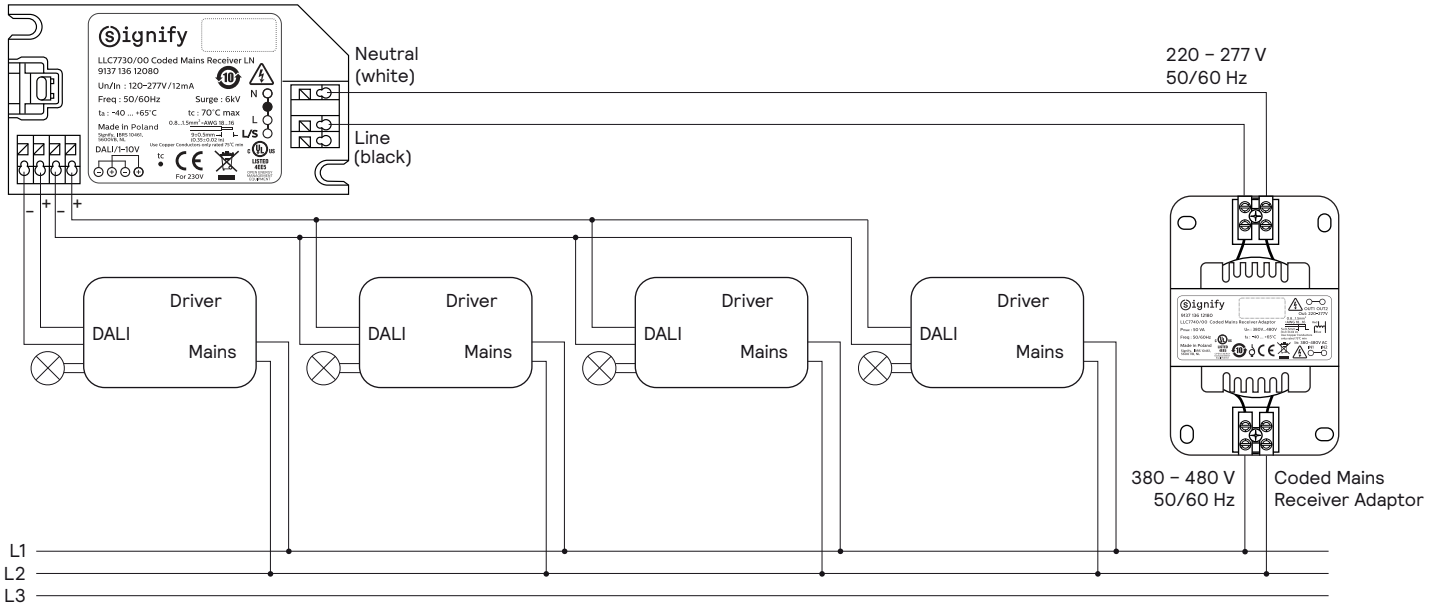
Wiring diagram for L-N 120 – 277 V application connected with external trigger



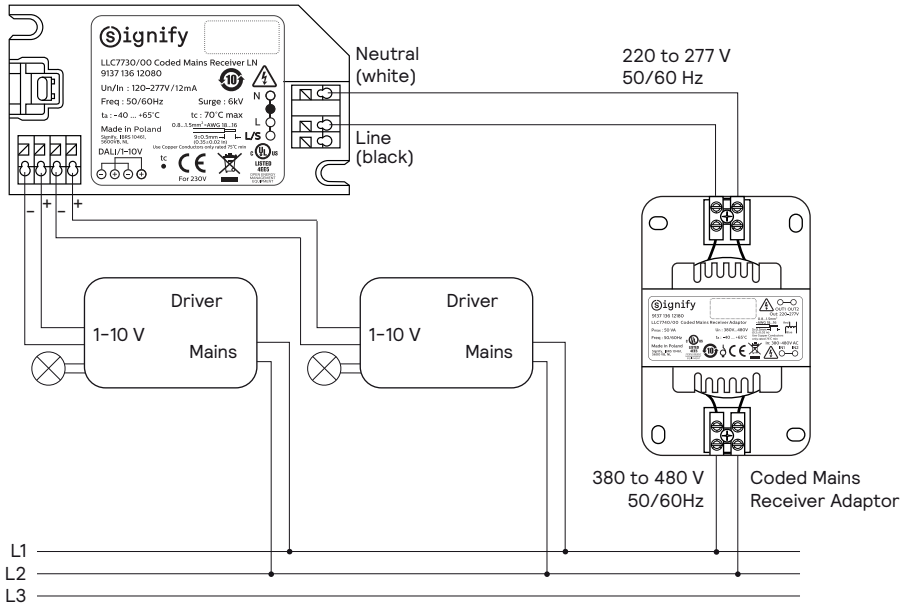
Wiring diagram L-L 380 – 480 V application



Wiring diagram multi DALI driver, L-L 380 – 480 V application

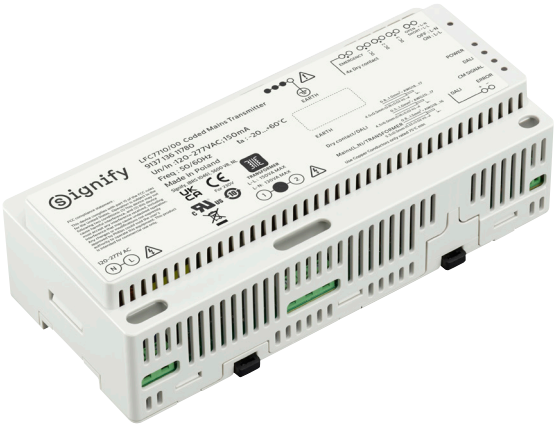


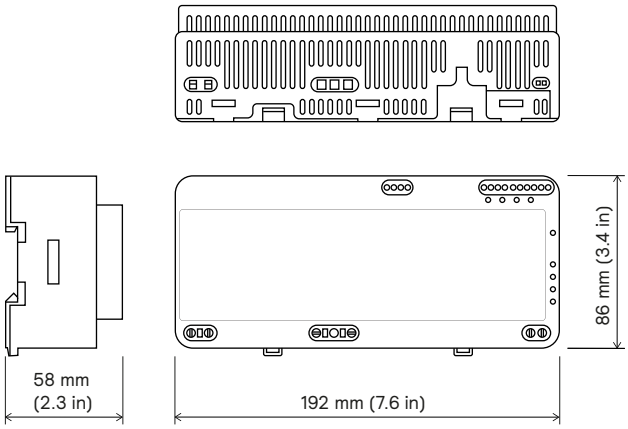
Wiring diagram multi 1 – 10 V driver, L-L 380 – 480 V application



Functional Specifications LFC7710, Coded Mains Transmitter

All values are valid at nominal mains voltage and ambient temperature of 25 ±2 °C (77 ±4 °F), unless stated otherwise.





Electrical

Mains voltage	120 to 277 V
Mains frequency	50/60 Hz
Cable length	< 3 m (10 ft) between transmitter and TX transformer
Max power consumption	< 20 W (including TX transformer in full load)
Differential Mode Surge protection level	6 kV
Common Mode Surge protection level	2 kV
Output Power TX Transformer	Max. 150 VA max. for L-L transformer Max. 130 VA max. for L-N transformer

DALI Interface

Operating mode	Slave
Power supply	8 mA
Cable length	< 10 m (33 ft)
Protocol	DALI 2.0

Warning
In DALI communication mode, the transmitter must receive DALI command from the controller at least every five minutes, otherwise the Coded Mains system will go to 100% light output.

Dry-contact interface

Quantity	4
Cable length	< 3 m (10 ft)
Voltage	2.6 to 2.7 VDC
Current	1.1 mA

Dry contact points in panel (1: short, 0: open, x: N/A)

Scene	DIM Level (%)	Emergency	DC1	DC2	DC3
Sc3	10	0	1	1	1
Sc5	50	0	0	1	1
Sc6	60	0	1	0	1
Sc7	75	0	0	0	1
Sc8	80	0	1	1	0
Sc10	90	0	0	1	0
Sc12	100	1	x	x	x
Diagnostic		0	1	0	0
DALI control		0	0	0	0

Note
Dim levels are the default levels assigned to scene numbers and might change due to configuration of either the receiver or coded mains driver.

Note
Diagnostic – five seconds 100% light output, five seconds light off (or 10% dim level for 1 – 10 V driver) in repeat mode

Dim level matrix.

	Sc 1	Sc 2	Sc 3	Sc 4	Sc 5	Sc 6	Sc 7	Sc 8	Sc 9	Sc 10	Sc 11	Sc 12	Default	Remarks
DIM %	0	1	10	35	50	60	75	80	85	90	95	100	100	
See note	**	**	*		*	*	*	*		*		*		

Note

Sc = Scene

* Dim levels when controlled via Coded Mains signal from transmitter in dry contacts mode.

** Not available to interface with 1 – 10 V driver.

Earth connection	Mandatory to ensure the proper operation
Field Jumper	For field commissioning; Sets mode of CM TX
Open	L-N mode (LED is off)
Short	L-L mode (LED is on)

Indication LEDs

Dry Contact LED Emerency (Yellow) DCI, DC2, DC3 (Green)	Short: ON Open: OFF
Jumper connector LED (Green)	Open = L-N mode, LED is OFF Short = L-L mode , LED is ON
Power LED (Green)	When CM TX works and the incoming supply is working, LED is ON, otherwise it is OFF
DALI LED (Green)	When DALI Communication with controller is working, the LED blinks, otherwise it is OFF
CM SIGNAL (Green)	When a Coded Mains command is sent out by CM TX, the LED blinks, otherwise it is OFF
ERROR LED (Red)	When an error happens and the CM TX stops sending Coded Mains command, the LED is ON, otherwise it is OFF

Connections	Terminal function	Requirements
Mains power input	Neutral Line	2-pin green screw-type connector supporting conductor cross section 0.8 to 1.5 mm² Wire range: 18 to 16 AWG 5.7 kgf.cm (4.9 lbf-in) 5.5 mm (0.22 in) stripping
Output to Transformer	OUT 1 OUT 2	2-pin green screw-type connector supporting conductor cross section 0.8 to 1.5 mm² Wire range: 18 to 16 AWG 5.7 kgf.cm (4.9 lbf-in) 5.5 mm (0.22 in) stripping
DALI Connector	DALI+ DALI-	2-pin, 3.5 mm (0.14 in) -pitch, green screw-type connector supporting conductor cross section 0.5 to 1.0 mm² Wire range: 20 to 17 AWG 2.0 kgf.cm (1.7 lbf-in) 4.5 mm (0.16 in) stripping
Dry Contact Connector	EMERGENCY DC 1 DC 2 DC 3 JUMPER	3.5 mm (0.14 in) -pitch screw-type green supporting conductor cross section 0.5 to 1.0 mm² Wire range: 20 to 17 AWG, 2.0 kgf.cm (1.7 lbf-in) 4.5 mm (0.16 in) stripping
Earth connection	Earth	3.5 mm (0.14 in) -pitch screw-type green supporting conductor cross section 0.8 to 1.0 mm² Wire range: 18 to 17 AWG, 2.0 kgf.cm (1.7 lbf-in) 4.5 mm (0.16 in) stripping

Mechanical

Installation	Din-rail (EN50022) with clip
IP Rating	IP20
Dimensions (length, width, height)	192 x 58 x 86 mm (7.6 x 2.3 x 3.4 in)
Color	Grey (RAL7035)
Weight	375 g (13.2 oz)
Housing material	Polycarbonate

Environmental

Ambient temperature operational	-20 to 60 °C (-4 to 140 °F)
Ambient temperature storage	-40 to 85 °C (-40 to 185 °F)
Humidity	20 to 90 %, non-condensing
RoHs/REACH	RoHs according to directive 2011/65/EC REACH according to directive 2006/1907/EC China ROHS compliance

Warning
This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Warning
Earth leakage in distribution line impacts dimming signal over mains. Please refer to the Installation Guide for more details.

Robustness and reliability

Operational lifetime	60,000 hrs
Lifetime failure rate	<=10%

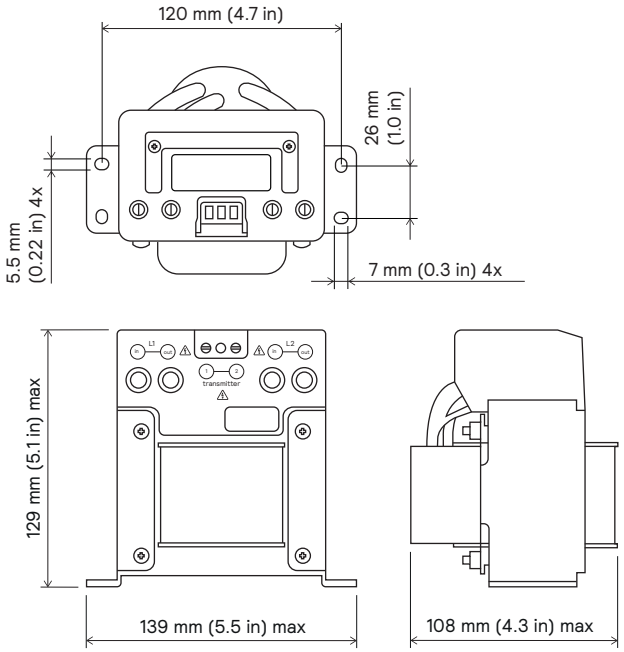
Safety and EMC

Classification	IT Equipment (EU) Energy Management Equipment (USA)
Standards	IEC60950, UL916 FCC part 15 CISPR 22 and CISPR 24
Approbation	CE, UL, cUL, RoHS

Note
Installation: The transmitter should be protected from dust and water, preferably by enclosing the system in a metal IP class 65 (NEMA type 4) outdoor cabinet.
Neutral line shall not be Earthed to ensure effective transmission of coded mains signals.

Functional Specifications LCU7720, Coded Mains Transformer LL

All values are valid at nominal mains voltage and ambient temperature of 25 ±2 °C (77 ±4 °F), unless stated otherwise.



Electrical	
Transformer input	490 V square wave
Mains frequency	50/60 Hz
Max load current	2 × 32 A (40 A fuse)
Output Power max.	150 VA

Connections	Terminal function	Requirements
Input from Transmitter 490 V square wave	Pin 1	2-pin green screw-type connector supporting conductor cross section 0.8 to 2.0 mm² Wire range: 18 to 14 AWG 4 kgf.cm (3.5 lbf-in) 7.5 mm (0.30 in) stripping
	Pin 2	
Line 1 in/out	L1 in	2-pin white screw-type connector supporting conductor cross section 10 to 25 mm² Wire range: 8 to 4 AWG 20.7 kgf.cm (18 lbf-in) 13 mm (0.51 in) stripping
	L1 out	
Line 2 in/out	L2 in	2-pin white screw-type connector supporting conductor cross section 10 to 25 mm² Wire range: 8 to 4 AWG 20.7 kgf.cm (18 lbf-in) 13 mm (0.51 in) stripping
	L2 out	

Mechanical

Installation	Surface mounting
IP Rating	IP00
Dimensions (length, width, height)	139 x 108 x 129 mm (5.5 x 4.3 x 5.1 in)
Color	Dark grey
Weight	3100 g (6.8 lb)
Housing material	Polyphenylene oxide and steel

Environmental

Ambient temperature operational	-20 to 60 °C (-4 to 140 °F)
Ambient temperature storage	-40 to 85 °C (-40 to 185 °F)
Humidity	20 to 90 %, non-condensing
RoHs/REACH	RoHs according to directive 2011/65/EC REACH according to directive 2006/1907/EC China RoHS compliance

Robustness and Reliability

Operational lifetime	60,000 hrs
Lifetime failure rate	<=10%

Safety and EMC

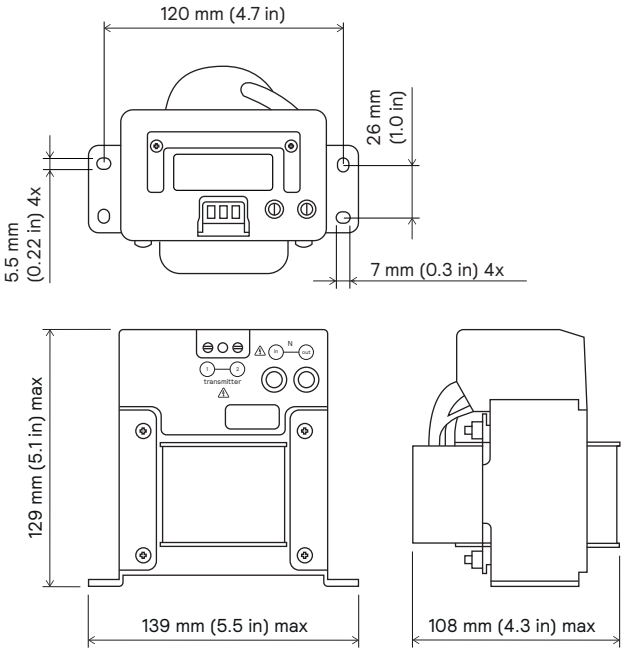
Classification	IT Equipment (EU) Energy Management Equipment (USA)
Standards	IEC60950, UL916 CISPR22 and CISPR24 FCC part 15
Approbation	CE, UL, cUL, RoHS

Note

Installation: The transformer LL should be protected from dust and water, preferably by enclosing the system in a metal IP class 65 (NEMA type 4) outdoor cabinet.

Functional Specifications LCU7725, Coded Mains Transformer LN

All values are valid at nominal mains voltage and ambient temperature of 25 ±2 °C (77 ±4 °F), unless stated otherwise.



Electrical	
Transformer input	490 V square wave
Mains frequency	50/60 Hz
Max load current	50 A (63 A fuse)
Output Power max.	130 VA

Connections	Terminal function	Requirements
Input from Transmitter 490V square wave	Pin 1	2-pin green screw-type connector supporting conductor cross section 0.8 to 2.0 mm² Wire range: 18 to 14 AWG 4 kgf.cm (3.5 lbf-in) 7.5 mm (0.30 in) stripping
	Pin 2	
Neutral in/out	N in	2-pin white screw-type connector supporting conductor cross section 10 to 25 mm² Wire range: 8 to 4 AWG 20.7 kgf.cm (18 lbf-in) 13 mm (0.51 in) stripping
	N out	

Mechanical

Installation	Surface mounting
IP Rating	IP00
Dimensions (length, width, height)	135 x 103 x 126 mm (5.3 x 4.1 x 5.0 in)
Color	Dark grey
Weight	3,100 g (6.8 lb)
Housing material	Polyphenylene oxide and steel

Environmental

Ambient temperature operational	-20 to 60 °C (-4 to 140 °F)
Ambient temperature storage	-40 to 85 °C (-40 to 185 °F)
Humidity	20 to 90 %, non-condensing
RoHs/REACH	RoHs according to directive 2011/65/EC REACH according to directive 2006/1907/EC China ROHS compliance

Robustness and reliability

Operational lifetime	60,000 hrs
Lifetime failure rate	<=10%

Safety and EMC

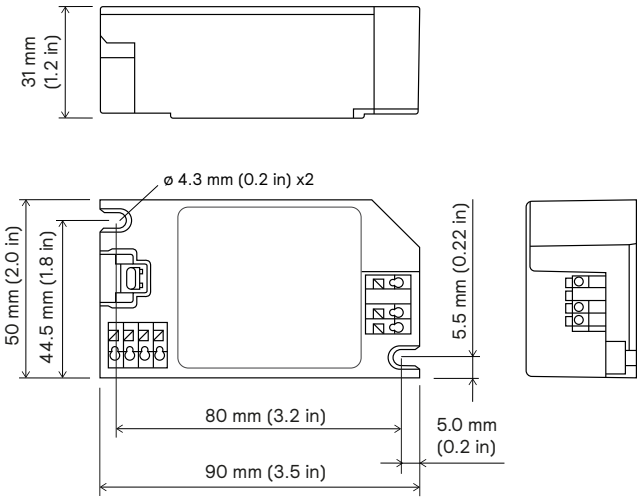
Classification	IT Equipment (EU) Energy Management Equipment (USA)
Standards	IEC60950, UL916 CISPR22 and CISPR24 FCC part 15
Approbation	CE, UL, cUL, RoHS

Note

Installation: The transformer LN should be protected from dust and water, preferably by enclosing the system in a metal IP class 65 (NEMA type 4) outdoor cabinet.

Functional Specifications LLC7730, Coded Mains Receiver LN

All values are valid at nominal mains voltage and ambient temperature of 25 ±2 °C (77 ±4 °F), unless stated otherwise.



Electrical

Operating Voltage	120 to 277 V
Mains frequency	50/60 Hz
Cable length	< 1 m (3 ft) between Adaptor and Receiver
Max power consumption	< 2 W
Surge level	6 kV according to IEC61000-4-5

DALI Interface / 1 – 10 V Interface

Connector	4-pin, 3.5 mm (0.14 in) pitch
Cable length	< 10 m (30 ft). If longer than 10 m (30 ft), you need to use shield wire
DALI operating mode	Master
DALI Power supply	8 mA
DALI protocol	DALI 2.0
1 – 10 V power endurance	350 µA

Coded Mains Receiver has a duplicated dimming output with either 1 – 10 V or DALI driver (auto-detected).

DALI/1 – 10V

The terminals 1 – 10 V / DALI are basic insulated from mains voltage.

Connections	Terminal function	Requirements
Mains input	Neutral (white)	Spring type connector supporting conductor cross section 0.8 to 1.5 mm² Wire range: 18 to 16 AWG 9 mm (0.35 in) stripping
	Line (black)	
External trigger input interface 120 – 277V (for Line to Neutral application only)	Input (orange)	Spring type connector supporting conductor cross section 0.8 to 1.5 mm² Wire range: 18 to 16 AWG 9 mm (0.35 in) stripping
DALI/1 – 10 V	2x positive (purple)	Spring type connector supporting conductor cross section 0.8 to 1.5 mm² Wire range: 18 to 16 AWG 9 mm (0.35 in) stripping
	2x negative (grey)	

1 – 10 V dim level matrix

	Sc 1	Sc 2	Sc 3	Sc 4	Sc 5	Sc 6	Sc 7	Sc 8	Sc 9	Sc 10	Sc 11	Sc 12
DIM %	N.A.	N.A.	10	35	50	60	75	80	85	90	95	100
Vout (v)	N.A.	N.A.	1	2.95	4.11	4.89	6.06	6.45	6.84	7.23	7.61	8

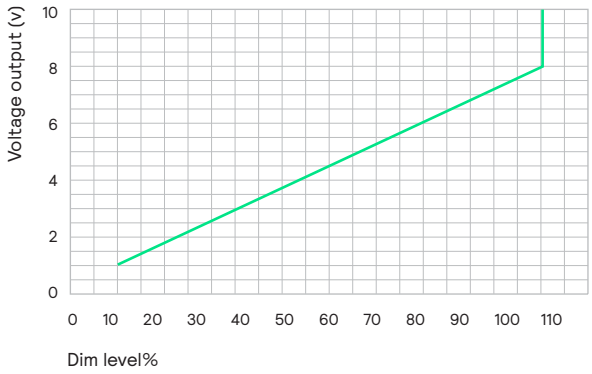
Note
Sc = Scene

Receiver dimming levels follows the Table

	Sc 1	Sc 2	Sc 3	Sc 4	Sc 5	Sc 6	Sc 7	Sc 8	Sc 9	Sc 10	Sc 11	Sc 12	Default	Remarks
DIM %	0	1	10	35	50	60	75	80	85	90	95	100	100	
See note	**	**	*		*	*	*	*		*		*		

Note
Sc = Scene
* Dimming levels when controlled via Coded Mains signal from transmitter in dry contacts mode.
** Not available to interface with 1 - 10 V driver.

1 – 10 V dim curve



Mechanical

Installation	Surface mounting
IP Rating	IP20
Dimensions (length, width, height)	90 x 50 x 31 mm (3.5 x 2.0 x 1.2 in)
Color	Dark grey
Weight	75 g (2.6 oz)
Housing material	Polycarbonate

Environmental

Ambient temperature operational	-40 to 65 °C (-40 to 149 °F)
Ambient temperature storage	-40 to 85 °C (-40 to 185 °F)
Humidity	20 to 90 %, non-condensing
RoHs/REACH	RoHs according to directive 2011/65/EC REACH according to directive 2006/1907/EC China ROHS compliance

Robustness and reliability

Operational lifetime	80,000 hrs
Lifetime failure rate	<=10%

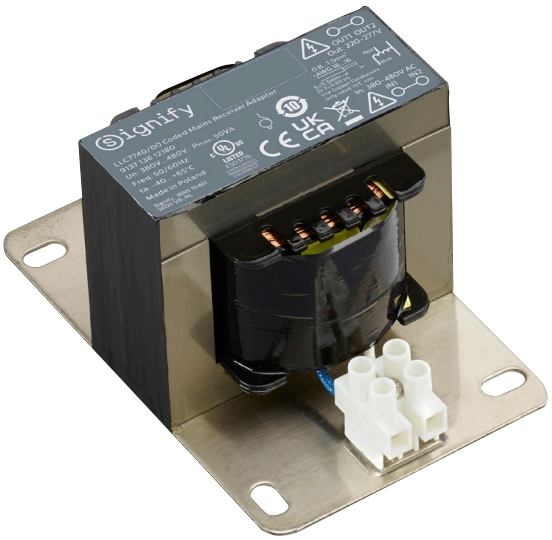
Safety and EMC

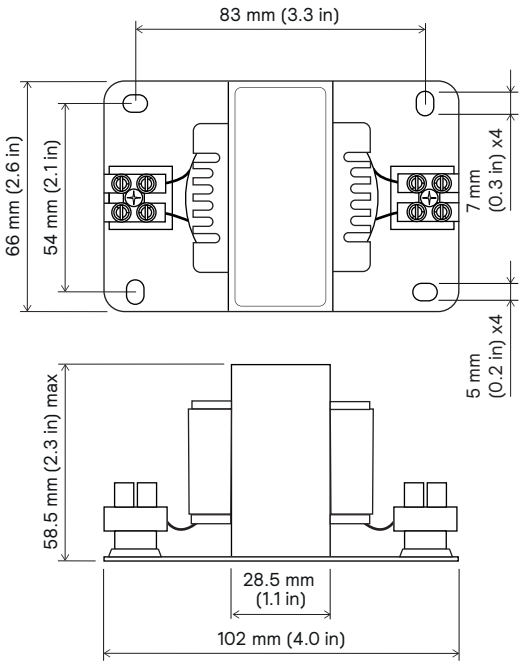
Classification	Lamp Controlgear (EU) Energy Management Equipment (USA)
Standards	IEC61347, IEC61547, UL916 CISPR15 FCC part 15
Approbation	CE, UL, cUL, RoHS

Note
Installation: The IP rating of the compartment in which the Receiver LN is mounted should be IP43 or above.

Functional Specifications LLC7740, Coded Mains Receiver Adaptor

All values are valid at nominal mains voltage and ambient temperature of 25 ±2 °C (77 ±4 °F), unless stated otherwise





Electrical	
Mains voltage	Line to Line Input 380 to 480 V Output 220 to 277 V
Mains frequency	50/60 Hz
Cable length	< 1 m (3 ft) between adapter and receiver
Rated Capacity	50 VA

Connections	Terminal function	Requirements
Mains input	In 1	2-pin white screw-type connector supporting conductor cross section 0.8 to 1.5 mm²
	In 2	Wire range: 18 to 16AWG 5 kgf.cm (4.3 lbf-in) 5 mm (0.2 in) stripping
Mains output	Out 1	2-pin white screw-type connector supporting conductor cross section 0.8 to 1.5 mm²
	Out 2	Wire range: 18 to 16 AWG 5 kgf.cm (4.3 lbf-in) 5 mm (0.2 in) stripping

Mechanical

Installation	Surface mounting
IP Rating	IP00
Dimensions (length, width, height)	102 x 66 x 58.5 mm (4.0 x 2.6 x 2.3 in)
Color	Black
Weight	900 g (2.0 lb)
Housing material	Steel

Environmental

Ambient temperature operational	-40 to 65 °C (-40 to 149 °F)
Ambient temperature storage	-40 to 85 °C (-40 to 185 °F)
Humidity	20 to 90 %, non-condensing
RoHs/REACH	RoHs according to directive 2011/65/EC REACH according to directive 2006/1907/EC China ROHS compliance

Robustness and reliability

Operational lifetime	80,000 hrs
Lifetime failure rate	<=10%

Safety and EMC

Classification	Power transformer (EU) Energy Management Equipment (USA)
Standards	IEC61558, UL916 FCC part 15
Approbation	CE, UL, cUL, RoHS

Note

Installation: The IP rating of the compartment in which the Receiver Adapter is mounted should be IP43 or above.

Packing data

Type	Box dimensions	Qty	Material	Weight	
				net	gross
LFC7710/00 Coded Mains Transmitter	725 x 571 x 158 mm (28.5 x 22.5 x 6.2 in)	20	Cardboard	7.5 kg (16.5 lb)	11.9 kg (26.2 lb)
LCU7720/00 Coded Mains Transformer LL	420 x 365 x 162 mm (16.5 x 14.3 x 6.4 in)	4	Cardboard	12.4 kg (27.3 lb)	14.8 kg (32.6 lb)
LCU7725/00 Coded Mains Transformer LN	420 x 365 x 162 mm (16.5 x 14.3 x 6.4 in)	4	Cardboard	12.4 kg (27.3 lb)	14.8 kg (32.6 lb)
LLC7730/00 Coded Mains Receiver LN	354 x 295 x 210 mm (13.9 x 11.6 x 8.3 in)	60	Cardboard	4.5 kg (9.9 lb)	5.4 kg (11.9 lb)
LLC7740/00 Coded Mains Receiver Adaptor	320 x 266 x 180 mm (12.6 x 10.4 x 7.1 in)	12	Cardboard	10.8 kg (23.8 lb)	12.6 kg (27.8 lb)

Ordering Data

Type	MOQ	Ordering number	EAN code level 1	EAN code level 3	EOC
LFC7710/00 Coded Mains Transmitter	1	9137 136 11780	8718696 723876	8718696 723883	723876 00
LCU7720/00 Coded Mains Transformer LL	1	9137 136 11880	8718696 723890	8718696 723906	723890 00
LCU7725/00 Coded Mains Transformer LN	1	9137 136 11980	8718696 723913	8718696 723920	723913 00
LLC7730/00 Coded Mains Receiver LN	60	9137 136 12080	8718696 723937	8718696 723944	723937 00
LLC7740/00 Coded Mains Receiver Adaptor	1	9137 136 12180	8718696 723951	8718696 723968	723951 00

Product Guide, Coded Mains - Appendix

China RoHS 2 declaration tables

LFC7710/00

产品中有害物质的名称及含量（Hazardous Substances in product）

部件名称 (Parts Name)	有害物质（Hazardous Substance）					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
上下盖 (Housing)	O	O	O	O	O	O
线路板（PCB）	O	O	O	O	O	O
连接插座（Connector）	O	O	O	O	O	O
绕线组件（Wire wound component）	X	O	O	O	O	O
电子元件 (Electronic component)	X	O	O	O	O	O
涂层（Coating）	O	O	O	O	O	O

本表格依据SJ/T11364的规定编制
O: 表示该有害物质在该部件所有均质材料中的含量均在GB/T26572 规定的限量要求以下。
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T26572 规定的限量要求。
The declaration table is in accordance with SJ/T11364
O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.
X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

LCU7720/00

产品中有害物质的名称及含量（Hazardous Substances in product）

部件名称 (Parts Name)	有害物质（Hazardous Substance）					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
上下盖 (Housing)	O	O	O	O	O	O
线路板（PCB）	O	O	O	O	O	O
连接插座（Connector）	O	O	O	O	O	O
绕线组件（Wire wound component）	X	O	O	O	O	O
电子元件 (Electronic component)	X	O	O	O	O	O
其他（Others）	O	O	O	O	O	O

本表格依据SJ/T11364的规定编制
O: 表示该有害物质在该部件所有均质材料中的含量均在GB/T26572 规定的限量要求以下。
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T26572 规定的限量要求。
The declaration table is in accordance with SJ/T11364
O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.
X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

LCU7725/00

产品中有害物质的名称及含量（Hazardous Substances in product）

部件名称 (Parts Name)	有害物质（Hazardous Substance）					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
上下盖 (Housing)	O	O	O	O	O	O
线路板（PCB）	O	O	O	O	O	O
连接插座（Connector）	O	O	O	O	O	O
绕线组件（Wire wound component）	X	O	O	O	O	O
电子元件 (Electronic component)	X	O	O	O	O	O
其他（Others）	O	O	O	O	O	O

本表格依据SJ/T11364的规定编制
O: 表示该有害物质在该部件所有均质材料中的含量均在GB/T26572 规定的限量要求以下。
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T26572 规定的限量要求。
The declaration table is in accordance with SJ/T11364
O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.
X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

LLC7730/00

产品中有害物质的名称及含量（Hazardous Substances in product）

部件名称 (Parts Name)	有害物质（Hazardous Substance）					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
上下盖 (Housing)	O	O	O	O	O	O
线路板（PCB）	O	O	O	O	O	O
连接插座（Connector）	O	O	O	O	O	O
绕线组件（Wire wound component）	X	O	O	O	O	O
电子元件 (Electronic component)	X	O	O	O	O	O
涂层（Coating）	O	O	O	O	O	O

本表格依据SJ/T11364的规定编制
O: 表示该有害物质在该部件所有均质材料中的含量均在GB/T26572 规定的限量要求以下。
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T26572 规定的限量要求。
The declaration table is in accordance with SJ/T11364
O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.
X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

LLC7740/00

产品中有害物质的名称及含量（Hazardous Substances in product）

部件名称 (Parts Nam)e	有害物质（Hazardous Substance）					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
连接插座（Connector）	O	O	O	O	O	O
绕线组件（Wire wound component）	X	O	O	O	O	O
其他（Others）	O	O	O	O	O	O

本表格依据SJ/T11364的规定编制
O: 表示该有害物质在该部件所有均质材料中的含量均在GB/T26572 规定的限量要求以下。
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T26572 规定的限量要求。
The declaration table is in accordance with SJ/T11364
O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.
X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

R04 09 October 2025

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