User Instruction & Installation Manual

FX560 Manual Control
1Kw Xenon Searchlight

Product Reference Number:

A2213 – FX560D 1Kw 240v
A2243 – FX560DP 1Kw 240v
A2215 – FX560C 1Kw 240v
A2245 – FX560CP 1Kw 240v

A2212 – FX560D 1Kw 115v
A2217 – FX560DP 1Kw 115v
A2214 – FX560C 1Kw 115v
A2244 – FX560CP 1Kw 115v

Manufacturer's details:

Francis Searchlights Ltd
Union Road, Bolton
Lancashire, BL2 2HJ, UK
Tel: +44 (0) 1204 558960
Fax: +44 (0) 1204 558979
http://www.francis.co.uk
E-mail: sales@francis.co.uk

Distributor details:

Manual Part Number: C29161
Issue: 2 18.11.25

CONTENTS

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 Xenon range combine 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.

Back To Top

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, the lifting handles must be used to prevent damage to the equipment or personal injury.

- Because of the high internal pressure within the lamp, there is a risk of explosion in either a hot or cold state.
- During operation this lamp emits intense UV radiation which is harmful to the eyes and skin. Suitable protection should be worn.
- The high luminance of the arc can cause severe damage to the eye if viewed directly. ALWAYS wear suitable protective goggles when viewing the lamp.
- Always use protective jackets supplied with the lamp.
- Should it be necessary to examine the lamp with the front bezel removed, always use a protective shield and wear goggles to ensure a safe working environment.
- 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 lamp has cooled sufficiently before removal.
- If undue force appears necessary to remove the lamp, the equipment should be inspected by a competent person or contact the manufacturer.
- When disposing of lamps there are several options available.
    - Return the lamp, via the supplier, to the lamp manufacturer in its complete packaging.
    - Because of the cold internal pressure of the lamp is approximately 8 bar, the lamp must first be depressurized before disposal. Place the lamp, in its protective jacket, in a plastic bag and drop from a height of 1 to 2 metres onto a hard surface.
- Xenon lamps do not contain materials which are harmful to the environment and thus are not subject to special waste disposal regulations.
- Due to the vast range of lamps available it may appear possible that more powerful lamps can be used in the equipment than for which it was designed. Even when the unit will physically accept a higher wattage lamp, this substitution is not recommended and is dangerous. This action will also void any warranties on the equipment.

  Always refer to the lamp manufacturer's technical data when dealing with lamps.

Back To Top

3 - Technical Information

This product has been designed to operate in accordance with the product specification. The FX560 1000-watt searchlight has the following features:

- All marine grade materials and fixings.
- Electronic power supply unit.
- Instant re-strike no cooling down time required.
- Parabolic glass reflector.
- Toughened super clear Optiwhite front glass.
- Powder coated and stove enamel paint finish.
- Full 360° horizontal rotation.
- Vertical movement ±45° (Deck and Deck Pedestal)
- Vertical movement +20° to -40° (Cabin and Cabin Pedestal).
- Internal self-regulating heater.
- Sealing – IP56 Searchlight & Power supply unit.
- Weight – Deck 52Kgs, Deck Pedestal 64Kgs, Cabin 58Kgs, Cabin Pedestal 62Kgs.
- Weight Power Supply Unit 14Kgs.

The searchlight also performs to the following optical data:

- Xenon light source.
- Lamp Wattage - 1000 Watts.
- Supply voltage - 220/240V or 110v/115v.
- Peak Beam Candlepower – 81,000,000 lux.
- Range – 9,003 metres.
- Lamp life 3000 hours
- Divergence - 1.5° spot to 10° flood.
- Temperature range: -50°C.

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.

Technical information on the Power Supply Unit and Ignitor are included overleaf. For more detailed information please contact the manufacturer.

Back To Top

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. Fit the ‘O’ ring in position and bolt the searchlight base securely. On an uneven surface it is necessary to use a suitable sealant, such as silicone to ensure a weatherproofed joint. 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. When in the desired position, bolt the searchlight firmly down.

Back To Top

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 lamp fitted be applied to the lampholder 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.

The PSU should NOT be positioned no more then 5 meters away from the searchlight.

The following table below indicates the maximum length of cable to be used for the AC supply cable, from the supply to the searchlight:

Searchlight	115v 1Kw	240v 1Kw
Cable Size (mm^2)	Distance Max	Distance Max
1.5	17 MTRS	75 MTRS
2.5	28 MTRS	123 MTRS
4	44 MTRS	195 MTRS
6	68 MTRS	304 MTRS
10	115 MTRS	509 MTRS

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:

Installation Guidelines

A typical installation and connection routine for the searchlights is as follows:

Referring to wiring diagram C29144, a 240v or 115v AC supply should be connected to the Power Supply Unit as shown, which then provides a common feed to all other functions and equipment.

Cables required to be connected by the customer: -

4 cores 4mm cable from the Searchlight into the PSU, doubling up the pairs.
5 cores 1.5mm cable from the Searchlight to the PSU.
Mains supply cable.

(Customer may need to provide a suitable junction box to extend these cables – 3 metres supplied). The searchlight head is pre-wired.

When the light is in operation the output from the PSU should be approximately 22v dc at 45amps.

Upon striking, the running wattage of the lamp can be calculated by using the equation:

$$P = VI$$

Where P= Power (watts)
V= Voltage (V)
I = Current (Amps)

Instruments required: D.C. Ammeter & Multi meter

Procedure

1) With the multi meter, test the DC voltage in the searchlight head. This should be approximately 22 volts.
2) With the D.C ammeter, test the current of the red DC cable at front of searchlight. It should read approximately 45 amps.
3) Multiply these readings together, as shown above, to obtain the desired wattage required, usually about 990watts.

Fitting instructions for the 1Kw xenon lamp

Referring to the diagram overleaf:

1) Unfasten the ten latches (A) on the front and rear of the searchlight.

2) Remove the front bezel (B) and rear bezel (C) assemblies.

3) Unscrew the two M6 hexagon screws (D) from the front lampholder mounting block (E) and remove the front lampholder assembly from the mounting bracket.

4) Loosen the knurled screw on the front (F).

5) The lamp can now be inserted, make sure that the negative (cathode) end of the lamp is towards the rear of the searchlight. Screw the lamp onto the rear lampholder (G).

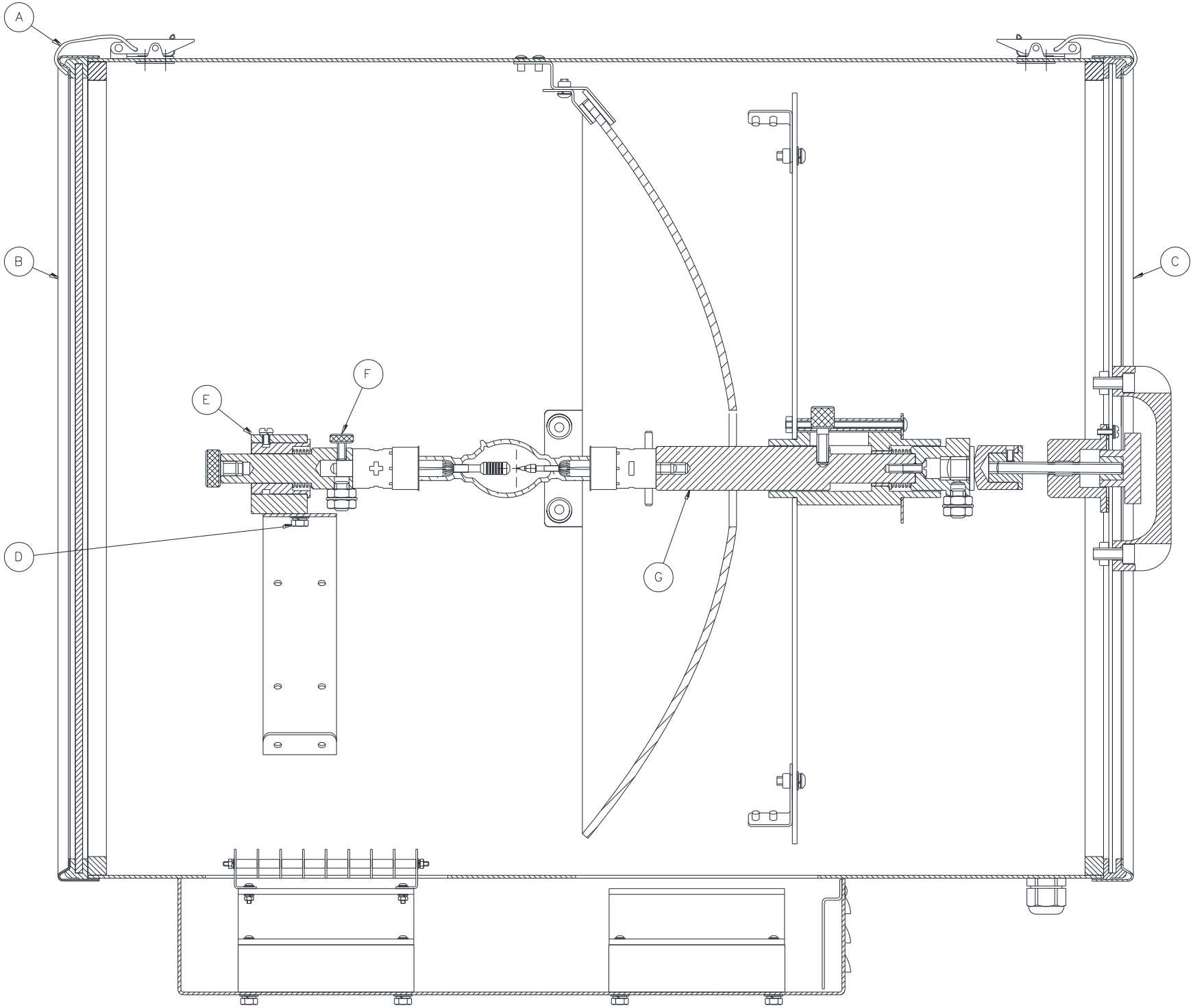
6) Fasten the front lampholder mounting block back in position, it will be necessary to pull the front socket against its spring to fit over the lamp. When in place tighten the front knurled screw (F).

7) Fasten the front and rear lampholder leads as wiring diagram, ensuring the connections are secure.

8) The front bezel and rear bezel can now be replaced.

9) Removal is the reverse of the above.

Back To Top


A
B
C
D
E
F
G

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 PSU should be housed below deck.

The searchlight can be positioned using the elevation and base lockwheels. When in the desired position the lockwheels must be securely fastened to prevent damage.

The beam of the searchlight can be adjusted to give a variety of beam types. By turning the focus lockwheel positioned on the rear dome clockwise/anticlockwise the lamp holder mechanism moves through spot to flood positions. When in the desired beam is achieved simply release the lockwheel.

The heaters specified on this equipment are self-regulating and will shut off when they reach the dew point temperature.

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.

Setting to Work

Safe service in use necessitates the strict observance of the following precautions.

- Any article fabricated from quartz or glass is inherently fragile and care should therefore be taken, always, when handling lamps.
- Eye protection must be worn when handling lamps that have been removed from their packaging materials. The protective jacket should not be removed from the lamp for safety reasons, as there is a remote possibility of the lamp shattering violently, especially if it is subjected to mechanical shock or vibration.
- Ensure that the power rating of the Xenon lamp to be fitted is suitable for the lamphouse and power supply equipment.
- Always isolate the equipment from the supply before inserting a lamp.
- Before inserting the lamp ensure that all contacts are clean. Contacts must be renewed at the slightest sign of corrosion. Sanding or filing down corroded areas is not recommended as this will only make the conducting surface between the pin and lampholder smaller, thus causing the lamp to overheat.
- The inert gas used in Xenon lamps is under a pressure of several bar even when the bulb is cold. FOR SAFETY REASONS THE LAMP MAY ONLY BE INSERTED INTO THE LAMPHOUSE WITH THE PROTECTIVE JACKET FITTED.
- Do not twist or bend the fused quartz bulb when fitting the lamp as mechanical stresses MUST be avoided.
- Ensure that the spring contacts firmly surround the pins on the cap of the lamp. Do not apply unnecessary force when tightening the screws.
- After inserting the lamp, ensure that there is sufficient axial play in the lampholder. The lamp must be capable of unimpeded expansion when it warms up to operating temperature. Mechanical forces must not be applied to the fused quartz bulb.
- Electrical leads must be arranged in such a way that there is a sufficient air gap (approximately 40mm) between them and the lamphouse, to prevent flashovers from the ignition voltage. All flexible leads must have strain-relieving clamps.
- Before putting the lamp into service for the first time, check the polarity of the electrical connections. INCORRECT POLARITY WILL CAUSE IMMEDIATE DESTRUCTION OF THE LAMP.
- Before the protective jacket is removed, suitable protection must be worn i.e face mask and gloves with wrist protection.
- Never touch the quartz bulb with bare hands, as fingerprints will make the glass cloudy and cause a severe loss of light. This may also cause recrystallisation and thus weaken the bulb material. Should the bulb be inadvertently touched, remove fingerprints with methylated spirit and a clean, soft paper towel. The bulb should then be wiped with distilled water. NOTE: ALWAYS WEAR MASK AND GLOVES DURING CLEANING).
- All packaging and the protective jacket must be retained for re-use. Whenever removing a lamp, the protective jacket must always be used for safety reasons.

Notes:

1) Xenon lamps are designed for dc operation only. The dc current may only be varied within the limits of the current control range. A Xenon lamp operates best at rated current; over the life of the lamp, the current may be increased to its maximum value to compensate for loss of light. The output of the lamp can be reduced by operating the lamp at minimum current, but this does not prolong the life of the lamp.
2) For safety reasons, Xenon lamps should be replaced once they reach the end of their average lamp life, and not later than 1.25 times their average lamp life. After this time there is an increased risk of the lamp exploding.
3) The anode (positive cap marked '+') must be on top when the lamp is inserted in the vertical position. If the anode is incorrectly inserted the arc will be unstable, the bulb will blacken more quickly, and the lamp will prematurely fail.
4) The HT lead from the high voltage terminal of the ignitor, must be connected to the cathode (negative cap marked '- '). If the lamp is fitted with the wrong polarity, it will be irreparably damaged after a very short time.
5) In all circumstances the lamp manufacturer's data should be referred to when dealing with lamps.

Back To Top

7- Fault Finding

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

Please refer to the following table for the troubleshooting of Xenon lamps.

Fault	Cause	Remedy
■ Wrong Polarity	■ Lamp incorrectly fitted ■ Faulty wiring	■ Anode (large electrode) must always be on top in vertical burning position ■ Check polarity, transpose connections if necessary
■ Cap overheated ■ Cap temperature above 230°C	■ Faulty contacts ■ Cooling equipment defective	■ Check terminals, tighten or renew ■ Check cooling equipment and replace if necessary
■ Arc unsteady	■ Lamp operated outside current control range ■ Magnetic stabilisation for horizontal operation defective	■ Correct current setting ■ Check magnetic stabilisation
■ Bulb draws in air	■ Crack in graded seal caused by overheated cap ■ Maximum cap temperature 230°C	■ Check terminals - tighten or renew
■ Glass erosion on fused quartz bulb	■ Lamp operated outside current control range ■ Lamp service life exceeded	■ Correct current setting ■ Check meter
■ Electrodes damaged ■ Premature blackening	■ Current ripple too high ■ Auxiliary mirror incorrectly adjusted	■ Have power supply inspected ■ Adjust auxiliary mirror
■ Asymmetrical blackening of lamp (in horizontal burning position)	■ Lamp operated too long in same position	■ Turn lamp through 180° after half service life

Failure of Lamp to Ignite

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

1) Check that the mains supply is connected to the input of the PSU. On operating the switch, if the lamp does not light switch off mains supply and check all fuses.
2) If the lamp still does not ignite, check the searchlight head. On your command get an operator to activate the starting switch for approximately 5 seconds. During this time listen for any noise (cracking or hissing) coming from within the barrel. If this arcing is heard switch off the supply at the mains. Remove the rear dome to expose the two supply leads to the xenon lamp. Using a dry cloth wipe these leads to remove any dust, moisture or condensation that may have formed around the inside of the barrel. Replace the rear dome, ensuring the latches are secure, and perform the check again, listening for the cracking. If the lamp still fails to ignite, switch off at the mains and replace the xenon lamp in accordance with the safety procedures within this manual and the manufacturers' information.

Any further tests to be carried out with regards to lamp failure must be conducted by a competent electrical engineer and should not be carried out in an explosive atmosphere.

3) Before a xenon lamp will ignite, the electrically insulated gas between the electrodes must be ionised. This is done by the ignitor which produces a high frequency voltage (up to 32,000 volts or higher). The Ignitor is activated by switching the lamp on and a crackling or hissing noise should be heard. The ignitor is housed within the rear of the searchlight barrel. This is a totally encapsulated unit, and repairs are not advised. If found to be faulty a new ignitor must be fitted.

Back To Top

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 reflector if required.
    - Check the reflector mounting gaskets. If signs of corrosion or damage are evident, replace as necessary.
    - Ensure that the lampholder is free from corrosion or other damage.
    - Check earth points for conductivity.
- 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 mechanism i.e., lockwheels, elevation & pan mechanism 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.

Back To Top

9 –Wiring Diagram & General Assembly Drawings

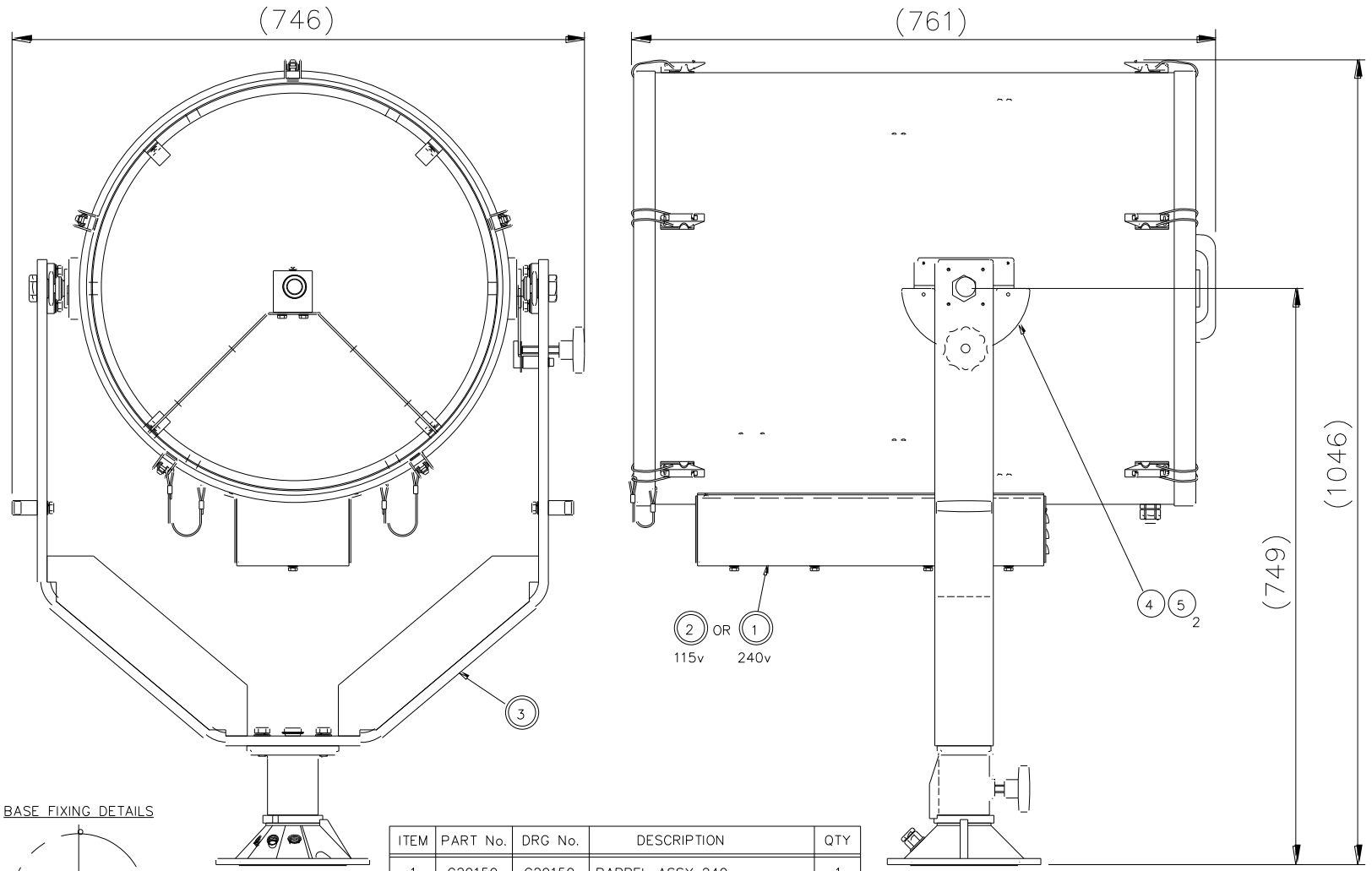
Drawing Number	Description
A2213 / A2212	FX560D 1Kw General Assembly
A2243 / A2217	FX560DP 1Kw General Assembly
A2215 / A2214	FX560C 1Kw General Assembly
A2245 / A2244	FX560CP 1Kw General Assembly
C29144	1Kw Xenon Wiring Diagram
C29065	Power Supply Enclosure Assembly

FIRST USED ON

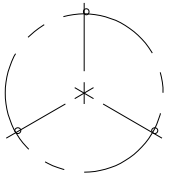
DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

0 10 20 30 40 50mm



BASE FIXING DETAILS



3 HOLES ø11.0 EQUI-SPACED ON A 174.0 P.C.D.

ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C29159	C29159	BARREL ASSY 240v	1
2	C29160	C29159	BARREL ASSY 115v	1
3	C20843	C20843	DECK MOUNT	1
4	C11380	X2863	QUADRANT	1
5	C13020		M8 x 10 SKT CAP HD SCREW	2

A2213 FX560D 1Kw 240v GA
A2212 FX560D 1Kw 115v GA

ISS No	MODIFICATION DETAILS	DATE & INIT'S
1	AS FIRST DRAWN	5.08 D.S.
2	SIDEPLATE MOVED (EC1251)	1.09 D.S.

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

Francis SEARCHLIGHTS

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

 A2 CONT ON SHEET

DRAWN	D.S.	DATE	5.08	TOLERANCES	Sand Casting: To ISO 8062 CT10
CHECKED		SCALE	1:4	General: ±	Die Casting: To ISO 8062 CT8
ALL DIMENSIONS IN MILLIMETRES				Angular: ±	Hole centres & posns: ±

MATERIAL | FINISH | DESCRIPTION

FX560D 1Kw GA

PART No./DRG No. A2213 SHT 1

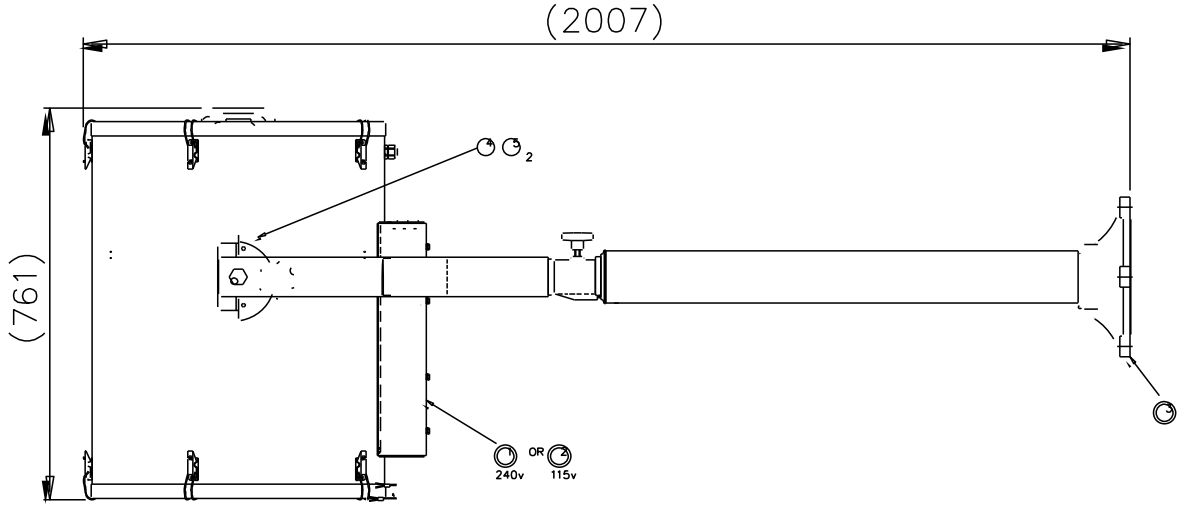
FIRST USED ON

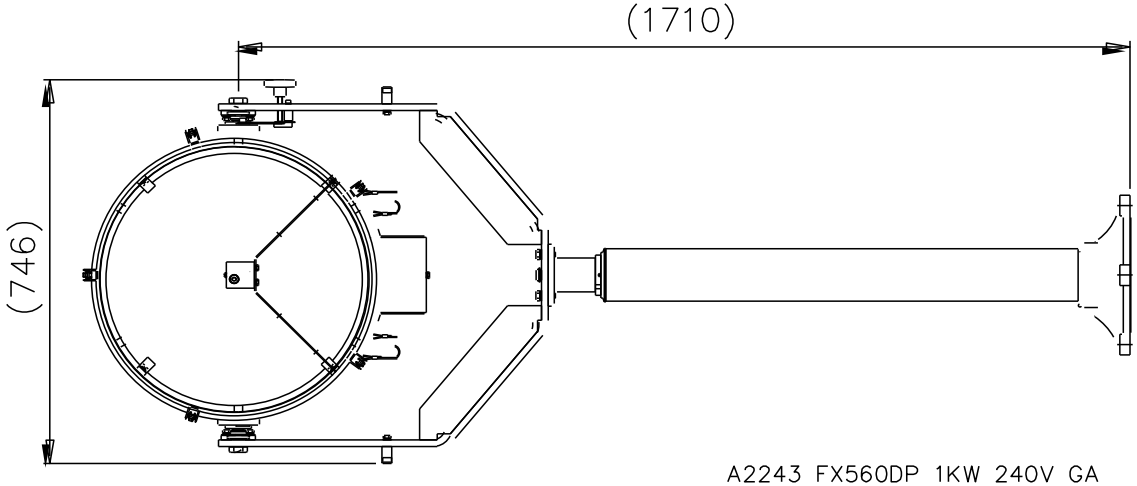
DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

0 10 20 30 40 50mm

ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C29159	C29159	BARREL ASSY 240v	1
2	C29160	C29159	BARREL ASSY 115v	1
3	C20848	C20848	DECK PEDESTAL MOUNT	1
4	C11380	X2863	QUADRANT	1
5	C13020		M8 x 10 SKT CAP HD SCREW	2





BASE FIXING DETAILS

3 HOLES ø11.0 EQUI-SPACED ON A 174.0 P.C.D.

A2243 FX560DP 1KW 240V GA
A2217 FX560DP 1KW 115V GA

ISS No	MODIFICATION DETAILS	DATE & INIT'S
1	AS FIRST DRAWN	5.08 D.S.
2	SIDEPLATE MOVED (EC1251)	1.09 D.S.

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

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

A1 CONT ON SHEET

DRAWN	D.S.	DATE	5.08	TOLERANCES	Sand Casting: To ISO 8062 CT10
CHECKED		SCALE	1:5	General: ±	Die Casting: To ISO 8062 CT8
ALL DIMENSIONS IN MILLIMETRES				Angular: ±	Hole centres & posns: ±

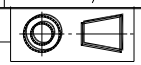
MATERIAL | FINISH | DESCRIPTION: FX560DP 1KW GA

PART No./DRG No.: A2243 | SHT: 1

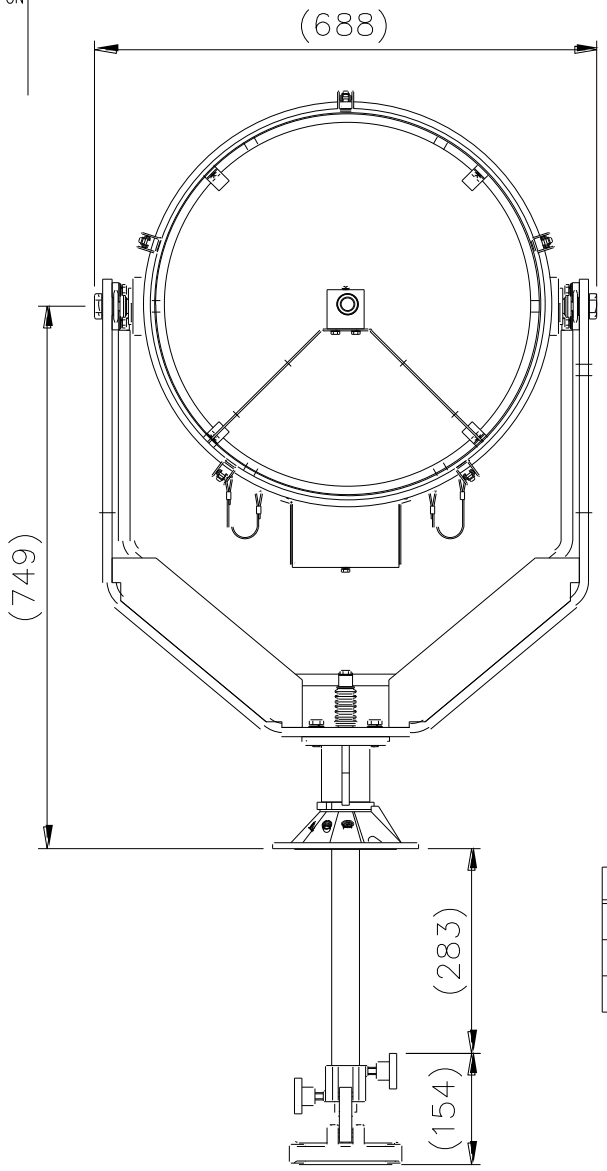
FIRST USED ON

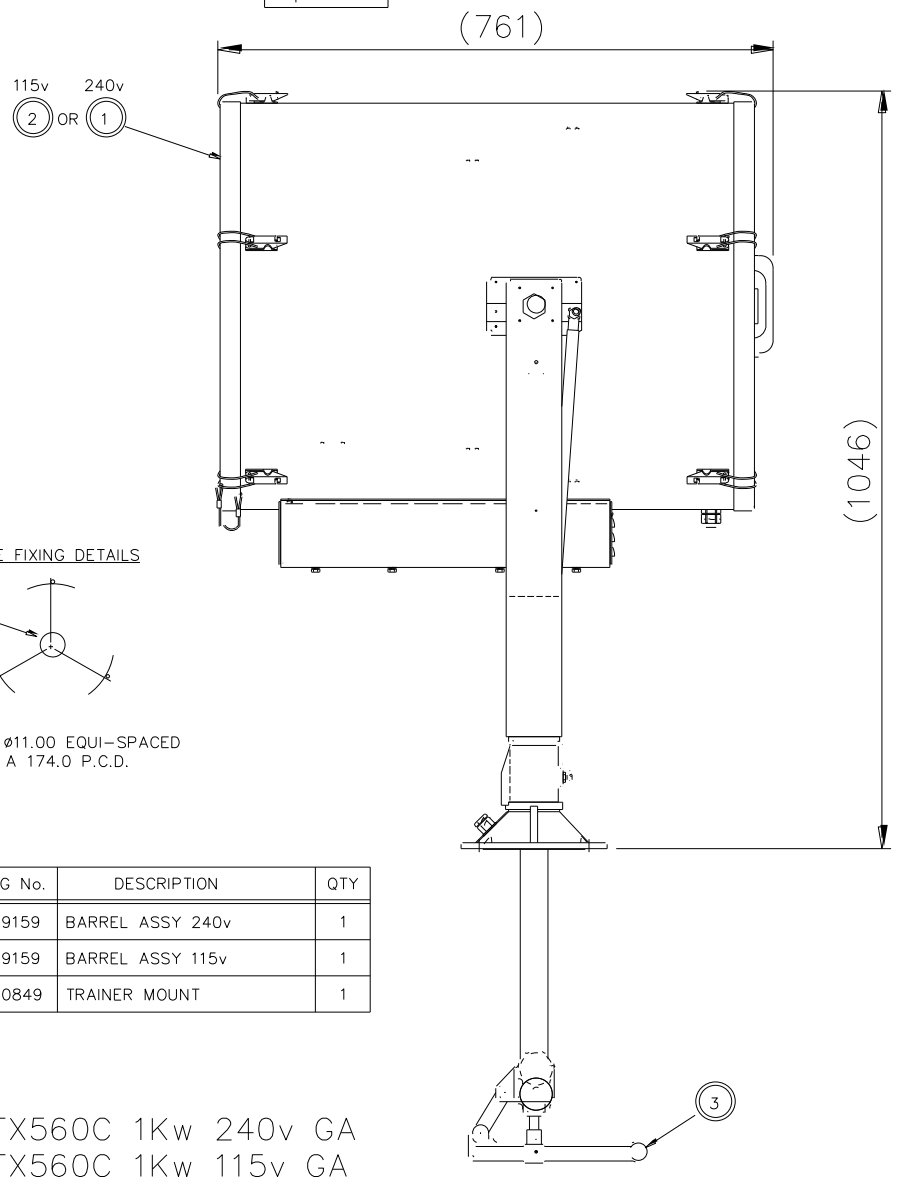
DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

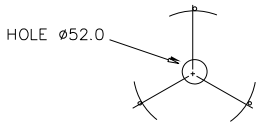


0 10 20 30 40 50mm





BASE FIXING DETAILS



3 HOLES ø11.00 EQUI-SPACED
ON A 174.0 P.C.D.

ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C29159	C29159	BARREL ASSY 240v	1
2	C29160	C29159	BARREL ASSY 115v	1
3	C20849	C20849	TRAINER MOUNT	1

A2215 FX560C 1Kw 240v GA
A2214 FX560C 1Kw 115v GA

ISS No	MODIFICATION DETAILS	DATE & INIT'S
1	AS FIRST DRAWN	5.08 D.S.
2	SIDEPLATE MOVED (EC1251)	1.09 D.S.

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

Francis SEARCHLIGHTS

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

 A2 CONT ON SHEET

DRAWN	D.S.	DATE	5.08	TOLERANCES	
CHECKED		SCALE	1:5	General: ±	
ALL DIMENSIONS IN MILLIMETRES				Angular: ±	

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

MATERIAL | FINISH | DESCRIPTION: FX560C 1Kw GA

PART No./DRG No.: A2215

SHT 1

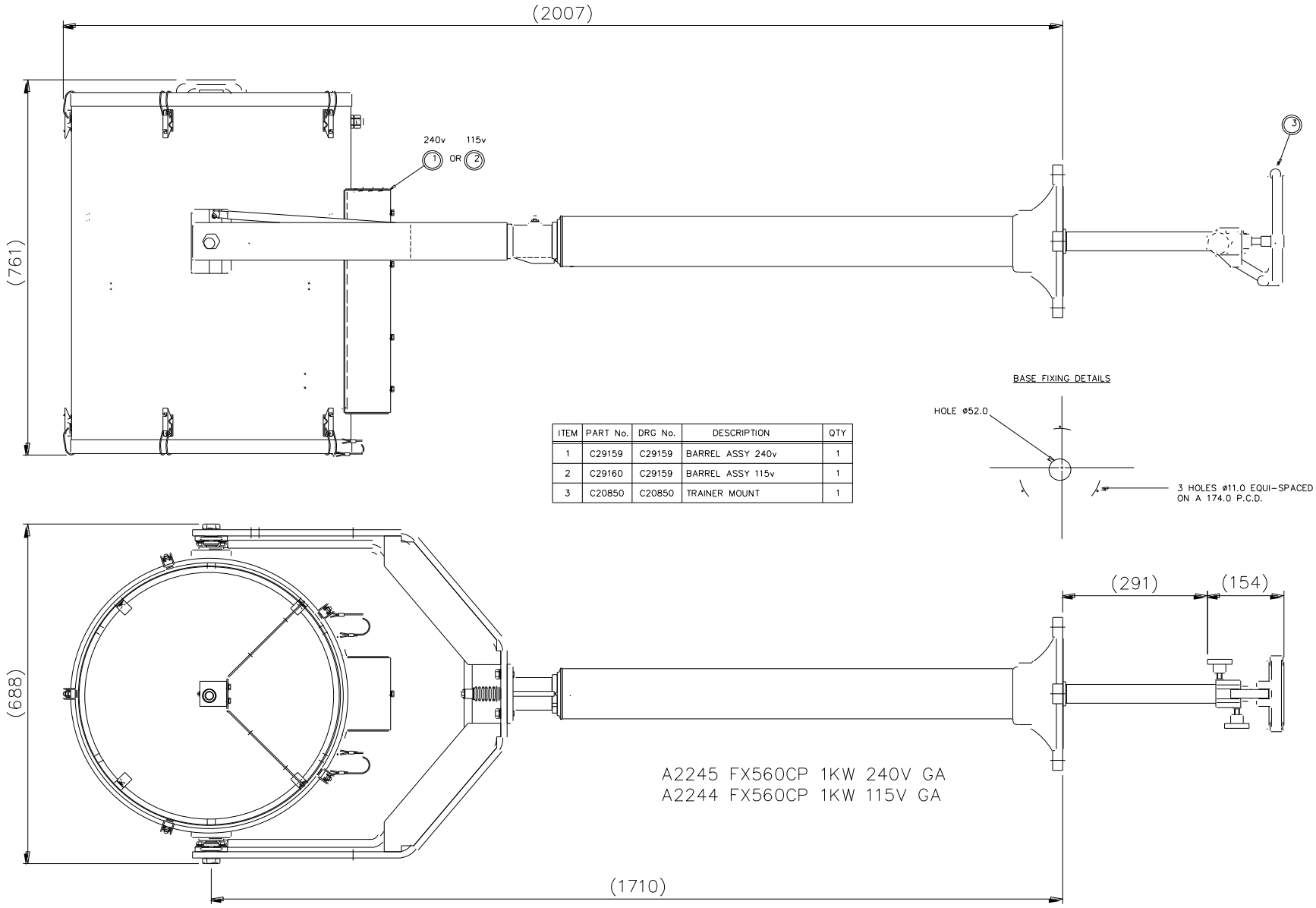
FIRST USED ON

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

0 10 20 30 40 50mm

ISS No	MODIFICATION DETAILS	DATE & INITS
1	AS FIRST DRAWN	5.08 D.S.
2	SIDEPLATE MOVED (EC1251)	1.09 D.S.



ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C29159	C29159	BARREL ASSY 240v	1
2	C29160	C29159	BARREL ASSY 115v	1
3	C20850	C20850	TRAINER MOUNT	1

BASE FIXING DETAILS

A2245 FX560CP 1KW 240V GA
A2244 FX560CP 1KW 115V GA

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

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

 A1 CONT ON SHEET

DRAWN	D.S.	DATE	5.08
CHECKED		SCALE	1: 4

ALL DIMENSIONS IN MILLIMETRES

TOLERANCES
General: ±
Angular: ±

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

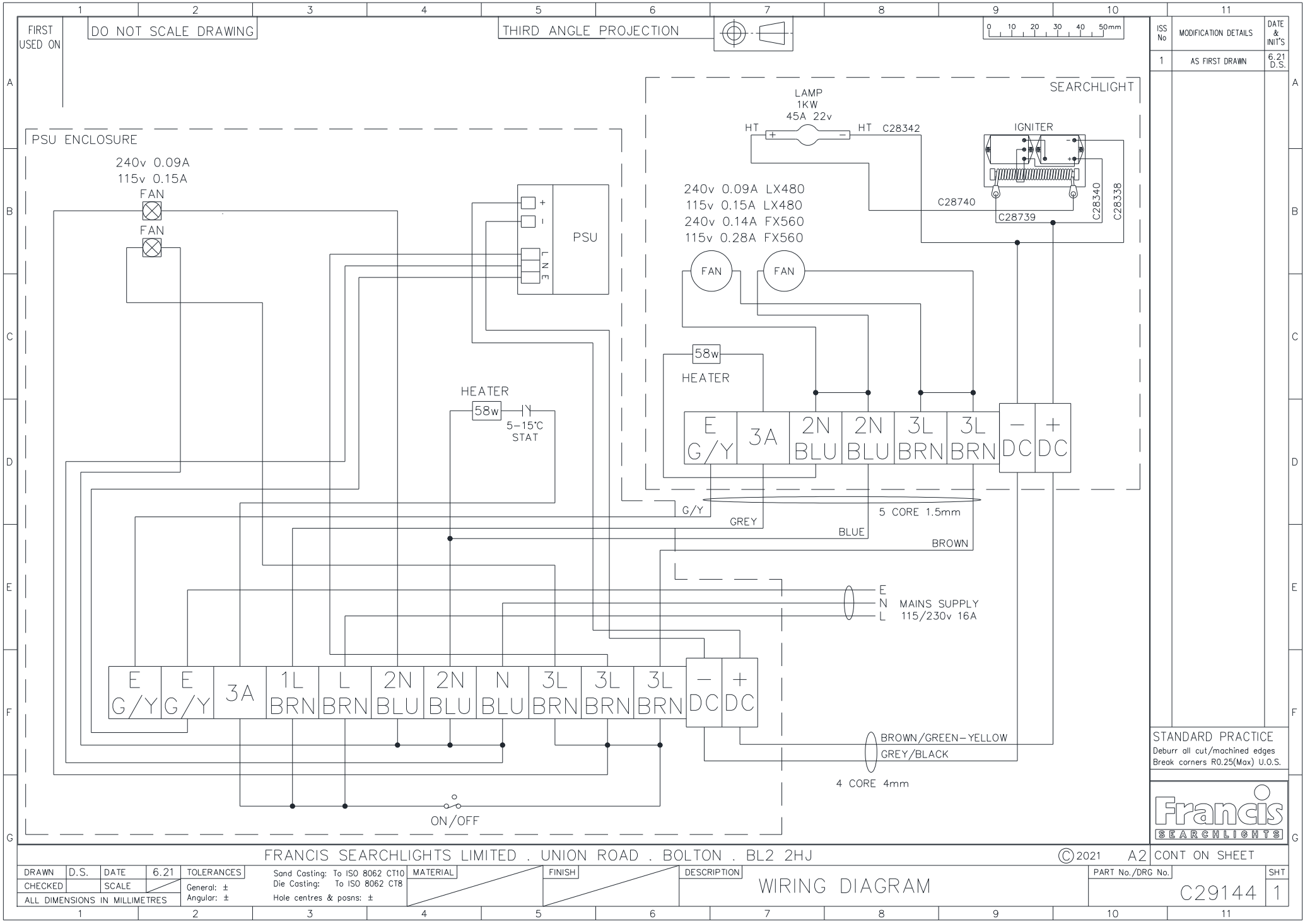
MATERIAL

FINISH

DESCRIPTION: FX560CP 1KW GA

PART No./DRG No. A2245

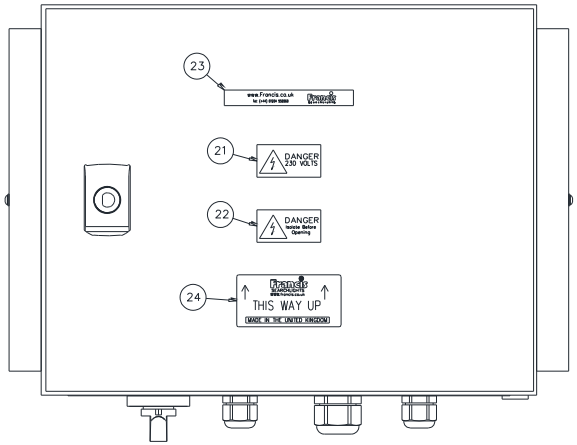
SHT 1


FIRST USED ON
DO NOT SCALE DRAWING
THIRD ANGLE PROJECTION
0 10 20 30 40 50mm
ISS No
MODIFICATION DETAILS
DATE & INIT'S
1
AS FIRST DRAWN
6.21 D.S.
SEARCHLIGHT
LAMP 1KW 45A 22v
HT
HT C28342
IGNITER
C28740
C28739
C28340
C28338
240v 0.09A LX480
115v 0.15A LX480
240v 0.14A FX560
115v 0.28A FX560
FAN
FAN
58w
HEATER
E G/Y
3A
2N BLU
2N BLU
3L BRN
3L BRN
– DC
+ DC
PSU ENCLOSURE
240v 0.09A
115v 0.15A
FAN
FAN
PSU
+
I
L
N
E
HEATER
58w
5–15°C STAT
G/Y
GREY
BLUE
BROWN
5 CORE 1.5mm
E
N MAINS SUPPLY
L 115/230v 16A
E G/Y
E G/Y
3A
1L BRN
L BRN
2N BLU
2N BLU
N BLU
3L BRN
3L BRN
3L BRN
– DC
+ DC
BROWN/GREEN–YELLOW
GREY/BLACK
4 CORE 4mm
ON/OFF
STANDARD PRACTICE
Deburr all cut/machined edges
Break corners R0.25(Max) U.O.S.
Francis SEARCHLIGHTS
FRANCIS SEARCHLIGHTS LIMITED . UNION ROAD . BOLTON . BL2 2HJ
©2021
A2
CONT ON SHEET
DRAWN D.S. DATE 6.21
CHECKED SCALE
ALL DIMENSIONS IN MILLIMETRES
TOLERANCES
General: ±
Angular: ±
Sand Casting: To ISO 8062 CT10
Die Casting: To ISO 8062 CT8
Hole centres & posns: ±
MATERIAL
FINISH
DESCRIPTION
WIRING DIAGRAM
PART No./DRG No.
C29144
SHT
1

FIRST USED ON FX380D 1KW A2771

DO NOT SCALE DRAWING

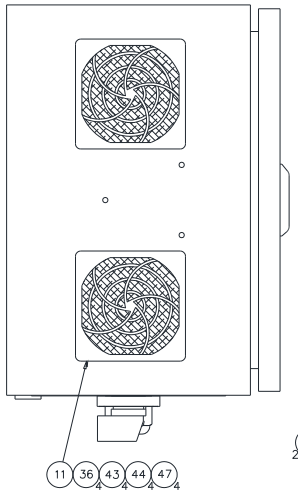
THIRD ANGLE PROJECTION

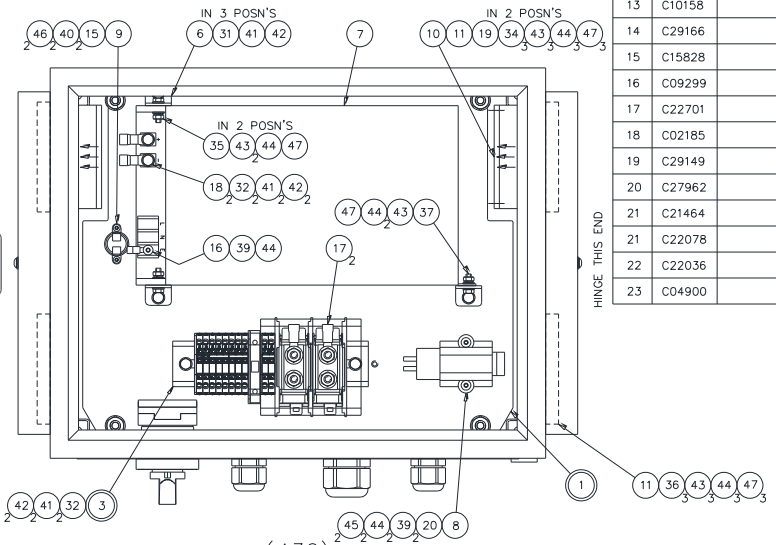


USE ITEMS BELOW FOR WIRING

25 26 27 28 29 30

VIEW WITH SPLASH COVER REMOVED

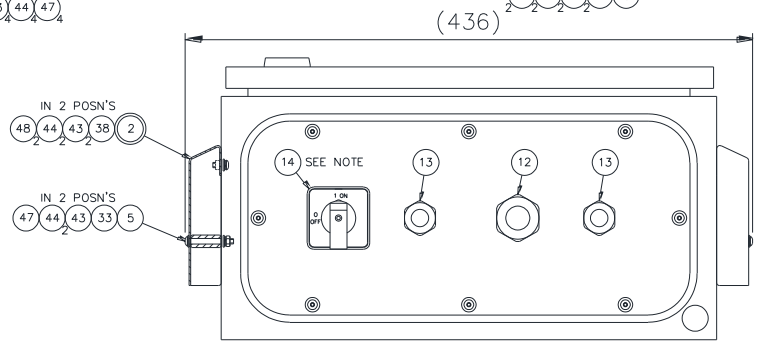


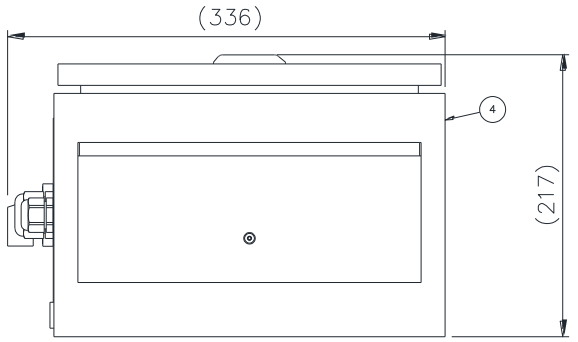


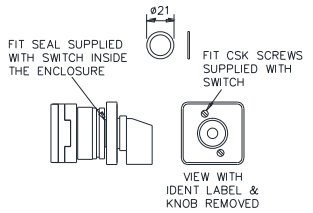
ITEM	PART No.	DRG No.	DESCRIPTION	240V QTY	115V QTY
1	C28305	C28305	CHASSIS PLATE SUB ASSY	1	1
2	C25012	C25012	FAN SPLASH COVER SUB ASSY	2	2
3	C30445	C30445	PSU DIN RAIL ASSY	1	1
4	C29167	C29167	PSU ENCLOSURE DRILLING	1	1
5	C24687	C24687	SPLASH COVER PILLAR	2	2
6	C28304	C28304	PSU BRACKET	3	3
7	C28264		PSU 240V	1	
7	C30610		PSU 115V		1
8	C23277		HEATER	1	1
9	C24889		THERMAL SWITCH	1	1
10	C16930		FAN 240V	2	
10	C16931		FAN 115V		2
11	C25013		FAN COVER	4	4
12	C15450		M25 CABLE GLAND	1	1
13	C10158		M20 CABLE GLAND	2	2
14	C29166		SWITCH	1	1
15	C15828		RED SHROUDED CRIMP	2	2
16	C09299		M4 RED EYELET	1	1
17	C22701		M6 YELLOW EYELET	2	2
18	C02185		M5 YELLOW EYELET	2	2
19	C29149		3 WAY LEVER CONNECTOR	2	2
20	C27962		SPACER	2	2
21	C21464		230V WARNING LABEL	1	
21	C22078		115V WARNING LABEL		1
22	C22036		ISOLATE SUPPLY LABEL	1	1
23	C04900		FRANCIS EXTERIOR LABEL	1	1

ITEM	PART No.	DRG No.	DESCRIPTION	240V QTY	115V QTY
24	C24369		THIS WAY UP LABEL	1	1
25	C14161		6mm S/C SILICONE CABLE RED	A/R	A/R
26	C14162		6mm S/C SILICONE CABLE BLACK	A/R	A/R
27	C26799		1.5mm S/C SILICONE CABLE BROWN	A/R	A/R
28	C15838		1.5mm S/C SILICONE CABLE BLUE	A/R	A/R
29	C15112		1.5mm S/C SILICONE CABLE G/Y	A/R	A/R
30	C04481		RED SLEEVING	A/R	A/R
31	C16335		M5 x 12 HEX HD SCREW	3	3
32	C13351		M5 x 10 HEX HD SCREW	4	4
33	C14468		M4 x 35 SKT BUTTON HD SCREW	2	2
34	C10120		M4 x 20 CSK HD SCREW	6	6
35	C15990		M4 x 16 HEX HD SCREW	2	2
36	C06981		M4 x 16 CSK HD SCREW	7	7
37	C14710		M4 x 12 HEX HD SCREW	1	1
38	C14533		M4 x 10 SKT BUTTON HD SCREW	4	4
39	C23813		M4 x 8 SKT BUTTON HD SCREW	3	3
40	C14502		M3 x 6 SKT BUTTON HD SCREW	2	2
41	C08392		M5 PLAIN WASHER	7	7
42	C09231		M5 S/C SPRING WASHER	7	7
43	C04376		M4 PLAIN WASHER	27	27
44	C08793		M4 S/C SPRING WASHER	25	25
45	C20637		M4 x 12 O/D WASHER	2	2
46	C10747		M3 S/C SPRING WASHER	2	2
47	C06266		M4 FULL NUT	18	18
48	C12039		RTV	A/R	A/R

C29065 1KW DECK PSU ENCLOSURE ASSY 240V
C29066 1KW DECK PSU ENCLOSURE ASSY 115V







ENCLOSURE BASE FIXINGS
340 x 260 M8 FIXINGS
WEIGHT 11KGS

ISS No	MODIFICATION DETAILS	DATE & INIT'S
1	AS FIRST DRAWN	5.21 D.S.
2	COLOURED TERMINALS	3.25 D.S.
3	C30610 115V PSU ADDED (EC2103)	10.25 D.S.
4	C29149 QTY 2 ADDED (EC2094)	10.25 H.E.C

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

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

A1 CONT ON SHEET

DRAWN	D.S.	DATE	10.5.21
CHECKED		SCALE	1:2
ALL DIMENSIONS IN MILLIMETRES			

TOLERANCES
General: ±
Angular: ±

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

MATERIAL

FINISH

DESCRIPTION

1KW DECK PSU ENCLOSURE ASSY

PART No./DRG No. C29065

SHT 1

10 - Spare Parts List

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

Part Number	Description
C28264-00	Power Supply Unit
C28330-00	Ignitor
C20224-00	Fan (240v) (Searchlight)
C21573-00	Fan (115v) (Searchlight)
C16930-00	Fan (240v) (PSU)
C16931-00	Fan (115v) (PSU)
D22843	1Kw Xenon Lamp
C20881-00	Front Glass
C20569-00	Front/Rear Bezel Gasket
C20839-01	Focus Wheel Assembly
C23277-01	Heater & Fuse Assembly (Searchlight & PSU)
C06779-00	Reflector
C21502-01	Base Lock Wheel Assembly (Deck & Cabin)
C21503-01	Side Lock Wheel Assembly (Deck & Cabin)
C16958-01	Tilt Lock Wheel Assembly (Cabin & Cabin Pedestal)
C11026-01	Pan Lock Wheel Assembly (Cabin & Cabin Pedestal)
C11148-00	'O' Ring Seal (Deck & Cabin)
C10170-00	'O' Ring Seal (Deck Pedestal & Cabin Pedestal)
C20281-00	Bellows (Cabin & Cabin Pedestal)
C22072-00	Push Road Seal Washer (Cabin & Cabin Pedestal)
C24889-00	PSU Thermal Switch
C29166-00	PSU On / Off Switch

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.

Back To Top