

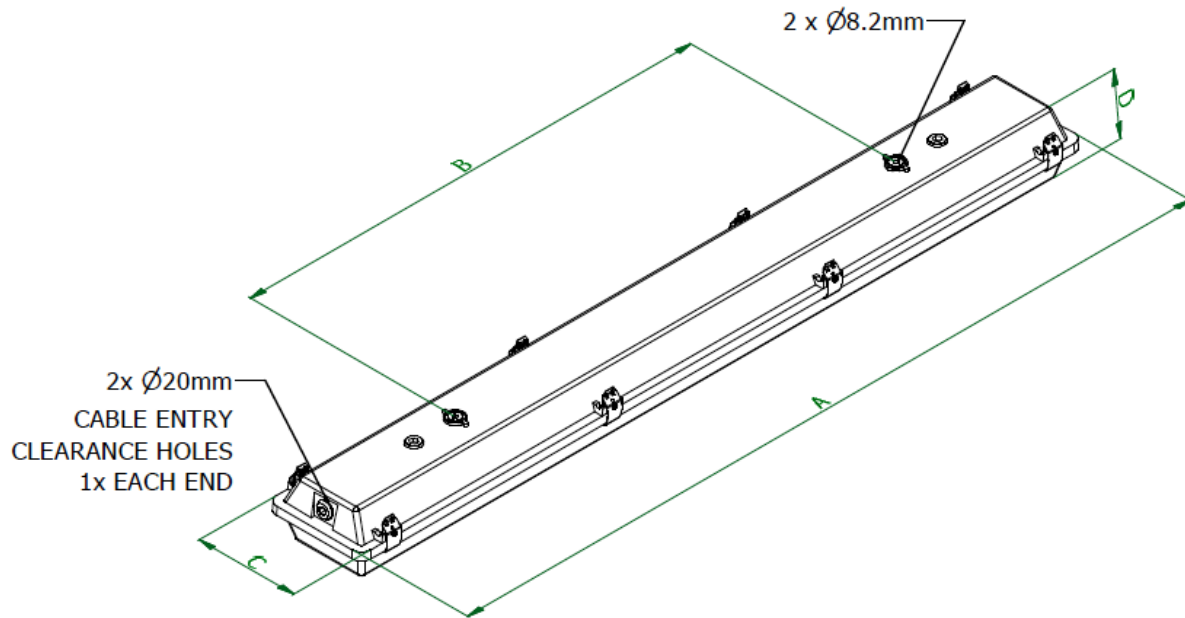
INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

# Sterling III - LED Luminaires

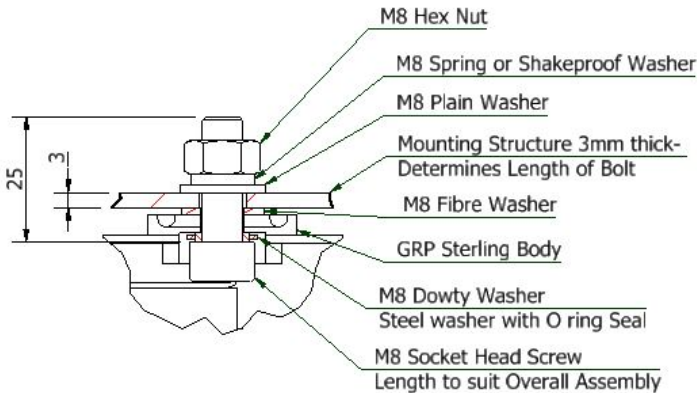
## Industrial Inotec Central Battery System (CBS)

**Important:**



Please read these instructions carefully before installing or maintaining this equipment. Good electrical practices should always be followed, and this data should be used as a guide only.



Dimension			
Dim	03 L	06 L	09 L
A	702	1312	1312
B	500	800	800
C	172	172	172
D	106	106	106



Section Thru Mounting Holes  
Typical Arrangement of Sealing Washers

<b>0.0 Specification</b>	
Type of Protection	N/A
Standards	EN 60598-1
Area Classification	Industrial, (Non- Hazardous)
Ambient	03L, 06L -15°C to +45°C; 09L -15°C to +40°C
Ingress Protection	IP65 to EN 60529
	The CE marking of this product applies to "The Electrical Equipment (Safety) Regulations 2006", "The Electromagnetic Compatibility Regulations 2004", the "Waste Electrical and Electronic Equipment Regulations 2006". [This legislation is the equivalent in UK law of EU directives 2014/35/EU, 2014/30/EU, 2012/19/EU respectively].
	The UKCA marking of this product applies to "The Electrical Equipment (Safety) Regulations 2016", "The Electromagnetic Compatibility Regulations 2016", the "Waste Electrical and Electronic Equipment Regulations 2012".
	M Poutney Technical Manager

**1.0 Introduction – Sterling III Safe Area LED Luminaire**

The Sterling Safe Area LED Luminaires are surface mounted or suspended, utilising the 2 holes on the base of body. They are mainly used in harsh environments and are constructed using a corrosion resistant glass reinforced polyester body attached to an injection moulded polycarbonate diffuser by self-retaining stainless-steel toggle clips. The control gear and LED's are mounted on a removable tray, which for maintenance has hanging straps. Note: The ratings are listed in Table A & B

**2.0 Storage**

To optimise lifetime, luminaires should be stored in cool dry conditions preventing ingress of moisture and condensation between -15°C to +50°C

**3.0 Installation and Safety**

**3.1 General**

There are no health hazards associated with this product whilst in normal use. However, care should be exercised during the following operations.

**Installation** should be carried out in accordance with the local area code of practice, whichever is appropriate. In the UK the requirements of the 'Health and Safety at Work Act' must be met.



**Handling and Electrical work** associated with this product to be in accordance with the *'Manual Handling Operations Regulations'* and *'Electricity at Work Regulations, 1989'*. Your attention is drawn to the paragraphs (i) 'Electrical Supplies', (ii) 'Electrical Fault Finding and Replacement' and (iii) 'Inspection and Maintenance'. The luminaires are Class 1 and should be effectively earthed.

The information in this leaflet is correct at the time of publication. The company reserves the right to make specification changes as required.

### 3.2 Tools

Screwdriver flat blade 12mm and 3mm. Suitable spanners for installing glands.  
Pliers, knife, wire strippers/cutters.

### 3.3 Electrical Supplies

Luminaires fitted with electronic control gear are suitable for a rated supply from 230Vac 50-60Hz, and 176-264Vdc. A maximum voltage variation of +/-6% on the nominal is acceptable; however, the ballast is designed to accept tolerances of up to +/-10%. Luminaires should not be operated continuously at more than +/-10% of the rated supply voltage of the control gear.

Electronic gear has integrated power factor correction to >0.90.

### 3.4 Light Emitting Diode (LED)

LED's are supplied in 3000, 6000 or 9000 Lumen options with the colour temperature of 3000K, 4000K or 5000K (Check nameplate)

#### 3.4.1 Inotec monitoring module

Modules will be factory set to DL for maintained luminaires, switch position I

/JSVS is the J-SV-Module/S model for emergency luminaires

/JSVT is the J-SV-Modul T/S model will switch off after a pre-set period when in Emergency mode.

The time period can be selected for about 30,60 or 120 seconds, by setting the x10(T) address switch

### 3.5 Mounting

Luminaires should be installed where access for maintenance is practical and in accordance with any lighting design information provided for the installation.

On mounting the luminaire by using the 8.2mm  $\varnothing$  holes, it is the responsibility of the user to ensure that an adequate seal is made to maintain the desired IP rating with a minimum of IP65. Washers are provided. Other mountings are available on request.

### 3.6 Cable Connection

#### 3.6.1 Cables

The GRP models have facility for through wiring but do not have a facility for looping. The metal bodied series have the facility both looping and through wiring.

The temperature conditions of the supply cable entry point are such that 70°C (ordinary PVC) cable can be used. 300/500V cable ratings are adequate and no special internal construction is necessary. Where MCB's are used, the type with the higher short time tripping current ratio used for motor starting and lighting should be specified. The standard maximum looping size is 2.5mm<sup>2</sup> with options of 2.5mm<sup>2</sup> through wiring. An internal earth tag can be fitted to the cable gland.

**Note:** Through wiring when used, is subject to a maximum current of 16A.

#### 3.6.2 Cable Glands

Cable glands when installed should maintain the minimum IP65 rating of the enclosure. The cable gland should adequately secure the cable in the unit. Sealing plugs for unused entries should be similarly rated and fitted. There are 2 off 21mm diameter holes is provided. One transit plug is fitted all other entries are permanently plugged. It is the responsibility of the user to ensure that an adequate seal between the gland body and the apparatus is maintained.



### 3.7 Cabling

Access for cabling is via diffuser cover, care is to be taken as there is no suspension of diffuser cover. The diffuser clips are undone, and the diffuser laid aside. The gear tray can be removed by undoing the spring clips on the suspension cables. The cable glands should be fitted with suitable washers to maintain the desired IP rating. Any earth tag connections should be fitted. The connecting terminals are identified, and the conductors should be bared back so that they make full contact in the terminals, but the bare conductor should not be more than 1mm beyond the terminal. Unused terminal screws should be tightened. The cores must be identified by polarity and connected in accordance with the terminal markings. Before re-fitting the cover, a final check on the correctness of connections should be made.

#### 3.7.1 Replacing LED's

Before opening the diffuser cover, ensure that the luminaire is isolated from mains supply. Access for re-lamping is via the diffuser cover; care is to be taken, as there is no suspension facility for the diffuser cover.

It is recommended on failure of LED's an entire geartray kit including driver should be fitted. This will maximise the lifetime of the product.

Note the diffuser cover orientation on removal as the diffuser cover must be refitted in its original orientation to maintain the IP rating.

### 3.8 Inspection and Maintenance

#### 3.8.1 Routine Examination

The luminaire must be de-energised before opening. Individual organisations will have their own procedures. What follows are guidelines based on our experience:

- 1 Ensure LED's are lit when energised by mains supply.
- 2 Visually check diffuser cover for damage, this should only be cleaned using a damp cloth to avoid static, and only use recommended detergents for polycarbonate. If the polycarbonate is discoloured or damaged, a new diffuser cover must be fitted.
- 3 When de-energised and left to cool, there should be no significant sign of internal moisture. If there are any signs of water ingress, the luminaire should be opened, dried and any likely ingress points eliminated by re-gasketing or other replacements.
- 4 Check cable glands for tightness and nip up if required.
- 5 Check any external and internal earths.
- 6 Check all terminations are firmly screwed down, tighten if necessary.
- 7 Check clips visually for any damage and replace if necessary.
- 8 If it has been suspected that the luminaire has suffered mechanical damage, a stringent workshop check on all components should be made. All components can be removed from the luminaire for inspection.

#### 3.8.2 Commissioning

Energise the mains and check that LED's illuminate when the supply is energised.

If LED's do not illuminate, ensure switch on Inotec module is set to DL

For further troubleshooting, see section 4.0

### 3.9 Electrical Fault Finding and Replacement

The supply must be isolated before opening the Luminaire.

Any live fault finding must be done by a competent electrician and, if carried out with Luminaire in place, under a permit to work.

If LED's go out repeatedly, and replacement LED's do not work or expected life is reduced, the control gear should be returned for replacement / testing. The electronic drivers are approved components.

On re-assembly, all faulty/damaged wiring should be replaced, and connections checked.



#### 4.0 Disposal of Material

Any disposal must satisfy the requirements of the WEEE directive [2012/19/EU and Regulations 2012] and therefore must not be treated as commercial waste. The unit is made from combustible materials, the control gear contains plastic parts and electronic components. All electrical components and the body parts may give off noxious fumes if incinerated. Take care to render these fumes harmless or avoid inhalation. Any local regulations concerning disposal must be complied with.

#### 4.1 LED's

LED's in modest quantities are not "special waste". They should be broken in a container to avoid possible injury from fragmentation. Avoid inhaling dust. This applies to the UK; there may be other regulations on disposal operating in other countries.

**Important:** *Do not incinerate LED's.*



To comply with the Waste Electrical and Electronic Equipment directive 2012/19/EU and Regulations 2012\_ the apparatus cannot be classified as commercial waste and as such must be disposed of or recycled in such a manner as to reduce the environmental impact.

#### 5.0 Fuse Ratings

With the availability of MCB's with a wide range of characteristics, the individual engineer can make a better judgement of what is required. Use MCB's suitable for inrush currents to reduce ratings. Where MCB's are used, the type with the higher short time tripping current ratio used for motor starting and lighting should be specified. The inrush current can be calculated where circuit conditions are known. The inrush currents can be obtained from the manufacturer.

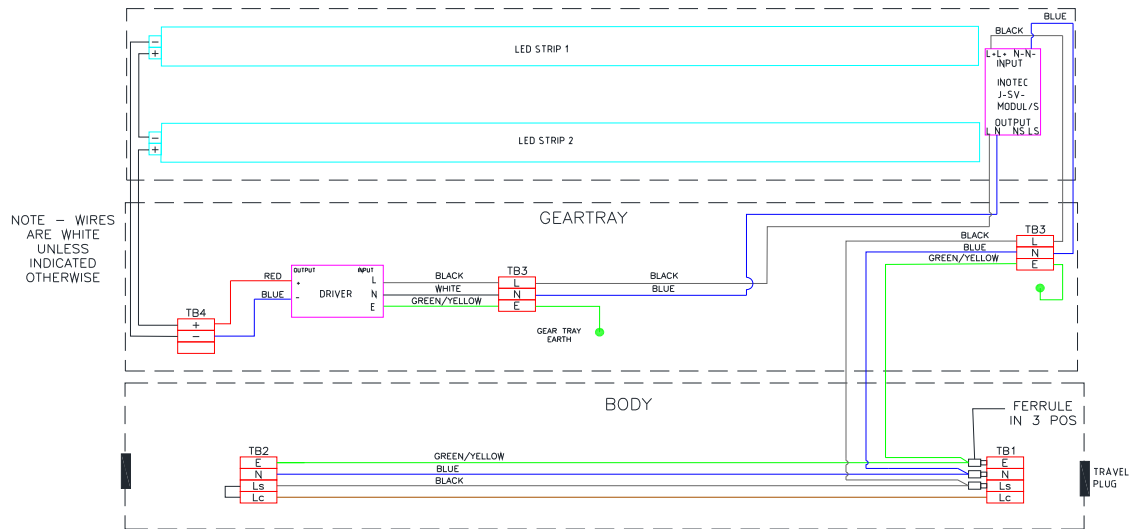
The fuse ratings for LED strips in circuits need to take account of the Driver within the construction of the Luminaire. All calculations must satisfy wiring regulations.

<b>Table A</b>		<b>Refer to Section:1.0</b>	
<b>Standard circuit Inotec modules</b>			
<b>Product code</b>	<b>Body Type</b>	<b>Nominal Voltage</b>	<b>Power Consumption Watts</b>
ST3I/03L/LE/JSVS	2ft Twin	230Vac 176-264Vdc	25
ST3I/06L/LE/JSVS	4Ft Twin	230Vac 176-264Vdc	46
ST3I/09L/LE/JSVS	4Ft Twin	230Vac 176-264Vdc	65
ST3I/03L/LE/JSVT	2ft Twin	230Vac 176-264Vdc	24
ST3I/06L/LE/JSVT	4Ft Twin	230Vac 176-264Vdc	45
ST3I/09L/LE/JSVT	4Ft Twin	230Vac 176-264Vdc	64



<b>Table B – Standard circuit Inotec modules</b>				
<b>No. of strips</b>	<b>Lumens</b>	<b>Driver Current</b>	<b>Line Current</b>	<b>Inrush Current/ Duration</b>
03L JSVS 2 x 560mm	3592	300mA	0.08A	27A (41 μs)
06L JSVS 2 x 1120mm	6241	600mA	0.11A	22A (43 μs)
09L JSVS 2 x 1120mm	8798	850mA	0.24A	25A (40 μs)
03L JSVT 2 x 560mm	3592	300mA	0.08A	12A (44 μs)
06L JSVT 2 x 1120mm	6241	600mA	0.11A	35A (45 μs)
09L JSVT 2 x 1120mm	8798	850mA	0.24A	33A (40 μs)

**Typical Standard with Inotec module Wiring Diagram**





Chalmit Lighting is a leading supplier of Hazardous Area lighting products

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For technical support, please contact: [techsupport@chalmit.com](mailto:techsupport@chalmit.com)

Note: Chalmit Lighting reserves the right to amend characteristics of our products and all data is for guidance only.



	<b>EU/UK-Declaration of conformity</b>		
	<b>UE-Déclaration de conformité</b>		
	<b>EU-Konformitätserklärung</b>		
Manufacturer	Chalmit	Address	388 Hillington Road, Glasgow. G52 4BL Scotland UK
Product	Sterling III LED Industrial Inotec Central Battery System		
Catalogue	ST3I/**/**/**** Example: ST3I/03L/LE/JSVS		
Area Classification	Industrial, (Non-Hazardous)		
Ingress Protection	IP65		
Ambient	03L,06L -15°C to +45°C ; 09L -15°C to +40°C		
Terms of the directive:	Standard & Date Certified to	Standards Date Declared to	
Prescription de la directive:	Standard & date certifiée à	Normes date Déclaré	
Bestimmungen der Richtlinie:	Standard & Datum Zertifiziert nach	Standards Datum erklärt	
2014/30/EU Regulations 2016	Electromagnetic compatibility	EN 55015 : 2019	
2014/30/UE	Compatibilité électromagnétique	EN 61547 : 2009	
2014/30/EU	Elektromagnetische Verträglichkeit	EN 61000-3-2 : 2019	
2014/35/EU Regulations 2016	Low voltage equipment	EN 60598-1 : 2015	
2014/35/UE	Équipements électriques à bas voltage	EN 60598-2-5 : 2015	
2014/35/EU	Niederspannungsgeräte / -systeme	EN 60598-2-22 : 2014	
		EN 60529 : 1992+A2:2013	
2012/19/EU Regulations 2012	Waste of electrical and electronic equipment		
2012/19/UE	Déchets d'équipements électriques et électroniques		
2012/19/EU	Entsorgung der elektrischen und elektronischen Geräte / Systeme		
2011/65/EU Regulations 2012	RoHS II Directive		

On behalf of the Chalmit, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms to all technical and regulatory requirements of the above listed directives.

En tant que représentant du fabricant Chalmit, je déclare qu'à la date où les équipements accompagnant cette déclaration sont mis sur le marché, ceux-ci sont conformes à toutes les dispositions réglementaires et techniques des directives énumérées ci-dessus.

Hiermit bestätige ich, im Namen von Chalmit, dass am Tag der Lieferung des Produkts/der Produkte zusammen mit dieser Erklärung das Gerät/die Geräte alle technischen und regulatorischen Anforderungen der oben aufgeführten Direktiven erfüllt.

Name and Date      Mark Poutney    11/11/2021  
Nom et Date  
Name und Datum

Technical Manager  
Directeur technique  
Technischer Leiter

Quality Management System Accreditation:  
Système de Management Qualité Accréditation:  
Qualitätsmanagementsystem Akkreditierung:  
Environmental Management System.  
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