



# SEN Louvre 033

## Installation Guide



### PRODUCT CARE AND HANDLING

---

- KKDC products are delivered in appropriate packaging. Any handling instructions on the packaging must be observed. Products should remain in packaging 'as delivered' until installation or for ongoing transportation and storage.
- Inspect products carefully before installation. Do not proceed to install any product that may have been damaged in transportation, storage or handling.
- Handle with care. Many KKDC products contain precision electrical components and are not designed to withstand excessive stresses from tension or compression.
- Please follow standard ESD (Electrostatic discharge) protection measures when handling and installing KKDC LED products.

### SAFETY AND WARRANTY

---

- Installation is only to be carried out by suitably qualified persons in accordance with installation instructions and all applicable regulations or standards. (Improper installation can create an electrical hazard with risk of electric shock, fire or injury).
- KKDC will not be held responsible for any consequences arising from improper product handling, storage or installation.
- KKDC products must be installed as supplied. Disassembly, modification or attempted repair will invalidate warranty and may create an electrical hazard.
- The KKDC product warranty is available with this document or on our website – [www.kkdc.lighting](http://www.kkdc.lighting).

### PREPARATION

---

- Install KKDC products in accordance with the Wiring and Mounting instructions supplied with the product, using the recommended accessories, tools and fixings where specified.
- Product specification and installation information is also available from the KKDC website [www.kkdc.lighting](http://www.kkdc.lighting).
- Products should only be installed in areas appropriate to their IP rating, operable temperature and humidity range.
- Carefully plan and check the physical layout and circuit structure of the installation before starting work. Note wiring methods, cable type and connection points along with positioning and rating of power supplies and any control gear. Refer to all product information – including that for power supplies/control gear – and confirm choice of power supply, control gear, cable thickness and cable length.
- For safe and reliable operation KKDC LED products must only be used with suitable KKDC supplied or recommended power supplies and control gear. Contact KKDC for further information.  
(North America – Use only UL listed Class 2 power supplies with KKDC products – See also Installation Guide – Wiring)
- The KKDC LED products in this guide require **12V DC** or **24V DC** 'constant voltage' power supplies as indicated in product specifications.

### AFTER INSTALLATION

---

- KKDC products are designed to be maintenance free however accumulated dust may be removed from the emitting surface of luminaires with careful use of a soft dry cloth.
- Ensure that paints, organic solvents and caustic or corrosive cleaning chemicals do not come into contact with KKDC products.  
For example **DO NOT USE** –
  - Benzene, Toluene, Xylene, Acetone, Carbon tetrachloride, Gasoline, Ether,
  - Sodium/Calcium hydroxide, Sodium Carbonate.
- For cleaning or sanitization – products in sealed IP rated housings may be wiped with a soft cloth dampened with an alcohol cleaner or with cool, soft water diluted (5% or less) bleach (Sodium Hypochlorite) solution.
- Please retain this information and pass to those responsible for installation/site maintenance.

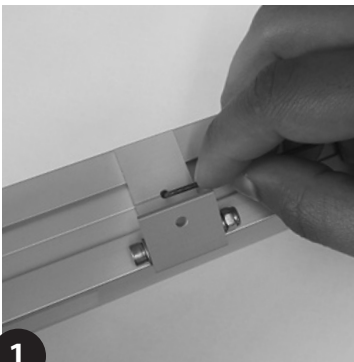
---

Note: KKDC may change product specifications and installation guidance without prior notice.

### READ BEFORE INSTALLATION

- The mounting surface to which any KKDC product is attached must not carry any electrical potential and metallic surfaces must be earthed. Avoid physical contact between adjacent LED products.
- Prepare, measure and mark the installation location and mounting surfaces before fixing. Any machining or drilling etc. should be completed before mounting. KKDC products and their immediate installation area should be kept clean, dry and free of paints and solvents during and after installation.
- Ensure that products are mounted with supplied, recommended or appropriate screws and fixings to suit the surface material.
- Mount products so that cables and connectors will not come under excessive stress and position accessories, wiring and connectors where they will not cast shadows.

### MOUNTING – LOW ADJUSTABLE BRACKET



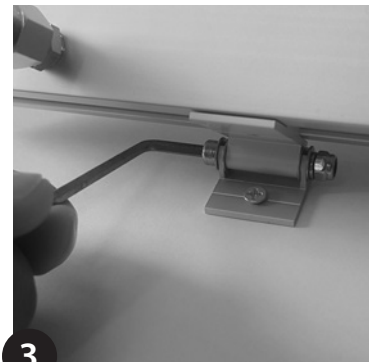
1

Secure brackets with hex key.  
Mark and drill holes for screws.



2

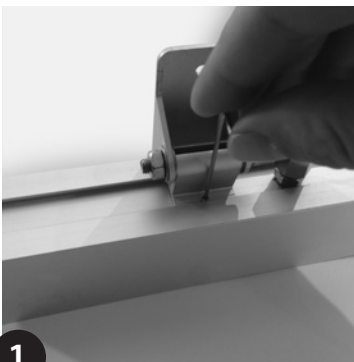
Fix with suitable screws.



3

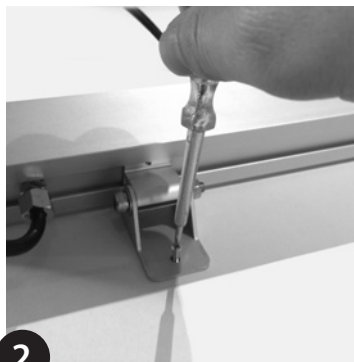
Adjust to required angle and secure with hex key.

### MOUNTING – ADJUSTABLE BRACKET



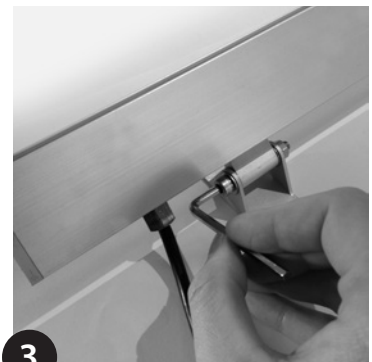
1

Secure brackets with hex key.  
Mark and drill holes for screws.



2

Fix with suitable screws.

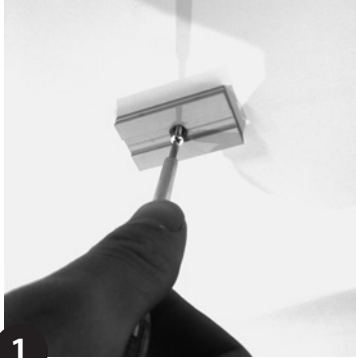


3

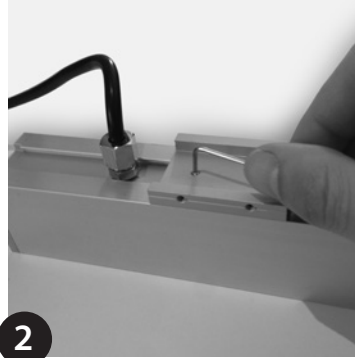
Adjust to required angle and secure with hex key.

Note: This guide is produced from testing under 'average' conditions and does not represent all possible applications or installation circumstances.  
Please contact KKDC for further information.  
KKDC may change product specifications and installation guidance without prior notice.

### MOUNTING – MOUNTING PLATE



Check product/plate orientation and cable grommet clearance from mounting surface. Mark position of plates (supplied with the pre-installed sliders – 2 per metre).

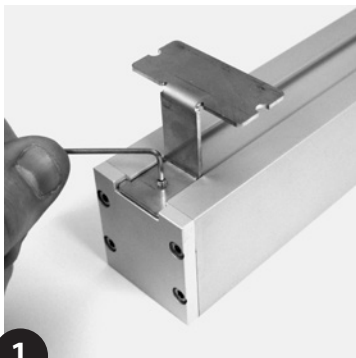


Position slider over plates (lock slider with grub screw/hex key).

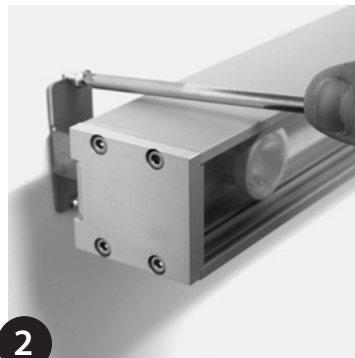


Secure slider to plate with hex key.

### MOUNTING – FIXED BRACKET



Secure brackets with hex key. Mark and drill holes for screws.



Fix with suitable screws.





# SEN Louvre

## Single/double tail Wiring



### SEN Louvre TAIL OPTIONS – CODE TABLE

The white SEN Louvre product Code table offers 2 types of tail options – single and double:

Cable Length	Power Feed***	
1000mm/39.37" d	Single tail	1
	Double tail	2

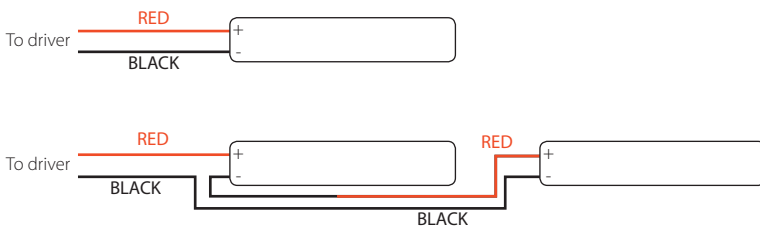
### EXPLANATION AND WIRING EXAMPLES

#### 1000mm SINGLE sheathed tail d1

- Describes wiring SEN Louvre products supplied with a single 2 core, sheathed tail.

Where a single length of single tail SEN Louvre is to be connected to the driver, connect as illustrated below:

Where more than one length of single tail SEN Louvre is to be connected to the driver, wiring must be in series as illustrated:



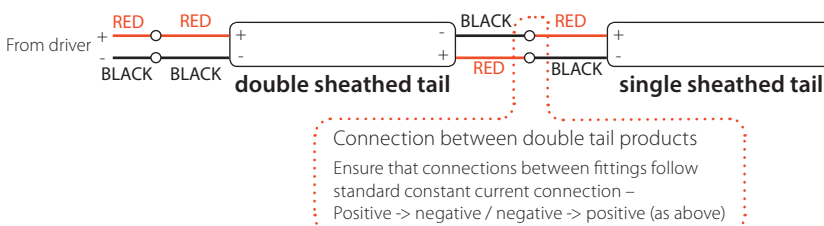
#### 1000mm DOUBLE sheathed tail d2

- Describes wiring for SEN Louvre products supplied with two tails – one 2 core sheathed tail at each end.
- Not recommended for order as the last product in run of SEN Louvre.

The double tail option is designed for runs of more than one SEN Louvre and is made with an open circuit. It is not recommended for single product use. However, if used alone or to end a run it must be wired as illustrated below:



The double tail is intended for use where multiple fittings are to be wired in a single run. The double tail allows loop in/loop out style wiring as illustrated below:



Cable marking: Cables supplied on fitting will be indicated with VCC for Positive (RED), and GND for Negative (BLACK).

Note: Failure to wire SEN Louvre fittings in the way indicated above will result in total product failure. This type of failure will NOT be covered by product warranty.

Note: This guide is produced from testing with KKDC approved power supplies or control gear. Performance with other power or control products cannot be guaranteed. Contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.



## READ BEFORE INSTALLATION

- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- If a constant current PSU/driver is powered 'live' without a load connected – disconnect power and leave for a minimum of 2 minutes before connecting SEN Louvre to the output.
- Non UL SEN Louvre circuits must not exceed a maximum of 300V.
- ULus installations – Maximum product length usable due to 60V Class 2 limit (maximum PCB length shown below).  
 SEN Louvre 033 – 600mm/23.6in  
 SEN Louvre 050 – 1000mm/39.4in  
 SEN Louvre 100 – 1800mm/70.9in

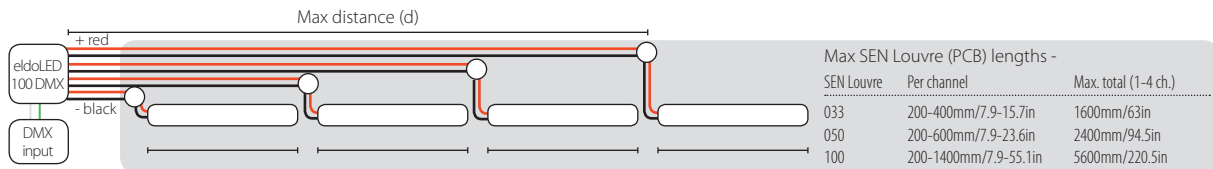
## WIRING EXAMPLES

### eldoLED 100W 350mA

PSU secondary output:  
2-55V per channel (1-4 channels)  
100W Max. total load

Cable size / Max distance (d)					
0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG	
13m/42.5ft	21m/68.5ft	27m/88.5ft	-	-	

### SEN Louvre 033/050/100

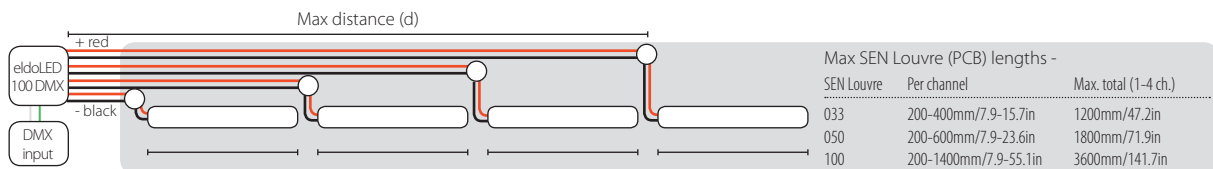


### eldoLED 100W 700mA

PSU secondary output:  
2-55V per channel (1-4 channels)  
100W Max. total load

Cable size / Max distance (d)					
0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG	
13m/42.5ft	21m/68.5ft	27m/88.5ft	-	-	

### SEN Louvre 033/050/100



Where SEN Louvre length ordered exceeds the maximum permitted load for any one PSU channel, SEN Louvre is supplied with more than 1 pair of power feed wires. Each pair should be connected to a separate channel of the PSU output.



Contact a qualified professional if an Installation requires PSU loading or wiring to exceed or vary from the advice in this guide.

Note: This guide is produced from testing with KKDC approved power supplies or control gear.  
 Performance with other power or control products cannot be guaranteed. Contact KKDC for further information.  
 KKDC may change product specifications and installation guidance without prior notice.



**READ BEFORE INSTALLATION**

- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- If a constant current PSU/driver is powered 'live' without a load connected - disconnect power and leave for a minimum of 2 minutes before connecting SEN Louvre Meanwell to the output.
- ULus installations – Maximum product length usable due to 60V Class 2 limit (maximum PCB length shown below).  
 SEN Louvre Meanwell 033 – 600mm/23.6in  
 SEN Louvre Meanwell 050 – 1000m/39.4in  
 SEN Louvre Meanwell 100 – 1800mm/70.9in

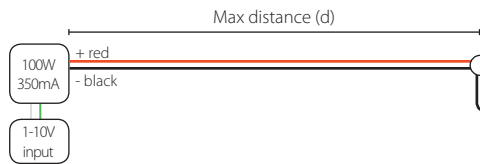
**WIRING EXAMPLES**

**Meanwell 100W 350mA**

PSU secondary output:  
30-250V  
10.15-99.75W

Cable size / Max distance (d)				
0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG
27m/88.5ft	42m/137.5ft	56m/183.5ft	85m/275.5ft	142m/465.5ft

**SEN Louvre Meanwell 033/050/100**



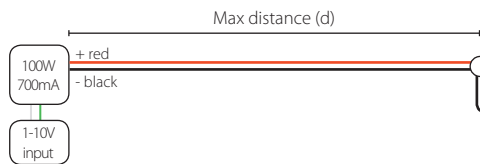
Min./Max. SEN Louvre Meanwell (PCB) lengths -	
033	600-2600mm/23.6-102.4in
050	800-4000mm/31.5-157.5in
100	1000-8000mm/39.4-315in

**Meanwell 100W 700mA**

PSU secondary output:  
15-140V  
10.5-99.4W

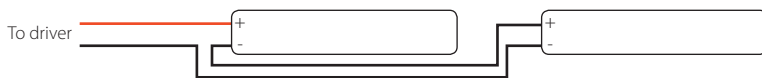
Cable size / Max distance (d)				
0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG
16m/52.5ft	24m/78.5ft	33m/108ft	50m/164ft	85m/279ft

**SEN Louvre Meanwell 033/050/100**



Min./Max. SEN Louvre Meanwell (PCB) lengths -	
033	200-1200mm/7.9-47.2in
050	400-2000mm/15.7-78.7ft
100	600-4000mm/23.6-157.5ft

Where more than one length of SEN Louvre Meanwell is to be connected to the PSU/driver, wiring must be in series as illustrated:



Contact a qualified professional if an Installation requires PSU loading or wiring to exceed or vary from the advice in this guide.

Note: This guide is produced from testing with KKDC approved power supplies or control gear. Performance with other power or control products cannot be guaranteed. Contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.



## READ BEFORE INSTALLATION

- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- If a constant current PSU/driver is powered 'live' without a load connected - disconnect power and leave for a minimum of 2 minutes before connecting SEN Louvre to the output.
- ULus installations – Maximum product length usable due to 60V Class 2 limit (maximum PCB length shown below).  
 SEN Louvre 033 – 600mm/23.6in  
 SEN Louvre 050 – 1000m/39.4in  
 SEN Louvre 100 – 1800mm/70.9in

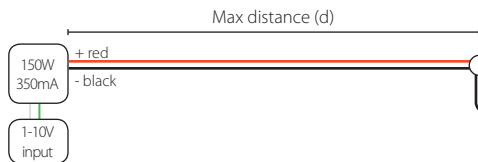
## WIRING EXAMPLES

### Meanwell 150W 350mA

PSU secondary output  
215-430V  
175.25-150.5W

Cable size / Max distance (d)				
0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG
94m	141m	188m	281m	469m

### SEN Louvre 033/050/100



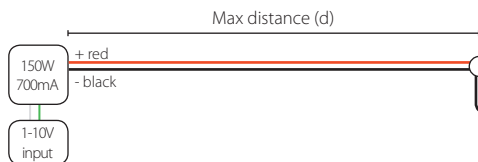
Min./Max. SEN Louvre (PCB) lengths -  
 033 2400-4000mm  
 050 3600-6000mm  
 100 7200-12000mm

### Meanwell 150W 700mA

PSU secondary output:  
107-215V  
74.9-150.5W

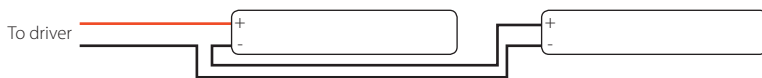
Cable size / Max distance (d)				
0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG
44m	67m	89m	133m	222m

### SEN Louvre 033/050/100



Min./Max. SEN Louvre (PCB) lengths -  
 033 1200-1800mm  
 050 1800-2600mm  
 100 3600-5400mm

Where more than one length of SEN Louvre is to be connected to the PSU/driver, wiring must be in series as illustrated:



Contact a qualified professional if an Installation requires PSU loading or wiring to exceed or vary from the advice in this guide.

Note: This guide is produced from testing with KKDC approved power supplies or control gear.  
 Performance with other power or control products cannot be guaranteed. Contact KKDC for further information.  
 KKDC may change product specifications and installation guidance without prior notice.



# SEN Louvre + Meanwell 200W 1-10V Installation Guide – Wiring



## READ BEFORE INSTALLATION

- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- If a constant current PSU/driver is powered 'live' without a load connected - disconnect power and leave for a minimum of 2 minutes before connecting SEN Louvre to the output.
- ULus installations – Maximum product length usable due to 60V Class 2 limit (maximum PCB length shown below).  
SEN Louvre 033 – 600mm  
SEN Louvre 050 – 1000mm  
SEN Louvre 100 – 1800mm

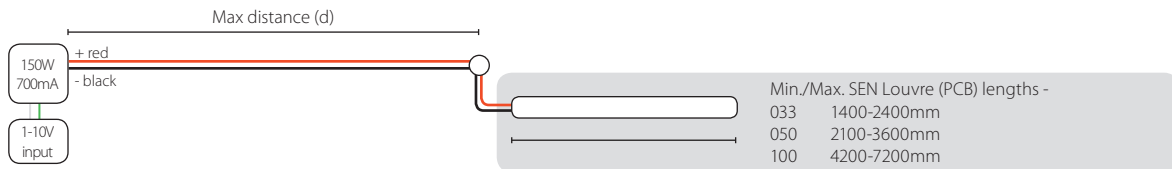
## WIRING EXAMPLES

### Meanwell 200W 700mA

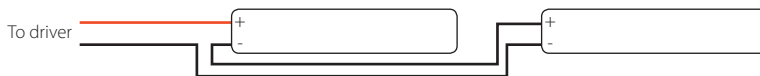
PSU secondary output:  
143-286V  
100.1-200.2W

Cable size / Max distance (d)				
0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG
53m	80m	107m	160m	267m

### SEN Louvre 033/050/100



Where more than one length of SEN Louvre is to be connected to the PSU/driver, wiring must be in series as illustrated:



Contact a qualified professional if an Installation requires PSU loading or wiring to exceed or vary from the advice in this guide.

Note: This guide is produced from testing with KKDC approved power supplies or control gear.  
Performance with other power or control products cannot be guaranteed. Contact KKDC for further information.  
KKDC may change product specifications and installation guidance without prior notice.





## READ BEFORE INSTALLATION

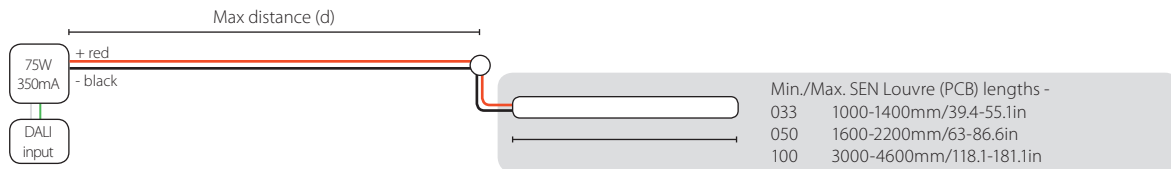
- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- If a constant current PSU/driver is powered 'live' without a load connected - disconnect power and leave for a minimum of 2 minutes before connecting SEN Louvre to the output.
- ULus installations – Maximum product length usable due to 60V Class 2 limit (maximum PCB length shown below).  
 SEN Louvre 033 – 600mm/23.6in  
 SEN Louvre 050 – 1000m/39.4in  
 SEN Louvre 100 – 1800mm/70.9in

## WIRING EXAMPLES

### Philips 75W 350mA

PSU secondary output:  
80-150V  
30-75W

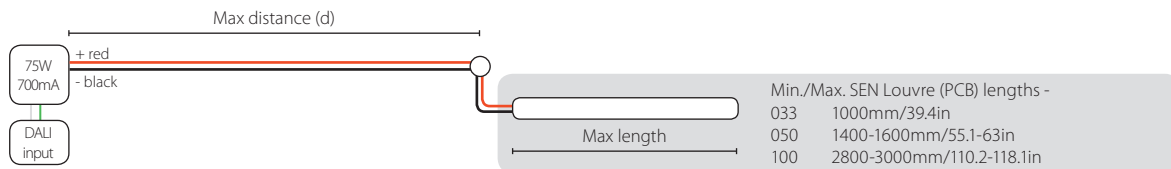
		Cable size / Max distance (d)				
		0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG
<b>SEN Louvre 033/050/100</b>		81m/265.5ft	122m/400ft	164m/538ft	246m/807ft	412m/1351.5ft



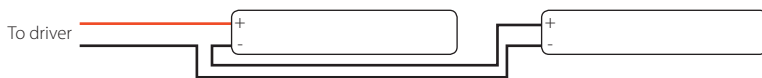
### Philips 75W 700mA

PSU secondary output:  
20-130V  
95W

		Cable size / Max distance (d)				
		0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG
<b>SEN Louvre 033/050/100</b>		42m/138ft	63m/206.5ft	85m/279ft	128m/420ft	214m/702ft



Where more than one length of SEN Louvre is to be connected to the PSU/driver, wiring must be in series as illustrated:



Contact a qualified professional if an Installation requires PSU loading or wiring to exceed or vary from the advice in this guide.

Note: This guide is produced from testing with KKDC approved power supplies or control gear.  
 Performance with other power or control products cannot be guaranteed. Contact KKDC for further information.  
 KKDC may change product specifications and installation guidance without prior notice.



# KKDC Junction Box

## Selection Guide

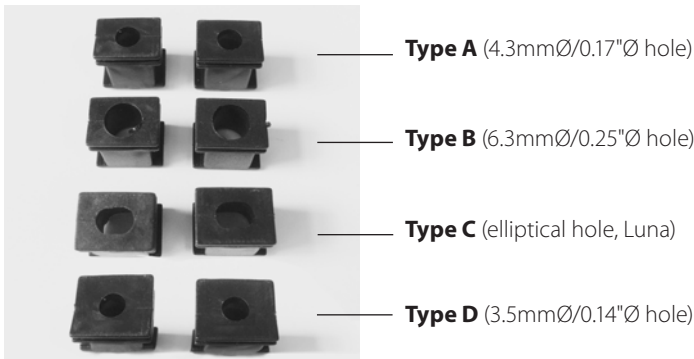


### For interconnecting KKDC exterior rated LED products

#### IP67 Slim J-Box – KKJB-07 (+ potting resin KKJB-07R)

A sealed, resin potted box, recommended for IP67 joining of single colour KKDC exterior products with sheathed wire tails. Select from the supplied bushes to suit product wiring size –

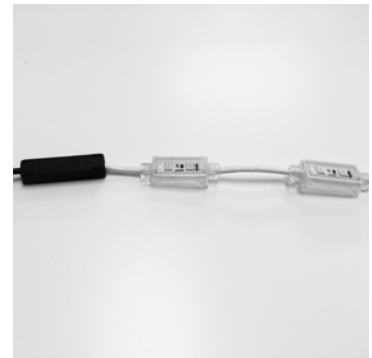
- A type** – Ø4.3mm (0.17in) sheathed cable      Groove Light IP67 (2 core only)/KKSL/KURV-Y LEDmix/KURV-Y RGB/MiMi/MiMi Glow/MoMo/MoMo-BLOC/MoMo-L/MoMo-R/POKI
- B type** – Ø6.3mm (0.25in) sheathed cable      MoMo-F/MoMo Sauna/SEN/SEN CV/SEN-F/SEN-F CV/SEN Louvre/SEN Louvre CV/SUMO/TAYO Ceiling (2 core only)/TAYO Micro (outdoor)/TAYO Spot
- C type** – ellipse sheathed cable                      Luna (2 core only)
- D type** – Ø3.5mm (0.14in) sheathed cable      KURV-Y (2 core only)



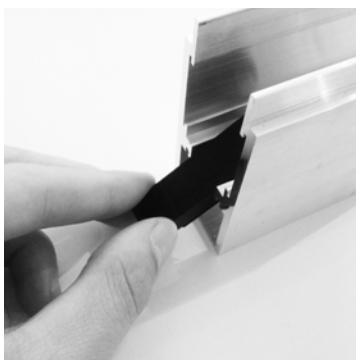
Joining MiMi



Joining SEN



Joining LUNA



KKJB-07 in SEN-F ground box

NOTE: IP67 Slim J-Box will fit beneath the product in base of MoMO-F and SEN-F housing channels but not beneath POKI.

IP67 Slim J-Box can only be used for connecting products to power or control sources if the cable used is 4.3mmØ/0.18"Ø, 6.3mmØ/0.26"Ø or 3.5mmØ/0.14"Ø. IP67 Slim J-Box – KKJB-07 provides a tight seal with A,B,C or D bushes.

Contains 2 pole screw terminals for wires with conductors ≤ 4mm<sup>2</sup>/≤ 0.16"².



# KKDC Junction Box Selection Guide



## For connecting most KKDC exterior rated LED products to power wiring

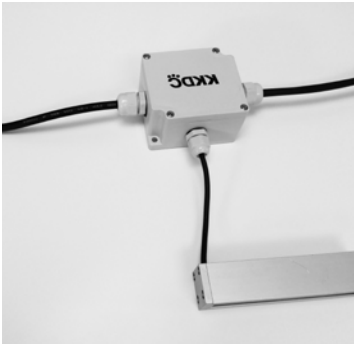
### KKJB-01 (IP67)

A sealed plastic junction box with glands and grommets to suit common power and most KKDC product sheathed wiring. The KKJB-01 junction box should be used for connecting products to, and branching from power feeds.

**2 x power cable glands** – for 5-10mmØ/0.20-0.39"Ø sheathed cable

**Product cable gland** – for 3-6.3mmØ/0.12-0.25"Ø sheathed cable – Groove Light IP67 (2 core only)/KKSL/KURV-Y (2 core only)/KURV-Y LEDmix/KURV-Y RGB/MiMi/MiMi Glow/MoMo/MoMo-BLOC/MoMo-F/MoMo-L/MoMo-R/MoMo Sauna/POKI/SEN/SEN CV/SEN-F/SEN-F CV/SEN Louvre/SEN Louvre CV/SUMO/TAYO Ceiling (2 core only)/TAYO Micro (outdoor)/TAYO Spot

– Suitable for wiring.



NOTE: For 3 way connections – contains 4 pole  $\leq 4\text{mm}^2/\leq 0.16''^2$  terminals for power in and out, and sheathed RGB or single colour product wiring.



## READ BEFORE INSTALLATION

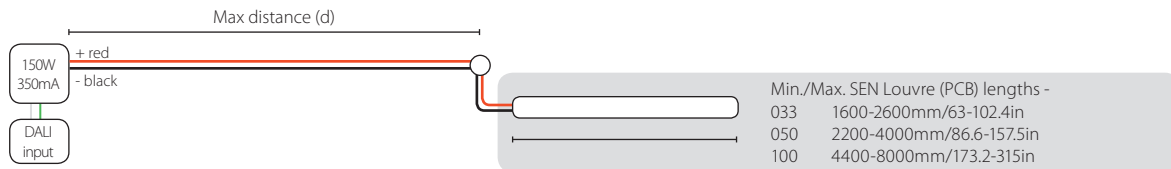
- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- If a constant current PSU/driver is powered 'live' without a load connected - disconnect power and leave for a minimum of 2 minutes before connecting SEN Louvre to the output.
- ULus installations – Maximum product length usable due to 60V Class 2 limit (maximum PCB length shown below).  
 SEN Louvre 033 – 600mm/23.6in  
 SEN Louvre 050 – 1000mm/39.4in  
 SEN Louvre 100 – 1800mm/70.9in

## WIRING EXAMPLES

### Philips 150W 350mA

PSU secondary output:  
125-250V  
30-100W

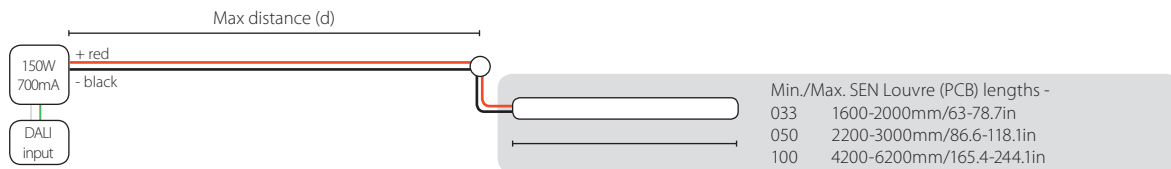
		Cable size / Max distance (d)				
		0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG
<b>SEN Louvre 033/050/100</b>		81m/265.5ft	122m/400ft	164m/538ft	246m/807ft	412m/1351.5ft



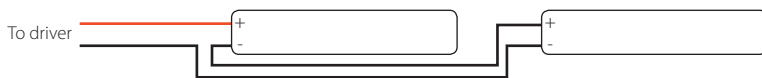
### Philips 150W 700mA

PSU secondary output:  
125-210V  
30-150W

		Cable size / Max distance (d)				
		0.5mm <sup>2</sup> / 20AWG	0.75mm <sup>2</sup> / 18AWG	1.0mm <sup>2</sup> / 17AWG	1.5mm <sup>2</sup> / 15AWG	2.5mm <sup>2</sup> / 13AWG
<b>SEN Louvre 033/050/100</b>		42m/138ft	63m/206.5ft	85m/279ft	128m/420ft	214m/702ft



Where more than one length of SEN Louvre is to be connected to the PSU /driver, wiring must be in series as illustrated:



Contact a qualified professional if an Installation requires PSU loading or wiring to exceed or vary from the advice in this guide.

Note: This guide is produced from testing with KKDC approved power supplies or control gear.  
 Performance with other power or control products cannot be guaranteed. Contact KKDC for further information.  
 KKDC may change product specifications and installation guidance without prior notice.

# Product Warranty



In the unlikely event that purchasers should experience a product failure, this should in the first instance be dealt with by contacting the supplier or local authorised KKDC representative.

Our warranty is provided in addition to any statutory legal rights and details the terms under which claims can be made.

## 1. Duration of Warranty

This warranty applies to all KKDC manufactured products for 3 years from the date of installation (or date of manufacture if the installation date is not known or verifiable) An extended 5 year warranty may be offered at the discretion of KKDC if appropriate project registration criteria are met.

## 2. Repair or Replacement

Should a KKDC product fail to function within the warranty period, KKDC will on its sole discretion provide a replacement free of charge or repair defective components in accordance with the terms set out below. Purchasers shall bear the cost of removal and return of any product subject to a warranty claim and that of installing a replacement. Any other costs, including but not limited to replacement costs upon installation; costs caused from failures of the installation or other damages and/or consequential damages are not covered by this warranty.

Replacement products shall as far as possible match the specification of the original but may have superior performance characteristics in line with ongoing product development.

## 3. Return of a Defective Product

The purchaser making a warranty claim shall contact KKDC (or their authorised representative) at the earliest opportunity to be provided with an address for return of the product. On receipt of returned product/s the validity of the claim will be checked. Proof of purchase may be required.

KKDC reserve the right to conduct diagnostic examination of any defective or failed product to determine patterns of usage and cause of failure and reserve the right to be the sole judge as to whether a returned product is defective within the terms of this warranty.

## 4. Notes / Conditions of Warranty

This warranty applies only to defects in materials and workmanship and only where KKDC Products are properly handled, stored, installed, wired and maintained in accordance with the most recent published KKDC product usage guides, installation instructions, specification sheets, and any applicable local electrical safety standards and wiring regulations.

(The most recent versions of KKDC product documentation are available from the website **[www.kkdc.lighting](http://www.kkdc.lighting)**)

This warranty does not constitute any inference as to the suitability of any product for any purpose. In no event shall KKDC be liable for any other costs or damages including lost profits, incidental, special or consequential damages.

Warranty claims will be invalid in the event of :

Product damage due to abuse, unauthorised alteration or modification, accident, fire, flood, lightning, rodents, insects, negligence or acts of God.

Product installation by unqualified persons.

Product modification, disassembly or attempted repair by non KKDC staff.

Product installation or storage in 'abnormal' conditions or locations, including but not limited to those where :

Ambient Temperatures are in excess of 60 Deg C.

Installation in areas of excessive humidity.

Any product subjected to excessive mechanical stress, or physical damage.

Inadequate heat sinking provision for any unhoused 'bare PCB' type LED product.

IP67 class luminaires installed without adequate local drainage, or becoming immersed in water.

Chemical contamination or damage from salt laden air.

Damage from use of pressure washers or other mechanical cleaners.

Improper use of 'sanitizing products' and maintenance using improper or unapproved chemical compounds/solvents.

Unauthorised use of parts or accessories not manufactured by KKDC in conjunction with KKDC Products.

'Constant Voltage' (CV) KKDC LED Products supplied with incorrect voltage.

'Constant Current' (CC) KKDC LED products supplied with incorrect current.

Incorrect layout, cutting and connection of wiring; intermittent or improper mains electrical supply.

Product/s having damaged serial number, cable or Certificate labels.

Product/s which have been installed more than once or have not been returned promptly and directly to KKDC for fault diagnosis and testing.

## 5. Warranty contacts

Warranty claims can be made only by the original purchaser by contacting KKDC or local KKDC authorised representative details of which can be found via the supplier or on the website – **[www.kkdc.lighting](http://www.kkdc.lighting)**.

## 6. Implied Terms

6.1 Subject to sub-clause 6.2, any condition or warranty which would otherwise be implied is excluded.

6.2 Where legislation implies any condition or warranty, and that legislation avoids or prohibits provisions in a contract excluding or modifying the application of or exercise of or liability under such condition or warranty, the condition or warranty shall be deemed to be included in this warranty. However the liability of KKDC for any breach of such condition or warranty shall be limited, at the option of KKDC, to the following:

If the breach relates to any KKDC Product:

- (i) the replacement or the supply of equivalent KKDC Product;
- (ii) repair of product (excluding costs of removal and installation);
- (iii) payment of the cost of replacement or of acquiring equivalent product; or
- (iv) payment of the cost of repair of product (excluding costs of removal and installation).

---

Note: KKDC reserves the right to make changes to product specifications and installation guidance without prior notice.