

# INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

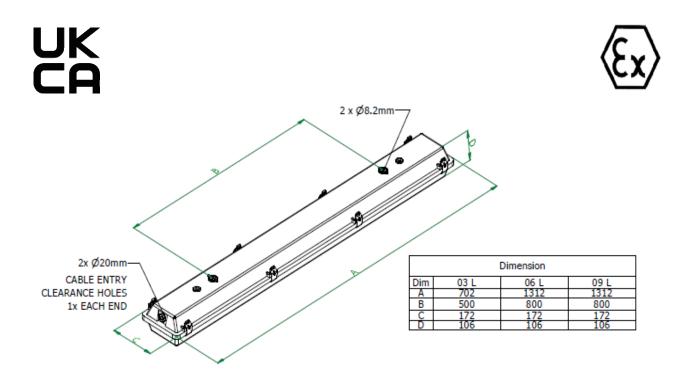
# Sterling III – LED Emergency Luminaire (Ex ec) ATEX,IECEx and UKEX

# **GRP Standard body**

Important:

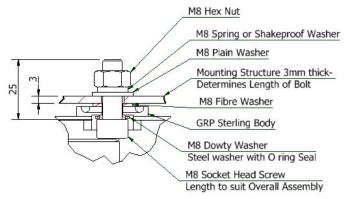
Please read these instructions carefully before installing or maintaining this equipment. Good electrical practices should always be followed, and this data should be used as a guide only.

**Technical Drawing:** 









Section Thru Mounting Holes Typical Arrangement of Sealing Washers

0.0 Specification					
Type of Protection	Ex ec, (non-sparking). Ex tc,				
Protection Standards	EN/IEC 60079-0, EN/IEC 60079-7, EN/IEC 60079-31,				
Area Classification	Zone 2 areas to EN/IEC 60079-10-1,				
	Zone 22 areas to EN/IEC 60079-10-2.				
Installation	EN/IEC 60079-14				
Certificate	Type Examination Certificate CML 16ATEX 4101X				
	IECEx Certificate of Conformity IECEx CML 16.0044X				
	Type Examination Certificate CML 21UKEX3501X				
Equipment Coding	Ex ec IIC T4 Gc				
	Ex tc IIIC T76°C Dc IP6X T ambient : 03L -20°C to +50°C ; 06L and 09L -20°C to +45°C				
ATEX/UKEX Coding					
Ingress Protection	IP65 to EN/IEC 60529				
CE	The CE marking of this product applies to "The Electrical Equipment (Safety) Directive", The Electromagnetic Compatibility Directive", the "Waste Electrical and Electronic Equipment Directive" and the "Equipment and Protective Systems intended for use in Explosive Atmospheres Directive". [2014/35/EU, 2014/30/EU, 2012/19/EU and 2014/34/EU respectively].				
UK CA	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" and the "Equipment and Protective Systems intended for use in Explosive Atmospheres Regulations 2016				
	The Equipment is declared to meet the provisions of the ATEX directive (2014/34/EU) by reason of the Type Examination/EU Type Examination and meets the UK statutory requirements SI 2016 No.1107 and compliance with the Essential Health and Safety Requirements.  M Poutney Technical Manager				



#### SPECIAL CONDITIONS FOR SAFE USE

The Luminaire shall only be installed where there is a low risk of mechanical damage.

When refitting the diffuser, the fixing clamps are to be re-secured with the original or replacement self tapping screws.

Fasteners through the enclosure used for mounting purpose shall be fitted with appropriate sealing washers to maintain the ingress protection rating of the enclosure.

Connections to the terminals must not be made if the ambient temperature is out with the range: 10°C to +80°C.

Luminaire is **supplied with Battery plug/Socket disconnected**, just prior to switching power on **re-connect battery plug and socket**.

# 1.0 Introduction – Zone 2 & Zone 22 Ex ec LED Luminaire General

There are three Emergency versions available. See Table A

The type of protection is Ex ec The Zone 2 & Zone 22 series Ex ec LED luminaires are surface mounted or suspended, utilising the two holes on the base of the 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 stainless steel toggle clips. The control gear and LED's are mounted on a removable tray that for maintenance purposes has hanging straps.

Note: The ratings are listed in TABLES A & B.

#### 1.1 Application

The luminaire is designed to be safe in normal operation. The luminaire should not be used where there are environmental, vibration or shock conditions above the normal for fixed installations. The gaskets should not be exposed to hydrocarbons in liquid or high concentration vapour states.

The luminaire is suitable for applications where Category 3 apparatus can be used. The type examination does not address suitability for portable applications.

#### 2.0 Storage

To optimise lifetime, luminaires and control gear boxes are to be stored in cool dry conditions preventing ingress of moisture and condensation between +5°C and +25°C Any specific instructions concerning emergency Luminaires must be complied with.

Battery packs in storage should be cycled charged/discharged/charged every 9 months, as per instructions below. Always disconnect battery plug and socket for storage.

Any specific instructions concerning emergency luminaires must be complied with.

(Warning: Battery packs not cycled and stored for a year may not be recoverable)

## 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 relevant EN / IEC standard or the local hazardous area code of practice, whichever is appropriate.

These instructions should be read carefully before attempting to install the luminaire. Copies of these instructions should be held in a safe place for future reference.

It is the responsibility of the installer to ensure that the apparatus selected is fit for its intended purpose and that the installation, operation and maintenance of the apparatus complies with regulations, standards or codes of practice applicable.

Any specific installation instructions must be referred to. In the UK, the requirements of the Health and Safety at Work Act must be met, and electrical work associated with this product must be in accordance with the "Manual Handling Operations Regulations" and "Electricity at Works 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 luminaires are quite heavy and suitable means of handling on installation must be provided.

Certification details on the rating plate must be verified against the application requirements before installation. The information in this leaflet is correct at the time of publication. The manufacturer reserves the right to make specification changes as required.

The GRP body & polycarbonate diffuser presents a potential source of ignition by **electrostatic electricity**. The diffuser should only be cleaned using a damp cloth. The luminaire should not be mounted very near to any probable location of fast-moving stream of dry air, steam etc. which could generate a propagating brush static discharge

#### 3.1.1 Use in Combustible Dust Atmospheres

Where the equipment is used in ignitable dust atmospheres reference must be made to the selection and installation standards in order that the equipment is used correctly. This applies to the de-rating of surface temperature for use where dust clouds may be present. Dust layers should not be allowed to accumulate on the fitting surface and good housekeeping is required for safe operation. Dust in layers has the potential to form ignitable clouds and to burn at lower temperatures.

Self tapping screws are supplied with the luminaire to lock the diffuser clamps. These must be fitted to maintain the certification.

Refer to EN/IEC 60079-10-2 & EN/IEC 61241-14 for additional details of selection, installation and maintenance.

#### 3.1.2 Hybrid Mixtures – Gas plus Dust

Where Hybrid mixtures exist as defined in EN/IEC1127 as a potentially explosive atmosphere, consideration should be given to verifying that the maximum surface temperature of the luminaire is below the ignition temperature of the hybrid mixture.

#### 3.1.3 Cleaning

The body of the luminaire may be cleaned with a mild solution of household detergent and water, after cleaning the body should be washed and wiped with clean water. The diffuser should not be polished or wiped with a dry cloth, as a risk of explosion due to electrostatic discharge may result. Cleaning of the diffuser with any chemical or hydrocarbon solvent-based cleaner may result in severe damage.

#### 3.1.4 Aggressive substances

If the equipment is likely to meet aggressive substances, then it is the responsibility of the user to take suitable precautions that prevent it from being adversely affected, thus ensuring that the type of protection provided by the equipment is not compromised.

Aggressive substances: e.g. acidic liquids or gases that may attack metals or solvents that may affect polymeric materials

Suitable precautions: e.g. regular checks as part of routine inspections or establishing from the material's data sheets that it is resistant to specific chemicals.

#### 3.2 Tools

Suitable spanners for installing cable glands.

3mm flat blade screwdriver. No.1 Pozidrive screwdriver.

Pliers, knife, wire strippers/cutters.

#### 3.3 Electrical Supplies

Luminaires fitted with electronic control gear are suitable for a rated supply from 220- 240Vac 50-60Hz, 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 Diode (LED)

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

#### 3.4.1 Dimming Option

If the product has a /DM suffix this means it comes fitted with a dali dimmable ballast and DALI EM functionality. 2 additional cable cores are needed to run the DALI data cable to DALI switch or PC with compatible software and hardware. EM light output levels cannot be altered through DALI.

## 3.6 Mounting

3.5

Luminaires should be installed where access for maintenance is practical and in accordance with any lighting design information provided for the installation. The mounting attitudes are restricted to ceiling, pendant, outreach pole (lamps facing down or horizontally outward) and horizontal wall mount. The luminaire is mounted using the DIA 8.2mm mounting holes on the rear of the body.

On mounting the luminaire by using the holes, it is the responsibility of the user to ensure that an adequate seal is made, to maintain the IP rating of the enclosure. Sealing Washers are provided.

#### 3.6 Cabling and Cable Glands

#### 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 2.5mm² with options of 2.5mm² 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 Gland Types

The installer and user must take responsibility for the selection of cables, cable glands and seals.

The product is certified for ATEX, IECEx and UKEX and to comply with the certification for installation cable glands and sealing plugs must be ATEX, IECEx or UKEX certified depending on site requirements.

Cable glands and sealing plugs when installed must reliably maintain the IP rating of the enclosure.

The cable gland must withstand an impact value of 7Nm where the risk of mechanical damage is high or 4Nm where the risk of mechanical damage is low.

Sealing plugs must be similarly rated, and a tool must be used for their removal. Where the cable is not reliably clamped externally to the apparatus, the cable gland must clamp the cable against a pull in Newtons of 20x the cable OD in mm for non-armoured cable and 80x the cable OD for armoured cable

Where brass cable glands are used in a corrosive environment cadmium or nickel plating should be used. DIA 20 cable entry clearance holes suitable for M20 cable glands are standard.

#### 3.6.3 Earthing

On GRP bodied luminaires, all internal metal parts are earthed through the Metal gear tray. The Metal gear tray is earthed via supplied cable to incoming terminal block.

It is the installer's responsibility to ensure proper earth supply to the luminaire and to ensure any metal cable glands are properly earthed. Cable gland earth kits are available from the manufacturer.

#### 3.6.4 Cabling

Access for cabling is via diffuser cover; care is to be taken, as there is no suspension of diffuser cover. The diffuser clip screws are removed, and the diffuser clips are undone, and the diffuser laid aside. The gear tray is dropped down after unclipping the steel mounting clips. The tray can be removed by undoing the spring clips on the suspension cables. 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 that 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 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 to replace the entire geartray assembly to maximise product lifetime.

Note: The diffuser cover must be refitted in its original orientation to maintain the IP rating.

IMPORTANT - In Zone 22 areas, the supplied the locking screws (No.6 x 5/16" (3.5mm x 8) Stainless Steel Self tapping Pozidrive) must be fitted into the diffuser clips.

#### 3.8 Inspection and Maintenance

Visual inspection should be carried out at a minimum of 12 monthly intervals and more frequently if conditions are severe. The time between lamp changes could be very infrequent and this is too long a period without inspection.

#### 3.8.1 Routine Examination

The equipment must be de-energised before opening. Individual organisations will have their own procedures. What follows are guidelines based on EN/IEC 60079-17 and 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. If the diffuser cover is removed, its orientation must be noted, and it must be refitted in the original orientation.
- 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.
- 9 Avoid the build up of dust layers by regular cleaning and again clean only using a damp cloth.

#### 3.8.2 Routine Testing of Emergency Lighting Functions

Users should ensure that the performance of emergency lighting remains adequate for their purposes by conducting periodic tests and recording the results. Requirements will differ between countries, applications and organisations. In the United Kingdom BS 5266 Pt1 gives guidance on testing.

#### 3.8.3 Emergency Lighting Functions

As standard this version can test the performance of the emergency Luminaire in accordance with IEC 62034. Unless the /NST (Non-Self Test option has been purchased)

#### Commissioning

After installation of the Luminaire and initial connection of the mains supply commissioning will be Initiated by the emergency converter module where the battery will remain on charge for an uninterrupted 24 hours. At this time the module will conduct a commissioning test for the full duration.

The 24 hours recharge occurs also if a new battery is connected or the module exits the rest mode condition. The following automatic commissioning duration test is only performed when a battery is replaced and fully charged (after 24 hrs) and the interval time is not set to zero, otherwise the system is expected to perform the testing.

If the mains supply is to be interrupted for more than 7 days, then the battery MUST be disconnected.

#### Functional test

The default setting is a 5 second test on a weekly basis.

#### **Duration test**

The default setting is a duration test conducted every 52 weeks.



#### Versions with option of DALI dimming and controls

If the /DM version of this fitting has been ordered, this comes with the additional ability of monitoring and tailoring test features.

#### Functional test

The time of day and frequency of the 5 second function test can be set by the DALI controller. The default setting is a 5 second test on a weekly basis. Duration test

The time of day and frequency of the duration test can be set by the DALI controller. The default setting is a duration test conducted every 52 weeks.

#### **LED Indicator** - A bi-colour LED indicates the status of the module as follows:

LED Indication	Status	Comment
Permanent green	System OK	AC mode
Fast flashing green (0.1 sec on – 0.1 sec off)	Function test underway	
Slow flashing green (1 sec on – 1 sec off)	Duration test underway	
Red LED on	Load failure	Open circuit/Short circuit/LED failure
Slow flashing red (1 sec on – 1 sec off)	Battery failure	Battery failed the duration test or function test/Battery is defective or deep discharged/incorrect battery voltage
Fast flashing red (0.1sec on – 0.1 sec off)	Charging failure	Incorrect charging current
Double pulsing green	Inhibit mode	Switching into inhibit mode via controller
Binary transmission of address via green/red LED	Address identification	During address identification mode
Green and red off	DC mode	Battery operation (emergency mode)

## 3.9 Electrical Fault Finding and Replacement (Refer EN / IEC 60079-19)

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. When electronic high frequency gear is fitted do not megger.

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.

#### 3.9.1 Battery Check and Replacement (Refer EN / IEC 60079-19)

Do not open luminaire when a hazardous atmosphere is present. Isolate before opening. The battery is detached at the plug and socket. Remove the two screws to release the battery. Re-assembly is in reverse order.

**Important:** Although the battery pack is fitted with a polarised plug and socket to prevent accidental shorting, Care must be taken not to short the leads together as this can cause sparking which, in turn,

could lead to a fire.

The emergency duration is 3 hours for the 03L, 06L and the 09L. This is in accordance with IEC 60598 2-22. The battery must be replaced when the duration is not acceptable.



Protect the batteries from water ingress and mechanical damage then transport from the hazardous area as soon as practical. Take care to fully discharge batteries before transporting or otherwise ensure that there can be no release of stored energy in transit.

#### 3.9.2 Checking of Battery separately

If the battery is to be checked separately, it should be charged using a **constant current charger** at 200/400mA for 30/15 hours for the 4Ah. Discharge measurement is not easy as the current is proportional to the voltage for resistance loads, so it must be averaged. Discharge the battery at 1 to 2A and multiply current by time. Do not discharge below 1 volt per cell, which is 5V. The capacity should be 75% or more of normal

#### 4.0 Overhaul (Refer EN / IEC 60079-19)

Components to be incorporated into or used as replacement parts of the equipment shall be fitted by suitably trained personnel and are to be purchased from the manufacturer as to ensure that certification is not invalidated. The certification of this equipment relies upon the following materials used in its construction: Glass re-enforced polyester body, polycarbonate diffuser, stainless steel clips and EPDM rubber gasket.

The unit is largely made of materials that are very corrosion resistant. This allows the unit to be completely stripped, cleaned, then re-built with new electrical parts as required. The internal wiring is 0.8mm² solid core, HTPVC insulated. All the spares required are available. Please state the model number and lamp details. The seal is between the polycarbonate diffuser and the base. The diffuser is retained by stainless steel clips. If the sealing gasket has deteriorated by softening or permanent set, a new sealing gasket should be fitted, which can be obtained from the manufacturer. To fit this, care is needed, the old gasket should be removed and remaining adhesive scraped off. The gasket is fixed in place to the body with a small amount of silicone RTV. It is the end user's responsibility to ensure the materials of construction and the product certification as detailed on the product label is suitable for intended installation location.

#### 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.

#### 6.0 Disposal of Material

Any disposal must satisfy the requirements of the <u>WEEE directive [2012/19/EU and Regulations 2012]</u> 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.

#### 6.1 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.

#### 6.2 Battery Disposal

Nickel cadmium batteries are defined as 'controlled waste' under the hazardous waste regulations and the user needs to observe a 'duty of care'.

Batteries can be returned to the manufacturers for re-cycling. They must be stored and transported safely, and any necessary pollution control forms completed prior to transportation. Take care to fully discharge batteries before transporting or otherwise ensure that there can be no release of stored energy in transit. For further details refer to Technical Department.



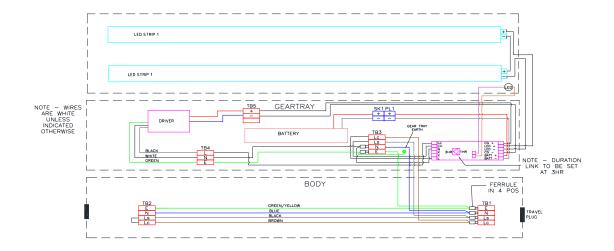


To comply with the Waste Electrical and Electronic Equipment directive 2012/19/EU and Regulations 2012 the apparatus cannot be classified as commercial waste and as such must be disposed of or recycled in such a manner as to reduce the environmental impact.

TABLE A - SCHEDULE – LED CONTROL GEAR – EMERGENCY – 120 to 277Vac – 127 to 300Vdc Note: for Dust Ratings Refer to Max Surface Temperatures.						
Product code	Body Type	Nominal Volts	Ambient Temperature	T Rating	Max Surface Temperature (Dust)	
ST3N/03L/LE/EM	2ft Twin	220-240Vac 50/60Hz	-20°C <u>&lt;</u> Ta <u>&lt;</u> +50°C	T4	76°C	
ST3N/06L/LE/EM	4Ft Twin	220-240Vac 50/60Hz	-20°C <u>&lt;</u> Ta <u>&lt;</u> +45°C	T4	76°C	
ST3N/09L/LE/EM	4Ft Twin	220-240Vac 50/60Hz	-20°C <u>&lt;</u> Ta <u>&lt;</u> +45°C	T4	76°C	

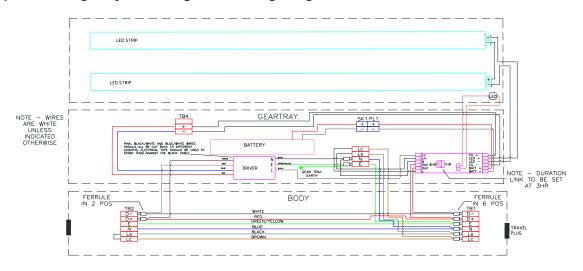
TABLE B - SCHEDULE – LED CONTROL GEAR – EMERGENCY – 220 to 240V					
No. Off LED Strips	Gear Type	Lumen	Nominal Circuit Power W (max)	Line Current	
2 x 560mm	LED Driver	3592	26	0.12 - 0.11A	
2 x 1120mm		6241	46	0.22 – 0.20A	
2 x 1120mm		8798	67	0.31 – 0.29A	

# **Typical Emergency LED Wiring Diagram**





# **Typical Emergency Dimming LED Wiring Diagram**



Note: For other Wiring Diagrams, please contact the manufacturer.

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



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



A A A A	EU/UK-Declaration of conformity							
# # # <sub>4</sub> , #		ation de conformité mitätserklärung						
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Manufacturer	Chalmit	Address 388 Hillington Road, Glasgow. G52 4BL Scotland UK				otland UK		
Product		ED Emergency						
Notified Body CML B.V. 2776								
Type Examination C	CML 16ATEX 4101X							
Approved Body Eurofins CML 2503								
Type Examination 0	Certificate	CML 21UKEX3501X						
ATEX <mark>/</mark> UKEX Coding	g	<b>(€x</b> ) Ⅱ30	Ex II 3 GD					
ATEX/UKEX Classi	fication	Group II Cat	Group II Category 3 GD					
Equipment Coding			Ex ec IIC T4 Gc, Ex tc IIIC T76°C Dc IP6X					
Ingress Protection		IP65						
The technical basis	, with respect to	equivalence o	f					
La base technique,	en ce qui conce	rne l'équivaler	nce de					
Die technische Grui	ndlage hinsichtli	ch der Normer	1					
Protection Standard	ls EN 60079-0, E	EN 60079-7, E	N 60079-31					
Area Classification	EN 60079-10-1,	EN 60079-10-	-2.					
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Terms of the directive	ve:				Standard & Date Certified to	Standards Date Declared to		
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Bestimmungen der	Richtlinie:				Standard & Datum	Standards Datum erklärt		
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2014/34/EU		d protective systems intended for use		ded for use	EN 60079-0: 2012			
SI 2016 No.1107		•	xplosive atmospheres.		EN 60079-7: 2015			
0044/04/11/		Appareils et les systèmes de protection destinés à			EN 60079-31: 2014			
2014/34/UE		n atmosphères potentiellement		nent				
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2014/34/EU				-				
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Regulations 2016	Electromagne	tic compatibilit	У		EN 55015 : 2019			
2014/30/UE	Compatibilité e	patibilité électromagnétique			EN 61547 : 2009			
2014/30/EU	Elektromagne	tische Verträg	lichkeit		EN 61000-3-2 : 2019			
001115=:=:								
2014/35/EU Regulations 2016	Low voltage equipment		EN 60598-1 : 2015					
2014/35/UE	Équipements	s électriques à bas voltage		EN 60598-2-22 : 2014				
2014/35/EU	· · ·	Niederspannungsgeräte / -systeme			EN 60529 : 1992+A2:2013			
2012/19/EU	Waste of elect			nent				
Regulations 2012		electrical and electronic equipment						
2012/19/UE	Déchets d'équ							
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.

Mark Poutney 10/11/2021 Name and Date Technical Manager MIRO Nom et Date Directeur technique Name und Datum Technischer Leiter

Quality Assurance Notification by: SGS Fimko OY Quality Management System Acreditation: ISO 9001 Système de Management Qualité Accréditation: Notification d'assurance qualité par: 0598

Qualitätsmanagementsystem Akkreditierung: Qualitätssicherungsnotifikation durch: Environmental Management System. ISO 14001 Système de gestion de l'environnement. by/par/durch Loyd's Register Umwelt kontroll system.

Certificate No./Certificat N°/Zertifikat Nr. SSGSB Eximentation OY **UKCA Quality Assurance Notification** 

LRQ 4005876 10155908 SGS Baseefa <mark>1180</mark>

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