

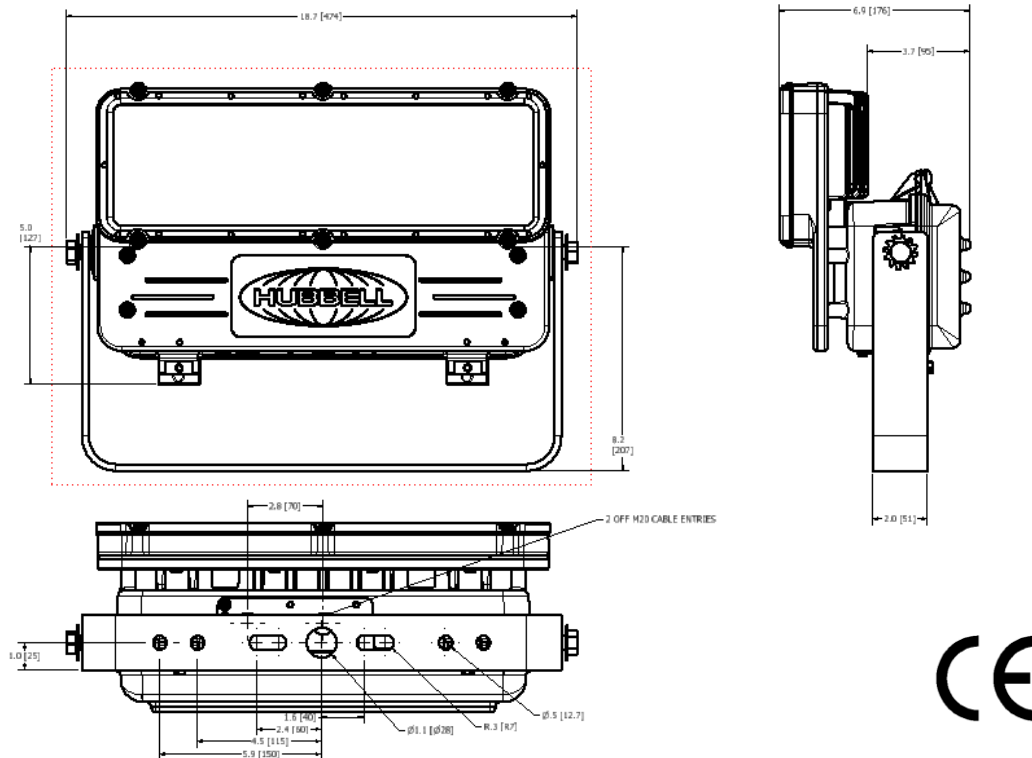


ARRAN X LED Floodlight Luminaire

Industrial

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

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.



0.0 Specification	
Type Of Protection	N/A
Standards	EN 60598-1,
Area Classification	Industrial, (Non- Hazardous)
Ambient	-50°C to +55°C
Ingress Protection	IP66 to EN 60529
Photobiological safety of Lamps and Lamp Systems	Risk Group 2 LED product to IEC 62471
Vision Advisory Claim	WARNING: Do not look at exposed led in operation especially with optical instruments. Eye injury can result.
CE Mark	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]. M Poutney Technical Manager



MEGOHM TEST - DUE TO THE SURGE PROTECTION PROVIDED IN THE LUMINAIRE TO PROTECT THE INTERNAL ELECTRONICS AND LEDs, A CIRCUIT WITH THE LED FIXTURE MAY GIVE A FALSE MEGOHMMETER (MEGGAR) READING. IF A MEGOHMMETER TEST IS REQUIRED, THE LED FIXTURE SHOULD BE REMOVED FROM THE CIRCUIT.

The fitting's driver is protected via thermal foldback sensor which reduces the light output of the fitting to prolong the life of the driver in high ambient service conditions. When the driver reaches temperatures near the manufacturer's recommended limits, the foldback sensor will activate and slightly reduce the light output to decrease the temperature of the fixture. Once the driver temperature reduces from this level, the fitting will operate at normal levels.

1.0 Introduction – ARRAN X FLOODLIGHT

The ARRAN X LED Floodlight Luminaire operates from mains voltage.

Power Factor >0.95 Power is constant over voltage range.

Table 1 MODEL VARIATIONS

CHALMIT MODEL NUMBER	WATTS	Hz	VOLTS	AMPS
ARXI/30/LE	270	50/60	120-270AC/105-250DC	2.3-1.0/2.6-1.1
ARXI/20/LE	180	50/60	120-270AC/105-250DC	1.5-0.7/1.7-0.7
ARXI/14/LE	120	50/60	120-270AC/105-250DC	1.0-0.4/1.1-0.5
ARXI/10/LE	90	50/60	120-270AC/105-250DC	0.8-0.3/0.9-0.4
ARXI/07/LE	60	50/60	120-270AC/105-250DC	0.5-0.2/0.6-0.2
ARXI/07/LE/EM	120	50/60	120-270	1.0-0.4
ARXI/14/LE/EM	60	50/60	120-270	0.5-0.2

Ambient Range -50°C to +55°C

Tamb Storage -40°C to +50°C

Looping The looping current rating is 16A. 6mm² terminals are standard.

Fuse and MCB Ratings Current consumption, see table above. It is recommended that for selection of MCB's users should consult the MCB manufacturer. MCB ratings can vary depending on the manufacturer and type and the size of the installation, i.e. impedance of conductors, however type 'C' breakers are usually suitable. The electronic control gear has an inrush current of 34A for less than 50µs. These figures are worst case with low resistance connections with short cables and low impedance supplies.

2.0 Storage

Luminaires should be stored in cool dry conditions preventing ingress of moisture and condensation.

3.0 Installation and Safety

3.1 General

There is 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 *IEE wiring regulations and any local authorised practices*. Any specific installation instructions must be referred to. 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 luminaires are quite heavy and suitable means of handling on installation must be provided.



IOM – ARRAN X LED FLOODLIGHT (IND)

Guard and Reflector can be supplied with or fitted retrospectively, the guard is to protect glass if there is a higher than normal risk of mechanical damage. The guard and reflector can be fitted together.

3.2 Tools

- M8 hex socket
- 4mm flat blade screwdriver
- Suitable spanners for installing cable glands
- Pliers, knife, wire strippers/cutters

3.3 Electrical Supplies

A maximum voltage variation of +6%/-6% on the nominal is expected.

3.4 Light Source

The luminaire is fitted with LEDs that can last 80,000 hours depending on ambient temperatures. Therefore depending on the functionality of the fitting replacement of LED's will be rare /unnecessary. If the LED assembly needs replaced refer to **4.2 LED Replacement**.

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. This will usually consist of aiming points and aiming angles. Mounting ARRAN X arrangements should be secured with lock washers or self-locking nuts and bolts.

3.5.1 AIMING DESIGNATIONS

In environments with high dust, the dust will cover the lens and increase the temperature of the fixture. In a high dust environment use the aiming diagram shown below as directed on the nameplate. The angle shown below will keep dust from accumulating on the lens.

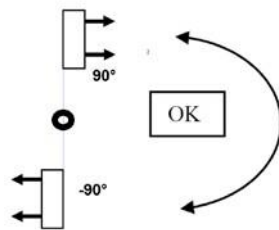


Figure A

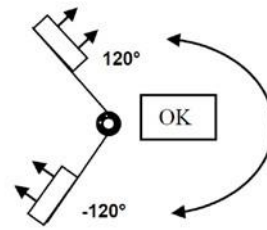


Figure B

3.6 Cabling and Cable Glands

3.6.1 Cable

The maximum conductor size is 6mm². Open the fixture by loosening the swing bolts. Using the terminal blocks supplied, run supply wire to fixture through applicable hub. Make watertight joint using sealing fittings at appropriate hole.

The holes through the cast metal in the driver compartment are for an M20 cable gland.



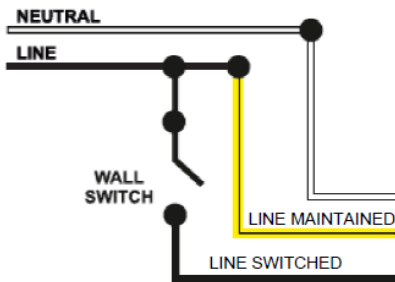
The terminal block shown is with battery back up. Non back up fixtures will not have the "L2" terminal. Mains wiring should be brought into the corresponding marked terminal. Looping wiring can be accomplished by using the adjacent connection port. A small screwdriver can be inserted in the slot near the connection port to ease the force required to insert the wire. The external ground is located next to the gland/hub opening where the mains wires exit the fixture.

Reattach the swing bolts. Torque the cover bolts until the cover touches the housing. Approximately 3 N-m. Re-energized the circuit to verify the fixture is operating properly

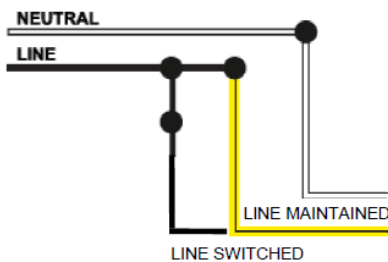
IMPORTANT: To turn the fixture completely off, an un-switched AC power source of 120VAC to 277VAC is required for the Line Maintained (yellow) and neutral (white) leads. A locally switched line must be attached to the Line Switched (black) terminal. If the Line Switched terminal is attached to continuous power, the fixture will go into battery backup mode if the power is turned off.

IMPORTANT: Fixtures are shipped with a jumper between the Line Maintained and Line Switched terminals. Remove the wire link (jumper) and attach the Line Switched terminal to a local switched source when local switching is required. The battery must be charged for at least 12 hours prior to testing. The battery switch must be turned to the “ON” position for the fixture to operate correctly. The fixture will not light up in battery backup mode until AC power is supplied once while the battery switch is in the “ON” position. Thereafter, the fixture will operate in battery backup mode when the AC power is off.

SELF-DIAGNOSTIC INSTRUCTIONS/OPERATION: The self-diagnostic feature is set from the factory. The emergency LED driver will conduct a self-check for thirty (30) minutes every thirty (30) days; and ninety (90) minutes or one hundred eighty (180) minutes self-check every 12 months. After every self-check the LED indicator light will indicate a status signal.



WIRING REQUIRED TO TURN FIXTURE COMPLETELY OFF



FIXTURE WILL GO INTO BATTERY BACKUP MODE WHEN POWER IS INTERRUPTED

TABLE 1 – Self Diagnostic Indications	
LED Indicators Status	EM Driver Status/Mode
• Solid Green	System OK/AC OK(Self-diagnostic Enabled or Disabled).
• Slow Flashing Red, 4s on/1s off	Battery not Detected, Check Battery Switch Connection.
• Flasing Red, 1s on/1s off	Battery Failure, Replace Battery.
• Flashing Green, 1s on/1s off	Self-Diagnostic Test Underway.
• Fast Flashing Red, 0.1s on/ 0.1s off	Abnormal Driver Performance, Replace Driver.
• Very Slow Flashing Red, 4s on/4s off	Over Temperature.
• None, Both LED's OFF	Normal Working EM Mode.
• Green/Red Alternative Flashing, 1s Green/1s Red.	No Load or Output over Voltage Protection Triggered.

3.6.2 Cable Glands

The installer and user must take responsibility for the selection of cables, cable glands and seals. Cable glands and sealing plugs when installed must reliably maintain the IP rating of the enclosure IP66. Sealing plugs are provided and a tool must be used for their removal. Where brass cable glands are used in a corrosive environment, cadmium or nickel plating should be used. Two tapped cable entries are provided, one with a plug and seal suitable for permanent use, the other has a travelling plug. M20 entries are standard, other sizes are available on request up to M25.

4.0 Inspection and Maintenance

Visual inspection should be carried out at a minimum of 12 monthly intervals and more frequently if conditions are severe.

Maximum Insulation Resistance Test 500V dc.

- 1 Check if any LED's have failed (not lit).
- 2 The LEDs are mounted on boards, if there is 3 or more LED's not working on one board the light output will have dropped to a level where the LED board may need replaced. Refer to **4.2 LED Replacement**.
- 3 Check for mechanical damage/corrosion.
- 4 Check for loose connections including earthing.
- 5 Check for undue accumulations of dust or dirt.
- 6 Verification of tightness of fixing, glands, blanking plugs etc.
- 7 Check for unauthorised modifications.
- 8 Check condition of enclosure gaskets and fastenings.
- 9 Check for any accumulation of moisture.
- 10 Clean the lamp glass.
- 11 Check that mountings are secure.
- 12 If there is suspicion that the luminaire has suffered mechanical damage, a stringent workshop check should be made.

Important: Where spares are needed, these must be replaced with manufacturer parts. No modifications should be made without the knowledge and approval of the manufacturer.

4.1 Electrical Fault Finding and Replacement

Any fault finding must be done by a competent electrician with the luminaire isolated and if carried out with the luminaire in place, under a permit to work. Fault finding is by substitution with known good components.

4.2 LED Replacement.

The need and frequency of replacing LED's be dependent on the functionality of the fitting. If it is continually running at high ambient temperatures it will affect the frequency of LED replacement. If it is necessary to replace the LED's, the LED's are mounted on boards that can be replaced individually. (The boards with LED's supplied by Chalmit). Remove cover assembly.

Removal of LED assembly is as follows:

1. Unscrew the screws that secure the board to the casting.
2. Carefully lift the plate and disconnect push in connector.

Replacement of LED assembly is the reverse of the removal.

Replace Front cover and fully tighten all bolts.

4.3 Battery Replacement

1. Make sure that the circuit is de-energized
2. Remove the housing cover.
3. Remove wires from lever nuts as necessary. To remove a wire from a lever nut, fully push up the lever and remove the conductor.
4. Remove the two screws that hold the driver to the housing.
5. Remove the two screws that hold the battery compartment cover to the driver.
6. Disconnect the connector and replace the new battery (part number VM-BATT).
7. Reassemble

New fixtures with batteries can be stored for 2 years in a -20°C to 30°C ambient without a need of recharge. A fully discharged unit should not be stored more than 6 months without being recharged. There is low voltage disconnect of the battery to the emergency drivers, however as the batteries still have self-discharge they should be recharged within 6 months to prevent the cells from permanent capacity loss. For long term storage, turn the battery switch to the "off" position to prevent the cells from permanent capacity loss.

5.0 Disposal of Material

The unit is mostly made from incombustible materials. The control gear contains electronic components and synthetic resin. All these may give off noxious fumes if incinerated. Care must be taken to render these fumes harmless and 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 therefore must not be treated as commercial waste.

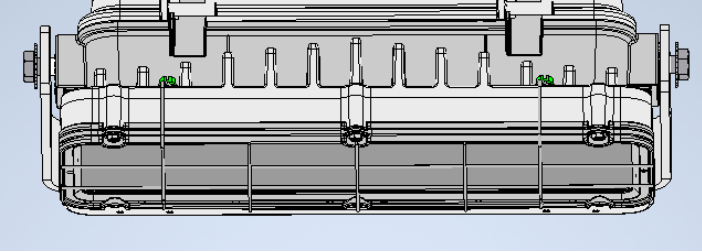


To comply with the Waste Electrical and Electronic Equipment directive 2012/19/EU the apparatus cannot be classified as commercial waste and as such must be disposed of or recycled in such a manner as to reduce the environmental impact.

Directions for Installation of Accessories

WARNING: Ensure the supply circuit is off before starting installation.

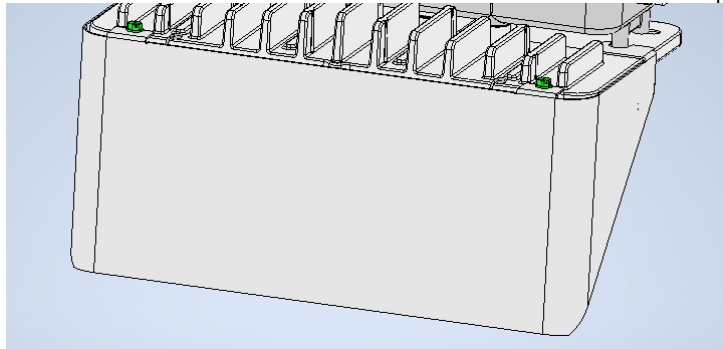
Wire Guard Installation



Place wire guard over lens area, placing loops over holes behind LED Housing. Attach guard to housing using two screws provided through bosses in housing.

Both guard and reflector can be used on a fixture simultaneously.

Dark Skies Reflector Installation



Place reflector over LED Housing. Hook tab on bottom of reflector over boss going from Driver Housing to LED Housing. Attach reflector to LED Housing using two screws provided through bosses in LED Housing.

Conditions for Safe Use:

1. To prevent ignition of hazardous atmospheres, disconnect ballast/fixture from supply circuit before opening. keep tightly closed when in operation.
2. Do not open, maintain or service in an area where an explosive atmosphere may be present.
3. When Polycarbonate lens is in use, clean lens with damp cloth to avoid static discharge.
4. The luminaire shall only be installed where there is a low risk of mechanical damage.

Chalmit Lighting is a leading supplier of Hazardous Area lighting products

	<p>CHALMIT LIGHTING 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.



	EU-Declaration of conformity		
	UE-Déclaration de conformité		
	EU-Konformitätserklärung		
Manufacturer	Chalmit	Address	388 Hillington Road, Glasgow. G52 4BL Scotland UK
Product	ARRAN X LED Floodlight Industrial		
Catalogue	ARXI/30L/LE/** see Table 1		
Area Classification	Industrial, (Non- Hazardous)		
Ingress Protection	IP66		
Ambient	-50°C to +55°C		
Terms of the directive:		Standard & Date Certified to	Standards Date Declared to
2014/30/EU		Electromagnetic compatibility	EN 55015 : 2013
2014/30/UE		Compatibilité électromagnétique	EN 61547 : 2009
2014/30/EU		Elektromagnetische Verträglichkeit	EN 61000-3-2 : 2014
2014/35/EU		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
2012/19/EU		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		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 02/09/2021
 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

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