



# 24V TEMPORARY LIGHTING RANGE



# 24V Temporary Lighting Range



## Overview

The purpose of a 24V 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 24V?

By using a SELV 24V 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.

## Cabling System

The Clevertronics 24V 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 24V temporary luminaires come with single or end-to-end 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) 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.

### 24V Cabling System – Plug & Play

- Provides scalable and flexible installation
- Switched control of general 24V lighting possible while maintaining supply to keep emergency batteries charged & ready
- Enables easy connecting for general and emergency luminaires
- 3-way and 4-way “splitter connector” connection allows for multiple connections
- 4m, 6m and 8m, 3 core interconnecting cable available
- Optional T-Lock accessory for tamper proof connection



### 24V 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 of the batteries.
- Available in 600mm or 1200mm
- Available with flex & plug from both ends for end-to-end cabling
- AS/NZS 2293.3 compliant with 1 hour emergency duration in accordance with AS/NZS3012

#### Weatherproof Single and Dual Output 24V DC Power Supply

- Supplied with 2 short length flex and plug outputs for connection to the temporary lighting cabling system.
- 24V DC output switch that allows supply to be switched off whilst still maintaining permanent supply to continuously charge battery.

### 24V 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 24V 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 24V Temporary lighting saves time and improves site safety.

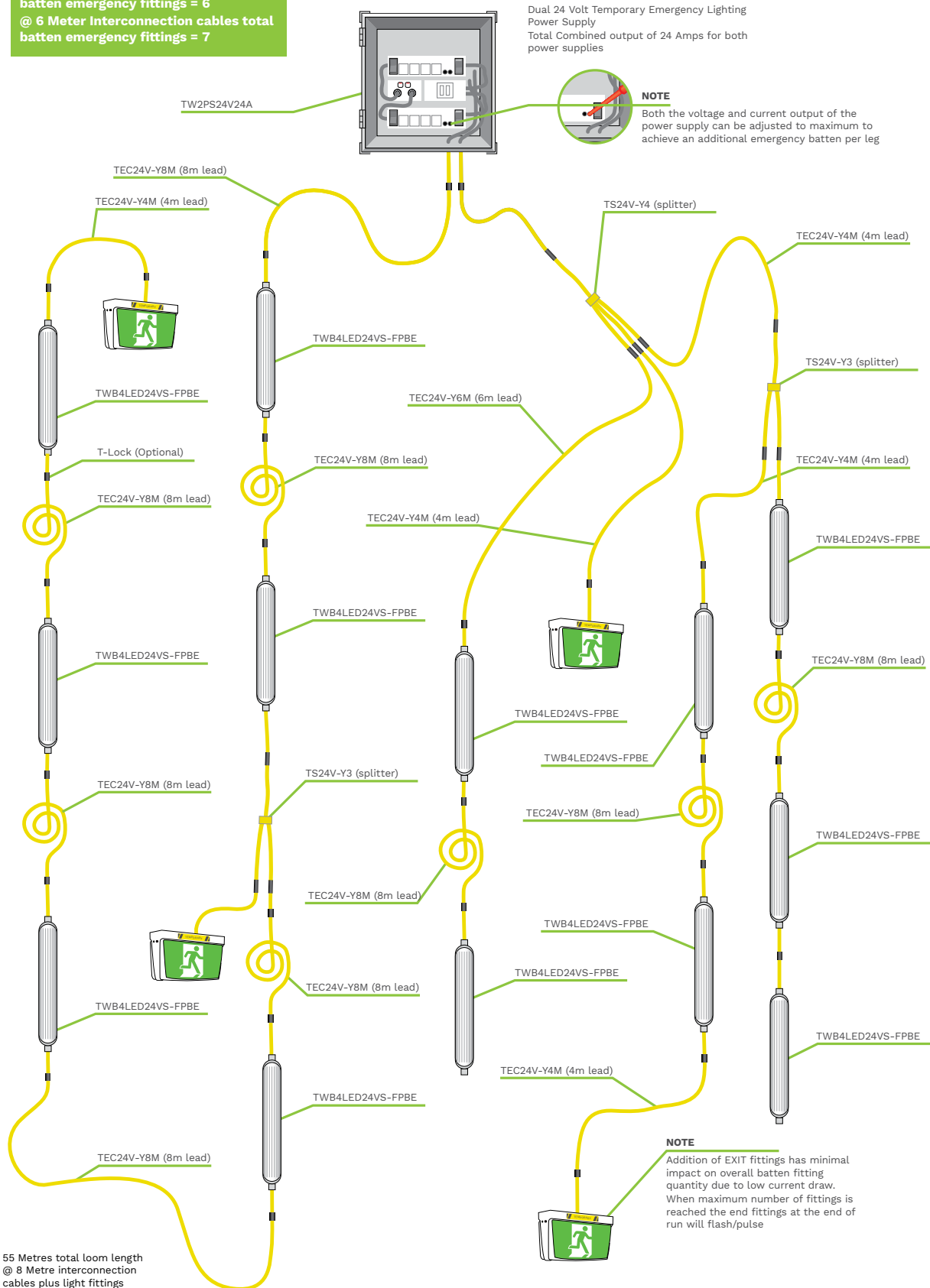
#### Value add

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



# 24V Example Layout

Maximum number of batten fittings per leg determined by overall voltage drop  
 @ 8 Meter Interconnection cables total batten emergency fittings = 6  
 @ 6 Meter Interconnection cables total batten emergency fittings = 7



# 24V Components

## Design methods for demonstrating emergency lighting compliance

There are three design methods for demonstrating emergency lighting compliance under AS/NZS3012 "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 (a):** Installing the TWB4LED24VS-FPBE 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).

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
D50	6.5	6.6	6.6	6.6	6.5	6.3	5.9	0.0	0.0	0.0	0.0	0.0
D80	7.9	8.1	8.3	8.4	8.4	8.4	8.3	8.0	7.6	0.0	0.0	0.0

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

## 24V COMPONENTS

SYSTEM COMPONENTS	PART NUMBER
4M Extension cable	TEC24V-4YM
6M Extension cable	TEC24V-Y6M
8M Extension cable	TEC24V-Y8M
1M Temp. Female Plugged Loom	TFP24V-Y1M
Splitter Connector – 3 Way	TS24V-Y3
Splitter Connector – 4 Way	TS24V-Y4
24V DC Power Supply 20A. WP with Hinged, Lockable Front Cover	TWPS24V20A
T-Lock	Connector locking device to prevent unauthorised disconnection of emergency lighting cables as per the requirement of as per AS/NZS2293 - 2019 - 2.7.3.1

## REPLACEMENT PARTS

1196701	Power Supply, Mean Well HLG-320H-24A (2)
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## 24V DC TEMPORARY POWER SUPPLY

PRODUCT INFORMATION	
Part Number	TW2PS24V24A
Description	Temporary weatherproof 24V DC power supply, 20A IP65. Supplied with a short length flex and plug (output) for connection to the temporary lighting cabling system
Construction	Metal enclosure
Mounting	Surface mount
Dimensions L x W x H	400mm x 400mm x 200mm
Weight	14.5kg
Charging Method	Intelligent current limited constant voltage
Operating Voltage	240V AC; 50Hz
Rated Output Voltage	24V DC (SELV)
Rated Output Current	24A (Combined, nominal output of the two power supplies). Absolute maximum rated current for each power supply at 24V is 13.34A)
IP Rating	IP66
Operating Temperature	0°C to 40°C

# Technical Specifications



## Power Supply

ORDERING INFORMATION		24V POWER SUPPLY	
Single Line		TWPS24V20A	
Dimensions (L x W x H)		300mm x 300mm x 180mm	
Double Line		TWPS24V24A	
Dimensions (L x W x H)		400mm x 400mm x 200mm	

TECHNICAL SPECIFICATIONS	
Output 24V DC 24A (Max)	24VDC 24A (Max)
Operating Temperature	0°C - 40°C
Ingress Protection Rating (IP)	IP65



## Exits

ORDERING INFORMATION	CLEVERFIT	UNIVERSAL WEATHERPROOF	WALL MOUNT WEATHERPROOF
Standard	TCFLED24V	TWELED24V	TWELED24V-WM
Dimensions (L x W x H)	355mm x 80mm x 215mm	410mm x 100mm x 272mm	380mm x 130mm x 190mm
Directional Options	All Directional Inserts Included		

POWER, LAMPS AND BATTERY			
Power Consumption	1.5W	1.5W	1.5W
Battery	Lithium Iron Phosphate		
Operating Mode	Maintained		
Viewing Distance	24m		
Mounting Type	Chain Suspension or Wall Mount	Wall and Ceiling Mount	Wall Mount
Ingress Protection Rating (IP)	IP20	IP66/67	IP66/67



## Battens

ORDERING INFORMATION	600MM		1200MM	
End-to-end flex & plug	TWB2LED24V-FPBE	TWB2LED24VS-FPBE	TWB4LED24V-FPBE	TWB4LED24VS-FPBE
Dimensions (L x W x H)	665mm x 85mm x 62mm		1268mm x 85mm x 62mm	

POWER, LAMPS AND BATTERY	600MM		1200MM	
Power Consumption	17W	17.4W	33W	33.4W
Lamp(s) (CCT / Life)	4,000K / 50,000 Hours LED			
Battery	-	Lithium Iron Phosphate	-	Lithium Iron Phosphate
Operating Mode	Non-emergency	Sustained	Non-emergency	Sustained
Mounting Type	Chain Suspension or Surface Mount			
Ingress Protection Rating (IP)	IP65			
Impact Rating (IK)	IK06 (Base), IK08 (Diffuser)			
Classification	-	C0=D80 C90=D50	-	C0=D80 C90=D50

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