

ELECTRICAL INSTALLATION CERTIFICATE

Issued in accordance with British Standard 7671 - Requirements for Electrical Installations by an Approved Contractor or Conforming Body enrolled with NICEIC, Warwick House, Houghton Hall Park, Houghton Regis, Dunstable, LU5 5ZX

Original (To the person ordering the work)

DETAILS OF THE CLIENT

Client / Address: **JOHN SISK AND SON LIMITED, 1 CURO PARK, FROGMORE, ST ALBANS, HERTFORDSHIRE** Postcode: **AL2 2DD**

DETAILS OF THE INSTALLATION

Address: **663 JACKSON BUILDING, 2 ENGINEERS WAY, WEMBLEY** Postcode: **HA9 0SH** The installation is: **New**
 Extent of the installation covered by this certificate: **CIRCUITS FED VIA APARTMENT DB ONLY** **An addition**
An alteration

DESIGN


Details of permitted exceptions appended: **N/A** Risk assessment appended: **N/A** No. of pages

I/We, being the person(s) responsible for the design of the electrical installation (as indicated by my/our signature(s) below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, hereby CERTIFY that the design work for which I/we have been responsible is, to the best of my/our knowledge and belief, in accordance with BS 7671 amended to **2015** (date) except for the departures, if any, detailed as follows:

Details of departures from BS 7671, as amended (Regulations 120.3,133.5): **NONE**

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the **DESIGN** of the installation:

Signature  Date **27/09/2019** Name (CAPITALS) **J ROBINSON** Designer 1
 Signature Date Name (CAPITALS) ** Designer 2

CONSTRUCTION

I, being the person responsible for the construction of the electrical installation (as indicated by my signature below), particulars of which are described above, having exercised reasonable skill and care when carrying out the construction, hereby CERTIFY that the construction work for which I have been responsible is to the best of my knowledge and belief, in accordance with BS 7671, amended to **2015** (date) except for the departures, if any, detailed as follows:

Details of departures from BS 7671, as amended (Regulations 120.3,133.5): **NONE**

The extent of liability of the signatory is limited to the work described above as the subject of this certificate.

For the **CONSTRUCTION** of the installation:

Signature  Date **25/09/2019** Name (CAPITALS) **L BOURDICE** Constructor



INSPECTION AND TESTING

I, being the person responsible for the inspection and testing of the electrical installation (as indicated by my signature below), particulars of which are described above, having exercised reasonable skill and care when carrying out the inspection and testing, hereby CERTIFY that the work for which I have been responsible is to the best of my knowledge and belief, in accordance with BS 7671, amended to **2015** (date) except for the departures, if any, detailed as follows:

Details of departures from BS 7671, as amended (Regulations 120.3,133.5): **NONE**

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the **INSPECTION AND TESTING** of the installation:

Signature  Date **25/09/2019** Name (CAPITALS) **S WILSON** Inspector
 Signature  Date **25/09/2019** Name (CAPITALS) **S WILSON** Qualified Supervisor †

DESIGN, CONSTRUCTION, INSPECTION AND TESTING *

* This box to be completed only where the design, construction, inspection and testing have been the responsibility of one person.

Details of permitted exceptions appended: **N/A** Risk assessment appended: **N/A** No. of pages

I, being the person responsible for the design, construction, inspection and testing of the electrical installation (as indicated by my signature below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, construction, inspection and testing, hereby CERTIFY that the work for which I have been responsible is to the best of my knowledge and belief, in accordance with BS 7671, amended to **2015** (date) except for the departures, if any, detailed as follows:

Details of departures from BS 7671, as amended (Regulations 120.3,133.5):

The extent of liability of the signatory is limited to the work described above as the subject of this certificate.

For the **DESIGN**, the **CONSTRUCTION** and the **INSPECTION AND TESTING** of the installation:

Signature Date Signature Date
 Name (CAPITALS) Name (CAPITALS) Reviewed by
 Name (CAPITALS) Name (CAPITALS) Qualified Supervisor ††

† Where the inspection and testing have been carried out by an Approved Contractor, the inspection and testing results are to be reviewed by the registered Qualified Supervisor.

†† Where the design, the construction, and the inspection and testing have been the responsibility of one person, the inspection and testing results are to be reviewed by the registered Qualified Supervisor.

PARTICULARS OF THE ORGANISATION(S) RESPONSIBLE FOR THE ELECTRICAL INSTALLATION

DESIGN (1)	Organisation † HURLEY PALMER FLATT		
Address:	240 BLACKFRIARS ROAD LONDON	NICEIC Enrolment No (where appropriate)	
	Postcode: SE1 8NW	Branch number: (if applicable)	
DESIGN (2)	Organisation †		
Address:		NICEIC Enrolment No (where appropriate)	
	Postcode:	Branch number: (if applicable)	
CONSTRUCTION	Organisation † H E SIMM AND SON LTD		
Address:	55-56 RUSSELL SQUARE BLOOMSBURY LONDON	NICEIC Enrolment No (Essential Information)	036051001
	Postcode: WC1B 4HP	Branch number: (if applicable)	
INSPECTION AND TESTING	Organisation † H E SIMM AND SON LTD		
Address:	55-56 RUSSELL SQUARE BLOOMSBURY LONDON	NICEIC Enrolment No (where appropriate)	036051001
	Postcode: WC1B 4HP	Branch number: (if applicable)	

SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS

Tick boxes and enter details, as appropriate

Characteristics of Primary Supply Overcurrent Protective Device(s)

System Type(s)	Number and Type of Live Conductors			Nature of Supply Parameters				Characteristics of Primary Supply Overcurrent Protective Device(s)		
TN-S	a.c.	<input checked="" type="checkbox"/>	d.c.	Nominal Voltage(s): U ₀ ⁽¹⁾	N/A	V	U ₀ ⁽¹⁾	230	BS(EN)	BS 88-3 Fuse C
TN-C-S	1-phase (2 wire)	<input checked="" type="checkbox"/>	1-phase (3 wire)	Nominal frequency, f ⁽¹⁾	50	Hz	Notes: (1) by enquiry		Type	C
TN-C	2-phase (3 wire)		2-pole	Prospective fault current, I _{pf} ⁽²⁾⁽³⁾	2.1	kA	(2) by enquiry or by measurement		Rated current	100 A
TT	3-phase (3 wire)		3-pole	External earth fault loop impedance, Z _e ⁽²⁾⁽³⁾	0.07	Ω	(3) where more than one supply, record the higher or highest values		Short-circuit capacity	31.5 kA
IT	Other		other	Number of sources	1				Confirmation of supply polarity	<input checked="" type="checkbox"/>

PARTICULARS OF INSTALLATION AT THE ORIGIN

Details of Installation Earth Electrode (where applicable)

Means of Earthing Distributor's facility: <input checked="" type="checkbox"/>	Type: (eg rod(s), tape etc)	Location:		Method of measurement:	
Installation earth electrode:	Electrode resistance, R _A : (Ω)				
Main Switch/Switch-Fuse/Circuit-Breaker/RCD			Maximum Demand (Load)		Protective measures against electric shock:
Type: BS(EN)	BS EN 60947-3	Voltage rating	230	V	ADS
No of Poles	2	Rated current, I _n	100	A	
Supply conductors material	Copper	RCD operating current, I _{Δn} *	N/A	mA	
Supply conductors CSA	25 mm ²	RCD operating time (at I _{Δn})*	N/A	ms	
		Rated delay *	N/A	ms	
Earthing and Protective Bonding Conductors			Bonding of extraneous-conductive-parts (v)		
Earthing conductor	Conductor material	Copper	Main protective bonding conductors	Conductor material	Copper
Conductor csa	25	mm ²	Conductor csa	16	mm ²
Continuity/connection verified	<input checked="" type="checkbox"/>		Continuity/connection verified	<input checked="" type="checkbox"/>	
Water installation pipes	<input checked="" type="checkbox"/>	Lightning protection	N/A		
Oil installation pipes	N/A	Structural steel	N/A		
Gas installation pipes	N/A	Other	M		E

COMMENTS ON EXISTING INSTALLATION

In the case of an alteration or additions see Section 633 **NONE** Note: Enter 'NONE' or, where appropriate, the page number(s) of additional page(s) of comments on the existing installation.

NEXT INSPECTION **

§ Interval in terms of years, months or weeks, as appropriate

I/We the designer(s), RECOMMEND that this installation is further inspected and tested after an interval of not more than **5 10 YEARS**

** The proposed date for the next inspection should take into consideration the frequency and quality of maintenance that the installation can reasonably be expected to receive during its intended life, and the period should be agreed between the designer, installer and other relevant parties.

† Where the Approved Contractor responsible for the construction of the electrical installation has also been responsible for the design and the inspection and testing of that installation, the 'Particulars of the Organisation(s) responsible for the Electrical Installation' may be recorded only in the section entitled 'CONSTRUCTION'

‡ Where a number of sources are available to supply the installation, and where the data given for the primary source may differ from other sources, a separate sheet must be provided which identifies the relevant information relating to each additional source.

SCHEDULE OF ITEMS INSPECTED

† See note below

1.0 CONDITION OF ELECTRICAL INTAKE EQUIPMENT

(the Distributor should be notified of any unsatisfactory equipment)

1.1	Service cable	✓
1.2	Service head	✓
1.3	Distributor's earthing arrangement	✓
1.4	Meter tails - Distributor/Consumer	✓
1.5	Metering equipment	✓
1.6	Isolator	✓

2.0 PARALLEL OR SWITCHED ALTERNATIVE SOURCES OF SUPPLY

2.1	Presence of adequate arrangements where generator to operate as a switched alternative	
a)	Dedicated earthing arrangement independent of that of the public supply	N/A
2.2	Presence of adequate arrangements where generator to operate in parallel with public supply system	
a)	Correct connection of generator in parallel	N/A
b)	Compatibility of characteristics of means of generation	N/A
c)	Means to provide automatic disconnection of generator in the event of loss of public supply system or voltage or frequency deviation beyond declared values	N/A
d)	Means to prevent connection of generator in the event of loss of public supply system or voltage or frequency deviation beyond declared values	N/A
e)	Means to isolate generator from the public supply system	N/A
2.3	Presence of alternative/additional supply warning notices at:	
a)	The origin	N/A
b)	The meter position, if remote from origin	N/A
c)	The consumer unit/distribution board to which the alternative/additional sources are connected	N/A
d)	All points of isolation of ALL sources of supply	N/A

3.0 AUTOMATIC DISCONNECTION OF SUPPLY

3.1	Presence and adequacy of protective earthing/ bonding arrangements as follows:	
a)	Distributor's earthing arrangement or installation earth electrode arrangement	✓
b)	Earthing conductor and connections	✓
c)	Main protective bonding conductors and connections	✓
d)	Earthing/bonding labels at all appropriate locations	✓
3.2	Accessibility of:	
a)	Earthing conductor connections	✓
b)	All protective bonding connections	✓
3.3	FELV - requirements satisfied	N/A
3.4	Reduced low voltage - requirements satisfied	N/A

4.0 BASIC PROTECTION

4.1	Presence and adequacy of protective measures to provide basic protection	
a)	Insulation of live parts	✓
b)	Barriers or enclosures	✓
c)	Obstacles**	N/A
d)	Placing out of reach**	N/A

5.0 ADDITIONAL PROTECTION

5.1	The presence and effectiveness of additional protection methods used, as follows:	
a)	RCDs not exceeding 30 mA operating current	✓
b)	Supplementary bonding	N/A

6.0 OTHER METHODS OF PROTECTION

(insert location in box provided)

The presence and effectiveness of other methods of protection against electric shock where used, as follows:

6.1	Basic and fault protection	LOCATION	
a)	SELV		N/A
b)	PELV		N/A
c)	Double insulation/Reinforced insulation		N/A
d)	Electrical separation for one item of equipment		N/A
6.2	Fault protection		
a)	Non-conducting location/Earth-free local equipotential bonding**		N/A
b)	Electrical separation for more than one item of equipment**		N/A

7.0 DISTRIBUTION EQUIPMENT

7.1	Adequacy of working space/accessibility	✓	
7.2	Security of fixing	✓	
7.3	Insulation of live parts not damaged during erection	✓	
7.4	Adequacy / security of barriers	✓	
7.5	Suitability of enclosures for IP and fire ratings	✓	
7.6	Enclosures not damaged during installation	✓	
7.7	Presence and effectiveness of obstacles	✓	
7.8	Presence of main switch(es), linked where required	✓	
7.9	Operation of main switch(es) (functional check)	✓	
7.10	Operation of circuit-breakers and RCDs to prove functionality	✓	
7.11	RCD(s) provided for fault protection, where specified	N/A	
7.12	RCD(s) provided for protection against fire	N/A	
7.13	RCD(s) provided for additional protection, where specified	✓	
7.14	Confirmation overvoltage protection (SPDs) provided where specified	N/A	
7.15	Confirmation of indication that SPD is functional	N/A	
7.16	Presence of RCD quarterly test notice at or near the origin	✓	
7.17	Presence of diagrams, charts or schedules at or near each distribution board, where required	✓	
7.18	Presence of non-standard (mixed) cable colour warning notice at or near the appropriate distribution board, where required	N/A	
7.19	Presence of next inspection recommendation label	✓	
7.20	Presence of other required labelling	✓	
7.21	Selection of protective device(s) and base(s); correct type and rating	✓	
7.22	Single-pole protective devices in line conductor only	✓	
7.23	Protection against mechanical damage where cables enter equipment	✓	
7.24	Protection against electromagnetic effects where cables enter ferromagnetic enclosures	✓	
7.25	Confirmation that ALL conductor connections, including connection to busbars are correctly located in terminals and are tight and secure	✓	
8.0	CIRCUITS		
8.1	Identification of conductors	✓	
8.2	Cables correctly supported throughout their length	✓	
8.3	Examination of cables for signs of mechanical damage during installation	✓	
8.4	Examination of insulation of live parts, not damaged during erection	✓	

** For use in controlled supervised/conditions only

SCHEDULE OF ITEMS INSPECTED

† See note below

8.5	Non-sheathed cables protected by enclosure in conduit, ducting or trunking	✓
8.6	Suitability of containment systems (including flexible conduit)	✓
8.7	Correct temperature rating of cable insulation	✓
8.8	Adequacy of cables for current-carrying capacity with regard to the type and nature of installation	✓
8.9	Adequacy of protective devices: type and rated current for fault protection	✓
8.10	Presence and adequacy of circuit protective conductors	✓
8.11	Coordination between conductors and overload protective devices	✓
8.12	Wiring systems and cable installation methods / practices appropriate to the type and nature of installation and external influences	✓
8.13	Cables installed under floors, above ceilings, in walls / partitions, adequately protected against damage	
	installed in prescribed zones	✓
	incorporating earthed armour or sheath, or installed within earthed wiring system, or otherwise protected against mechanical damage by nails, screws and the like	N/A
8.14	Provision of additional protection by RCDs having rated residual operating current ($I_{\Delta n}$) not exceeding 30 mA	
	a) for mobile equipment with a current rating not exceeding 32 A for use outdoors	N/A
	b) For all socket-outlets of rating 20 A or less, unless exempt	✓
	c) For cables installed in walls/partitions at a depth of less than 51 mm	✓
	d) For cables installed in walls/partitions containing metal parts regardless of depth	✓
8.15	Provision of fire barriers, sealing arrangements so as to minimize the spread of fire	✓
8.16	Band II cables segregated/separated from Band I cables	✓
8.17	Cables segregated/separated from non-electrical services	✓
8.18	Termination of cables at enclosures	
	a) Connections under no undue strain	✓
	b) No basic insulation of a conductor visible outside enclosure	✓
	c) Connections of live conductors adequately enclosed	✓
	d) Adequately connected at point of entry to enclosure (glands, bushes etc.)	✓
8.19	Suitability of circuit accessories for external influences	N/A
8.20	Circuit accessories not damaged during erection	✓
8.21	Single-pole devices for switching in line conductor only	✓
8.22	Adequacy of connections, including cpcs, within accessories and at fixed and stationary equipment	✓
9.0 ISOLATION AND SWITCHING		
9.1	Isolators	
	a) Presence and location of appropriate devices	✓
	b) Capable of being secured in the OFF position	✓
	c) Correct operation verified (functional check)	✓
	d) The installation, circuit or part thereof that will be isolated is clearly identified by location and/or durable marking	✓
	e) Warning label posted in situations where live parts cannot be isolated by the operation of a single device	N/A

9.2	Switching off for mechanical maintenance	
	a) Presence of appropriate devices	✓
	b) Acceptable location (state if local or remote) Local	✓
	c) Capable of being secured in the OFF position	✓
	d) Correct operation verified (functional check)	✓
	e) The circuit or part thereof to be disconnected clearly identified by location and/or durable marking	✓
9.3	Emergency switching/stopping	
	a) Presence of appropriate devices	N/A
	b) Readily accessible for operation where danger might occur	N/A
	c) Correct operation verified (functional check)	N/A
	d) The installation, circuit or part thereof to be disconnected, clearly identified by location and/or durable marking	N/A
9.4	Functional switching	
	a) Presence of appropriate devices	✓
	b) Correct operation verified (functional check)	✓

10.0 CURRENT-USING EQUIPMENT (PERMANENTLY CONNECTED)

10.1	Suitability of equipment in terms of IP and fire ratings	✓
10.2	Enclosure not damaged/deteriorated during installation so as to impair safety	✓
10.3	Suitability for the environment and external influences	✓
10.4	Security of fixing	✓
10.5	Cable entry holes in ceilings above luminaires, sized or sealed so as to restrict the spread of fire	✓
10.6	Recessed luminaires (downlighters)	
	a) Correct type of lamps fitted	✓
	b) Installed to minimise build-up of heat	✓
10.7	Provision of undervoltage protection, where specified	N/A
10.8	Provision of overload protection, where specified	✓
10.9	Adequacy of working space/accessibility to equipment	✓

11.0 SPECIAL INSTALLATIONS OR LOCATIONS

List below any Special Installations or Locations which are part of the installation to be verified, and confirm that the additional requirements given in the respective section of Part 7 are fulfilled.

BATHROOM	✓

12.0 OTHER	

† *All boxes must be completed.* ✓ indicates that an inspection was carried out and that the result was satisfactory. 'N/A' indicates that an inspection was not applicable to the particular installation. Page 4 of 6

* *Where the electrical work to which this certificate relates includes the installation of a fire alarm system and/or an emergency lighting system (or a part of such systems), this electrical safety certificate should be accompanied by the particular certificate(s) for the system(s).*

SCHEDULE OF CIRCUIT DETAILS FOR THE INSTALLATION

Original (To the person ordering the work)

TO BE COMPLETED IN EVERY CASE		TO BE COMPLETED ONLY IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION*										
Location of distribution board:	APARTMENT SERVICE CUPBOARD	Supply to distribution board is from:	UKPS RISER	No of phases:	1	Nominal voltage:	230	V				
Distribution board designation:	DB 663 JACKSON BUILDING	Overcurrent protective device for the distribution circuit:	Type: BS(EN) BS 88-3 Fuse C	Rating:	100	A	Associated RCD (if any): BS(EN) N/A	RCD No of poles:	N/A	$I_{\Delta n}$	N/A	mA

Circuit number and line	Circuit designation	Type of wiring (see code below)	Reference method	Number of points served	Circuit conductors: csa		Max. disconnection time permitted by BS 7671 (s)	Overcurrent protective devices				RCD	Maximum Z_s permitted by BS 7671 (Ω)
					Live (mm ²)	cpc (mm ²)		BS (EN)	Type	Rating (A)	Short-circuit capacity (kA)		
1	FIRE ALARMS	A	102	6	1.5	1	0.4	60898 MCB	B	6	6		7.28
2	INTRUDER ALARM	A	102	1	2.5	1.5	0.4	60898 MCB	B	6	6		7.28
*	RCCB							61008 RCD				30	
3	KITCHEN SOCKETS	A	102	6	2.5	1.5	0.4	60898 MCB	C	32	6		0.68
4	HOB	A	102	1	6	2.5	0.4	60898 MCB	C	32	6		0.68
5	LIGHTS-HALL/KITCHEN/BEDROOM	A	102	12	1.5	1	0.4	60898 MCB	B	6	6		7.28
6	SPARE												
7	SPARE												
8	SPARE												
9	SPARE												
10	SPARE												
*	RCCB							61008 RCD				30	
11	LIVING/HALL/BEDROOM SOCKETS	A	102	9	2.5	1.5	0.4	60898 MCB	C	32	6		0.68
12	OVEN	A	102	1	2.5	1.5	0.4	60898 MCB	C	20	6		1.09
13	UTILITY CUPBOARD- SOCKETS/SPURS	A	102	4	2.5	1.5	0.4	60898 MCB	C	20	6		1.09
14	BATHROOM POD- LIGHTING/T/RAIL/MVHR/MEV	A	102	12	2.5	1.5	0.4	60898 MCB	C	16	6		1.37
15	SPARE												
16	SPARE												
17	SPARE												
*	SUPPLY TO APARTMENT	G	E	1	25	25	5	88-3 C	C	100	31.5		0.38

↑ See Table 4A2 of Appendix 4 of BS 7671

CODES FOR TYPE OF WIRING								
A	B	C	D	E	F	G	H	O (Other - please state)
Thermoplastic insulated/sheathed cables	Thermoplastic cables in metallic conduit	Thermoplastic cables in non-metallic conduit	Thermoplastic cables in metallic trunking	Thermoplastic cables in non-metallic trunking	Thermoplastic /SWA cables	Thermosetting /SWA cables	Mineral-insulated cables	

* In such cases, details of the distribution (sub-main) circuit(s), together with the test results for the circuit(s), must also be provided, on continuation schedules.

See next page for Schedule of Test Results

SCHEDULE OF TEST RESULTS FOR THE INSTALLATION

Original (To the person ordering the work)

TEST RESULTS

TO BE COMPLETED ONLY IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION				Test instruments (serial numbers) used:			
Characteristics at this distribution board				Earth fault loop impedance		RCD	
Yes <input type="checkbox"/> Confirmation of supply polarity * See note below Z _s 0.14 Ω Operating times At I _{Δn} <input type="checkbox"/> ms I _{pf} 1.7 kA RCD (if any) At 5I _{Δn} <input type="checkbox"/> ms Phase sequence confirmed (where appropriate) <input type="checkbox"/>				8108677		8108677	
				Insulation resistance		Multi-function	
				8108677		8108677	
				Continuity		Other	
				8108677			

Circuit number and line	Circuit impedances (Ω)					Insulation resistance				Polarity	Maximum measured earth fault loop impedance, Z _s (Ω)	RCD operating times		Test button operation
	Ring final circuits only (measured end to end)			All circuits (At least one column to be completed)		Line/Line †	Line/Neutral †	Line/Earth †	Neutral/Earth			at I _{Δn}	at 5I _{Δn} (if applicable)	
	r ₁ (Line)	r _n (Neutral)	r ₂ (cpc)	R ₁ + R ₂	R ₂	(MΩ)	(MΩ)	(MΩ)	(MΩ)			(ms)	(ms)	
1				1.23			> 999	> 999	> 999	✓	1.28			
2				0.07			> 999	> 999	> 999	✓	0.17			
*												38	15	✓
3	0.34	0.34	0.57	0.23			> 999	> 999	> 999	✓	0.31			
4				0.09			> 999	> 999	> 999	✓	0.22			
5				0.95			> 999	> 999	> 999	✓	1.01			
6														
7														
8														
9														
10														
*												38	14	✓
11	0.68	0.68	1.14	0.46			> 999	> 999	> 999	✓	0.33			
12				0.20			> 999	> 999	> 999	✓	0.29			
13				0.12			> 999	> 999	> 999	✓	0.20			
14				0.34			> 999	> 999	> 999	✓	0.42			
15														
16														
17														
*				0.08			> 999	> 999	> 999	✓	0.14			

* Note: Where the installation can be supplied by more than one source, such as a primary source (eg public supply) and a secondary source (eg standby generator), the higher or highest values must be recorded.

TESTED BY	
Signature: <i>D. Johnson</i>	Position: Electrical Tester
Name: (CAPITALS) D JOHNSON	Date of testing: 24/06/2019

See previous page for Schedule of Circuit Details