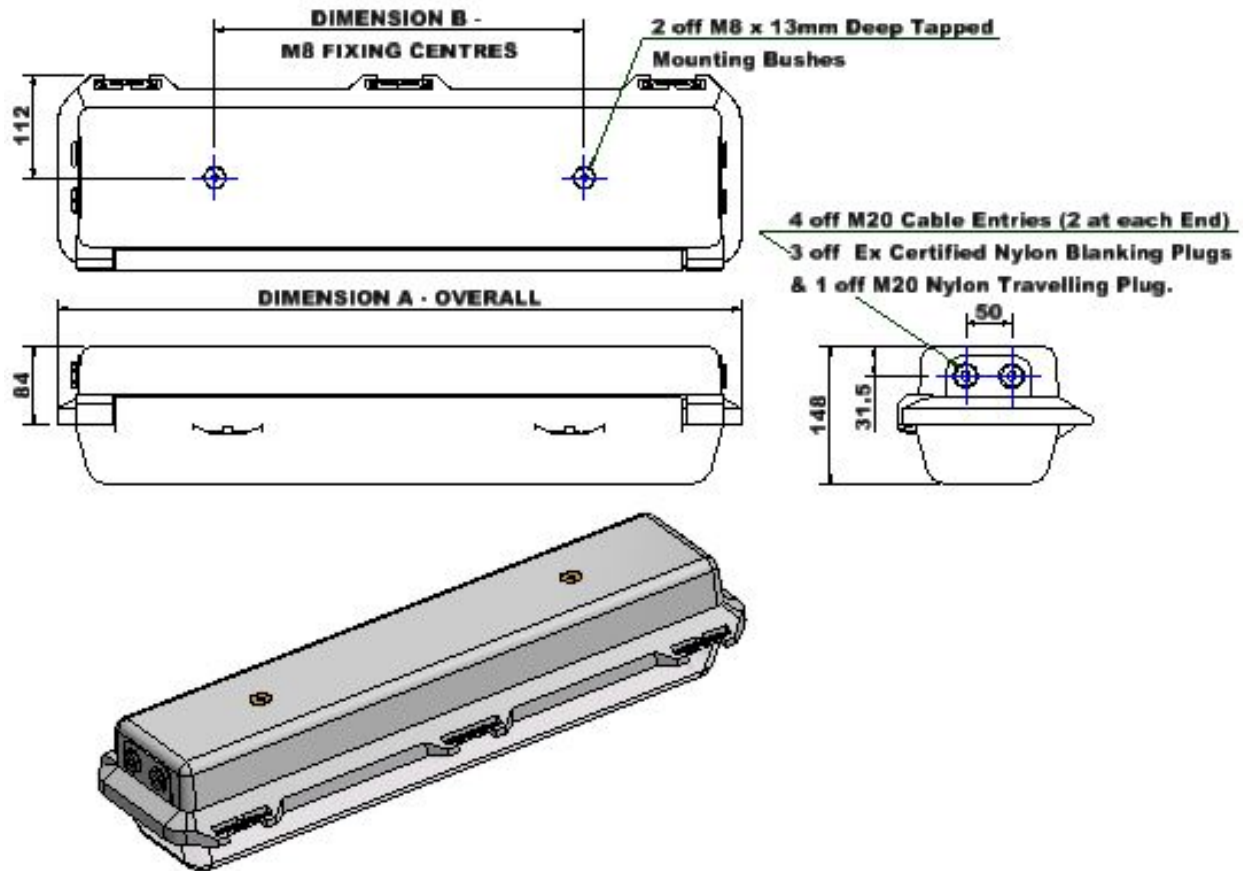


## INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS



### Protecta III – Industrial LED Luminaires

**Important:** Please read these instructions carefully before installing or maintaining this equipment. Good electrical practices should be followed at all times and this data should be used as a guide only.



MODEL SIZE	DIMENSION 'A'	DIMENSION 'B'
02L	742	400
04L	742	400
07L	1352	700



<b>078.0 Specification</b>	
Type of Protection	N/A
Standards	EN 60598-1
Area Classification	Industrial, (Non- Hazardous)
Ambient	-40°C to +55°C Standard
Ingress Protection	IP66/67 to EN 60529
 	<p>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].</p> <p>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</p> <p>M Poutney Technical Manager</p>

### 1.0 Introduction - Protecta Safe Area LED Luminaire

The Protecta Safe Area LED Luminaires are surface mounted or suspended, utilising the two tapped holes on base of body, Normal operation is mains supply "ON" LEDs illuminated.

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 hinges and a special clamp. The control gear and LED strips are mounted on a removable tray which for maintenance has hanging straps.

Note: The ratings are listed in Tables A & B

### 2.0 Storage

To optimise lifetime, luminaires should be stored in cool dry conditions preventing ingress of moisture and condensation between -25°C to +60°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.

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

12mm, 5mm and 3mm flat blade screwdriver. Pozi number 2 screwdriver  
Suitable spanners for installing cable glands. Pliers, knife, wire strippers/cutters.

#### 3.3 Electrical Supplies and Control Gear

Luminaires fitted with electronic control gear are suitable for a rated supply from 120- 277Vac 50-60Hz, 127-250V dc for 02L model and 120- 277Vac 50-60Hz,127-300V dc for 04L and 07L models. The safety limits are +/-10% of this. The supply would normally be expected to lie within +/-6% of rated. The LED supply is regulated, therefore the light output over the range is substantially unchanged.

Electronic gear has integrated power factor correction to >0.90.



**Warning:** *Luminaires are assessed and/or tested for EMC requirements. This is based on the disposition of entry cables and, where appropriate, through wiring arrangements as supplied or specified. Users must take care not to introduce wiring into parts of the apparatus materially different to that which could be reasonably inferred from the disposition of fixed supply terminals and specified wiring.*

### 3.4 Light Emitting Diodes (LED)

LED's are supplied in either 02L, 04L or 07L options with the colour temperature of 3000K, 4000K or 5000K.

### 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. The standard suspension is via two M8 tapped holes in stainless steel bushes moulded into the top of the body, the recommended torque for the fixing bolts is 10-15Nm. (at 400mm centres for 02L and 04L and 700mm centres for the 07L model).

Various adaptors, pole clamps and suspension brackets are available to order. The 02L and 04L models are available with integral side entry for 42 mm diameter poles.

### 3.6 Cable Connection

#### 3.6.1 Cables

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 4mm<sup>2</sup> with of 2.5mm<sup>2</sup> through wiring.

#### 3.6.2 Cable Glands

Cable glands when installed should maintain the desired IP rating of the enclosure.

### 3.7 Electrical Connections

Luminaires are available for looping and through wiring. The through rating is 16A. Terminals for 4mm<sup>2</sup> standard and 6mm<sup>2</sup> are available on request. State which on order. If work is to be done on any Luminaire which has already been connected to the electrical system, it must be isolated from the system. The diffuser cover is swung down and removed if convenient by swivelling back as far as possible and the reflector tray is then slid out after releasing the locking screws. This gives access to the mains terminals. Standard fitting mains terminal blocks have L N E, where appropriate.

#### 3.7.1 Installation of HF

Following the mounting of the apparatus and the connection of the supply cable the unit **cannot** be insulation tested. After commissioning the unit can be shut down for a long period without loss of function.

### 3.8 Servicing and Operation

#### 3.8.1 Opening and Closing the Cover

The procedure for opening the cover is as follows:

Insert the tool into one of the slots in the clamping bar with the end of the tool located into the outer flange of the body as a fulcrum point, a wide blade screwdriver is recommended. Gently lever the tool away from the diffuser, the clamping bar will begin to open. Insert the tool in the other clamping bar slot and gently lever away from the diffuser the clamping bar will open and the cover will be retained by the hinge. Should difficulty be experienced reinsert the tool in the first slot and repeat the procedure.

The procedure for closing and securing the cover is as follows:

Ensure the hinge mechanism is clear of any obstruction and then swing the diffuser into the closed position. Support the diffuser in position whilst pushing the clamp bar over the edge of the diffuser. Apply even pressure at both ends of the bar and press the bar over centre.

#### 3.8.2 Removal and Replacement of Clamping Bar (if required)

Open the luminaire as above and remove the diffuser or let it swing down. Press the clamping bar towards the closed position, tip forward beyond the closed position and the clamping bar will be released from the body. To replace the clamping bar, put in position on the body with the front edge pointing as far inwards as it will go. Click the bar outwards and bring back to the normal closed position. The clamping bar should then be secured



in position, open the clamping bar fully by using hand or screwdriver pressure (avoid damaging the gasket), the clamping bar is then ready to accept the normal closure of the diffuser.

### **3.8.3 Releasing the LED Tray / Gear Tray**

Loosen the four fixing screws retaining the LED / Gear tray and slide over keyhole slots. The tray will hang on the retaining cords without stressing the wiring between body and tray. Replace in reverse order.

### **3.8.4 Retro Fitting Lamps to LED's**

Before opening the front cover ensure that the luminaire is isolated from the mains supply. Access for retro fitting is via the front cover, care is to be taken as there is limited suspension of the cover. Make sure that the correct ESD protection is taken during LED replacement to avoid electric discharge to the PCB.

### **3.8.5 Commissioning**

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

## **3.9 Inspection and Maintenance**

**Important:** *Isolate the mains supply before carrying out any work.*

### **3.9.1 Replacement of Electronic Ballast**

The electronic ballast contains no replaceable parts. Should it be found necessary to replace these parts, the following procedure should be adopted:

Ensure that the Luminaire is isolated from mains supply, otherwise a risk of shock may occur. Disconnect the leads on the ballast at the terminal block. Undo the ballast securing screws and washers and withdraw the ballast from the gear body. Replace in reverse order.

### **3.9.2 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.

## **4.0 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.

The control gear can be tested for continuity of connections with a low voltage tester.

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

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



**5.0 Disposal of Material**

The unit is made from combustible materials. The control gear contains plastic parts and polyester resin. 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. 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 mainly made from incombustible materials.

**5.1 LED's**

LED's in modest quantities are not "special waste". They should be broken up in a container to avoid injury. Avoid inhaling dust.





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.

Table A <i>Series Standard circuit</i>			
Product code	Body Type	Nominal Volts	Power Consumption Watts
PR3I/02L/LE	2Ft Twin	120-277Vac 127-250Vdc	15
PR3I/04L/LE	2Ft Twin	120-277Vac 127-300Vdc	23
PR3I/07L/LE	4Ft Twin	120-277Vac 127-300Vdc	44

Electrical data for 120-277 AC and DC supplies

Table B <i>Series Standard circuit</i>				
No. of LED strips	Lumens	Driver Current	Line Current	Inrush Current/ Duration
02L 1 x 560mm	2296	400mA	0.06-0.13A	36A (2.1 μs)
04L 2 x 560mm	3526	300mA	0.09-0.2A	34A(2.3 μs)
07L 2 x 1120mm	6596	600mA	0.16-0.38A	36A (2.7 μs)

**Chalmit Lighting is a leading supplier of Hazardous Area lighting products**

	<p><b>CHALMIT LIGHTING</b> PO Box 5575 Glasgow, G52 9AP Scotland</p>	
<p>Telephone: +44 (0) 141 882 5555 Fax: +44 (0) 141 883 3704 Email: info@chalmit.com Web: www.chalmit.com</p>	<p>Registered No: 669157 Registered Office: Cannon Place 78 Cannon Street London EC4N 6AF UK</p>	

**For technical support, please contact: 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	Protecta LED Industrial Standard (Non-emergency)		
Catalogue	PR3I/****/** Example: PR3I/02L/LE		
Area Classification	Industrial, (Non- Hazardous)		
Ingress Protection	IP66/67		
Ambient	Standard -40°C to +55°C		
Terms of the directive:		Standard & Date Certified to	Standards Date Declared to
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 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 regulativen Anforderungen der oben aufgeführten Direktiven erfüllt.

Name and Date Mark Poutney 09/11/2021  
 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.  
 Système de gestion de l'environnement.  
 Umwelt kontroll system.  
**Certificate No./Certificat N°/Zertifikat Nr.**

**ISO 9001**

**ISO 14001**  
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