



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.

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.
- · 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.

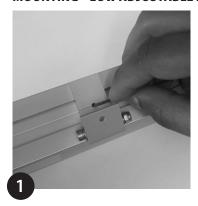




READ BEFORE INSTALLATION

- 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.

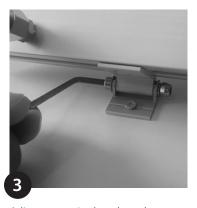
MOUNTING - LOW ADJUSTABLE BRACKET



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



Fix with suitable screws.



Adjust to required angle and secure with hex key.

MOUNTING - ADJUSTABLE BRACKET



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



Fix with suitable screws.



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.

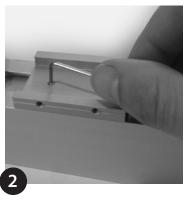




MOUNTING - MOUNTING PLATE



Check product/plate orientation and cable grommet clearance from mounting surface. Mark position of plates (supplied with the preinstalled 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 TAIL OPTIONS - CODE TABLE

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



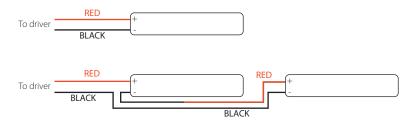
EXPLANATION AND WIRING EXAMPLES

1000mm SINGLE sheathed tail 1000 - S00B

• 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:



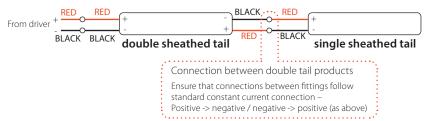
1000mm DOUBLE sheathed tail 1000 - DOOB

- 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.



SEN Louvre CC + eldoLED 100W DMX 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.
- 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).

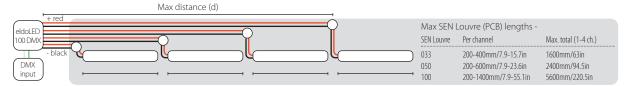
SEN Louvre 033 - 600mm/23.6in

SEN Louvre 050 - 1000m/39.4in

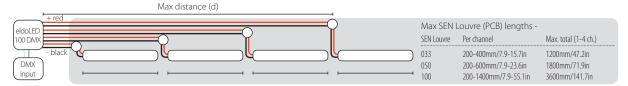
SEN Louvre 100 - 1800mm/70.9in

WIRING EXAMPLES

eldoLED 100W 350mA	Cable size / Max distance (d)						
PSU secondary output: 2-55V per channel (1-4 channels) 100W Max. total load	0.5mm²/ 20AWG	0.75mm²/ 18AWG	1.0mm²/ 17AWG	1.5mm²/ 15AWG	2.5mm²/ 13AWG		
SEN Louvre 033/050/100	13m/42.5ft	21m/68.5ft	27m/88.5ft	-	-		



eldoLED 100W 700mA	Cable size / Max distance (d)						
PSU secondary output: 2-55V per channel (1-4 channels) 100W Max. total load	0.5mm²/ 20AWG	0.75mm²/ 18AWG	1.0mm²/ 17AWG	1.5mm²/ 15AWG	2.5mm²/ 13AWG		
SEN Louvre 033/050/100	13m/42.5ft	21m/68.5ft	27m/88.5ft	-	-		



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 quide.



SEN Louvre CC + Meanwell 100W 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 Meanwell to the output.
- ULus installations Maximum product length usable due to 60V Class 2 limit (maximum PCB length shown below).

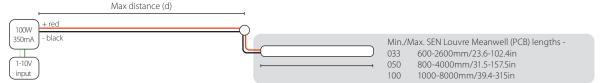
SEN Louvre Meanwell 033 – 600mm/23.6in

SEN Louvre Meanwell 050 - 1000m/39.4in

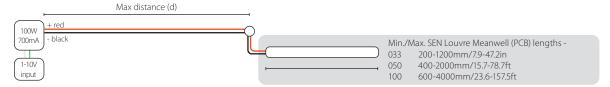
SEN Louvre Meanwell 100 - 1800mm/70.9in

WIRING EXAMPLES

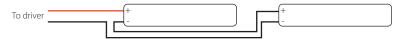
Meanwell 100W 350mA	Cable size / Max distance (d)						
PSU secondary output: 30-250V 10.15-99.75W	0.5mm²/ 20AWG	0.75mm²/ 18AWG	1.0mm²/ 17AWG	1.5mm²/ 15AWG	2.5mm²/ 13AWG		
SEN Louvre Meanwell 033/050/100	27m/88.5ft	42m/137.5ft	56m/183.5ft	85m/275.5ft	142m/465.5ft		



Meanwell 100W 700mA	Cable size / Max distance (d)					
PSU secondary output: 15-140V 10.5-99.4W	0.5mm²/ 20AWG	0.75mm²/ 18AWG	1.0mm²/ 17AWG	1.5mm²/ 15AWG	2.5mm ² / 13AWG	
SEN Louvre Meanwell 033/050/100	16m/52.5ft	24m/78.5ft	33m/108ft	50m/164ft	85m/279ft	



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 quide.



SEN Louvre CC + Meanwell 150W 1-10V Installation Guide - Wiring 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).

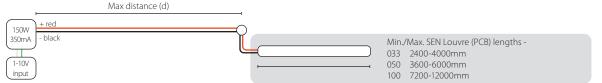
SEN Louvre 033 - 600mm/23.6in

SEN Louvre 050 - 1000m/39.4in

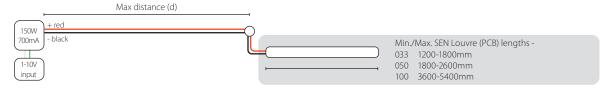
SEN Louvre 100 - 1800mm/70.9in

WIRING EXAMPLES

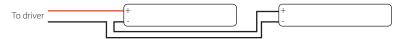




Meanwell 150W 700mA	Cable size / Max distance (d)				
PSU secondary output: 107-215V 74.9-150.5W	0.5mm²/ 20AWG	0.75mm²/ 18AWG	1.0mm²/ 17AWG	1.5mm²/ 15AWG	2.5mm ² / 13AWG
SEN Louvre 033/050/100	44m	67m	89m	133m	222m



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 quide.



SEN Louvre CC + 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).

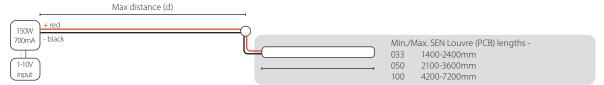
SEN Louvre 033 – 600mm

SEN Louvre 050 - 1000mm

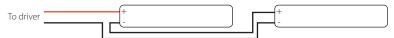
SEN Louvre 100 – 1800mm

WIRING EXAMPLES

Meanwell 200W 700mA	Cable size / Max distance (d)				
PSU secondary output: 143-286V 100.1-200.2W	0.5mm²/ 20AWG	0.75mm²/ 18AWG	1.0mm²/ 17AWG	1.5mm²/ 15AWG	2.5mm²/ 13AWG
SEN Louvre 033/050/100	53m	80m	107m	160m	267m



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.



SEN Louvre CC + Philips 75W DALI Installation Guide - Wiring





READ BEFORE INSTALLATION

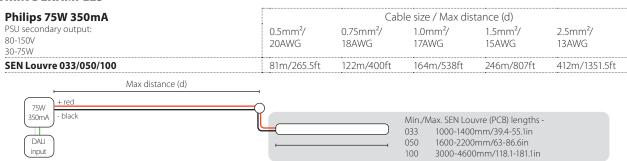
- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources 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/23.6in

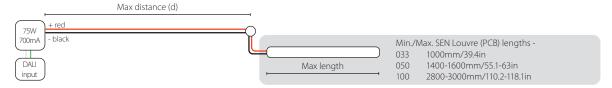
SEN Louvre 050 - 1000m/39.4in

SEN Louvre 100 - 1800mm/70.9in

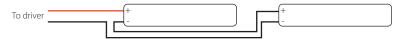
WIRING EXAMPLES



Philips 75W 700mA	Cable size / Max distance (d)						
PSU secondary output: 20-130V 95W	0.5mm²/ 20AWG	0.75mm²/ 18AWG	1.0mm²/ 17AWG	1.5mm²/ 15AWG	2.5mm²/ 13AWG		
SEN Louvre 033/050/100	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.



SEN Louvre CC + Philips 150W DALI Installation Guide - Wiring





READ BEFORE INSTALLATION

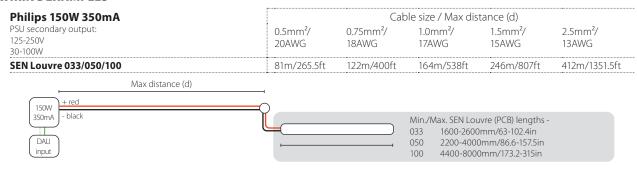
- · Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources 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/23.6in

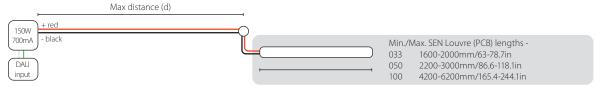
SEN Louvre 050 - 1000m/39.4in

SEN Louvre 100 - 1800mm/70.9in

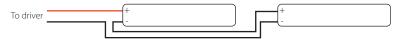
WIRING EXAMPLES



Philips 150W 700mA	Cable size / Max distance (d)					
PSU secondary output: 125-210V 30-150W	0.5mm²/ 20AWG	0.75mm²/ 18AWG	1.0mm²/ 17AWG	1.5mm²/ 15AWG	2.5mm²/ 13AWG	
SEN Louvre 033/050/100	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 quide.





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 KURV Groove IP67 (2 core only)/KURV-Y LEDmix/KURV-Y RGB/MIMI/MIMI Glow/

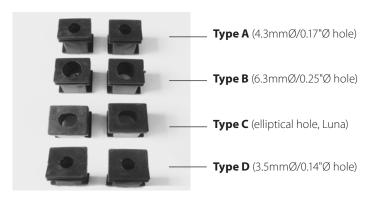
MIMI Poki/MIMI SL/MOMO/MOMO-Bloc/MOMO-L/MOMO-R

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

DUO Luna/QUADRO Luna (2 core only) C type – ellipse sheathed cable

D type – Ø3.5mm (0.14in) sheathed cable KURV-Y (2 core only)







KKJB-07 in SEN-F ground box



Joining SEN



Joining Luna

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

IP67 Slim J-Box can only be used for connecting products to power or control sources if the cable used is 4.3mm@/0.18"@, 6.3mm@/0.26"@ 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 $\leq 4 \text{mm}^2/\leq 0.16^{"2}$.





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 3-6.3mm@/0.12-0.25"@ sheathed cable – KURV Groove IP67 (2 core only)/KURV-Y (2 core only)/ KURV-Y LEDmix/KURV-Y RGB/MIMI/MIMI Glow/MIMI POKI/MIMI SL/MOMO/MOMO-BLOC/MOMO-F/MOMO-R/MOMO-R/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

- Suitable for wiring.



NOTE: For 3 way connections – contains 4 pole \leq 4mm²/ \leq 0.16"² terminals for power in and out, and sheathed RGB or single colour product wiring.

Product Warranty



We believe we produce a superior product, and that your investment should be rewarded with years of trouble free operation. Through rigorous quality control and testing at every stage of manufacture we are confident that KKDC products will operate as intended. 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 the Warranty

This warranty applies to all KKDC manufactured products for 3 years from the date of shipment. An extended 5 year warranty may be offered at the discretion of KKDC if appropriate project registration criteria are met.

2. Repair/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 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).

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 will not apply in the event of;

- · Product damage due to abuse, unauthorised alteration, modification, accident, natural disasters and 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 50°C (please refer to precise specification for each product).
 - There is excessive humidity.
 - Any product has been subjected to excessive mechanical stress, or physical damage.
 - Inadequate heat sinking is provided for any unhoused 'bare PCB' type LED product.
 - $\bullet \quad \text{IP67 class luminaires are installed without adequate local drainage, or become immersed in water.} \\$
- 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 are supplied with incorrect voltage.
- 'Constant Current' (CC) KKDC LED products are 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.
- Product/s discolored and/or deformed due to the natural environment and lifetime.
- Product/s installed in special/extreme environmental conditions (Such as: in Sub-zero polar regions / in desert regions on the equator / underwater deeper than 5m).
- Product/s not installed in accordance with KKDC installation and wiring guides.

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**

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).