



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.

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 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

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 IP65 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

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 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



* 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.

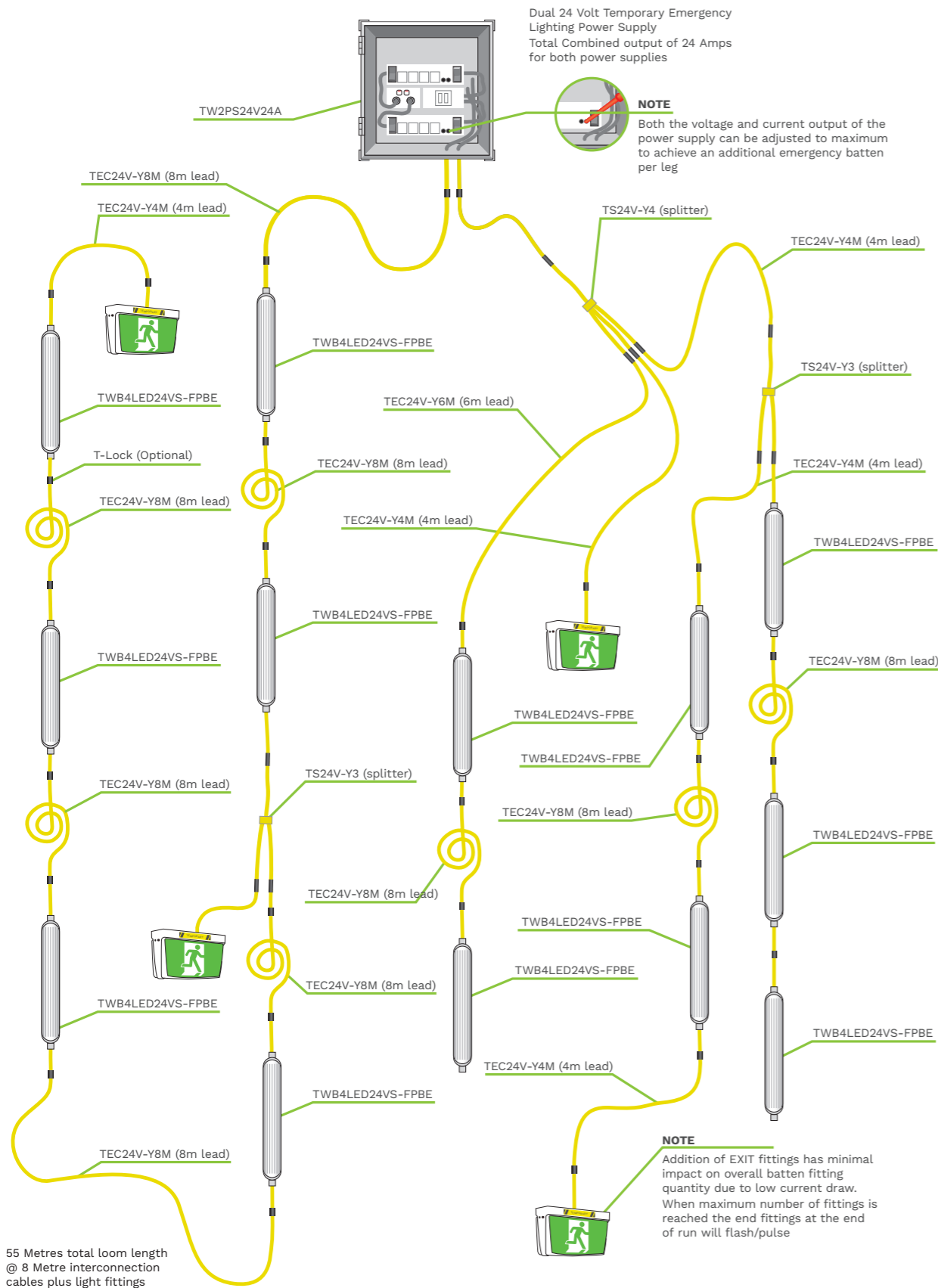
Value add



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 Yellow Extension Cable - IP65
TEC24V-Y6M	6M Yellow Extension Cable - IP65
TEC24V-Y8M	8M Yellow Extension Cable - IP65
TFP24V-Y1M	1M Temp. Female Plugged Loom - IP65
TS24V-Y3	Splitter Connector - IP65 3 Way
TS24V-Y4	Splitter Connector - IP65 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

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

REPLACEMENT PARTS

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

2/8-12 Monte-Khoury Drive
Loganholme QLD 4129
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

U2/19 Main Terrace
Richmond SA 5033
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