



## User Instruction & Installation Manual

### L300 110w Searchlight



#### Product Reference Number:

- |                                 |                            |
|---------------------------------|----------------------------|
| A6172 – 110/240v Deck           | A7201 – 24v Deck           |
| A6173 – 110/240v Cabin          | A7228 – 24v Cabin          |
| A6174 – 110/240v Deck Pedestal  | A7229 – 24v Deck Pedestal  |
| A6175 – 110/240v Cabin Pedestal | A7230 – 24v Cabin Pedestal |

#### Manufacturer's details:

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#### Distributor details:

Manual Part Number: C27731  
Issue: 8      28.5.26      EC2155

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# 1 - Introduction

**It is imperative that this manual is read carefully and understood before installing your equipment. For your future reference please keep this manual in a safe place.**

Thank you for specifying a product from the Francis Searchlights range. All Francis products are designed to give complete customer satisfaction and are manufactured to the highest engineering standards to ensure optimum performance and service life.

The Francis LED range combines features proven over many years service in the most hazardous conditions in both marine and land installations.

To prolong the life and performance of your product, we recommend that you only specify Francis Searchlights spare parts. This will also ensure that any warranties on your equipment will not be invalidated. Information on spares ordering and parts is provided in this manual.

Should you ever need to contact Francis Searchlights Ltd. regarding your equipment, please always quote the Product Serial Number.

## 2 - Safety Precautions

The following instructions must be adhered to, to ensure a safe working environment and the safety of the user.

**Note: When unpacking or manoeuvring the searchlight into its fixing position, suitable lifting points must be used to prevent damage to the equipment or personal injury.**

- The high luminance of the LED can cause severe damage to the eye if viewed directly. ALWAYS wear suitable protective goggles when viewing the LED.
- Searchlights get hot. Never touch the unit when lit and always allow 15 to 20 minutes for cooling down after turning the searchlight off.
- Never place anything on or cover the searchlight when in use.
- Ensure the LED has cooled sufficiently before removal.
- Due to the vast range of LED modules available it may appear possible that more powerful LED's can be used in the equipment than for which it was designed. Even when the unit will physically accept a higher wattage LED, this substitution is not recommended and is dangerous. This action will also void any warranties on the equipment.

## 3 – Technical Information

This product has been designed to operate in accordance with the product specification. The L300 110W LED searchlight has the following features:

- All marine grade materials and fixings.
- Powder coated finish.
- Pan rotation 450°.
- Vertical movement  $\pm 40^\circ$  (Deck & Deck Pedestal).
- Vertical movement  $+30^\circ$  to  $-25^\circ$  (Cabin & Cabin Pedestal).
- Economical 33,000-hour LED life.
- Toughened super clear Optiwhite front glass.
- Parabolic reflector.
- Searchlight & Control Gear protected to IP66.
- Searchlight weight 12 Kgs, PSU weight 2.5 Kgs, Pedestal 4.6Kgs, Cabin control assembly 2.3Kgs & Cabin pedestal assembly 3.3Kgs.

The searchlight also performs to the following optical data:

- Supply voltage – 110/240v ac or 24v dc.
- Luminous flux 13,900.
- Colour temperature 6500K.
- Range – 1129 metres.
- Divergence –  $7^\circ$  spot  $20^\circ$  flood.
- Temperature range: -50 if optional heater is fitted.

In order that the searchlight operates correctly it is imperative that competent personnel are responsible for the installation, operation, and servicing of this equipment. Failure to adhere to this advice may cause premature failure or incorrect operation of the searchlight, which may damage the equipment or cause personal injury.

## 4 - Unpacking and Installation Instructions

The following instructions should be read and fully understood prior to installing the equipment to ensure that the correct procedures are followed, and all safety precautions are observed.

**Note: If the equipment has been in storage for a considerable amount of time, it is advisable to conduct a routine maintenance check on all parts before installation.**

### **Safety Precautions**

This equipment should not be connected to an electrical supply before being installed. Installation procedures should be adhered to, to ensure a safe working environment and reduce the risk of damage or personal injury.

### **Preparing the Mounting Position**

Mark out and drill the fixing holes through the deck, using the template provided. If anti-vibration mounts are to be fitted, the fixing holes for the mounts should also be marked out and drilled. Prior to manoeuvring the searchlight into its' fixing position, the AV mounts should be fitted to the base.

In the case of cabin control models, a centre hole is also required to allow the mechanism to pass through. Fit the 'O' ring in position and bolt the searchlight down securely. On an uneven surface it is necessary to use a suitable sealant, such as silicone, to ensure a weatherproofed joint.

For cabin control models it is necessary to remove the Underdeck control assembly prior to installation. Using the Allen key provided, the five grub screws on the Underdeck mechanism should be loosened to allow the Underdeck control assembly to be removed. The outer tube can now be positioned through the centre hole. The searchlight base can now be securely fixed as stated above.

Upon installation, re-assemble the Underdeck control mechanism ensuring the grub screws are secure and the mechanism operates correctly.

## Fitting Instructions for Cabin Model

### Preparing the Mounting Position

Using the template provided mark out and drill the fixing holes through the deck or cabin roof. In the case of cabin control models, a centre hole is also required to allow the mechanism to pass through.

### Mounting the Searchlight

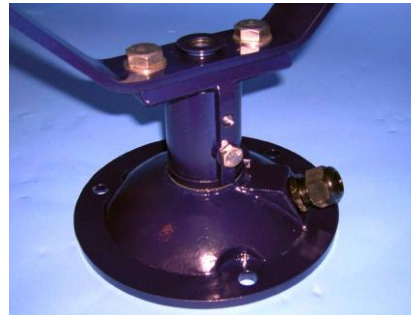
#### For Deck Models:

Fit the 'O' ring in position and bolt the searchlight base securely down. On an uneven surface it is necessary to use a suitable sealant, such as silicone, to ensure a weather proofed joint.

#### For Cabin/Cabin Pedestal Models:



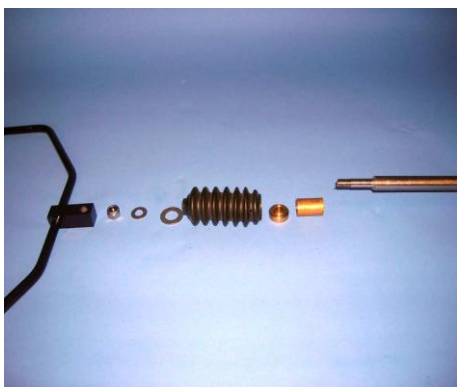
1. Remove the Base Lock Wheel.



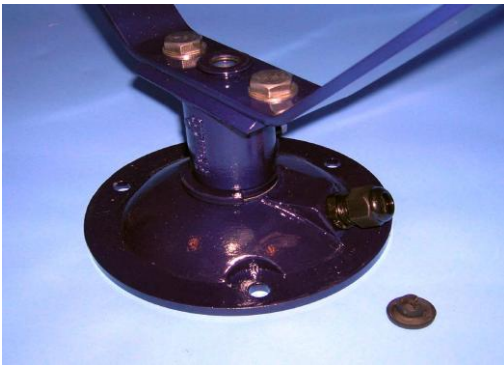
2. Replace Lock Wheel with M8 x 10 hexagon screw in the bottom fixing



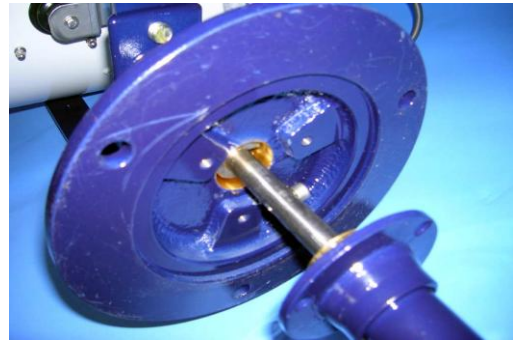
3. Now remove the following items as these are only required on deck models Barrel Lock Wheel, Elevation Link and fixings



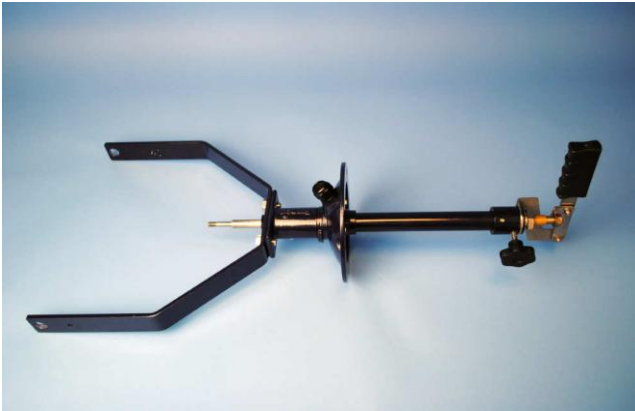
4. When installing the Under Deck mechanism, first separate the following items. U-Piece Assembly, M8 nyloc nut, M8 plain washer, M12 plain washer, Rubber Bellows, Bellows Top Bush, and the Push Rod Top Bush



**5.** Remove the Blanking Plug from the Bellows Bottom Bush.



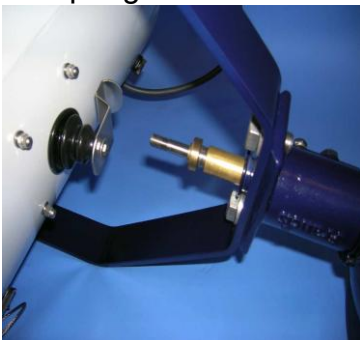
**6.** Insert the Under Deck through the centre hole making sure it is aligned as photos below.



**7.** Fasten the Under Deck mechanism Using the 3 off M6 x 16 screws and spring washers



**8.** Re-Fit the following items:  
Push Rod Top Bush



**9.** Bellows Top Bush.

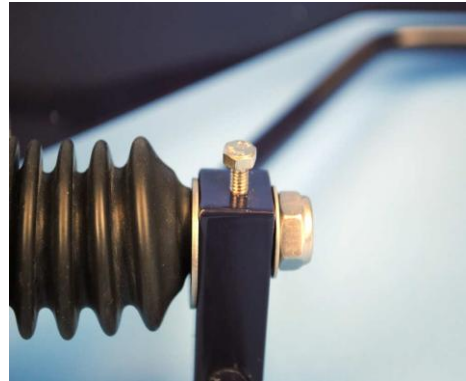
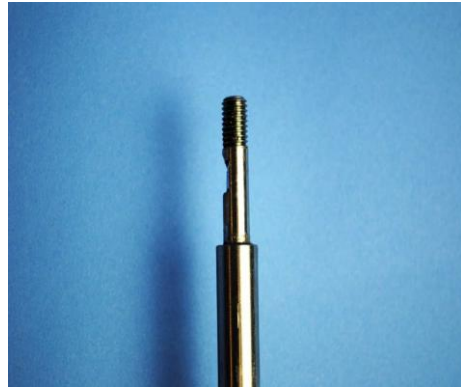


**10.** Bellows.



**11.** M12 plain washer. U-Piece Assy.  
M8 plain washer. M8 nyloc nut.

12. Make sure the mechanism is in this position before tightening the M5 x 8 hexagon screw onto the flat of the push rod



13. U-Piece fixings.



14. Fix the U-Piece Assembly using U-Piece fixings make sure there is a plain washer both sides of the U-Piece Bush.



15. Completed.  
Make sure the Searchlight pans and tilts correctly.

#### For Pedestal Models:

Mark out and drill through cabin roof using the template provided.  
Remove the cable gland in the base and replace with the blanking plug supplied.  
Secure the pedestal to the deck using appropriate fixings and then mount the searchlight to the pedestal and secure using the fixings provided. A drilled hole is also required in the deck to allow for the connection to an electrical supply. The searchlight is supplied with 3 metres of supply cable so that the installer can choose a suitable connection point.

## 5 - Electrical Installation

For safety purposes, only competent personnel should perform the electrical installation. All equipment should be installed to current Electrical Regulations and Standards.

To obtain the maximum light output from the searchlight, it is essential that the full operating voltage of the LED fitted be applied to the LED contacts.

### Method of Electrical Connection

- 1) Disconnect the supply before working on the electrical system.
- 2) The searchlight must be connected to a fused electrical supply, using suitably sized cable.
- 3) If the searchlight is located a considerable distance from the supply, provision must be made in the cable size to overcome the voltage drop.
- 4) Whenever possible cable terminations should be made below deck and with approved terminal devices.
- 5) If a spare auxiliary fuse or circuit breaker is not available, one of the correct type/ratings should be fitted and connected to a positive supply. It is advisable to locate a bus bar or main connection and avoid any direct connection to the supply:
- 6) For 110/220v AC products, the following colour coding system should be used for the customer supply cable:

Brown	- Live
Blue	- Negative
Green/Yellow	- Earth

### Installation Guideline

A typical installation and connection routine for the L300 110W LED 110/240v searchlight is as follows:

Referring to wiring diagram C27730, a supply is fed into the driver junction box, which then provides a common feed to the searchlight.

Cables required to be connected by the customer: -

3 cores 1.5mm cable from the driver junction box to the Searchlight,

(Customer may need to provide a suitable junction box to this cable, 3 metres supplied).

The Mains cable to the driver junction box is to be supplied by the customer.

A typical installation and connection routine for the L300 110W LED 24v searchlight is as follows:

Referring to wiring diagram C28533, a supply is fed into the driver junction box, which then provides a common feed to the searchlight.

Cables required to be connected by the customer: -

3 cores 1.5mm cable from the driver junction box to the Searchlight,

(Customer may need to provide a suitable junction box to this cable, 3 metres supplied).

The Mains cable to the driver junction box is to be supplied by the customer.

## 6 - Operating Instructions

This equipment is designed for use out of doors, in free air. Never place anything on or cover the searchlight when in use as this may present a hazard.

The searchlight can be positioned using the elevation and base plate lockwheels. When in the desired position the lockwheels should be securely fastened to maintain position. When not in use it is recommended that the searchlight is left in the down position to prevent sunlight from damaging the LED.

The beam of the searchlight can be adjusted to give a variety of beam types. Using the focus knob on the underside of the searchlight, the desired beam can be achieved for any application. The beam will move through 'spot' to 'flood'. To fix the beam type; simply release the knob at the desired position.

Using the template provided mark out and drill the fixing holes through the deck or cabin roof. In case of cabin control models, a centre hole is also required to allow the mechanism to pass through.

On an uneven surface when bolting down the searchlight it is necessary to use a suitable sealant, such as silicone, to ensure weather proofed joint.

Please note that if an optional heater is fitted, it is advisable to leave the heater permanently in the 'ON' position to remove any condensation. The heater specified on this equipment is self-regulating and will shut off when the dew point temperature is reached.

**This product should not be used for any purpose other than for which it was designed. Any modifications to the product should not be undertaken without consulting the manufacturer.**

## 7- Fault Finding

All fault finding must be conducted by a competent person or qualified Electrical Engineer.

### **Failure of LED to light.**

In the event of the LED failing to light the following steps should be taken:

- 1) Check that the mains supply is connected to the input of the LED driver and check all connections as per the wiring diagram. On operation if the LED does not light, switch off mains supply and check all fuses.

## 8 - Maintenance and Servicing

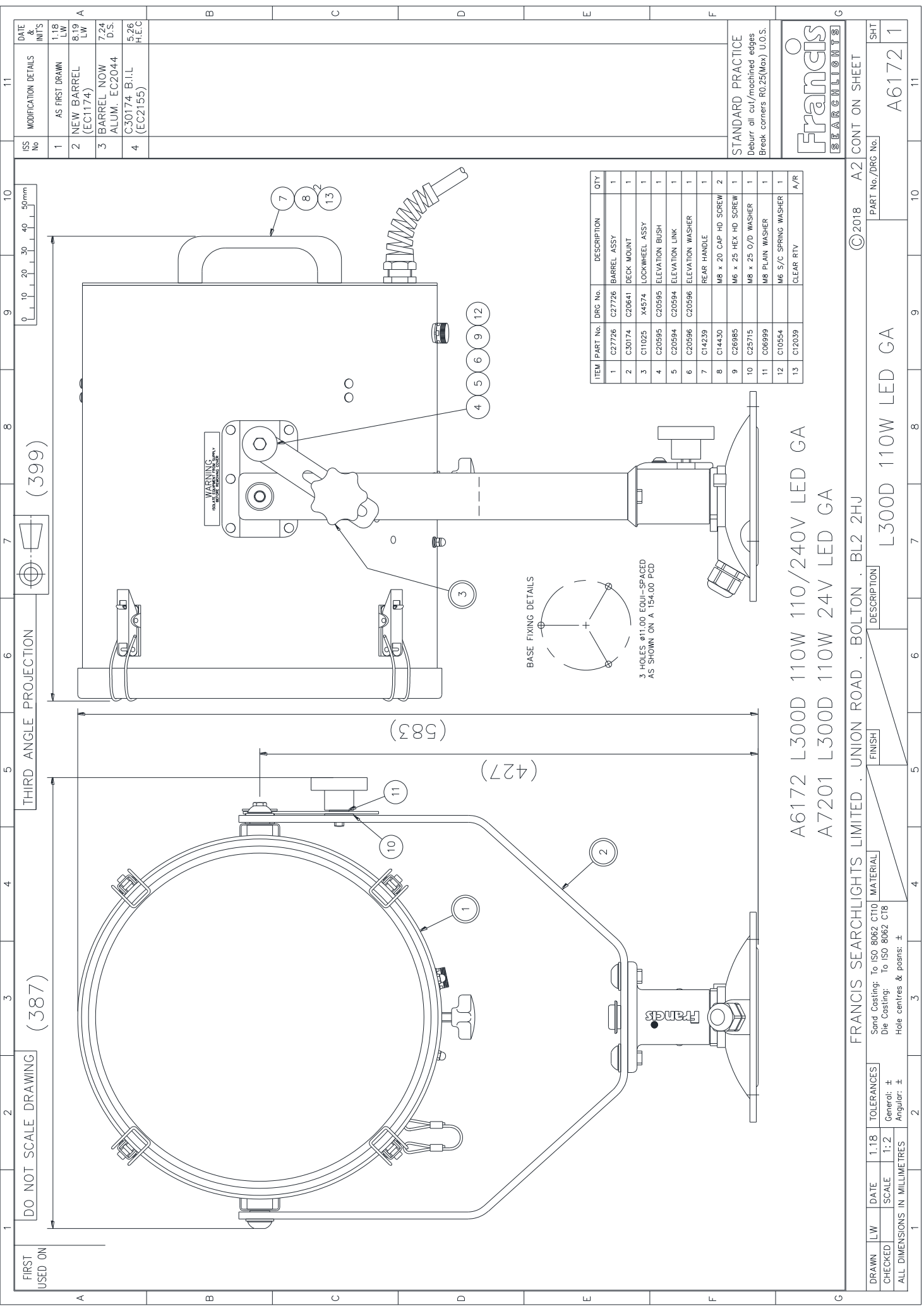
To prolong the service life and performance of your searchlight, the following maintenance guidelines are recommended:

- Maintenance checks should be conducted before every voyage or at least every three months.
- Before checking, disconnect the equipment from the supply.
- Visually inspect the condition of the equipment.
- Any major or minor structural damage should be rectified immediately to reduce sympathetic wear.
- After inspection it may be necessary to clean the inside of the searchlight. The following procedure should be adhered to:
  - Remove the front bezel.
  - Clean the front glass inside and out using a proprietary glass cleaner.
  - Clean the lenses if required.
- It is advisable to check all seals and gaskets for signs of degradation. Renew if necessary.
- Upon completing all maintenance requirements, the searchlight should be tested for full working order (approximately 20 minutes).
- Every six months the external movement mechanisms i.e., lockwheels, elevation and pan mechanisms, should be lightly lubricated.

**If in any doubt as to the correct servicing procedures to adopt, please contact your distributor/agent or the manufacturer who will be able to advise the best course of action for your product.**

## 9 - Wiring Diagrams & General Assemblies

<b>Drawing Number</b>	<b>Description</b>
A6172 A7201	L300 110W LED Deck 110/240V General Assembly L300 110W LED Deck 24V General Assembly
A6173 A7228	L300 110W LED Cabin 110/240V General Assembly L300 110W LED Cabin 24V General Assembly
A6174 A7229	L300 110W LED Deck Pedestal 110/240V General Assembly L300 110W LED Deck Pedestal 24v General Assembly
A6175 A7230	L300 110W LED Cabin Pedestal 110/240V General Assembly L300 110W LED Cabin Pedestal 24V General Assembly
C27730	Wiring Diagram 110/240V.
C28533	Wiring Diagram 24V.
C27704	Driver Box Assembly 110/240V
C28484	Driver Box Assembly 24V
C27867	LED Replacement Instructions



ISS No	MODIFICATION DETAILS	DATE & INT'S
1	AS FIRST DRAWN	1.18 LW
2	NEW BARREL (EC1174)	8.19 LW
3	BARREL NOW ALUM. EC2044	7.24 D.S.
4	C30174 B.I.L (EC2155)	5.26 H.E.C

ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C27726	C27726	BARREL ASSY	1
2	C30174	C20641	DECK MOUNT	1
3	C11025	X4574	LOCKWHEEL ASSY	1
4	C20595	C20595	ELEVATION BUSH	1
5	C20594	C20594	ELEVATION LINK	1
6	C20596	C20596	ELEVATION WASHER	1
7	C14239		REAR HANDLE	1
8	C14430		M8 x 20 CAP HD SCREW	2
9	C26985		M6 x 25 HEX HD SCREW	1
10	C25715		M8 x 25 O/D WASHER	1
11	C08599		M8 PLAIN WASHER	1
12	C10554		M6 S/C SPRING WASHER	1
13	C12039		CLEAR RTV	A/R

STANDARD PRACTICE  
Deburr oil cut/machined edges  
Break corners R0.25(Max) U.O.S.

**Francis**  
SEARCHLIGHTS

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PART No./DRG No. A6172

SHT 1

FIRST USED ON

DO NOT SCALE DRAWING (387)

THIRD ANGLE PROJECTION (399)

50mm

0 10 20 30 40 50

(583)

(427)

WARNING  
READ THE INSTRUCTIONS CAREFULLY  
BEFORE USING THIS PRODUCT

3 HOLES ø11.00 EQUI-SPACED AS SHOWN ON A 154.00 PCD

BASE FIXING DETAILS

FRANCIS

A6172 L300D 110W 110/240V LED GA  
A7201 L300D 110W 24V LED GA

FINISH	DESCRIPTION
	L300D 110W LED GA

FRANCIS SEARCHLIGHTS LIMITED · UNION ROAD · BOLTON · BL2 2HJ

DRAWN	LW	DATE	1.18	TOLERANCES
CHECKED	SCALE	1:2	General: ±	Angular: ±

Send Casting: To ISO 8062 CT10  
Die Casting: To ISO 8062 CT18  
Hole centres & posns: ±

ALL DIMENSIONS IN MILLIMETRES

DATE	DESCRIPTION	BY	CHKD	APP'D
1.18	AS FIRST DRAWN			
1.18	NEW BARREL			
7.24	BARREL NOW ALUM EC2044			
1.25	C27683 BILL (EC2080)			
5.26	A6172, A7201 AND C27683 BILL (EC2125)			

ISS No	MODIFICATION DETAILS	DATE
1	AS FIRST DRAWN	1.18
2	NEW BARREL	1.18
3	BARREL NOW ALUM EC2044	7.24
4	C27683 BILL (EC2080)	1.25
5	A6172, A7201 AND C27683 BILL (EC2125)	5.26

STANDARD PRACTICE  
 Break corners R0.2(Min) U.O.S.

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 PART No./DRG No. A6173 1

FRANCIS SEARCHLIGHTS LIMITED · UNION ROAD · BOLTON · BL2 2HU

DESCRIPTION L300C 110W LED GA

FINISH MATERIAL

Send Coating: To ISO 8062 CT10  
 Die Coating: To ISO 8062 C18  
 Hole centres & posit: ±

TOLERANCES  
 General: ±  
 Angular: ±

DO NOT SCALE DRAWING

FIRST USED ON

THIRD ANGLE PROJECTION

(369) (582) (426) (201) (132)

HOLE Ø75.0

BASE FIXING DETAILS

3 HOLES Ø11.0 EQUI-SPACED AS SHOWN ON A 154.0 P.C.D.

FOR SCREW FIXING KIT

1 OR 2

4

A6173 L300C 110W LED HV GA  
 A7228 L300C 110W LED LV GA

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C27683	C20624	TRAINER MOUNT CONVERSION	1	1
4	C20746		CABIN CONVERSION KIT	1	1

A6173A7228

FRANCIS

SEARCHLIGHTS LIMITED

UNION ROAD · BOLTON · BL2 2HU

DESCRIPTION L300C 110W LED GA

FINISH MATERIAL

Send Coating: To ISO 8062 CT10  
 Die Coating: To ISO 8062 C18  
 Hole centres & posit: ±

TOLERANCES  
 General: ±  
 Angular: ±

DO NOT SCALE DRAWING

FIRST USED ON

THIRD ANGLE PROJECTION

(369) (582) (426) (201) (132)

HOLE Ø75.0

BASE FIXING DETAILS

3 HOLES Ø11.0 EQUI-SPACED AS SHOWN ON A 154.0 P.C.D.

FOR SCREW FIXING KIT

1 OR 2

4

A6173 L300C 110W LED HV GA  
 A7228 L300C 110W LED LV GA

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C27683	C20624	TRAINER MOUNT CONVERSION	1	1
4	C20746		CABIN CONVERSION KIT	1	1

A6173A7228

FRANCIS

SEARCHLIGHTS LIMITED

UNION ROAD · BOLTON · BL2 2HU

DESCRIPTION L300C 110W LED GA

FINISH MATERIAL

Send Coating: To ISO 8062 CT10  
 Die Coating: To ISO 8062 C18  
 Hole centres & posit: ±

TOLERANCES  
 General: ±  
 Angular: ±

DO NOT SCALE DRAWING

FIRST USED ON

THIRD ANGLE PROJECTION

(369) (582) (426) (201) (132)

HOLE Ø75.0

BASE FIXING DETAILS

3 HOLES Ø11.0 EQUI-SPACED AS SHOWN ON A 154.0 P.C.D.

FOR SCREW FIXING KIT

1 OR 2

4

A6173 L300C 110W LED HV GA  
 A7228 L300C 110W LED LV GA

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C27683	C20624	TRAINER MOUNT CONVERSION	1	1
4	C20746		CABIN CONVERSION KIT	1	1

A6173A7228

FRANCIS

SEARCHLIGHTS LIMITED

UNION ROAD · BOLTON · BL2 2HU

DESCRIPTION L300C 110W LED GA

FINISH MATERIAL

Send Coating: To ISO 8062 CT10  
 Die Coating: To ISO 8062 C18  
 Hole centres & posit: ±

TOLERANCES  
 General: ±  
 Angular: ±

DO NOT SCALE DRAWING

FIRST USED ON

THIRD ANGLE PROJECTION

(369) (582) (426) (201) (132)

HOLE Ø75.0

BASE FIXING DETAILS

3 HOLES Ø11.0 EQUI-SPACED AS SHOWN ON A 154.0 P.C.D.

FOR SCREW FIXING KIT

1 OR 2

4

A6173 L300C 110W LED HV GA  
 A7228 L300C 110W LED LV GA

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C27683	C20624	TRAINER MOUNT CONVERSION	1	1
4	C20746		CABIN CONVERSION KIT	1	1

A6173A7228

FRANCIS

SEARCHLIGHTS LIMITED

UNION ROAD · BOLTON · BL2 2HU

DESCRIPTION L300C 110W LED GA

FINISH MATERIAL

Send Coating: To ISO 8062 CT10  
 Die Coating: To ISO 8062 C18  
 Hole centres & posit: ±

TOLERANCES  
 General: ±  
 Angular: ±

DO NOT SCALE DRAWING

FIRST USED ON

THIRD ANGLE PROJECTION

(369) (582) (426) (201) (132)

HOLE Ø75.0

BASE FIXING DETAILS

3 HOLES Ø11.0 EQUI-SPACED AS SHOWN ON A 154.0 P.C.D.

FOR SCREW FIXING KIT

1 OR 2

4

A6173 L300C 110W LED HV GA  
 A7228 L300C 110W LED LV GA

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C27683	C20624	TRAINER MOUNT CONVERSION	1	1
4	C20746		CABIN CONVERSION KIT	1	1

A6173A7228

FRANCIS

SEARCHLIGHTS LIMITED

UNION ROAD · BOLTON · BL2 2HU

DESCRIPTION L300C 110W LED GA

FINISH MATERIAL

Send Coating: To ISO 8062 CT10  
 Die Coating: To ISO 8062 C18  
 Hole centres & posit: ±

TOLERANCES  
 General: ±  
 Angular: ±

DO NOT SCALE DRAWING

FIRST USED ON

THIRD ANGLE PROJECTION

(369) (582) (426) (201) (132)

HOLE Ø75.0

BASE FIXING DETAILS

3 HOLES Ø11.0 EQUI-SPACED AS SHOWN ON A 154.0 P.C.D.

FOR SCREW FIXING KIT

1 OR 2

4

A6173 L300C 110W LED HV GA  
 A7228 L300C 110W LED LV GA

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C27683	C20624	TRAINER MOUNT CONVERSION	1	1
4	C20746		CABIN CONVERSION KIT	1	1

A6173A7228

FRANCIS

SEARCHLIGHTS LIMITED

UNION ROAD · BOLTON · BL2 2HU

DESCRIPTION L300C 110W LED GA

FINISH MATERIAL

Send Coating: To ISO 8062 CT10  
 Die Coating: To ISO 8062 C18  
 Hole centres & posit: ±

TOLERANCES  
 General: ±  
 Angular: ±

DO NOT SCALE DRAWING

FIRST USED ON

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HOLE Ø75.0

BASE FIXING DETAILS

3 HOLES Ø11.0 EQUI-SPACED AS SHOWN ON A 154.0 P.C.D.

FOR SCREW FIXING KIT

1 OR 2

4

A6173 L300C 110W LED HV GA  
 A7228 L300C 110W LED LV GA

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C27683	C20624	TRAINER MOUNT CONVERSION	1	1
4	C20746		CABIN CONVERSION KIT	1	1

A6173A7228

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SEARCHLIGHTS LIMITED

UNION ROAD · BOLTON · BL2 2HU

DESCRIPTION L300C 110W LED GA

FINISH MATERIAL

Send Coating: To ISO 8062 CT10  
 Die Coating: To ISO 8062 C18  
 Hole centres & posit: ±

TOLERANCES  
 General: ±  
 Angular: ±

DO NOT SCALE DRAWING

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HOLE Ø75.0

BASE FIXING DETAILS

3 HOLES Ø11.0 EQUI-SPACED AS SHOWN ON A 154.0 P.C.D.

FOR SCREW FIXING KIT

1 OR 2

4

A6173 L300C 110W LED HV GA  
 A7228 L300C 110W LED LV GA

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C27683	C20624	TRAINER MOUNT CONVERSION	1	1
4	C20746		CABIN CONVERSION KIT	1	1

A6173A7228

FRANCIS

SEARCHLIGHTS LIMITED

UNION ROAD · BOLTON · BL2 2HU

DESCRIPTION L300C 110W LED GA

FINISH MATERIAL

Send Coating: To ISO 8062 CT10  
 Die Coating: To ISO 8062 C18  
 Hole centres & posit: ±

TOLERANCES  
 General: ±  
 Angular: ±

DO NOT SCALE DRAWING

FIRST USED ON

THIRD ANGLE PROJECTION

(369) (582) (426) (201) (132)

HOLE Ø75.0

BASE FIXING DETAILS

3 HOLES Ø11.0 EQUI-SPACED AS SHOWN ON A 154.0 P.C.D.

FOR SCREW FIXING KIT

1 OR 2

4

A6173 L300C 110W LED HV GA  
 A7228 L300C 110W LED LV GA

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C27683	C20624	TRAINER MOUNT CONVERSION	1	1
4	C20746		CABIN CONVERSION KIT	1	1

A6173A7228

DATE & REV'S	DATE	16
MODIFICATION DETAILS	1	AS FIRST DRAWN 8.19 LW EC1774
	2	NEW BARREL 8.19 LW EC1774
	3	BARREL NOW 7.24 ALUM. EC2044
	4	A6172 & A7201 5.26 A.C.C. B.I.L. (EC2155)

STANDARD PRACTICE  
 For details see  
 British Standard BS 5400:1990 U.K.S.

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 PART No./DRG No. A6174 1

FRANCIS SEARCHLIGHTS LIMITED  
 匯豐燈器有限公司

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

0 10 20 30 40 50mm

4 HOLES  $\phi 12.50$  EQUI-SPACED AS SHOWN ON A 190.00 PCD

BASE FIXING DETAILS

FOR SCREW FIXING KIT

A6174 L300DP 110W LED HV GA  
 A7229 L300DP 110W LED LV GA

(1587)

(1431)

(1004)

(399)

(387)

ITEM	PART No.	DRG No.	DESCRIPTION	QTY	QTY
1	A6172	A6172	L300D 110W LED HV GA	1	
2	A7201	A6172	L300D 110W LED LV GA	1	
3	C20719	C20719	PEDESTAL ASSY	1	1
4	C20747		DECK PED CONVERSION KIT	1	1

FINISH

MATERIAL

FRANCIS SEARCHLIGHTS LIMITED · UNION ROAD · BOLTON · BL2 2HJ

L300DP 110W LED GA

DESCRIPTION

Send Coating: to ISO 8052 CT10  
 Die Coating: to ISO 8052 C18  
 Hole centres & points: ±

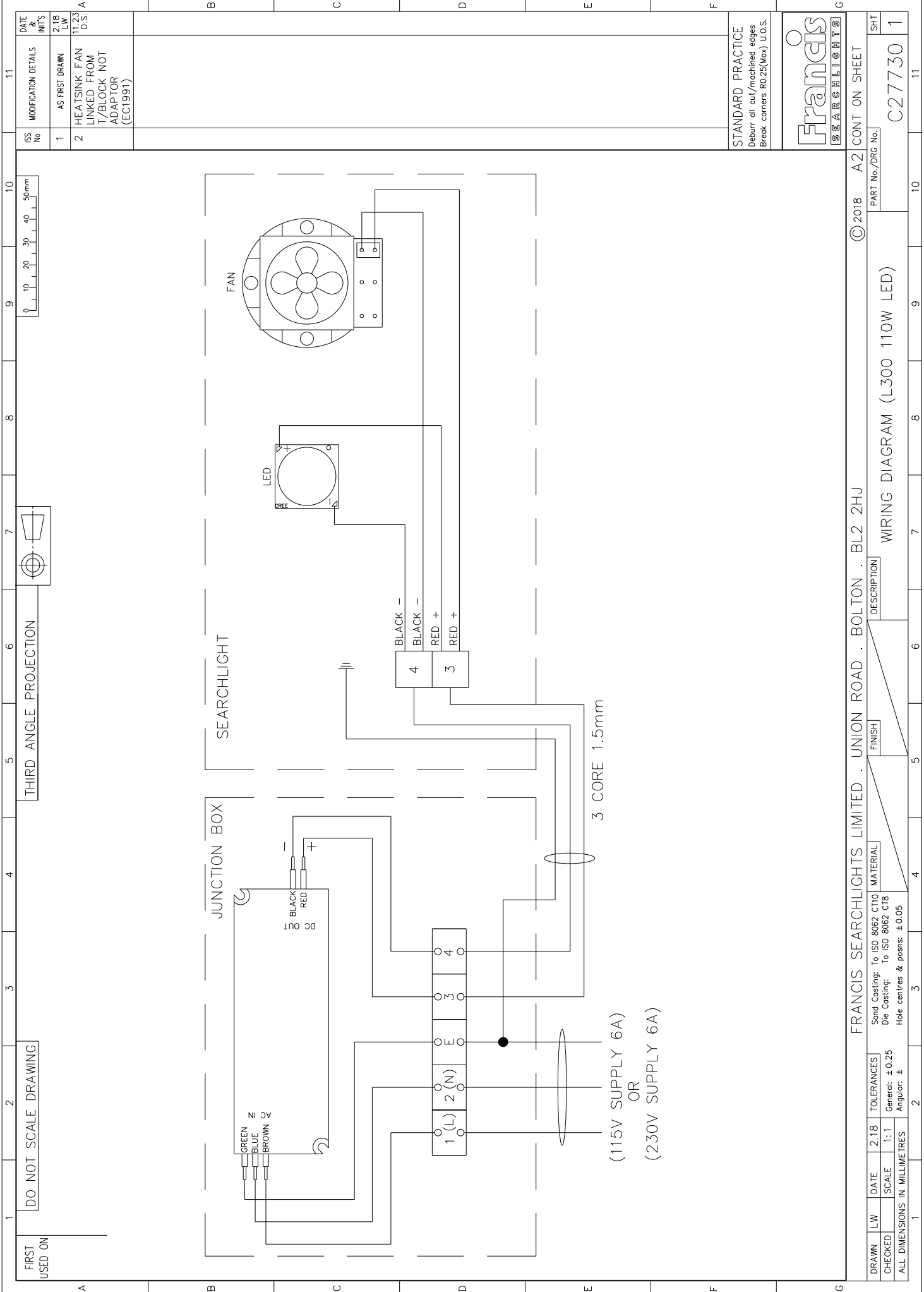
DATE 1.18 TOLERANCES  
 SCALE 1:2 General: ±  
 Angular: ±

ALL DIMENSIONS IN MILLIMETRES

DRAWN LW  
 CHECKED  
 FIRST USED ON

DATE 1.18  
 SCALE 1:2  
 TOLERANCES General: ± Angular: ±





DO NOT SCALE DRAWING

FIRST USED ON

THIRD ANGLE PROJECTION

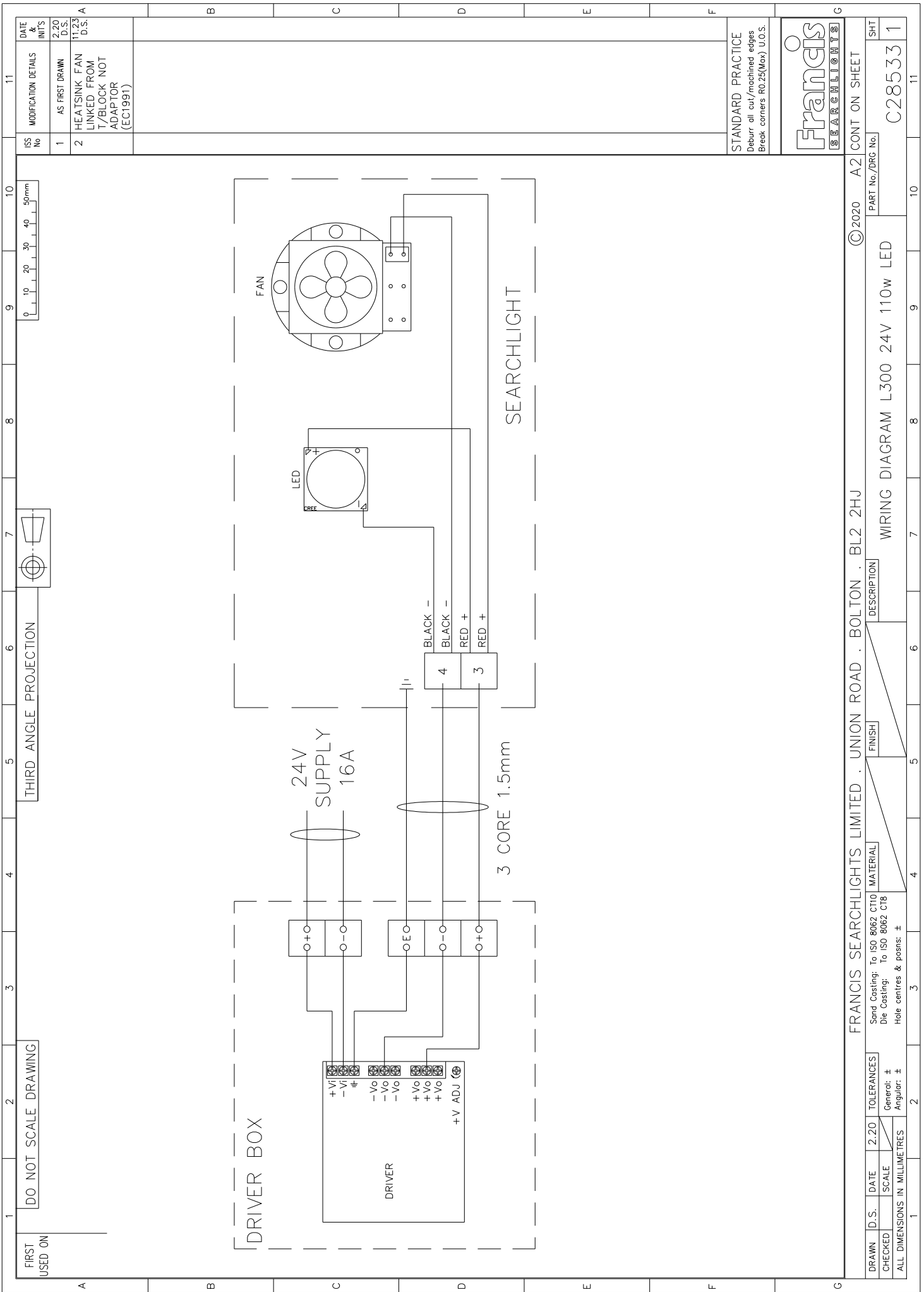


ISS No	MODIFICATION DETAILS	DATE & INIT'S
1	AS FIRST DRAWN	2.18 LW
2	HEATSINK FAN LINKED FROM T/BLOCK NOT ADAPTOR (EC1991)	11.23 D.S.A

STANDARD PRACTICE  
Debur all cut/machined edges  
Break corners R0.25(Max) U.O.S.



DRAWN LW		DATE 2.18	TOLERANCES	FRANCIS SEARCHLIGHTS LIMITED . UNION ROAD . BOLTON . BL2 2HU		© 2018	A2	CONT ON SHEET
CHECKED	SCALE 1:1	General: ±0.25	Angular: ±	Finish	Material	Part No./DRG No.	SHT	
ALL DIMENSIONS IN MILLIMETRES				Sand Casting: To ISO 8062 CT10		C27730		
				Die Casting: To ISO 8062 CT8		1		
				Hole centres & posits: ±0.05		WIRING DIAGRAM (L300 110W LED)		
				DESCRIPTION		11		



FIRST USED ON

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION



ISS No	MODIFICATION DETAILS	DATE & INIT'S
1	AS FIRST DRAWN	2.20 D.S.
2	HEATSINK FAN LINKED FROM T/BLOCK NOT ADAPTOR (EC1991)	11.23 D.S. A

STANDARD PRACTICE  
Debur all cut/machined edges  
Break corners R0.25(Max) U.O.S.



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PART No./DRG No.	C28533 1	
SHT	1	

FRANCIS SEARCHLIGHTS LIMITED . UNION ROAD . BOLTON . BL2 2HU

FINISH	DESCRIPTION
Sand Casting: To ISO 8062 CT10 Die Casting: To ISO 8062 CT8 Hole centres & posns: ±	WIRING DIAGRAM L300 24V 110w LED

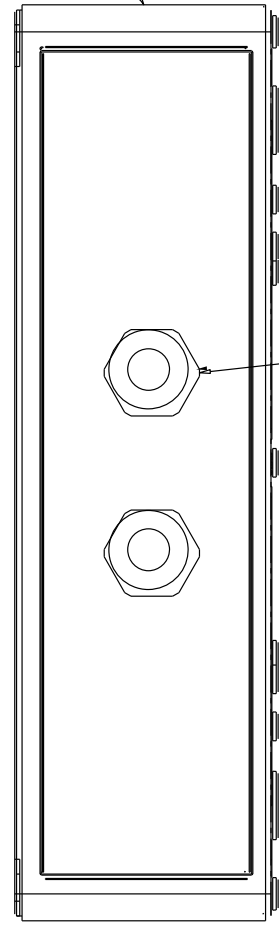
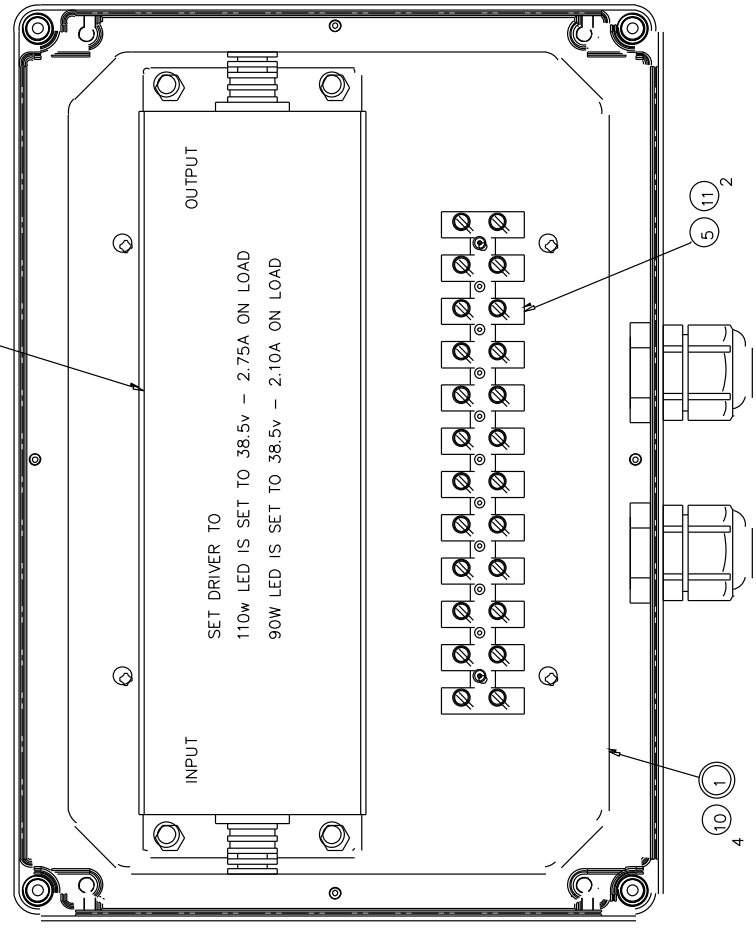
DRAWN	D.S.	DATE	2.20	TOLERANCES
CHECKED <td></td> <td></td> <td>SCALE</td> <td>General: ± Angular: ±</td>			SCALE	General: ± Angular: ±
ALL DIMENSIONS IN MILLIMETRES				

FIRST USED ON  
L300  
110w LED

DO NOT SCALE DRAWING

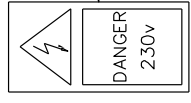
THIRD ANGLE PROJECTION

- 3 4 4 4
- 9 4 4 4
- 12 4 4 4
- 13 4 4 4



ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C27705	027705	CHASSIS PLATE S/ASSY	1
2	C27094	C27094	ENCLOSURE DRILLING	1
3	C27699		LED DRIVER	1
4	C10158		M20 CABLE GLAND	2
5	C15133		TERMINAL BLOCK	1
6	C21464		230V WARNING LABEL	1
7	C22036		ISOLATE SUPPLY LABEL	1
8	C04900		FRANCIS EXTERIOR LABEL	1
9	C26955		M4 x 10 HEX HD SCREW	4
10	C23598		M4 x 8 POZI HD SCREW	4
11	C10203		M3 x 16 BTN HD SCREW	2
12	C04376		M4 PLAIN WASHER	4
13	C08793		M4 S/C SPRING WASHER	4

FIT LABELS CENTRALLY ON LID



www.Francis.co.uk  
Tel: (+44) 01704 556960

BOX DIM'N 254 x 180 x 90  
BASE FIXINGS M4 239 x 165

IN 2 POSN'S

FRANCIS SEARCHLIGHTS LIMITED · UNION ROAD · BOLTON · BL2 2HU

Send Casting: To ISO 8062 CT10  
Die Casting: To ISO 8062 C18  
Hole centres & posns: ±

DRAWN	LW	DATE	1:18	TOLERANCES
CHECKED		SCALE	1:1	General: ± Angular: ±
ALL DIMENSIONS IN MILLIMETRES				

DESCRIPTION

FINISH

MATERIAL

DRIVER BOX ASSY 240V DECK

PART No./DRG No.

C27704 1

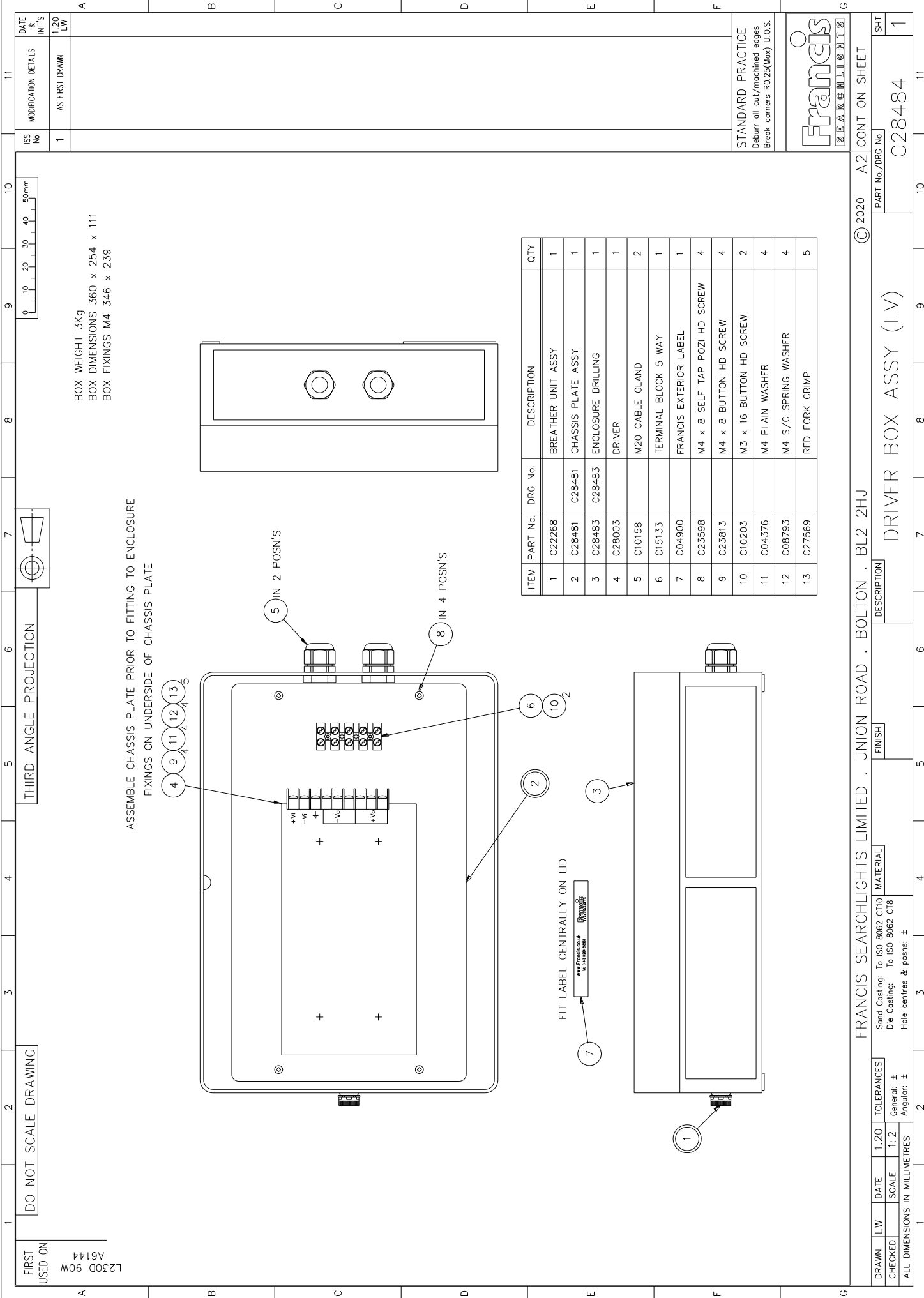
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STANDARD PRACTICE  
Debur all cut/machined edges  
Break corners R0.25(Max) U.O.S.



ISS No	MODIFICATION DETAILS	DATE & INIT'S
1	AS FIRST DRAWN	1.18 LW
2	NEW DRIVER VER 1.1 (EC1776)	8.19 LW

1	2	3	4	5	6	7	8	9	10	11
0 10 20 30 40 50mm										



DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

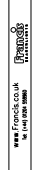
BOX WEIGHT 3Kg  
BOX DIMENSIONS 360 x 254 x 111  
BOX FIXINGS M4 346 x 239

ASSEMBLE CHASSIS PLATE PRIOR TO FITTING TO ENCLOSURE  
FIXINGS ON UNDERSIDE OF CHASSIS PLATE

5 IN 2 POSN'S

8 IN 4 POSN'S

FIT LABEL CENTRALLY ON LID



ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C22268		BREATHER UNIT ASSY	1
2	C28481	C28481	CHASSIS PLATE ASSY	1
3	C28483	C28483	ENCLOSURE DRILLING	1
4	C28003		DRIVER	1
5	C10158		M20 CABLE GLAND	2
6	C15133		TERMINAL BLOCK 5 WAY	1
7	C04900		FRANCIS EXTERIOR LABEL	1
8	C23598		M4 x 8 SELF TAP POZI HD SCREW	4
9	C23813		M4 x 8 BUTTON HD SCREW	4
10	C10203		M3 x 16 BUTTON HD SCREW	2
11	C04376		M4 PLAIN WASHER	4
12	C08793		M4 S/C SPRING WASHER	4
13	C27569		RED FORK CRIMP	5

STANDARD PRACTICE  
Deburr: all cut/machined edges  
Break corners R0.25(Max) U.O.S.



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PART No./DRG No. C28484  
SHT 1

FRANCIS SEARCHLIGHTS LIMITED . UNION ROAD . BOLTON . BL2 2HU

DESCRIPTION

DRIVER BOX ASSY (LV)

FINISH

MATERIAL

Sand Casting: To ISO 8062 CT10  
Die Casting: To ISO 8062 CT8  
Hole centres & posns: ±

TOLERANCES

General: ±

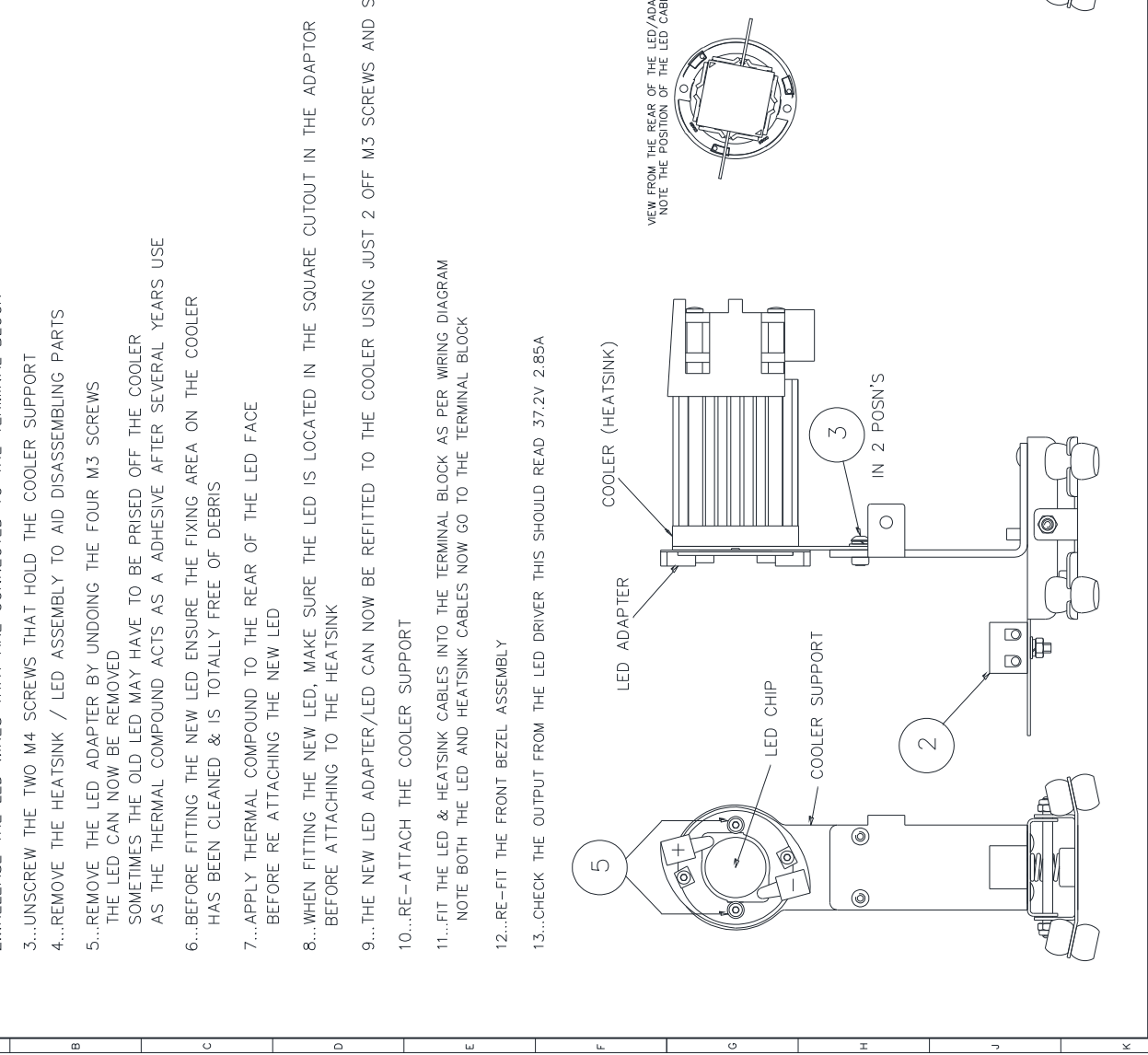
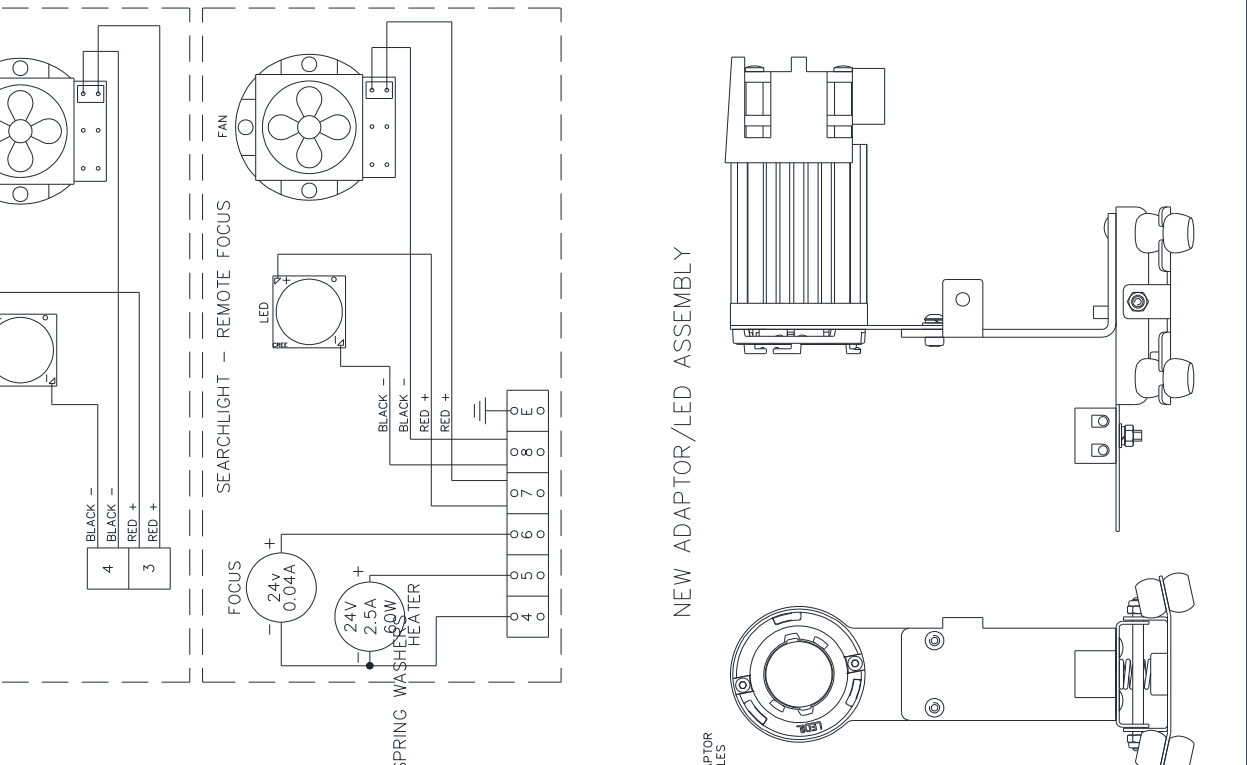
Angular: ±

DRAWN LW DATE 1.20 SCALE 1:2  
CHECKED A6144  
ALL DIMENSIONS IN MILLIMETRES

DATE	DESCRIPTION	BY	CHKD
11.18	AS FIRST DRAWN	11.18	11.18
11.19	VERSION 2	11.19	11.19
11.19	VERSION 3	11.19	11.19
10.23	VERSION 4 ECT1991	10.23	10.23

ISS	NO	MODIFICATION DETAILS
1	1	AS FIRST DRAWN
2	2	VERSION 2
3	3	VERSION 3
4	4	VERSION 4 ECT1991

16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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STANDARD PRACTICE  
 Detail all cut/machined edges  
 Break corners R0.25(Min) U.O.S.



## 10 – Spare Parts List

The following spare parts can be ordered directly from the manufacturer:

<b>Part Number</b>	<b>Description</b>
C27691-01	LED Replacement Kit
C27713-00	LED Adapter
C27715-01	LED Cooler
C08884-00	Reflector
C27224-00	Front Glass
C20567-00	Front Glass Gasket
C27699-01	LED Driver (110/240V)
C28003-00	LED Driver (24v)
C22268-01	Breather Assembly
C11025-01	Lock Wheel Assembly (Deck & Deck Pedestal))
C10168-00	Base 'O' Ring (Deck & Cabin)
C20634-00	Pedestal Base 'O' Ring (Deck Pedestal & Cabin Pedestal)
C10169-00	Spigot 'O' Ring (Deck & Cabin)
C21967-00	Bellows Bottom Bush 'O' Ring (Deck & Cabin)
C08926-00	Push Rod Seal (Deck & Cabin)
C20281-00	Bellows (Cabin & Cabin Pedestal)
C20745-01	Underdeck Lock Wheel Assembly (Cabin & Cabin Pedestal)

To prolong the life and performance of your product, we recommend that you only specify Francis Searchlights spare parts. This will ensure that any warranties on your equipment will not be invalidated.

When ordering spare parts please contact the Sales Department at Francis Searchlights Limited. Please always quote searchlight model and serial number. This will enable a fast response to your spares' requirements.