



**User Instruction & Installation Manual**  
**LX230RC 100 Watt 12v/24v/110v/240v**  
**H.I.D Xenon Searchlight**

**Product Reference Number:**

**A6091-LX230RC 24v**  
**A6098-LX230RC 12v**  
**A6103-LX230RC 240v**  
**A6119-LX230RC 110v**



*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](mailto:sales@francis.co.uk)

*Distributor details:*



Manual Part Number: C26125

Issue: 7  
23.2.17

# CONTENTS

- 1 - Introduction
- 2 - Safety Precautions
- 3 - Technical Information
- 4 - Unpacking and Installation Instructions
- 5 - Electrical Installation
- 6 - Operating Instructions
- 7 - Fault Finding
- 8 - Maintenance and Servicing
- 9 - General Assembly and Wiring Diagrams
- 10 - Spare Parts List

# 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 in order to ensure optimum performance and service life.

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

In order 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 quote the Product Serial Number at all times.

## 2 - Safety Precautions

The following instructions must be adhered to, in order 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 in order 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 sleeves supplied with the lamp whilst handling;
- 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, return the lamp, via the supplier, to the lamp manufacturer in its complete packaging;
- 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 or voltage 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.

### 3 – Technical Information

This product has been designed to operate in accordance with the product specification. The LX230RC 100watt H.I.D Xenon searchlight has the following features:

- All marine grade materials and fixings;
- Stove enamel painted;
- Full 365° horizontal rotation;
- Vertical movement  $\pm 20^\circ$ ;
- Pan rotation speed 26°/sec (24v version) 13°/sec (12v version);
- Tilt rotation speed 4°/sec;
- Instant lamp re-strike. No cooling down time required;
- Economical 3000 hour lamp life;
- Toughened front glass;
- Colour temperature 6000K;
- Sealing to IP66.

The searchlight also performs to the following optical data:

- Xenon H.I.D light source
- Lamp Wattage - 100 Watts;
- Supply voltage – 9.5v to 30v DC;
- Peak Beam Candlepower – 3,100,000lux;
- Range – 1,761 metres;
- Adjustable lamp focus, 5° spot to 29° flood;
- Temperature range: -40°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.

## 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 in order 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. 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.

## 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.

In order 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 in order 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 and rating 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 - 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 beam of the searchlight can be adjusted to give a variety of beam types. See the last note on lamp removal & fitting.

The searchlight is also fitted with a breather at the rear of the searchlight which ensures a steady airflow to prevent any vacuum forming within the barrel.

**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, at all times, when handling lamps;
- Eye protection must be worn when handling lamps that have been removed from their packaging materials. The protective cover should not be removed from the lamp prior to use 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 lamp to be fitted is suitable for the lamphouse and power supply equipment;
- Always isolate the equipment from the supply before inserting a lamp;
- Do not twist or bend the bulb when fitting the lamp as mechanical stresses MUST be avoided;
- When inserting or removing a lamp, always hold it securely by its' base in order to prevent breakage between base and bulb;
- The lampholder must not exercise mechanical tensions on the lamp, neither during insertion or operation.
- For safety reasons, the lamp should be replaced once it has reached its' average life, and not later than 1.25 times the stated life. With continuing use the risk of the lamp exploding increases due to alterations within the quartz;
- Before the protective sleeve 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 sleeve must be retained for re-use. Whenever removing a lamp, the protective sleeve must always be used for safety reasons;

## 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 trouble-shooting of Xenon lamps.

### Failure of Lamp to ignite

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

- 1) Check that the supply is connected to the input of the Ballast and check all connections as per the wiring diagrams show below. On operation if the lamp does not light, switch off supply and check all fuses;

**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.**

- 1) 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 25,000 volts or higher). Switching the lamp on activates the ignitor. A cracking or hissing noise should be heard. The ignitor is housed within the rear of the searchlight barrel. If found to be faulty a new ignitor must be fitted.

## 8 - Maintenance and Servicing

In order 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 in order 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;
  - Ensure that the lampholder is free from corrosion or other damage;
- 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).

**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.**

### **Notes for Lamp Fitting/Removal for LX230RC 100w H.I.D Xenon See dwg C26112 for aid**

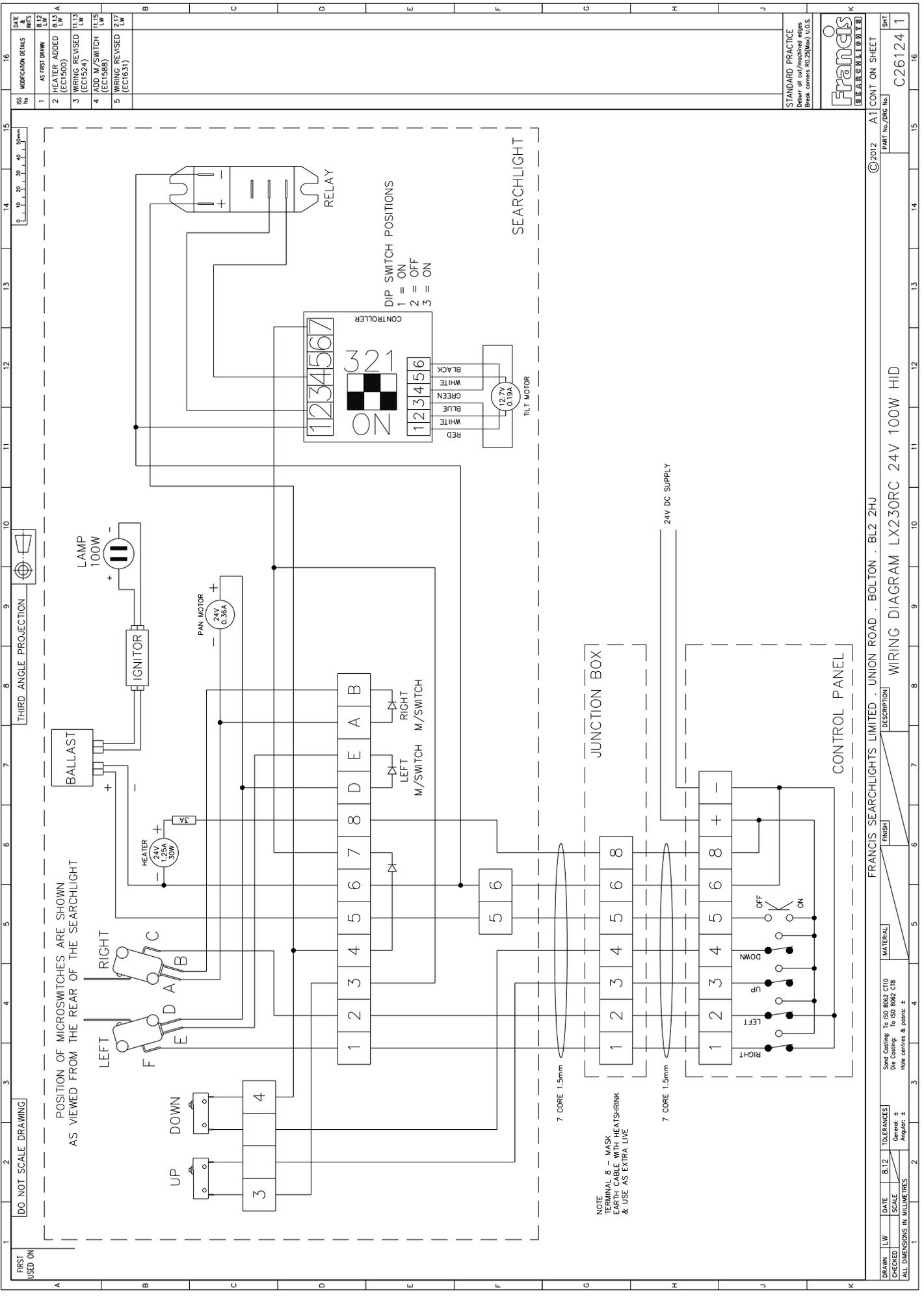
Ensure all screws are retained carefully in a safe position

- Remove lamp from packaging, ensuring protective jacket is still in place;
- Remove front & rear bezels from searchlight by unfastening the six clips;
- Remove the four M3 cap head screws that fasten the reflector to the tilt bracket.
- Remove reflector & unclip lamp leads.
- Unscrew lamp attachment from the reflector.
- Release the M4 grub screw in the lampholder.
- Remove lamp from the holder.
- Unscrew the two M3 countersunk head screws that hold the lampholder onto the lampholder attachment being careful not to lose the M4 spacing nut behind the lampholder.
- The lamp can now be fully removed by freeing one lead at a time through the centre bore.
- Remove new lamp from protective packaging.
- Replace the lamp by reversing the above procedure.
- For ease, attach the lamp leads from the front of searchlight before attaching the reflector. Then take up the slack in the leads from the rear of the searchlight once the reflector is back in position.
- **NOTE: A smaller spot of beam can be achieved by removing one M4 nut from both sides of the lampholder; also, a larger spot of beam can be achieved by adding an M4 nut to both sides of the lampholder.**

## 9 – General Assembly and Wiring Diagrams

<b>Drawing Number</b>	<b>Description</b>
A6091	A6091 LX230RC 100w General Assembly (24v) A6098 LX230RC 100w General Assembly (12v) A6103 LX230RC 100w General Assembly (240v) A6119 LX230RC 100w General Assembly (110v)
C26124	Wiring Diagram 24v
C27816	Wiring Diagram 12v
C26220	Wiring Diagram 240v
C26334	Wiring Diagram 110v
C26112	Reflector Assembly
C21623	Control Panel 24/240v
C26221	HV Junction Box (110v/240v Only)
C26129	Junction Box Assembly (24v)
C26225	Junction Box Assembly (12v)



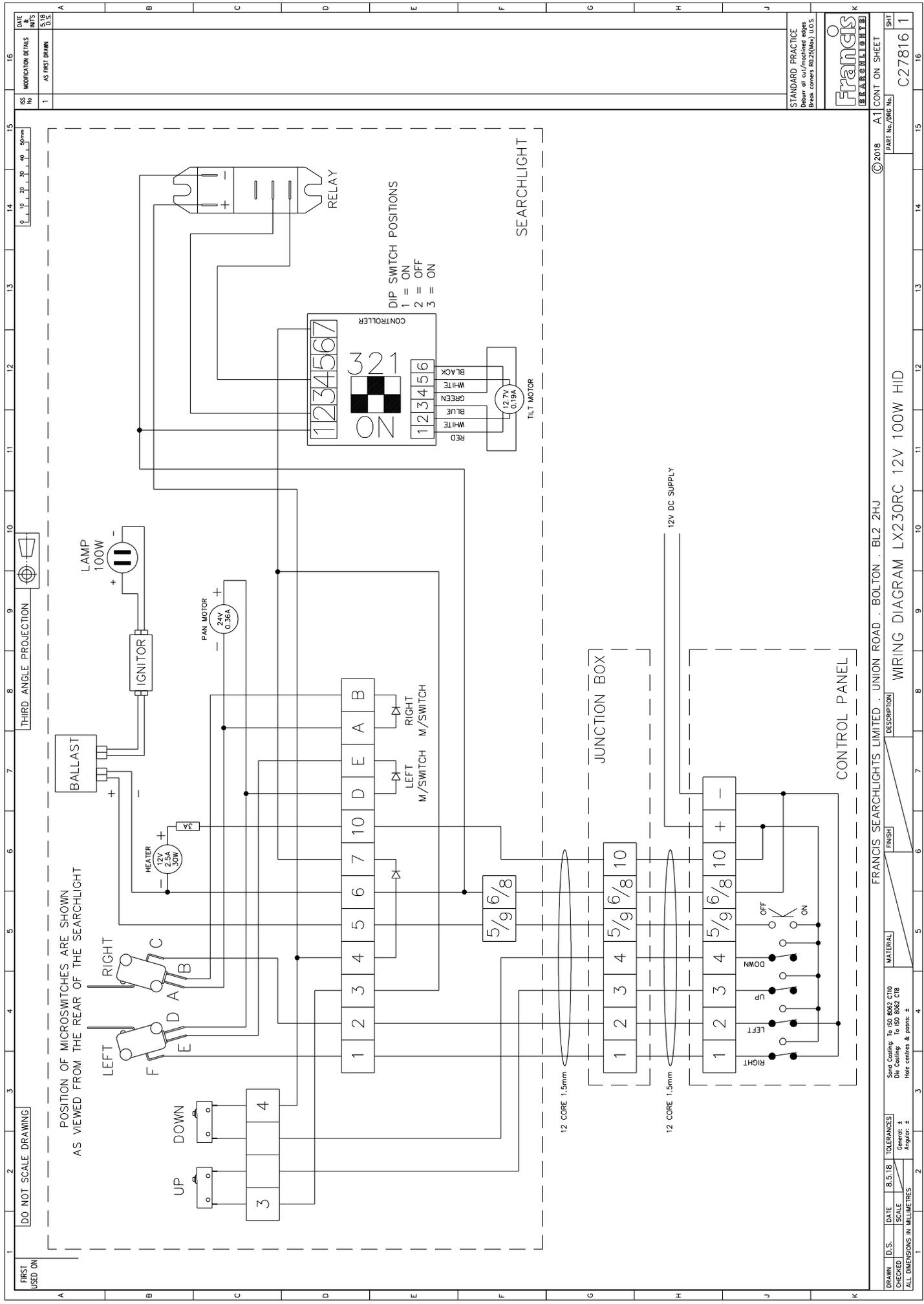


REV	DATE	DESCRIPTION
1	AS FIRST DRAWN	8.13 LW
2	HEATER ADDED	11.13 LW
3	WIRING REVISED	11.13 LW
4	ADD M/SWITCH	11.15 LW
5	WIRING REVISED	2.17 LW

NO	DESCRIPTION
16	MODIFICATION DETAILS

STANDARD PRACTICE Debur all cut/machined edges Break corners R0.25(Max) U.G.S.	
Francis	
©2012	A1 CONT ON SHEET
PART No./REV. No.	C26124 1

FRANCIS SEARCHLIGHTS LIMITED · UNION ROAD · BOLTON · BL2 2JH	DESCRIPTION	FINISH	MATERIAL	Scale Casting: To ISO 8062 CT10 Die Casting: To ISO 8062 C78	General #	Angular #
DO NOT SCALE DRAWING	THIRD ANGLE PROJECTION					
WIRING DIAGRAM LX230RC 24V 100W HID						



DATE 16	MODIFICATION DETAILS AS FIRST DRAWN
NO 1	AS FIRST DRAWN

A	B	C	D	E	F	G	H	J
---	---	---	---	---	---	---	---	---

STANDARD PRACTICE Debur all cut/machined edges Break corners R0.25(Max) U.O.S.	© 2018 PART NO./REV NO. A1 CONT ON SHEET	FRANCIS SEARCHLIGHTS LTD	SHEET C27816 1
--	--	-----------------------------	-------------------

FRANCIS SEARCHLIGHTS LIMITED . UNION ROAD . BOLTON . BL2 2HU	DESCRIPTION WIRING DIAGRAM LX230RC 12V 100W HID
--	--

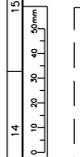
DRAWN CREATED	D.S. SCALE	8.5.18	TOLERANCES Machined to ISO 2875 CT8 Dip Centres to ISO 8062 CT8 Hole centres & points ± As per 1 ±	MATERIAL
------------------	---------------	--------	--	----------

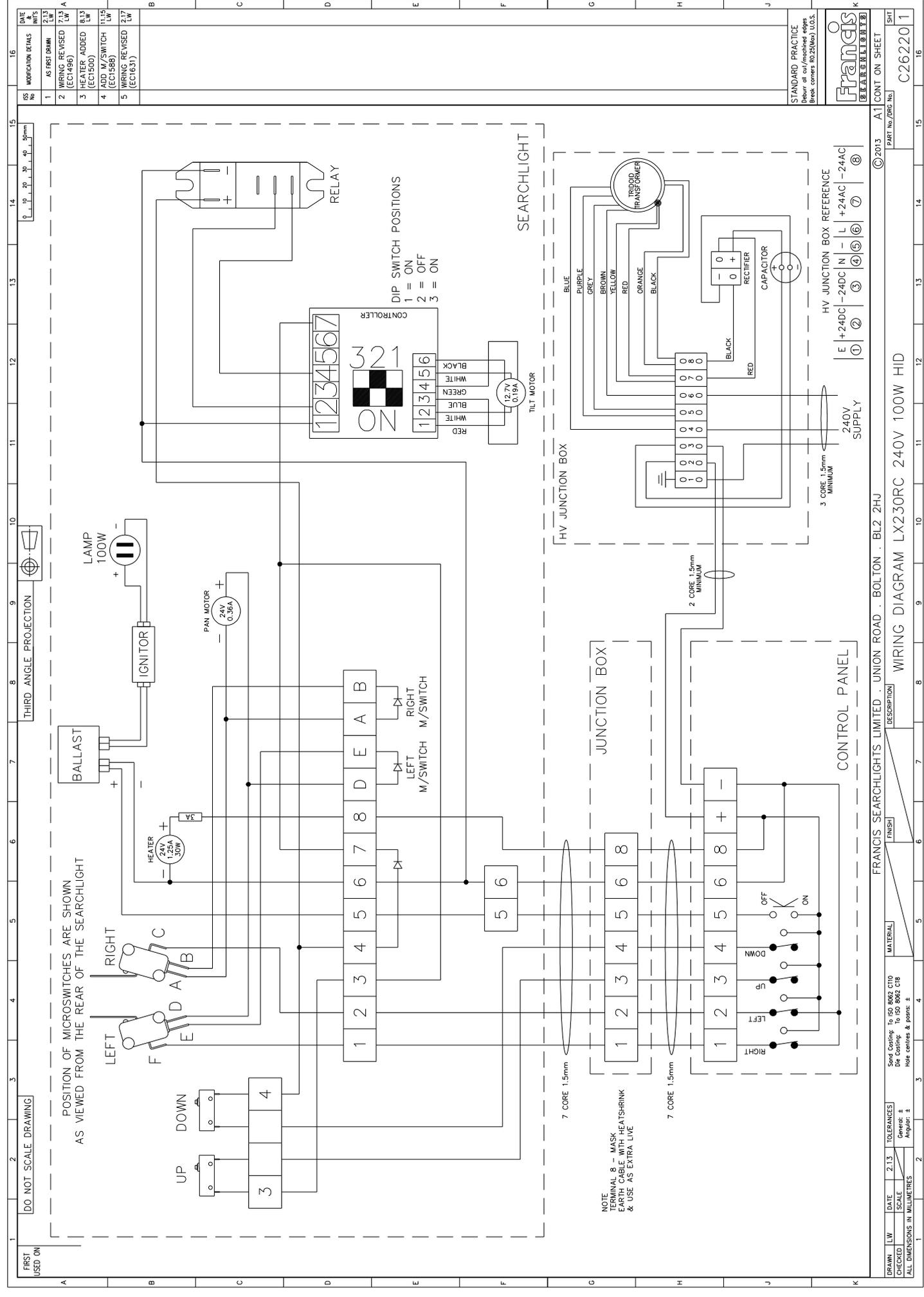
FIRST USED ON

DO NOT SCALE DRAWING

POSITION OF MICROSWITCHES ARE SHOWN AS VIEWED FROM THE REAR OF THE SEARCHLIGHT

THIRD ANGLE PROJECTION





REV	NO	MODIFICATION DETAILS	DATE	BY
1	AS FIRST DRAWN	2.13 LW	7.13 LW	A
2	WIRING REVISED	(EC1496)	8.13 LW	
3	HEATER ADDED	(EC1500)	11.15 LW	
4	ADD M/SWITCH	(EC1588)	2.17 LW	
5	WIRING REVISED	(EC1631)		

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

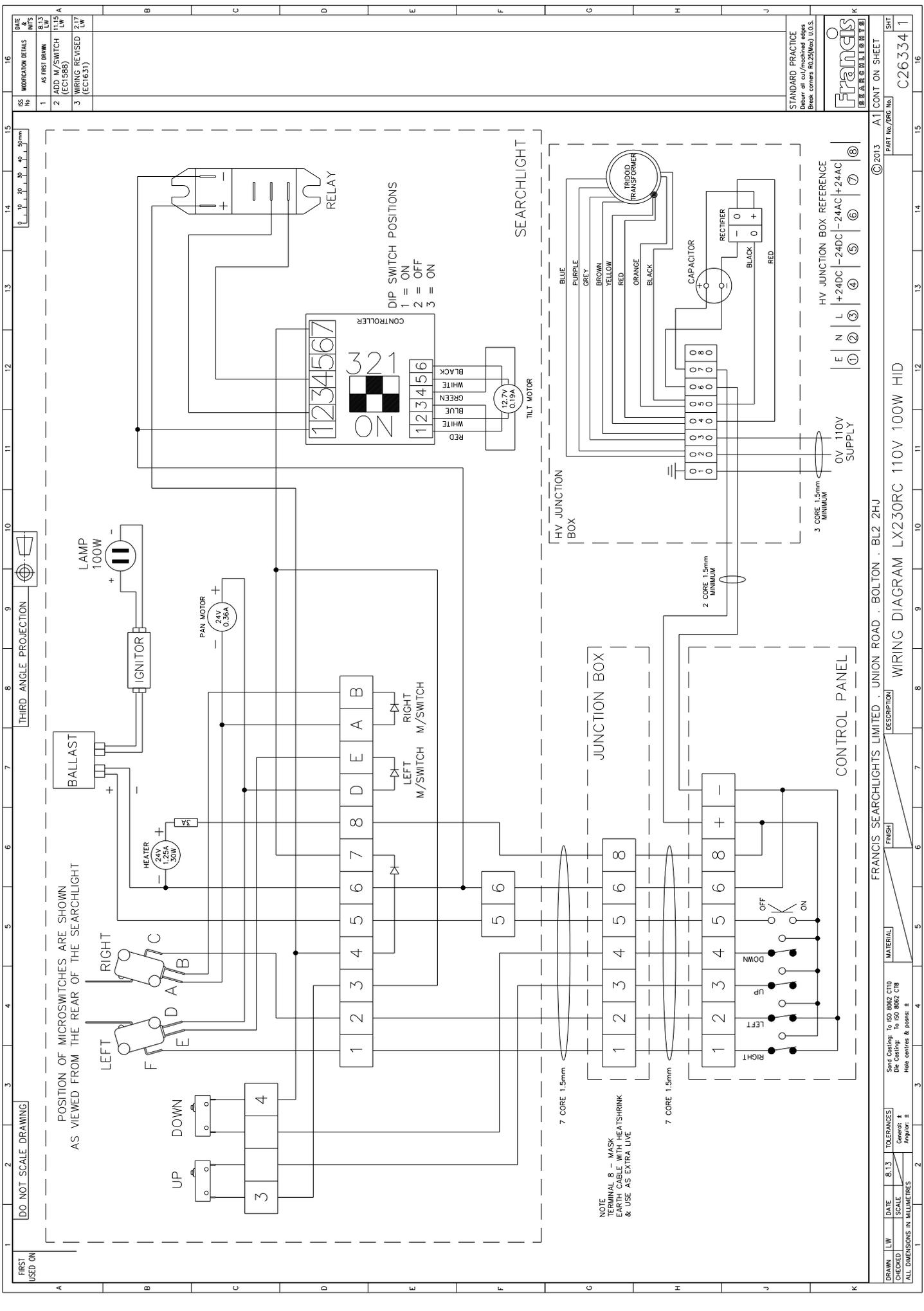
© 2013 A1 CONT ON SHEET

FRANCIS SEARCHLIGHTS LIMITED

PART No./DRG No. C26220 1

SHT

DATE	SCALE	TOLERANCES	FINISH	DESCRIPTION	MATERIAL
7.13 LW	2.13	±0.05	AS SUPPLIED	WIRING DIAGRAM LX230RC 240V 100W HID	



REV	NO	MODIFICATION DETAILS	DATE	BY
1	AS FIRST DRAWN		8.13	LW
2	ADD M/SWITCH (EC1586)		11.15	LW
3	WIRING REVISED (EC1631)		2.17	LW

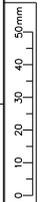
STANDARD PRACTICE Refer to cut/machine edge Draw centres (022)(020) 0.03.	
CONT ON SHEET	
PART No./DRG No.	C26334 1
SHT	16

DRAWN	LW	DATE	8.13	TOLERANCES	Send Casting: to ISO 8062 C110
CHECKED	SCALE	General: ±	Angular: ±	Material	Die Casting: to ISO 8062 C18
ALL DIMENSIONS IN MILLIMETRES		FINISH		DESCRIPTION	
FRANCIS SEARCHLIGHTS LIMITED · UNION ROAD · BOLTON · BL2 2HU		WIRING DIAGRAM LX230RC 110V 100W HID			

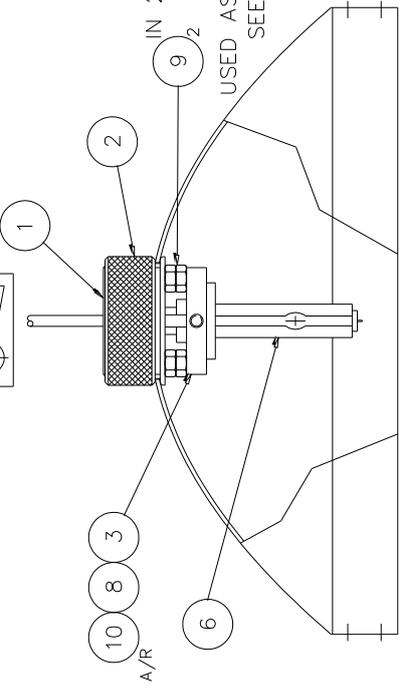
FIRST USED ON  
C26105  
#100  
LX230RC

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

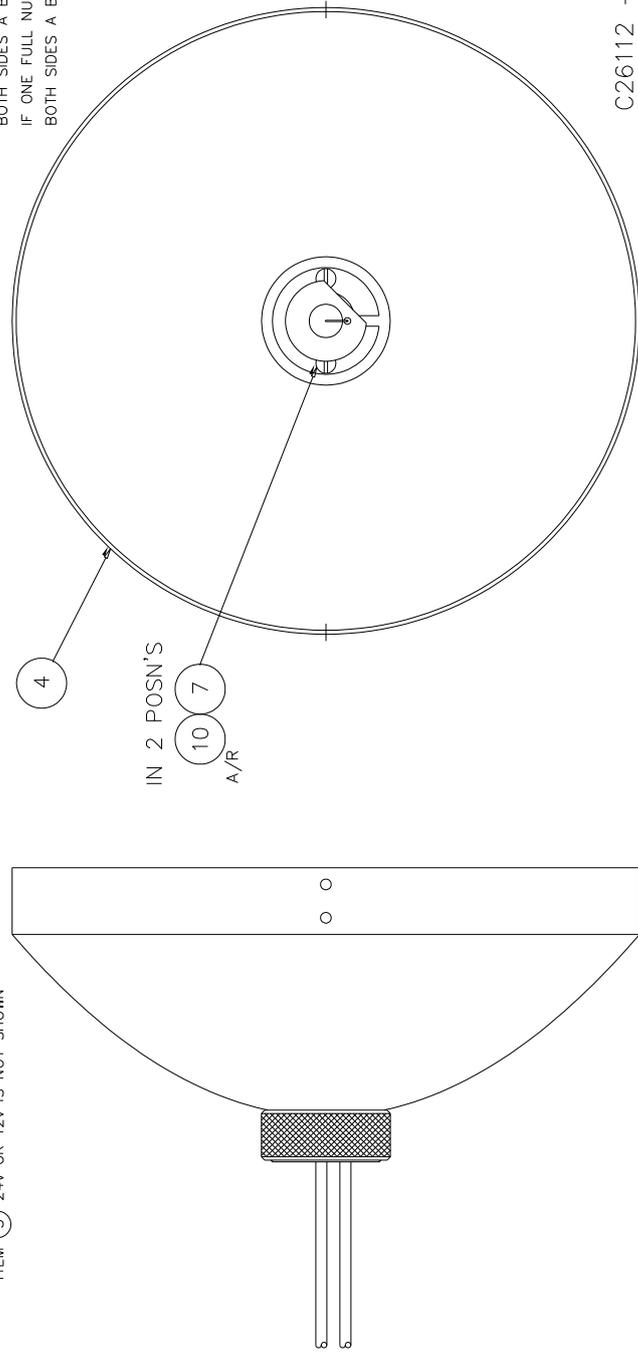


ITEM	PART No.	DRG No.	DESCRIPTION	24v QTY	12v QTY
1	C26091	C26091	LAMPHOLDER ATTACHMENT	1	1
2	C26092	C26092	LAMPHOLDER NUT	1	1
3	C26090	C26090	LAMPHOLDER	1	1
4	C25988	C25988	REFLECTOR	1	1
5	C25857	C25857	24V 100W H.I.D UNIT	1	X
5	C27119	C25857	12V 100W H.I.D UNIT	X	1
6	D25858	C25857	100w XENON LAMP	1	1
7	C14643		M3 x 16 CSK HD	2	2
8	C14437		M4 x 6 GRUBSCREW	1	1
9	C06266		M4 FULL NUT	4	4
10	C13853		LOCTITE (MEDIUM)	A/R	A/R



STANDARD IS TWO M4 FULL NUTS EACH SIDE  
IF ONE FULL NUT IS REMOVED FROM  
BOTH SIDES A BETTER SPOT IS ACHIEVED  
IF ONE FULL NUT IS ADDED TO  
BOTH SIDES A BETTER FLOOD IS ACHIEVED

ITEM 5 24V OR 12V IS NOT SHOWN



C26112 - 24v VERSION  
C27814 - 12v VERSION

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

**Francis**  
SEARCHLIGHTS

ISS No	11
MODIFICATION DETAILS	
1 AS FIRST DRAWN	5.12 LW
2 LAMP ADDED (EC1542)	4.14 LW
3 12v VERSION ADDED (EC1699)	5.18 LW

DATE & INIT'S	5.12 LW
DATE & INIT'S	4.14 LW
DATE & INIT'S	5.18 LW

CONT ON SHEET	A2
PART No./DRG No.	C26112
SHT	1

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

FINISH	DESCRIPTION
	REFLECTOR ASSEMBLY (LX230RC)

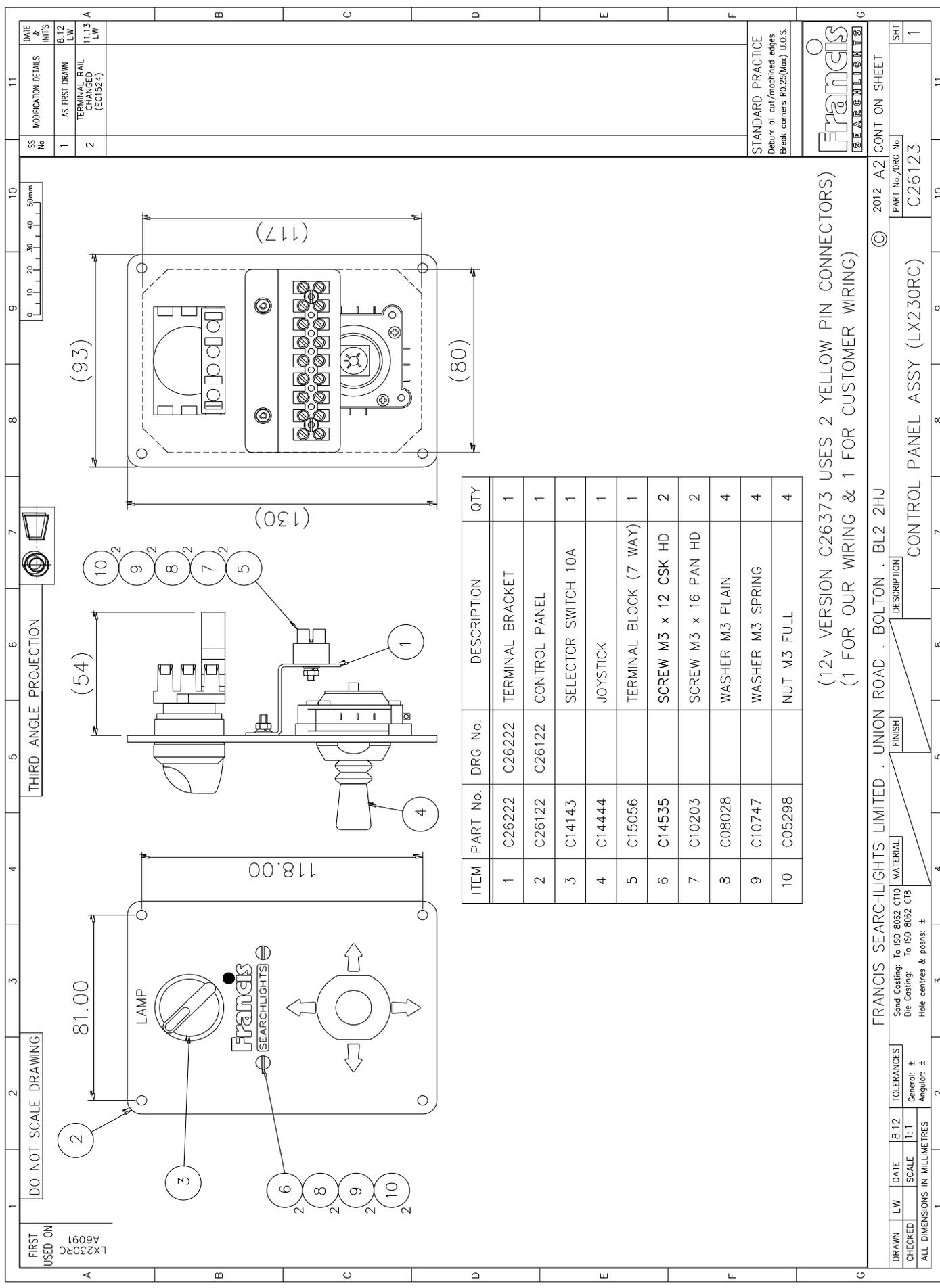
MATERIAL	FINISH
Sand Casting: To ISO 8062 CT10 Die Casting: To ISO 8062 C18	

TOLERANCES	General: ±	Angular: ±
±0.15	±0.1	±0.5

SCALE	ALL DIMENSIONS IN MILLIMETRES
1:1	

DATE	SCALE	ALL DIMENSIONS IN MILLIMETRES
5.12	1:1	

DRAWN	DATE	SCALE	ALL DIMENSIONS IN MILLIMETRES
	5.12	1:1	



FIRST USED ON  
LX230RC  
A6091

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

50mm

11

ISS No	MODIFICATION DETAILS	DATE & INIT'S
1	AS FIRST DRAWN	8.12 LW
2	TERMINAL RAIL CHANGED (EC1524)	11.13 LW

ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C26222	C26222	TERMINAL BRACKET	1
2	C26122	C26122	CONTROL PANEL	1
3	C14143		SELECTOR SWITCH 10A	1
4	C14444		JOYSTICK	1
5	C15056		TERMINAL BLOCK (7 WAY)	1
6	C14535		SCREW M3 x 12 CSK HD	2
7	C10203		SCREW M3 x 16 PAN HD	2
8	C08028		WASHER M3 PLAIN	4
9	C10747		WASHER M3 SPRING	4
10	C05298		NUT M3 FULL	4

(12V VERSION C26373 USES 2 YELLOW PIN CONNECTORS)  
(1 FOR OUR WIRING & 1 FOR CUSTOMER WIRING)

FRANCIS SEARCHLIGHTS LIMITED	UNION ROAD	BOLTON	BL2 2HU
FRANCIS SEARCHLIGHTS LIMITED	UNION ROAD	BOLTON	BL2 2HU
FINISH	DESCRIPTION	CONTROL PANEL ASSY (LX230RC)	
Sand Casting: To ISO 8062 CT10	MATERIAL	CONTROL PANEL ASSY (LX230RC)	
Die Casting: To ISO 8062 CT8		CONTROL PANEL ASSY (LX230RC)	
Hole centres & posns: ±		CONTROL PANEL ASSY (LX230RC)	
2	3	4	5
6	7	8	9
10	11	12	13
14	15	16	17
18	19	20	21
22	23	24	25
26	27	28	29
30	31	32	33
34	35	36	37
38	39	40	41
42	43	44	45
46	47	48	49
50	51	52	53
54	55	56	57
58	59	60	61
62	63	64	65
66	67	68	69
70	71	72	73
74	75	76	77
78	79	80	81
82	83	84	85
86	87	88	89
90	91	92	93
94	95	96	97
98	99	100	101
102	103	104	105
106	107	108	109
110	111	112	113
114	115	116	117
118	119	120	121
122	123	124	125
126	127	128	129
130	131	132	133
134	135	136	137
138	139	140	141
142	143	144	145
146	147	148	149
150	151	152	153
154	155	156	157
158	159	160	161
162	163	164	165
166	167	168	169
170	171	172	173
174	175	176	177
178	179	180	181
182	183	184	185
186	187	188	189
190	191	192	193
194	195	196	197
198	199	200	201
202	203	204	205
206	207	208	209
210	211	212	213
214	215	216	217
218	219	220	221
222	223	224	225
226	227	228	229
230	231	232	233
234	235	236	237
238	239	240	241
242	243	244	245
246	247	248	249
250	251	252	253
254	255	256	257
258	259	260	261
262	263	264	265
266	267	268	269
270	271	272	273
274	275	276	277
278	279	280	281
282	283	284	285
286	287	288	289
290	291	292	293
294	295	296	297
298	299	300	301
302	303	304	305
306	307	308	309
310	311	312	313
314	315	316	317
318	319	320	321
322	323	324	325
326	327	328	329
330	331	332	333
334	335	336	337
338	339	340	341
342	343	344	345
346	347	348	349
350	351	352	353
354	355	356	357
358	359	360	361
362	363	364	365
366	367	368	369
370	371	372	373
374	375	376	377
378	379	380	381
382	383	384	385
386	387	388	389
390	391	392	393
394	395	396	397
398	399	400	401
402	403	404	405
406	407	408	409
410	411	412	413
414	415	416	417
418	419	420	421
422	423	424	425
426	427	428	429
430	431	432	433
434	435	436	437
438	439	440	441
442	443	444	445
446	447	448	449
450	451	452	453
454	455	456	457
458	459	460	461
462	463	464	465
466	467	468	469
470	471	472	473
474	475	476	477
478	479	480	481
482	483	484	485
486	487	488	489
490	491	492	493
494	495	496	497
498	499	500	501
502	503	504	505
506	507	508	509
510	511	512	513
514	515	516	517
518	519	520	521
522	523	524	525
526	527	528	529
530	531	532	533
534	535	536	537
538	539	540	541
542	543	544	545
546	547	548	549
550	551	552	553
554	555	556	557
558	559	560	561
562	563	564	565
566	567	568	569
570	571	572	573
574	575	576	577
578	579	580	581
582	583	584	585
586	587	588	589
590	591	592	593
594	595	596	597
598	599	600	601
602	603	604	605
606	607	608	609
610	611	612	613
614	615	616	617
618	619	620	621
622	623	624	625
626	627	628	629
630	631	632	633
634	635	636	637
638	639	640	641
642	643	644	645
646	647	648	649
650	651	652	653
654	655	656	657
658	659	660	661
662	663	664	665
666	667	668	669
670	671	672	673
674	675	676	677
678	679	680	681
682	683	684	685
686	687	688	689
690	691	692	693
694	695	696	697
698	699	700	701
702	703	704	705
706	707	708	709
710	711	712	713
714	715	716	717
718	719	720	721
722	723	724	725
726	727	728	729
730	731	732	733
734	735	736	737
738	739	740	741
742	743	744	745
746	747	748	749
750	751	752	753
754	755	756	757
758	759	760	761
762	763	764	765
766	767	768	769
770	771	772	773
774	775	776	777
778	779	780	781
782	783	784	785
786	787	788	789
790	791	792	793
794	795	796	797
798	799	800	801
802	803	804	805
806	807	808	809
810	811	812	813
814	815	816	817
818	819	820	821
822	823	824	825
826	827	828	829
830	831	832	833
834	835	836	837
838	839	840	841
842	843	844	845
846	847	848	849
850	851	852	853
854	855	856	857
858	859	860	861
862	863	864	865
866	867	868	869
870	871	872	873
874	875	876	877
878	879	880	881
882	883	884	885
886	887	888	889
890	891	892	893
894	895	896	897
898	899	900	901
902	903	904	905
906	907	908	909
910	911	912	913
914	915	916	917
918	919	920	921
922	923	924	925
926	927	928	929
930	931	932	933
934	935	936	937
938	939	940	941
942	943	944	945
946	947	948	949
950	951	952	953
954	955	956	957
958	959	960	961
962	963	964	965
966	967	968	969
970	971	972	973
974	975	976	977
978	979	980	981
982	983	984	985
986	987	988	989
990	991	992	993
994	995	996	997
998	999	1000	1001

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

© 2012 A2

CONT ON SHEET

PART No./DRG No.  
C2

DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

DATE: 21.11.17  
 DWG No: AS PER DRAWING

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

A

B

C

D

E

F

G

H

J

K

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

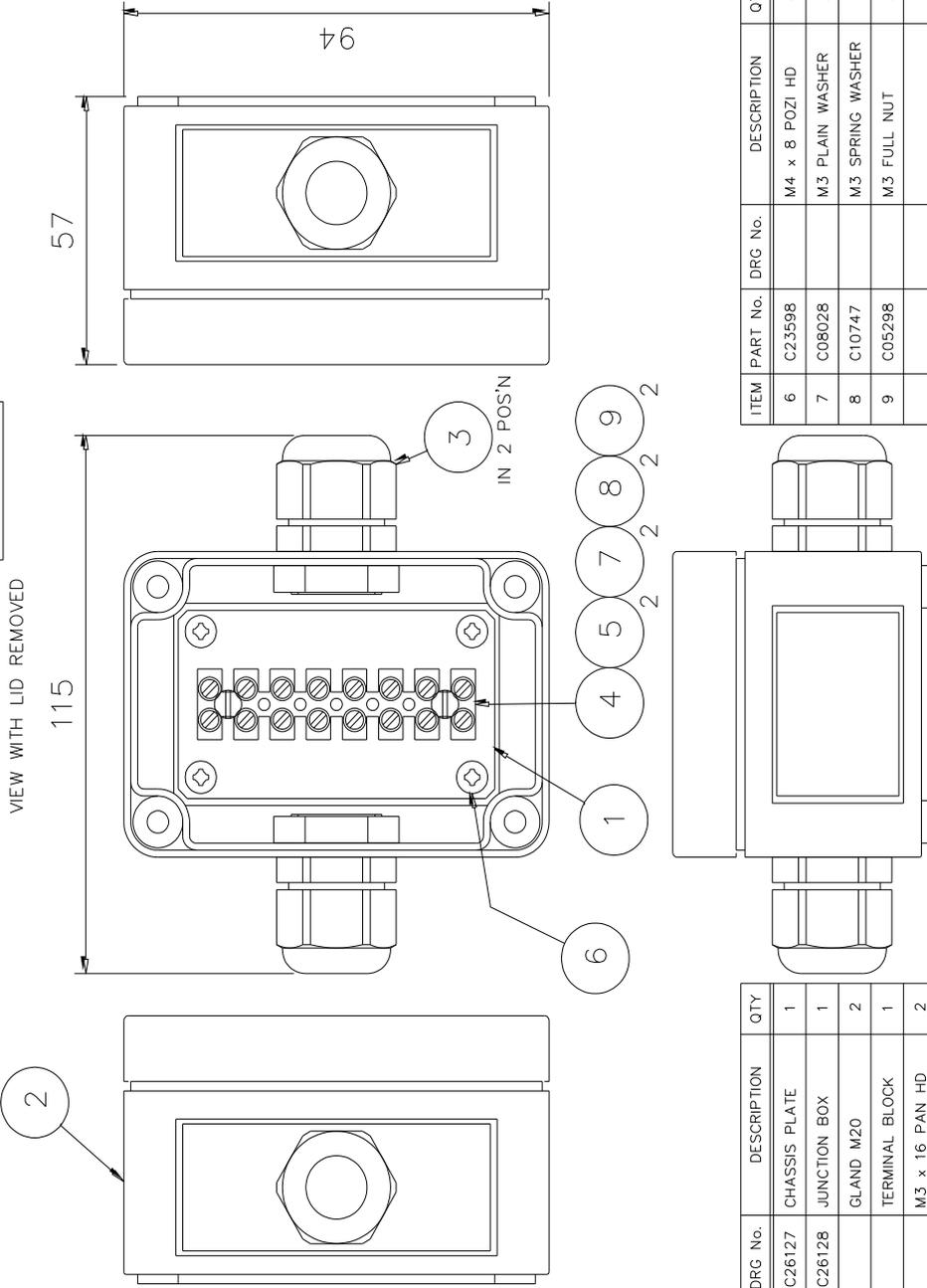
FIRST USED ON  
LX230RC  
A6091

DO NOT SCALE DRAWING

THIRD ANGLE PROJ



ISS No	MODIFICATION DETAILS	DATE & UNITS
1	AS FIRST DRAWN	8.12 LW



ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C26127	C26127	CHASSIS PLATE	1
2	C26128	C26128	JUNCTION BOX	1
3	C10158		GLAND M20	2
4	C15056		TERMINAL BLOCK	1
5	C10203		M3 x 16 PAN HD	2

ITEM	PART No.	DRG No.	DESCRIPTION	QTY
6	C23598		M4 x 8 POZI HD	4
7	C08028		M3 PLAIN WASHER	2
8	C10747		M3 SPRING WASHER	2
9	C05298		M3 FULL NUT	2

STANDARD PRACTICE

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

TOLERANCES U.O.S: -

General: ±

Angular: ±

Hole centres & posns: ±0.15

Sand Casting: To ISO 8062 CT10

Die Casting: To ISO 8062 CT8



© 2012 A3 CONT ON SHEET

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

DRAWN	LW	DATE	8.12	MATERIAL
CHECKED		SCALE	1:1	
ALL DIMENSIONS IN MILLIMETRES				

DESCRIPTION  
JUNCTION BOX  
ASSY

PART No./DRG No.

C26129

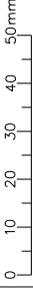
SHT

1

FIRST USED ON  
 A6103  
 A6098  
 A6091  
 A6091  
 LX230RC

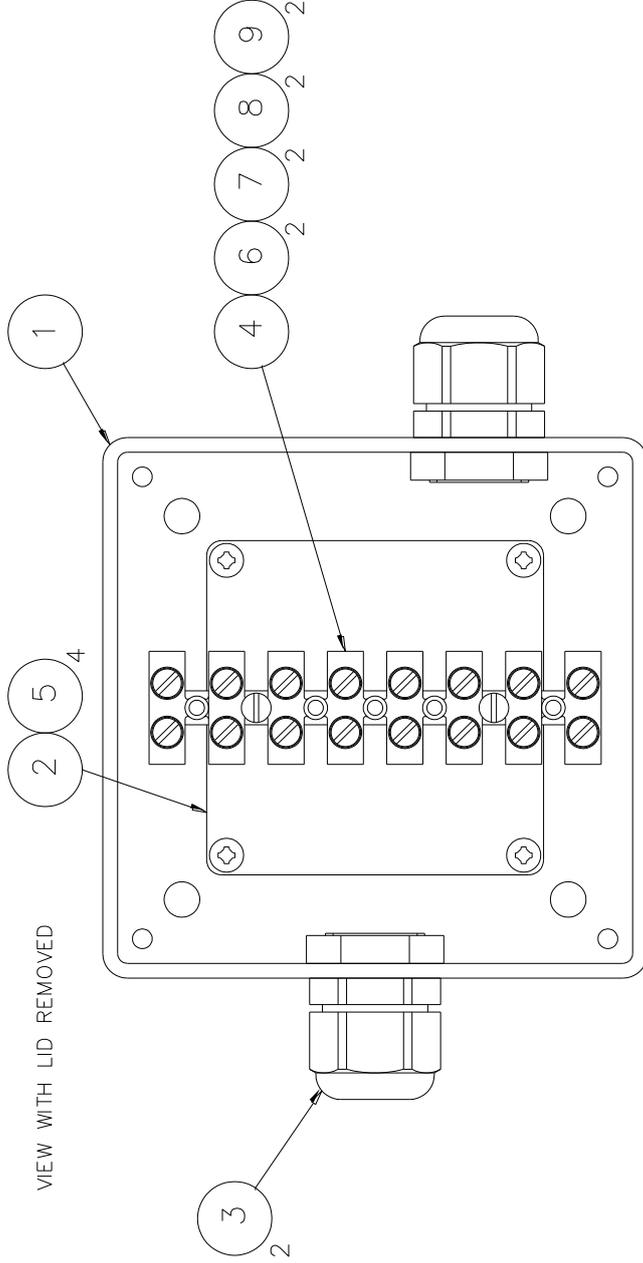
DO NOT SCALE DRAWING

THIRD ANGLE PROJ



ISS No	MODIFICATION DETAILS	DATE & INIT'S
1	AS FIRST DRAWN	2.13 LW

VIEW WITH LID REMOVED



STANDARD PRACTICE  
 Deburr all cut/machined edges  
 Break corners R0.25(Max) U.O.S.  
 TOLERANCES U.O.S: -  
 General: ±0.25  
 Angular: ±  
 Hole centres & posns: ±0.125  
 Sand Casting: To ISO 8062 CT10  
 Die Casting: To ISO 8062 CT8

**Francis**  
 SEARCHLIGHTS

ITEM	PART No.	DRG No.	DESCRIPTION	QTY
1	C26224	C26224	ENCLOSURE	1
2	C26223	C26223	CHASSIS PLATE	1
3	C10158		M20 CABLE GLAND	2
4	C15133		TERMINAL BLOCK (8WAY)	1
	5	C23598	SCREW $\phi 4 \times 8$ PAN POLYMATE	4
	6	C10129	SCREW M3 $\times 20$ PAN HD	2
	7	C08028	WASHER M3 PLAIN	2
	8	C10747	WASHER M3 SPRING	2
	9	C05298	NUT M3 FULL	2

DRAWN LW		DATE	2.13	MATERIAL	FINISH	
CHECKED		SCALE	1.1	DESCRIPTION		
ALL DIMENSIONS IN MILLIMETRES				JUNCTION BOX ASSY (LX230RC 12v)		
FRANCIS SEARCHLIGHTS LIMITED. UNION ROAD. BOLTON. BL2 2HJ				©2013	A3	CONT ON SHEET
				PART No./DRG No.	C26225	
				SHT	1	

## 10 – Spare Parts List

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

<b>Part Number</b>	<b>Description</b>
<b>Searchlight Spares</b>	
D25858	100w Xenon Lamp
C25857-01	100w Ballast & Ignitor Unit (24v & HV)
C27119-01	100w Ballast & Ignitor Unit (12v)
C08865-00	Front glass
C12888-00	Front Glass Infra-Red (Optional)
C21141-00	Front glass gasket
C22268-01	Breather Assembly
C25988-00	Reflector
C23805-00	Relay 24v (Model A6091)
C26172-00	Relay 12v (Model A6098)
C26117-01	Control Board
C26171-01	Stepper Motor Assembly
C26119-00	Tilt Timing Belt
C27103-00	Pan Motor
C21211-00	Pan Motor Gear
C10168-00	Base 'O' ring
C26103-00	Bearing Housing Gasket
C21567-00	Searchlight Heater
C24118-00	Fuse
C24021-00	Fuse Holder
C24813-00	Transformer (Model A6103 HV Only)
C24823-00	Capacitor (Model A6103 HV Only)
C27058-00	Micro Switches (Tilt)
C22382-00	Micro Switches (Pan)
C20070-00	Drainage Plug
<b>Joystick Spares</b>	
C14143-00	On / off Switch
C14444-00	Joystick

In order 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 quote searchlight model and serial number at all times. This will enable a fast response to your spares' requirements.