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	• 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	• 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	• Energy efficient LED lights • 50,000 hours of life expectancy for the LED lights • Lights are only on when required
Elegant and practical	• 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	• 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	• 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)
- LED stair lighting strips with 1 m, two-core wire tails
- Aluminium profile and end caps for each light strip with diffuser
- Motion sensors (one with 5 m and one with 15 m three-core cable)
- Power supply unit
- DIN rail
- Timer (optional)
- Installation instructions

Stair lights

Stair light specifications

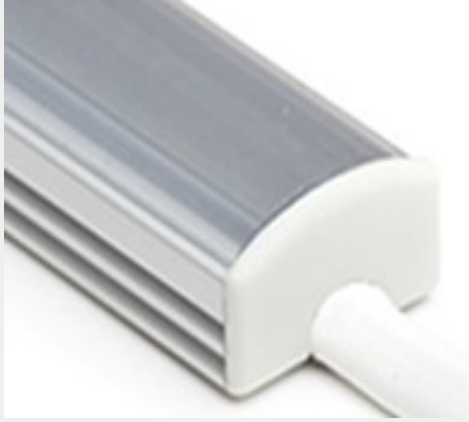| Length	60 cm / 90 cm
Lights	Energy-efficient LED series 3528 diodes
Lifespan	50,000 hours
Light colour	warm white / cold white / natural white / red / green / blue
Energy consumption	4.8W/m
Power supply	100W LED power supply, 12V DC
Cabling	Each light comes with 1 metre of two-core cable.

Warm white
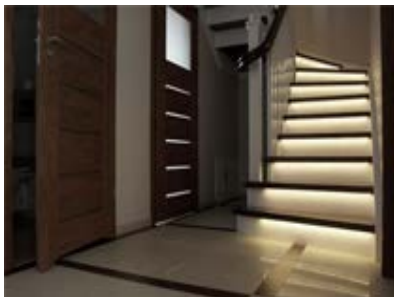
Natural white

Cold white

Step number and controller combinations

Minimum / Maximum number of steps	Controller
1-21	SCR 1
6 -21	SCR 2
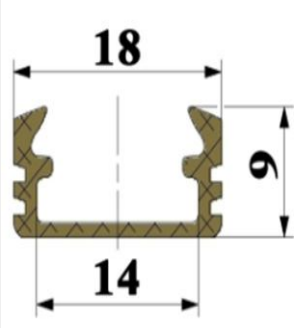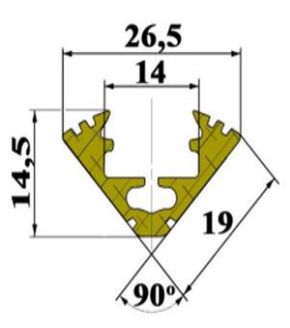
Stair lighting profiles

Length	60 cm / 90 cm
Profile material	Aluminium

Profile finish

Milk finish

Transparent finish

Profile colour

Silver

Pine

Wenge

White

Gold

Black

Stair lighting profiles

Profile type

Standard	Recessed	Angular
Standard fitting which can be mounted even on finished stairs.	The profile is hidden in a cut under the step. A popular choice for customers who have not finished their stairs yet.	Mounted in the corner between the stair tread and the riser.

Profile end caps

Standard	Recessed	Angular
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 under-side to each end of the profile	Adds 1.5 mm in length to each end of the profile

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	• 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	• all lights turn on / off simultaneously	• 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

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 incudes 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
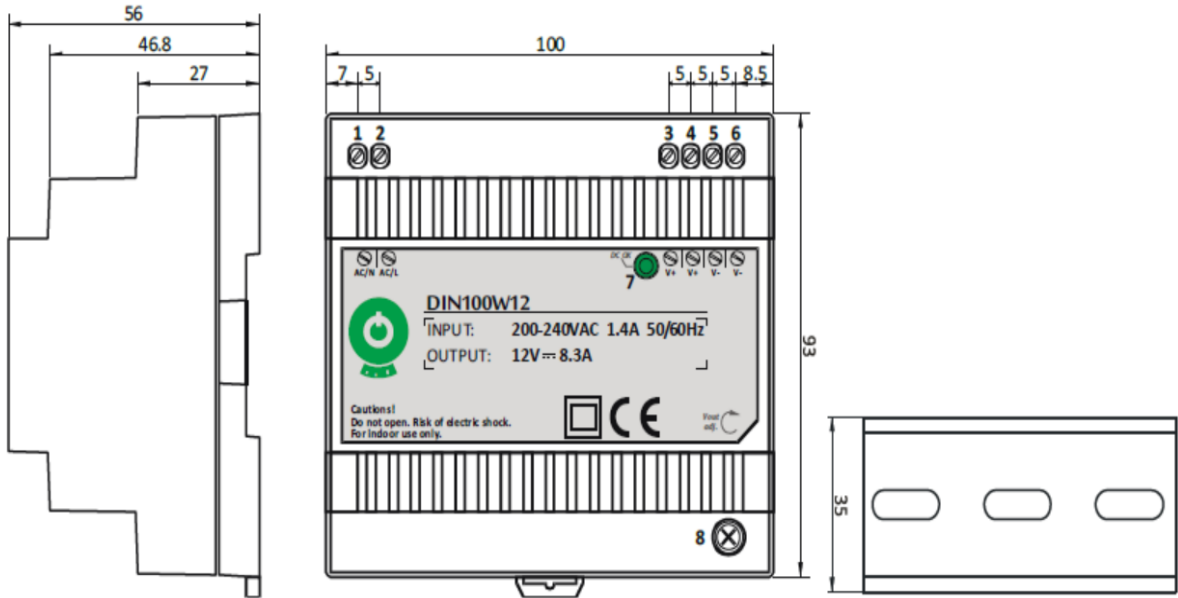
Terminal assignment

| 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. They do not activate if you walk by the stairs, which can be the case with other sensors available on the market. The range of the motion sensors is 1 m – 1.3 m depending on factors such as temperature and humidity.

Sensor options

Specifications	Option 1	Option 2	Option 3
Mounting	Flush mounted*	Surface mounted	Baluster / post mounted
Colour	Grey	Light grey	Black
Dimensions	Face plate: 7.5 x 7.5 cm Depth: 4.3 cm, Tube diameter 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
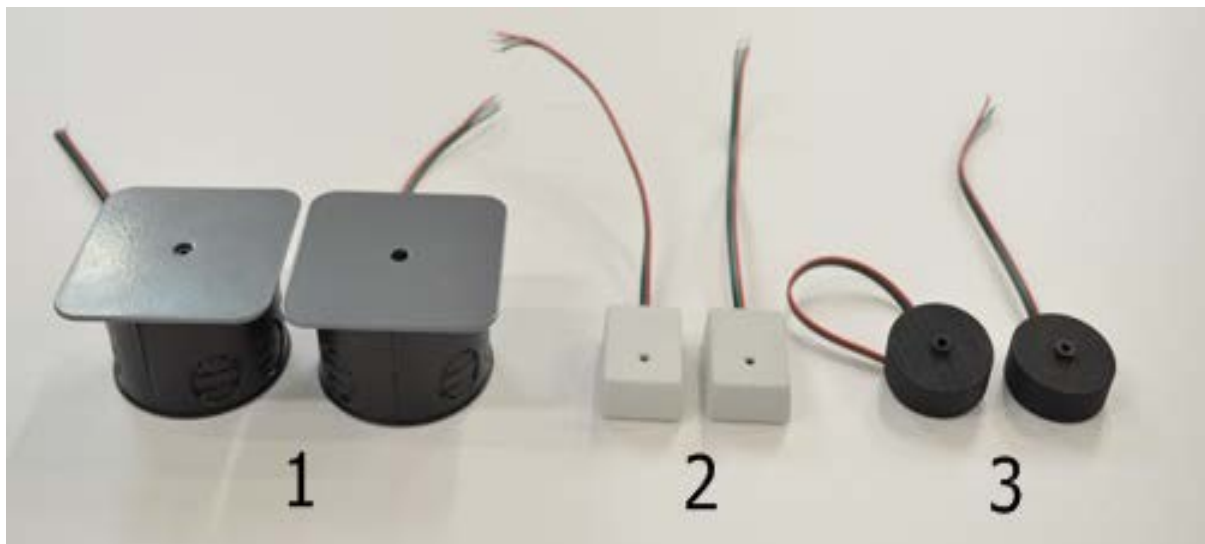
One motion sensor comes with 5 m and the other has 15 m of three-core cable to allow easy connection to the controller.

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 x 0.45 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 x 0.33 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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