



48V TEMPORARY LIGHTING RANGE



48V Temporary Lighting Range



Overview

The purpose of a 48V temporary lighting system is to provide the contractor a safe and flexible solution when installing and moving temporary lighting systems on construction sites to meet the requirements outlined in AS/NZS 3012. Egress routes and work areas often change on construction sites and therefore the lighting systems must move with the ever-changing site.

Why use 48V?

By using a SELV 48V lighting system, the mechanical protection and containment requirements are significantly easier to achieve, resulting in faster installations, removal and relocation – this saves a lot of time, money and improves site safety.

The 48V system enables connection of more than double the number of fittings per power supply compared to a 24V system.

Cabling System

The Clevertronics 48V temporary lighting system provides a flexible and scalable solution for general and emergency lighting on site. This is ideal for the ever changing environment at a construction site to save time and significantly reduce labour cost.

All Clevertronics 48V temporary luminaires come with end-to-end IP65 pre-wired connectors. The keyed connectors ensure correct polarity during installation, eliminating wiring errors.

Switched control of General Lighting

3-core (switched +DC, permanent +DC and -VE) IP65 cabling arrangement allowing for the on/off switching of the general lighting function of the battens whilst maintaining a permanent supply to the emergency battery chargers. This feature provides energy savings and increased lifetime of the weatherproof battens, by switching the battens off when not required, without discharging the emergency batteries. This capability also assists with meeting light pollution mitigation requirements on certain projects.



Features

Simple installation



All products are fitted with flex & plug for simple plug & play approach with the option of surface or suspension mounting.

Reliable



The LED's fitted into the emergency luminaires are suited to environments where vibration is present. This will limit premature failure of the lamps.

48V Cabling System – Plug & Play

- Provides scalable and flexible installation
 - Switched control of general 48V lighting possible while maintaining supply to keep emergency batteries charged & ready
 - Enables easy tool free IP65 connection for general and emergency luminaires
 - 3-way and 4-way IP65 “splitter connector” connection allows for multiple configurations
 - 4m, 6m, 8m, IP65 3-core interconnecting cables available
 - Optional T-Lock accessory for tamper proof connection
- *To prevent unauthorised disconnection in accordance with AS/NZS3012



Temporary Non-Emergency Flood Light

- 4 x adjustable LED heads
- 3327lm total lumen output
- IP65 and IK08 rated
- Comes with flex & plug for simple plug & play.

* IP66 exits: connection lead supplied loose and to be fitted by installer

48V Emergency Luminaires

Temporary Weatherproof Batten Range

- Lithium Iron Phosphate batteries
- Chain suspension or surface mounting options
- Switchable control of the general lighting possible whilst maintaining continuous permanent charge to the batteries
- Available in 600mm or 1200mm
*1200mm available now with 600mm available soon
- Available with flex & plug from both ends for IP65 end-to-end cabling
- AS/NZS 2293.3 compliant with 1 hour emergency duration in accordance with AS/NZS3012

Weatherproof Dual Output 48V DC Power Supply

- Supplied with short length flex and plug outputs for connection to the temporary lighting cabling system
- 48V DC output switch that allows supply to be switched off whilst still maintaining permanent supply to continuously charge battery
- Capable of connecting more than double the number of fittings per power supply than a 24V system.

48V Exit Signs

Temporary Exit Range

- Lithium Iron Phosphate batteries
- Chain suspension or surface mounting options
- Weatherproof options available
- All directional decals in one box
- Comes with flex & plug for simple plug & play*
- AS/NZS 2293.3 compliant with 1 hour emergency duration in accordance with AS/NZS3012



Safe



All products using 48V Temporary lighting saves time and improves site safety.

Value add



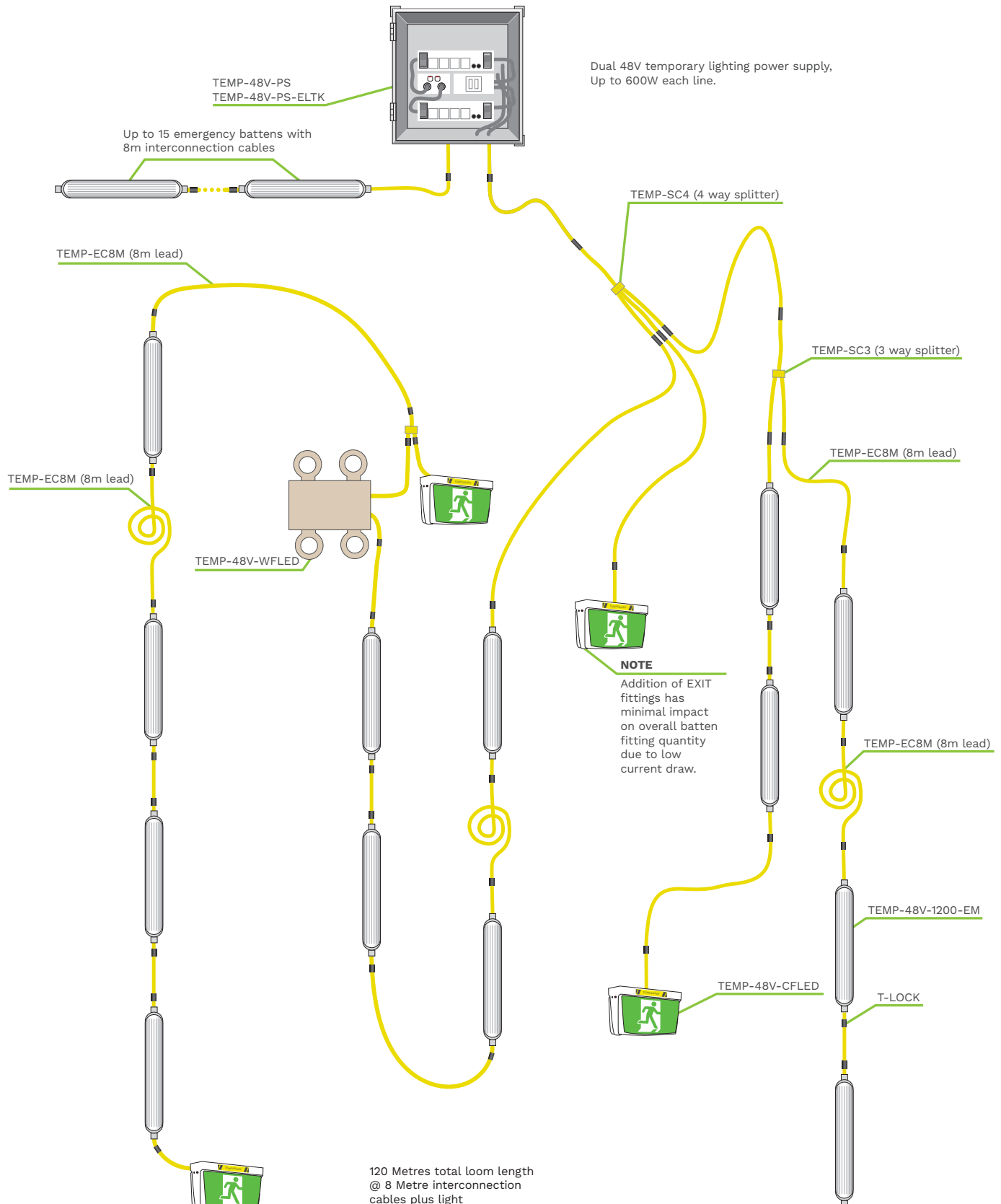
All products are ready to go so compliance can be achieved with minimal fuss and no added cost.

48V Example Layout

Connect up to 30 emergency batten (double line) with 8m interconnection cables. This equates to a maximum of 15 emergency batten per line with 8m interconnection cables between each fitting.

Each flood light is considered equivalent to 2 batten in terms of load on the circuit. For example, on a single line, you can connect up to 13 emergency batten plus 1 flood light.

Maximum number of connected fittings per line is determined by overall voltage drop.



48V Components

Design methods for demonstrating emergency lighting compliance

There are three design methods for demonstrating emergency lighting compliance under AS/NZ3012 "Electrical installations on construction sites and demolition sites." Emergency lighting shall be provided in stairways, passageways and adjacent to switchboards, on all demolition and construction sites where the general lighting cannot be met using natural lighting. Such lighting shall allow safe access to and egress from the site and shall provide the lighting levels specified in Items (a), (b) or (c) below.

Emergency lighting shall, in the required areas

- (a) provide an average of 20 lux at 900 mm above floor level along the centre-line of the corridor containing the emergency luminaires; or

- (b) be installed using luminaires complying with the luminaire classification, mounting height and spacing, as specified in AS/NZS3012 Tables 2, 3, 4 and 5.
- (c) be installed based on calculations of illuminance complying with Clause 4.6.1 of AS/NZS 2293.1—2018 and using a minimum horizontal illuminance of 3 lux. The emergency lighting level shall be provided for a minimum of one hour following loss of normal lighting in the area.

Note: Both (a) and (c) methods require lux plot calculations using specialised software by a qualified lighting designer.

EXAMPLE FOR METHOD (A): Installing the TEMP-48V-1200-EM battens 8m apart end to end at a height of 3m will deliver 20lx @ 900mm AFL in a line directly below the luminaires for 1 hour during a power failure. (With fully charged batteries).

EXAMPLE FOR METHOD (B) SPACING TABLE AND MOUNTING HEIGHTS – AS/NZS 3012 (MINIMUM LIGHT LEVEL OF 3 LUX)

Classification	2.1m	2.4m	2.7m	3.0m	3.3m	3.6m	4.0m	4.5m	5.0m	6.0m	7.0m	8.0m
C200	7.9	8.3	8.7	9.1	9.4	9.7	10	10.3	10.5	10.4	10.4	9.9
D80	7.9	8.1	8.3	8.4	8.4	8.4	8.3	8	7.6	N/A	N/A	N/A
D50	6.5	6.6	6.6	6.6	6.5	6.3	5.9	N/A	N/A	N/A	N/A	N/A

For 1 lux and AS/NZS 2293.1:2018 spacing tables please visit: <https://clevertronics.com.au/spacing-tables/>

48V COMPONENTS

PART NUMBER	SYSTEM COMPONENTS
TEMP-EC4M	4M Yellow Extension Cable - IP65
TEMP-EC6M	6M Yellow Extension Cable - IP65
TEMP-EC8M	8M Yellow Extension Cable - IP65
TEMP-FP1M	1M Temp. Female Plugged Loom - IP65
TEMP-SC3	Splitter Connector - IP65 3 Way
TEMP-SC4	Splitter Connector - IP65 4 Way
T-Lock	Connector locking device to prevent unauthorised disconnection of emergency lighting cables as per the requirement of AS/NZS:3012 - 2019 - 2.7.3.1

48V DC TEMPORARY POWER SUPPLY

PRODUCT INFORMATION	
Part Number	TEMP-48V-PS / TEMP-48V-PS-ELTK
Description	Temporary Lighting double line 48V DC 1200W power supply with two short flex and plugs (output) for connection to the temporary light cabling system. * ELTK denotes with timer test switch
Construction	Metal enclosure
Mounting	Surface mount
Dimensions L x W x H	400mm x 400mm x 200mm
Weight	20kg
Charging Method	Intelligent current limited constant voltage
Operating Voltage	240V AC; 50Hz
Rated Output Voltage	48V DC (SELV)
Rated Output Current	20A (Combined, nominal output of the two power supplies). Absolute maximum rated current for each power supply at 48V is 12.5A)
IP Rating	IP66
Operating Temperature	0°C to 40°C

REPLACEMENT PARTS

133-00009	Power Supply, Mean Well HLG-600H-48A (2)
-----------	--

Technical Specifications



Power Supply

ORDERING INFORMATION	48V POWER SUPPLY (DOUBLE LINE)	48V POWER SUPPLY (DOUBLE LINE)
Product Code	TEMP-48V-PS	TEMP-48V-PS-ELTK
Dimensions (L x W x H)	400mm x 400mm x 200mm	400mm x 400mm x 200mm
TECHNICAL SPECIFICATIONS		
Operating Voltage	240V AC, 50Hz	240V AC, 50Hz
Rated Output Voltage	48V DC 25A (Max)	48V DC 25A (Max) & AS2293.1 Test Switch
Operating Temperature	0°C - 40°C	
Ingress Protection Rating (IP)	IP66	



Exits

ORDERING INFORMATION	CLEVERFIT	UNIVERSAL WEATHERPROOF
Product Code	TEMP-48V-CFLED	TEMP-48V-WELED
Dimensions (L x W x H)	355mm x 80mm x 215mm	410mm x 100mm x 272mm
Directional Options	All Directional Inserts Included	
POWER, LAMPS AND BATTERY		
Power Consumption	1.5W	1.5W
Battery	Lithium Iron Phosphate	
Operating Mode	Maintained	
Operating Voltage	48V DC	
Viewing Distance	24m	
Mounting Type	Chain Suspension or Wall Mount	Wall and Ceiling Mount
Ingress Protection Rating (IP)	IP20	IP66/67



Battens

ORDERING INFORMATION	600MM		1200MM	
Product Code	TEMP-48V-600	TEMP-48V-600-EM	TEMP-48V-1200	TEMP-48V-1200-EM
Dimensions (L x W x H)	655mm x 88mm x 81mm		1264mm x 88mm x 81mm	
POWER, LAMPS AND BATTERY	600MM		1200MM	
Power Consumption	12W	14.2W	24W	26.2W
Lamp(s)	LED strip module, L70/B50 Ta 40°C; Reported > 72,000h, projected > 152,250h			
Total Lumen Output	1800lm		3600lm	
Colour Temperature	4000K			
Colour Rendering Index (CRI)	Ra≥ 80			
Battery	-	Lithium Iron Phosphate	-	Lithium Iron Phosphate
Operating Mode	Non-emergency	Sustained	Non-emergency	Sustained
Operating Voltage	48V DC			
Mounting Type	End to End 3 Core IP65 Flex & Plug			
Ingress Protection Rating (IP)	IP65			
Impact Rating (IK)	IK08			
AS/NZS 2293.3, AS.NZS 3012 Classification	-	C0=D80/C200, C90=D50/C200, C180=D80/C200, C270=D50/C200	-	C0=D80/C200, C90=D50/C200, C180=D80/C200, C270=D50/C200



Flood Light Unit

ORDERING INFORMATION

Product Code	TEMP-48V-WFLED
Dimensions (L x W x H)	Total: 395mm x 100mm x 300mm Enclosure: 150mm x 100mm x 250mm

POWER, LAMPS AND BATTERY

Power Consumption	36W
Lamp(s)	LED module, L70/B50 Ta 40°C; Reported > 60,000h, projected > 148,790h
Total Lumen Output	3327lm
Colour Temperature	4000K
Colour Rendering Index (CRI)	Ra≥ 80
Operating Voltage	48V DC
Connection Type	End to End 3 Core IP65 Flex & Plug
Ingress Protection Rating (IP)	IP65
Impact Rating (IK)	IK08

Victoria

1 Caribbean Drive
Scoresby VIC 3179
Phone: +61 3 9559 2700
Fax: +61 3 9559 2799

New South Wales

9 Distribution Place
Seven Hills NSW 2147
Phone: +61 2 8805 6400
Fax: +61 2 8805 6444

Queensland

1/140 Wecker Road
Mansfield QLD 4122
Phone: +61 7 3442 9700
Fax: +61 7 3442 9777

Western Australia

12 Milly Court
Malaga WA 6090
Phone: +61 8 9207 0000
Fax: +61 8 9248 3725

South Australia

Unit 1/136 Mooringe Ave
North Plympton SA 5037
Phone: +61 8 8301 8800
Fax: +61 8 8351 8286

Auckland

Unit 22/761 Great South Road
Penrose Auckland 1061
Phone: +64 800 548 448

Christchurch

163C Wordsworth Street
Sydenham Christchurch 8023
Phone: +64 800 548 448

clevertronics.com.au

clevertronics.co.nz