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Communications  
Group

# 900ECO STAIR-SAFE



TWO WAY  
RADIOS



PPE  
SOLUTIONS



ECO FRIENDLY  
SOLUTIONS



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SOLUTIONS



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# 900ECO STAIR SAFE

## INTRODUCTION

Implementing solar technology, the 900ECO Stair-Safe provides all year round LED lighting to external staircases.

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The 900ECO Stair-Safe works by harnessing sunlight via a high area solar panel and converting it to usable energy; this energy is stored in our high-capacity battery.

When natural light is no longer sufficient, the Push Buttons trigger the LED lightbars and illuminate the stairway to create a safer environment.

Created using a modular design, the 900ECO Stair-Safe is adaptable to just about any staircase; reducing risk and increasing safety.

The 900Eco Stair-Safe can be implemented onto almost any application, whether this be a staircase, walkway, or access point. Anywhere light is needed outdoors, the stair safe will increase safety whilst being sustainable and reliable.

### KEY BENEFITS:



SELF SUSTAINABLE



EASILY ADAPTABLE



SELF INSTALLED



PROVEN TO INCREASE SAFETY



REDUCED RISKS



EMC CERTIFIED

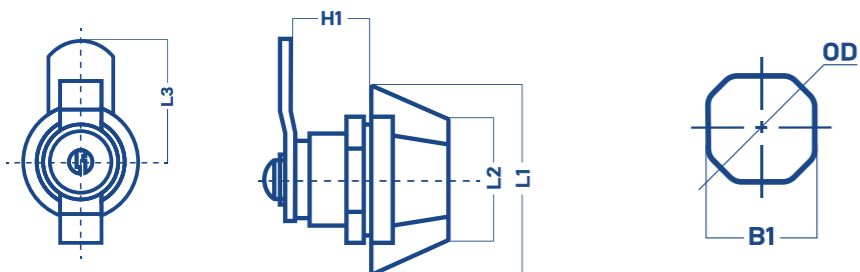


# SPECIFICATIONS & DIMENSIONS

Zero Fuel Cost,  
Low Maintenance,  
Easy Installation.

Our eco-friendly solutions mean that all of these products operate silently, producing no emissions, zero fuel cost, low maintenance and easy installation.

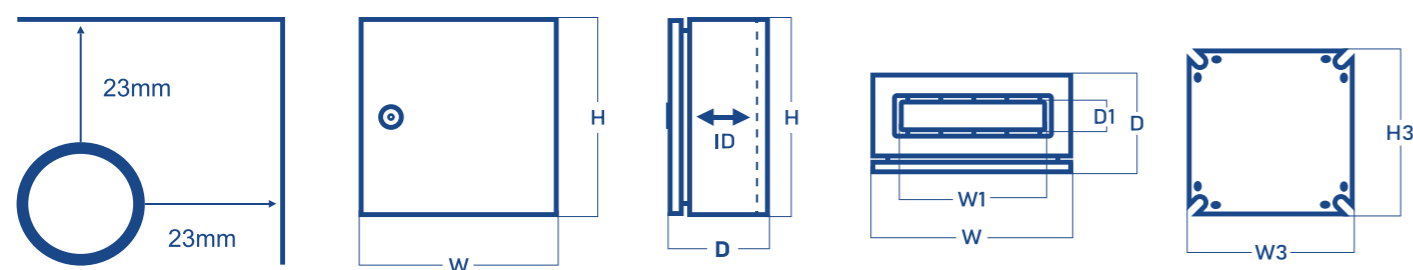
## DIMENSIONS - KEY LOCK



<b>L3</b>	<b>L1</b>	<b>L2</b>	<b>H1</b>	<b>B1</b>	<b>OD</b>
50mm	50mm	32.5mm	26.7mm	20mm	22mm

- Strong Steel (Powder Epoxy Coated)
- Body and door manufactured in 1.2 to 1.5mm sheet steel
- IP65 to EN60 529 NEMA4 (When Fitted & Sealed)
- Enclosure coated with standard cycle thermosetting epoxy polyester powder

## DIMENSIONS - ENCLOSURE



## HOLE 8.5MM - FIXING HOLES (BACK VIEW)\*

External Dimensions			Internal Depth	Gland Plate Hole		Mounting Plate		Other Information
Height	Width	Depth	ID - From Mounting Plate	W1	D1	W3	H3	GPTB = Gland Plate Top & Bottom
400	300	200	175	180	62	240	340	1 Lock & GPTB

\*All measurements listed are (mm)



# SPECIFICATIONS & DIMENSIONS

Provide light to the darker nights, rail and much more.

## 50W SOLAR PANEL

Watts	50
Maximum Power Voltage	Vmpp(V) - 17.6
Maximum Power Current	Impp(A) - 2.85
Open Circuit Voltage	Voc(V) - 22.5
Short Circuit Current	Isc (A) -30.4
Height (mm)	700
Width (mm)	510
Thickness (mm)	30
Weight (KG)	4.5
Cell Type	Poly

## PUSH BUTTON LIGHTS

Contact Material	Brass
Contact Form	Single Pole,Single Throw
MPN	Push Button Aluminium Metal Brass
Protection Against Liquids	Immersion up to 1m
Panel Cutout Shape	Circular
Brand	SmartSwitch
Current Type	DC
IP Rating	IP67
Protection Against Solids	Dust Tight
Termination Type	Solder Lug

## 12V 36AH GEL BATTERY

Package Dimensions	21.8 x 19.6 x 15.2 c
Package Weight	11.32 Kilograms
Brand	ULTRAMAX Batteries
Part Number	NPG35-12

## 100W CHARGE CONTROLLER

Overall dimension	160x94.9x49.3mm
Mounting dimension	148x70mm
Item Weight	0.35kg
Enclosure	IP30
Battery Type	Sealed(Default) / Gel / Flooded
Nominal system voltage	12/24VDCAuto
Battery input voltage range	9V-32V
Rated charge/ discharge current	20A@55
Max. PV open circuit voltage	50V
Terminals	10mm /8AWG
Relative humidity	≤95%, N.C.
Working environment temperature	≤95%, N.C.25 <sub>c</sub> +55 <sub>c</sub>
USB output	5VDC/2.4A(Total)



# SPECIFICATIONS & DIMENSIONS

Eco-friendly solutions with results that you're guaranteed to see.

## EXPECTED SYSTEM OPERATION (DAYS):

Because of the way solar systems are designed to last throughout the winter months (less solar power generation due to shorter days and longer nights) the system will last considerably longer in the summer months.

### WINTER

This is based on the assumption of LED lightbars being powered up to a maximum of 1hr per day and is based on the worst weather conditions.

Rest Period = Amount of time for solar system to completely recharge with no usage.

1x Flylead Used (10m maximum)	2x Flylead Used (20m maximum)	3x Flylead Used (30m maximum)	4x Flylead Used (40m maximum)
Continuous Use	Continuous Use	6.5 Days continuous use Rest Period – 11.5 Days	4 Days continuous use Rest Period – 11.5 Days

### SUMMER

This is based on the assumption of LED lightbars being powered up to a maximum of 1hr per day and is based on the best weather conditions.

Rest Period = Amount of time for solar system to completely recharge with no usage.

1x Flylead Used (10m maximum)	2x Flylead Used (20m maximum)	3x Flylead Used (30m maximum)	4x Flylead Used (40m maximum)
Continuous Use	Continuous Use	Continuous Use	Continuous Use

### FORMULA

Here is a formula that can be followed to calculate life expectancy of your solar system.

1m lightbar = 300mAh (power consumption 1hr use)

50w Solar Panel (worst weather conditions) = 2800mAh (power generation per day)

Battery Capacity = 33,000mAh \* 0.7 = 23100mAh (Battery Capacity after self-discharge)

### EXAMPLE 1:

20m of lightbar = (300mAh x 20m) 6000mAh (20m lightbar consumption in 1hr)

50w Solar Panel Generation = 2800mAh per day

Lightbar Consumption (6000mAh) – Solar Panel Generation (2800mAh) = 3200mAh (total power consumption from battery)

Battery Capacity after self-discharge (23100mAh) / total power consumption from battery (3200mAh) = 7.2 days (1hr use per day)



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