



STELLAR LIGHTING

www.stellarlighting.co.uk

Intelligent Stair Lighting

Product Information





Intelligent stair lighting

These motion sensor-activated LED stair lights switch on automatically to light up your stairs when you reach the top or bottom step. Each set includes LED strip lighting in protective sleeving, a power supply, advanced motion sensors and a flexible control system, ready for quick and easy installation.

Why choose Stellar Lighting's stair lights?

Flexible options	<ul style="list-style-type: none">• Adaptable solution for different types of stairs• Sets can be built into new constructions or existing stairs• Variety of options for quantity and size
Colour choices	<ul style="list-style-type: none">• Customisable options to match the surrounding design• Light colour options: cold white, warm white, natural white, red, green or blue• Profile colour options: silver, pine, wenge, white, gold or black
Energy efficient	<ul style="list-style-type: none">• Energy efficient LED lights• 50,000 hours of life expectancy for the LED lights• Lights are only on when required
Elegant and practical	<ul style="list-style-type: none">• Aesthetic design• The lighting effect makes the stairs an architectural feature of the space• Even illumination of the stairs, regardless of the width of the steps.• Sets are easy to install and use
Smart automation	<ul style="list-style-type: none">• Programmable control unit to adjust the lighting conditions to your preferences and the needs of your environment• Lights turn on and off automatically when required• Adjustable brightness and dimming speed
Made in Europe	<ul style="list-style-type: none">• Manufactured in the EU, to the highest quality standards• CE certified products• 2 year warranty



Complete set content

What is included in our Intelligent Stair Lighting kit?



- Intelligent stair lighting touchpad control unit (SCR1 or SCR2)
- For linear LED light strip option:
 - LED stair lighting strips with 1 m, two-core wire tails
 - Aluminium profile and end caps for each light strip with diffuser
- For wall recessed spotlight option:
 - LED spotlights with back boxes
- Motion sensors (one with 5 m and one with 15 m three-core cable)
- Power supply unit
- DIN rail
- Timer (optional)
- Installation instructions

We also supply controllers and motion sensors (either with or without a power supply) independently of the rest of the kit for customers who prefer a different design of light.



Stair lights

Linear stair light specifications

Length	60 cm / 90 cm
Lights	Energy-efficient LED series 3528 diodes
Lifespan	50,000 hours
Light colour	warm white / cold white / natural white / red / green / blue
Energy consumption	4.8W/m
Power supply	100W LED power supply, 12V DC
Cabling	Each light comes with 1 metre of two-core cable.



Warm white



Natural white



Cold white



Stair lighting profiles

Length	60 cm / 90 cm	
Profile material	Aluminium	
Profile finish	 Milk finish	 Transparent finish
	 Silver	 Pine
Profile colour	 Wenge	 White
	 Gold	 Black



Stair lighting profiles

Profile type				
	Standard	Angular	Recessed	Recessed slim
	Standard fitting which can be mounted even on finished stairs.	Mounted in the corner between the stair tread and the riser.	The profile is hidden in a cut under the step. A popular choice for customers who have not finished their stairs yet.	The profile is hidden in a cut under the step. Suitable for stairs where the wider recessed option is too wide.
Profile end caps				
	Standard	Angular	Recessed	Recessed slim
	Adds 1.5 mm in length to each end of the profile	Adds 1.5 mm in length to each end of the profile	Adds 10 mm in length at the top and 9 mm on the underside to each end of the profile	Adds 15 mm in length at the top and 8 mm on the underside to each end of the profile

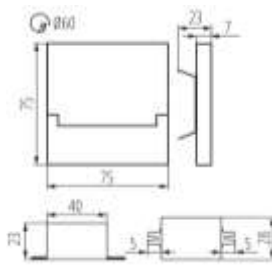
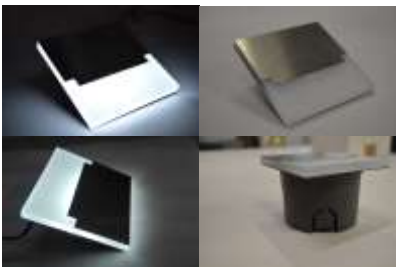


Stair lights

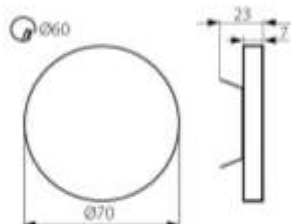
Wall recessed spotlight specifications

Dimensions for spotlights	Rectangular: 75 mm x 75 mm Round: 70mm
Dimensions for back box	60 mm (diameter) x 62 mm (depth)
Materials	Polished stainless steel, plastic
Colour	Stainless steel
Lights	SMD LED
Lifespan	50,000 hours
Number of cycles (on/off)	20,000
Light colour and temperature	cold white / warm white
Energy consumption	0.8 W
Power supply	100W LED power supply, 12V DC
Cabling	No cables provided

Rectangular spotlight option:



Round spotlight option 1:



Round spotlight option 2:





Stair lighting controller

The control unit has settings for light intensity, light duration and dimming speed. We offer two models: SCR1 switches on all lights simultaneously, while SCR2 switches each step individually, giving a sweeping effect up or down, depending whether the lower or upper sensor has been activated.

Specification	SCR1	SCR2
Max power	100 W	
Output voltage	DC 12 V – 24 V	
Dimensions of control panel	103 x 87 x 66 mm	
Ingress protection	IP20	
Housing material	Plastic	
Number of step control	1-21 steps	6-21 steps
Functions	<ul style="list-style-type: none">• automatically switching on and off the lights• lighting time adjustment between 5-120 seconds• continuous lighting when motion sensors are turned off• light intensity adjustment (lighter / darker)• 50 cm cable included to allow easy connection to the power source or timer• suitable for mounting on a 35mm DIN rail	
Additional feature	<ul style="list-style-type: none">• all lights turn on / off simultaneously	<ul style="list-style-type: none">• lights turn on / off individually• lights start turning on at both ends if both motion sensors are triggered





Stair lighting power source

The intelligent stair lighting set comes with a 100W power source included.



Main features:

- European AC input range
- Protections: short circuit / overload / over voltage / over temperature
- Cooling by free air convection
- Can be installed on DIN Rail TS-35/7.5 or 15
- Isolation class II
- LED indicator for power on

Model	DIN100W12
Dimensions	100 x 93 x 56 mm (L x W x H)
Weight	0.31 kg
Output	
Rated voltage	12 V
Rated current	8.3 A
Current range	0 - 8.3 A
Rated power	99.6 W
Voltage Adjustment Range [4]	10.8 - 13.8 V
Line regulation	± 1%
Load regulation	± 1%
Voltage tolerance [3]	± 2%
Ripple & noise (max.) [2]	240 mVp-p
Input	
Voltage range	180 - 264 VAC
Frequency range	47 - 63 Hz
Efficiency	87%
AC current	1.3 A / 230 VAC
Inrush current	40 A / 230 VAC (25°C)
Leakage current (max)	1 mA / 230 VAC



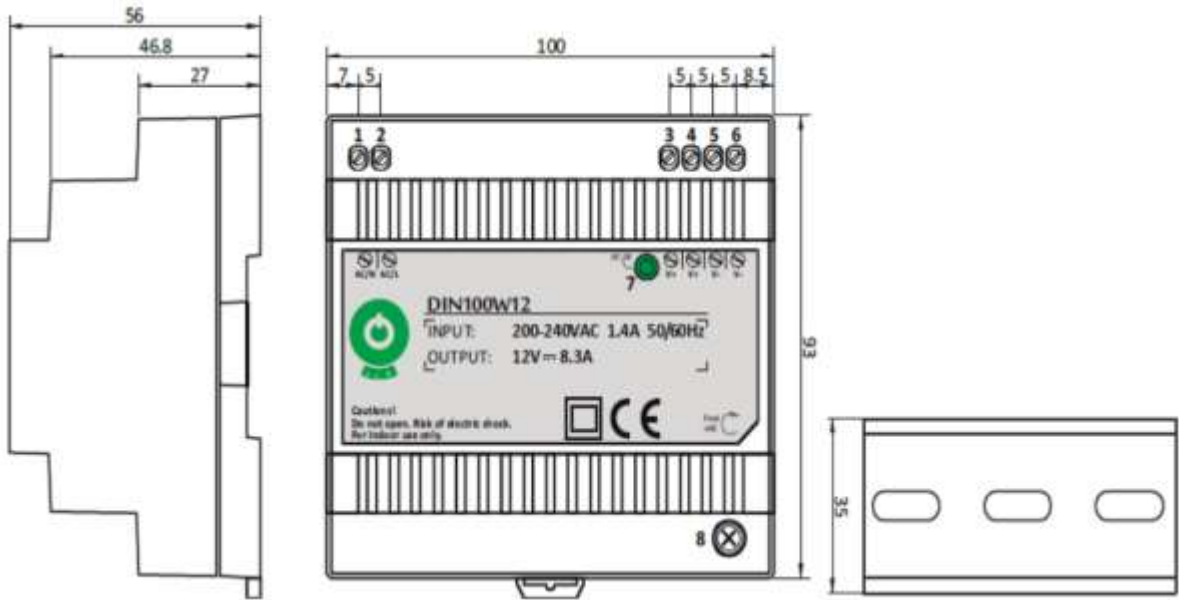
Stair lighting power source

Model	DIN100W12
Protections	
Overload	Range: 110 - 160% rated power
	Type: hiccup mode. Recovers automatically after fault condition is removed
Short Circuit	Type: hiccup mode. Recovers automatically after fault condition is removed
Over voltage	16 - 23V
	Type: shut off output voltage. Re-power on to recover.
Over temperature	Range: 135°C - 165°C detect on main control IC
	Type: shut off, recovers automatically after temperature goes down
Environment	
Working temperature	-20°C - 50°C
Working humidity	20 - 98% RH non-condensing
Storage temperature and humidity	30°C - 70°C, 10 - 98% RH non-condensing
Temperature coefficient	± 0.05% / °C (-20°C - 45°C)
Vibration	10 – 500 Hz, 2G, 10min / cycle, period for 30min. each along X, Y, Z axes
Safety & EMC regulations	
Safety standards	Compliance to EN60950-1
Withstand voltage	I-P/O-P: 4.2 kVDC / 30 s
Isolation resistance	I-P/O-P: 100 MΩ / 500 VDC / 25°C / 70%
EMC Emission	Compliance to EN55022
EMC immunity	Compliance to EN55024
Harmonic current	Compliance to EN61000-3-3; EN61000-3-2
<ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230 VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20 MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF i 47 μF parallel capacitor. 3. Tolerance includes set up tolerance, line regulation and load regulation. 4. By built-in potentiometer. 5. Power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment must be re-qualify to comply with EMC Directives. 	



Stair lighting power source

Mechanical specification



Terminal assignment

No.	Assignment	No.	Assignment
1	Input: AC / N	5, 6	Output: U_{out-}
2	Input: AC / L	7	LED indication for power on
3, 4	Output: U_{out+}	8	U_{out} adjustment



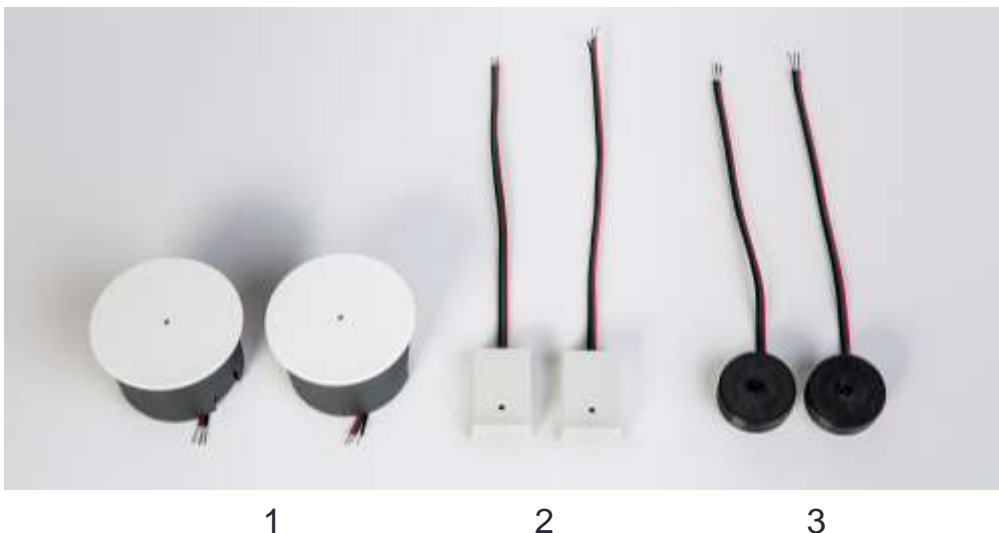
Motion sensors

Intelligent motion sensors switch the lights on when someone passes them directly. The motion sensors are designed to have a range of 1 m – 1.3 m, though this can depend on factors such as temperature and humidity. Special attention should be paid when positioning the motion sensors to ensure they are not triggered while walking past the stairs.

Sensor options

Specifications	Option 1	Option 2	Option 3
Mounting	Flush mounted*	Surface mounted	Baluster / post mounted
Colour	White	Light grey	Black
Dimensions	Faceplate: 7.2 cm Depth: 4.8 cm, Tube 6.3 cm	Height 4.5cm x width 1.5cm x thickness 1.6cm	Diameter 4cm, thickness 1.4cm

*comes with a round back box, that slides on to the sensor



One motion sensor comes with 5 m and the other has 15 m of three-core cable to allow easy connection to the controller.



Timer (optional)

The digital timer switches the stair light's controller on or off at selected times or days. This can prevent the stair lights from illuminating during the daytime, when you have sufficient natural light.



Main features:

- Up to 10 different programs
- The timer is suitable for mounting on a 35 mm DIN rail.
- Digital display with clock
- 50 cm cable included for easy connection to the power supply

Technical specifications

Dimensions	36 mm (width) 85 mm (length) 56 mm (depth)
Voltage	230 V (50 Hz)
Max load	16 A, 300 W
Minimum timer setting	1 minute
Operating temperature	from -10 ° C to + 40 ° C
Accuracy	+/- 1 min per month
Battery life	NIMH 1.2 > 100 h



Accessories (optional)

The Intelligent Stair Lighting system's components come with the cables described in the specifications above. The following accessories are available when purchasing the Intelligent Stair Lighting sets.



Two-core cable

- For connecting the LED light strips to the controller (SCR 1 or SCR 2)
- Minimum length 1 m
- Cross-section $2 \times 0.45 \text{ mm}^2$



Three-core cable

- For connecting the motion sensors to the controller (SCR 1 or SCR 2)
- Minimum length 1 m
- Cross-section $3 \times 0.33 \text{ mm}^2$



Wago quick connector clip

- The connectors allow the quick and easy connection of cables without the need for a screwdriver or soldering kit

If you have any questions or comments regarding our products, please contact us on

info@stellarlighting.co.uk



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