



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

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 connection for general and emergency luminaires
- 3-way and 4-way “splitter connector” connection allows for multiple configurations
- 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 to 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 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



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

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.

Safe



All products using 24V Temporary lighting saves time and improves site safety.

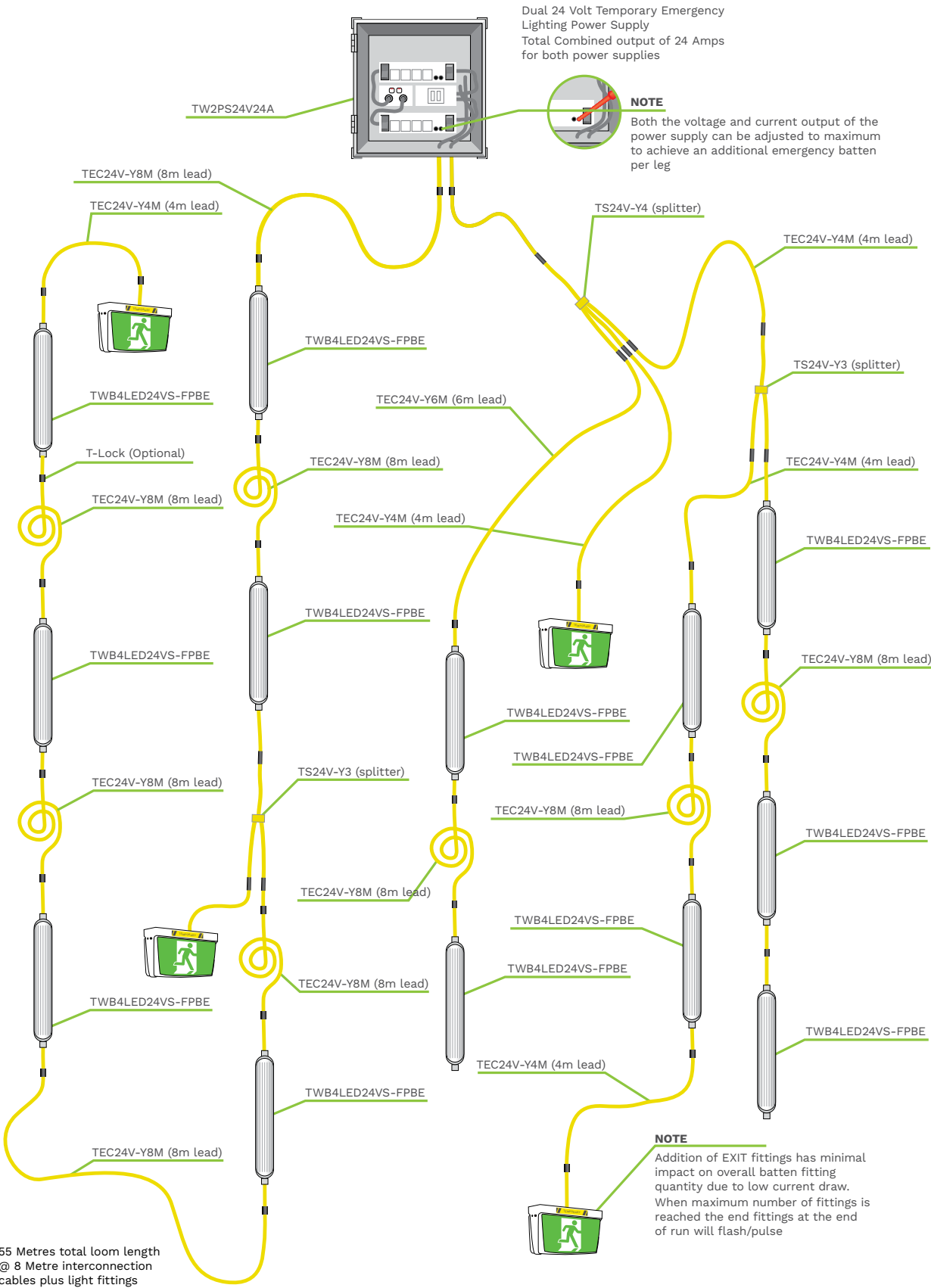
Value add



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
Using 8 Meter Interconnection cables total batten emergency fittings = 6
Using 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/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 (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

PART NUMBER	SYSTEM COMPONENTS
TEC24V-4YM	4M Extension cable
TEC24V-Y6M	6M Extension cable
TEC24V-Y8M	8M Extension cable
TFP24V-Y1M	1M Temp. Female Plugged Loom
TS24V-Y3	Splitter Connector – 3 Way
TS24V-Y4	Splitter Connector – 4 Way
TWPS24V20A	24V DC Single Line 20A Power Supply in an IP65 Polycarbonate Lockable Enclosure
TW2PS24V24A	24V DC Double Line 24A Power Supply in an IP66 Metal Lockable Enclosure
TW2PS24V24A-ELTK	24V DC Double Line 24A Power Supply in an IP66 Metal Lockable Enclosure & Timer Test Switch
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

REPLACEMENT PARTS	
1196701	Power Supply, Mean Well HLG-320H-24A (2)

24V DC TEMPORARY POWER SUPPLY

PRODUCT INFORMATION	
Part Number	TW2PS24V24A / TW2PS24V24A-ELTK
Description	Temporary double line 24V DC power supply 24A supplied 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	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

Notes



TECHNICAL SPECIFICATIONS			
Operating Voltage	240V AC, 50Hz	240V AC, 50Hz	240V AC, 50Hz
Rated Output Voltage	24V DC 20A (Max)	24V DC 24A (Max)	24V DC 24A (Max) & AS2293.1 Test Switch
Operating Temperature	0°C - 40°C		
Ingress Protection Rating (IP)	IP65	IP66	



POWER, LAMPS AND BATTERY			
Power Consumption	1.5W	1.5W	1.5W
Battery	Lithium Iron Phosphate		
Operating Mode	Maintained		
Operating Voltage	24V DC		
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



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	
Operating Voltage	24V DC				
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	

The product details described in this document are current as at the version date of the document. We reserve the right to change product design, specifications or materials (Specifications) as part of our continuous improvement program. Please confirm the applicable Specifications at the time of placing your order.

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