ELECTRICAL INSTALLATION CERTIFICATE

71208 - Master

[BS 7671:2008 as amended]

NICEIC APPROVED CONTRACTOR

amtech™

Details of the Client

Client/Address	Church of St Denys, C/O Mrs Jennings, Wyville House, Stonton Wyville, Leicestershire, LE16 7UG

Details of the Installation

		The installation is:	
Address	Stonton Wyville, Leicestershire, LE16 7UG	New	N/A
Extent of the installation covered by this certificate	Replacement of heaters and one new circuit from the distribution board.	An Addition	✓
		An Alteration	✓

Design

I being the person(s) responsible for the design of the electrical installation (as indicated by my signature(s) below), particulars of which are described above, have exercised reasonable skill and care when carrying out the design hereby CERTIFY that the design work for which I have been responsible is, to the best of my knowledge and belief in accordance with BS 7671 amended to July 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

Details of permitted exceptions (Regulations 411.3.3): N/A

Where applicable, a suitable risk assessment(s) must be attached to this Certificate: N/A

Number of pages: N/A

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

For the DESIGN of the installation:

Signature	R. Felstead	Date	22/9/16	Name (CAPITALS)	Richard Felstead	Designer 1
Signature	N/A	Date	N/A	Name (CAPITALS)	N/A	Designer 2 **

**(where there is divided responsibility for the design)

Construction

I being the person(s) responsible for the construction of the electrical installation (as indicated by my signature(s) below), particulars of which are described above, have 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 July 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	R. Felstead	Date	22/9/16	Name (CAPITALS)	Richard Felstead	Constructor

Inspection and Testing

I being the person(s) responsible for the inspection and testing of the electrical installation (as indicated by my signature(s) below), particulars of which are described above, have 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 July 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 INSPECTION AND TESTING of the installation:

Signature	R. Felstead	Date	22/9/16	Reviewed by Signature	N/A	Date	N/A
Name (CAPITALS)	Richard Felstead	Inspector		Name (CAPITALS)	N/A	Qualified Supervisor	

Particulars of the Organisation(s) Responsible for the Electrical Installation

71208 - Master

DESIGN (1)	Organisation	R C Felstead Electrical Contractors			
Address	5 Balmoral Road Melton Mowbray Leicestershire LE13 1JN	Tel	01664566851	NICEIC Enrolment Number	032903
				Branch No.(If Applicable)	N/A
DESIGN (2)	Organisation	N/A			
Address		Tel	N/A	Registration Number	
				Branch No.(If Applicable)	
CONSTRUCTION	Organisation	R C Felstead Electrical Contractors			
Address	5 Balmoral Road Melton Mowbray Leicestershire LE13 1JN	Tel	01664566851	NICEIC Enrolment Number	032903
				Branch No.(If Applicable)	N/A
INSPECTION AND TESTING	Organisation	R C Felstead Electrical Contractors			
Address	5 Balmoral Road Melton Mowbray Leicestershire LE13 1JN	Tel	01664566851	NICEIC Enrolment Number	032903
				Branch No.(If Applicable)	N/A

Supply Characteristics and Earthing Arrangements

Tick boxes and enter details, as appropriate

System Type(s)		Number and Type of Live Conductors					
TN-S	✓		a.c. ✓		d.c. N/A		
TN-C-S	N/A	1-Phase (2 wire)	N/A	1-Phase (3 wire)	N/A	2 Pole	N/A
TN-C	N/A	2-Phase (3 wire)	N/A			3 Pole	N/A
TT	N/A	3-Phase (3 wire)	✓	3-Phase (4 wire)	N/A	Other	N/A
IT	N/A	Other	N/A				

Nature of Supply Parameters						
Nominal Voltage	U	400	V	Uo	230	V
Nominal frequency	f	50	Hz			
Prospective fault current	Ipf	0.572	kA			
External loop impedence	Ze	0.40	Ω			
Number of Sources		1				

Characteristics of primary supply overcurrent protective Device(s)		
BS(EN)	1361 Fuse HBC	
Type	2	
Rated current	100	A
Short circuit Capacity	33	kA
Confirmation of Supply Polarity	✓	

Particulars of Installation at the Origin

Means of Earthing		Details of Installation Earth Electrode (where applicable)			
Distributor's facility	✓	Type (eg rod(s), tape etc)	N/A	Location	N/A
Installation earth electrode	N/A	Electrode resistance, R_A	N/A Ω	Method of measurement	N/A

Main Switch/ Switch-Fuse/ Circuit-Breaker/ RCD						Maximum Demand (Load)		Protective measure(s) against electric shock
Type BS(EN)	61008 RCD	Voltage Rating	400	V		80	Amps	ADS
No. of poles	4	Rated Current,In	100	A				
Supply Conductors material	Copper	RCD operating current, IΔn	30	mA				
Supply Conductors CSA	25 mm²	RCD operating time at, IΔn	18.5	ms				
		Rated time delay	N/A	ms				

Earthing and Protective Bonding Conductors				Bonding of extraneous conductive parts (✓)	
Earthing conductor		Main protective bonding conductors		Water installation pipes	N/A
Conductor material:	Copper	Conductor material:	N/A	Lightning Protection	N/A
Conductor csa:	16 mm²	Conductor csa:	N/A mm²	Oil installation pipes	N/A
Continuity/ connection verifed	✓	Continuity/ connection verified	N/A	Structural Steel	N/A
				Gas installation pipes	N/A
				Other	

Comments on Existing Installation

In the case of an alteration or additions see Regulation 633 --See Additional Page--

Next Inspection

I , the designer(s) RECOMMEND that this installation is further inspected and tested after an interval of not more than 5 Years or change of tenancy.

Item No	Description	Outcome
1.0	**CONDITION OF DISTRIBUTOR'S/SUPPLY 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	N/A
2.0	**PARALLEL OR SWITCHED ALTERNATIVE SOURCES OF SUPPLY**	
2.1	Presence of adequate arrangements where generator to operate as a switched alternative	N/A
2.1 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	
2.2 a)	Correct connection of generator in parallel	N/A
2.2 b)	Compatibility of characteristics of means of generation	N/A
2.2 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
2.2 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
2.2 e)	Means to isolate generator from the public supply system	N/A
2.3	Presence of alternative/additional supply warning notices at:	
2.3 a)	The origin	N/A
2.3 b)	The meter position, if remote from origin	N/A
2.3 c)	The consumer unit/distribution board to which the alternative/ additional sources are connected	N/A
2.3 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:	
3.1 a)	Distributor's earthing arrangement or installation earth electrode arrangement	✓
3.1 b)	Earthing conductor and connections	✓
3.1 c)	Main protective bonding conductors and connections	N/A
3.1 d)	Earthing/bonding labels at all appropriate locations	N/A
3.2	Accessibility of:	
3.2 a)	Earthing conductor connections	✓
3.2 b)	All protective bonding connections	N/A
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	
4.1 a)	Insulation of live parts	✓
4.1 b)	Barriers or enclosures	✓
4.1 c)	Obstacles	N/A
4.1 d)	Placing out of reach	N/A
5.0	**ADDITIONAL PROTECTION**	
5.1	The presence and effectiveness of additional protection methods used, as follows:	
5.1 a)	RCDs not exceeding 30mA operating current	✓
5.1 b)	Supplementary bonding	N/A

Item No	Description		Outcome
6.0	**OTHER METHODS OF PROTECTION (insert location in box provided)**		
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	LOCATION	
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		N/A
7.4	Adequacy / security of barriers		✓
7.5	Suitability of enclosures for IP and fire ratings		✓
7.6	Enclosures not damaged during installation		N/A
7.7	Presence and effectiveness of obstacles		N/A
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 RCD(s) provided for fault protection, where specified		✓
7.12	RCD(s) provided for protection against fire		N/A
7.13	RCD(s) provided for additional protection, where specified		N/A
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		✓
7.19	Presence of next inspection recommendation label		✓
7.20	Presence of other required labelling		N/A
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 connections to busbars are correctly located in terminals and are tight and secure		✓

Item No	Description	Outcome	Item No	Description	Outcome
8.0	**CIRCUITS**		9.0	**ISOLATION AND SWITCHING**	
8.1	Identification of conductors	✓	9.1	Isolators	
8.2	Cables correctly supported throughout their length	✓	9.1 a)	Presence and location of appropriate devices	✓
8.3	Examination of cables for signs of mechanical damage during installation	✓	9.1 b)	Capable of being secured in the OFF position	✓
8.4	Examination of insulation of live parts, not damaged during erection	✓	9.1 c)	Correct operation verified (functional check)	✓
8.5	Non-sheathed cables protected by enclosure in conduit	N/A	9.1 d)	The installation, circuit or part thereof that will be isolated is clearly identified by location and/or durable marking	✓
8.6	Suitability of containment systems (including flexible conduit)	✓	9.1 e)	Warning label posted in situations where live parts cannot be isolated by the operation of a single device	N/A
8.7	Correct temperature rating of cable insulation	✓	9.2	Switching off for mechanical maintenance	
8.8	Adequacy of cables for current carrying capacity with regard to the type and nature of installation	✓	9.2 a)	Presence of appropriate devices	✓
8.9	Adequacy of protective devices; type and rated current for fault protection	✓	9.2 b)	Acceptable location (state if local or remote) — Local	✓
8.10	Presence and adequacy of cirucit protective conductors	✓	9.2 c)	Capable of being secured in the OFF position	N/A
8.11	Coordination between conductors and overload protective devices	✓	9.2 d)	Correct operation verified (functional check)	✓
8.12	Wiring systems and cable installation methods / practices appropriate to the type and nature of installation and external influences	✓	9.2 e)	The circuit or part thereof to be disconnected clearly identified by location and/or durable marking	✓
8.13	Cables installed under floors, above ceilings, in walls/partions, adequately protected against damage		9.3	Emergency switching/stopping	
8.13 a)	Installed in prescribed zones	N/A	9.3 a)	Presence of appropriate devices	N/A
8.13 b)	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	9.3 b)	Readily accessible for operation where danger might occur	N/A
8.14	Provision of additional protection by RCDs having rated residual operating current (IΔn) not exceeding 30 mA		9.3 c)	Correct operation verified (functional check)	N/A
8.14 a)	For mobile equipment with a current rating not exceeding 32A for use outdoors	N/A	9.3 d)	The installation, circuit or part thereof to be disconnected, clearly identified by location and/or durable marking	N/A
8.14 b)	For all socket-outlets of rating 20 A or less, unless exempt	N/A	9.4	Functional switching	
8.14 c)	For cables installed in walls/partitions at a depth of less than 50 mm	N/A	9.4 a)	Presence of appropriate devices	✓
8.14 d)	For cables installed in walls/partitions containing metal parts regardless of depth	N/A	9.4 b)	Correct operation verified (functional check)	✓
8.15	Provision of fire barriers, sealing arrangements so as to minimize the spread of fire	N/A	10.0	CURRENT-USING EQUIPMENT (PERMANENTLY CONNECTED)	
8.16	Band II cables segregated/separated from Band I cables	N/A	10.1	Suitability of equipment in terms of IP and fire rating	✓
8.17	Cables segregated/separated from non-electrical services	N/A	10.2	Enclosure not damaged/deteriorated during installation so as to impair safety	✓
8.18	Termination of cables and enclosures		10.3	Suitability for the environment and external influences	✓
8.18 a)	Connections under no undue strain	✓	10.4	Security of fixing	✓
8.18 b)	No basic insulation of a conductor visible outside enclosure	✓	10.5	Cable entry holes in ceilings above luminaires, sized or sealed so as to restrict the spread of fire	N/A
8.18 c)	Connections of live conductors adequately enclosed	✓	10.6	Recessed luminaires (downlighters)	
8.18 d)	Adequately connected at point of entry to enclosure (glands, bushes etc.)	✓	10.6 a)	Correct type of lamps fitted	N/A
8.19	Suitability of circuit accessories for external influences	✓	10.6 b)	Installed to minimise build up of heat	N/A
8.20	Circuit accessories not damaged during erection	✓	10.7	Provision of undervoltage protection, where specified	N/A
8.21	Single-pole devices for switching in line conductor only	✓	10.8	Provision of overload protection, where specified	N/A
8.22	Adequacy of connections, including cpcs, within accessories and at fixed and stationary equipment	✓	10.9	Adequacy of working space/accessibility to equipment	✓
11.0	**SPECIAL INSTALLATIONS OR LOCATIONS**				

12.0	OTHER	OUTCOME

Inspected By

Name: Richard Felstead Date: 7/9/16

Signature:

Schedule of Additional Records (See attached schedule)

The attached Schedules are part of this document and this Certificate is valid only when they are attached to it

N/A Schedules of Inspections and N/A Schedules of Test Results

Board Details

TO BE COMPLETED IN EVERY CASE	ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION

Location of distribution board: Vestry

Distribution board designation: DB 1

Supply to distribution board is from: N/A

No of phases: N/A Nominal Voltage: N/A V

Overcurrent protective device for the distribution circuit

Type BS(EN): N/A Rating: N/A A

Associated RCD (if any)

BS(EN): N/A

RCD No of poles: N/A

RCD rating, $I\Delta n$: N/A mA

Circuit Details

Circuit number and line	Circuit designation	Type of wiring	Reference method	No of points served	Circuit conductors csa		Max. permitted disconnection time	Overcurrent protective device				RCD	Max. permitted Zs
					Live mm^2	cpc mm^2	s	BS(EN)	Type	Rating A	Short circuit capacity kA	Op. current $I\Delta n$	Ω
1/L1	Circuit Not Tested												
1/L2	Circuit Not Tested												
1/L3	Heater No 1	O	C	1	2.5	2.5	0.4	60898 MCB	C	20	10	30	1.09
2/L1	Circuit Not Tested												
2/L2	Circuit Not Tested												
2/L3	Heater No 2	O	C	1	2.5	2.5	0.4	60898 MCB	C	20	10	30	1.09
3/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
3/L2	Circuit Not Tested												
3/L3	Heater No 5	O	C	1	2.5	2.5	0.4	60898 MCB	C	20	10	30	1.09
4/L1	Circuit Not Tested												
4/L2	Circuit Not Tested												
4/L3	Heater No 6	O	C	1	1.5	1.5	0.4	60898 MCB	C	16	10	30	1.37
5/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
5/L2	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
5/L3	Circuit Not Tested												
6/L1	Heater No 9	O	C	1	1.5	1.5	0.4	60898 MCB	C	16	10	30	1.37
6/L2	Circuit Not Tested												
6/L3	Heater No 7	O	C	1	2.5	2.5	0.4	60898 MCB	C	20	10	30	1.09

Wiring Code

A	B	C	D	E	F	G	H	O
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	Other

Board Tests

ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION

Zs	N/A Ω	Operating times of associated RCD (if any)	At $I_{\Delta n}$	N/A ms	
Ipf	N/A kA		At $5I_{\Delta n}$ (if applicable)	N/A ms	
Confirmation of Supply polarity	✓	Phase sequence confirmed (where appropriate)	N/A		

TEST INSTRUMENTS (SERIAL NUMBERS) USED

Earth fault loop impedance	1002398101505273	RCD	1002398101505273
Insulation resistance	1002398101505273	Multi-function	N/A
Continuity	1002398101505273	Other	N/A

Circuit Tests

Circuit number and line	Circuit impedances Ω					Insulation resistance				Polarity	Maximum measured earth fault loop impedance	RCD		
	Ring final circuits only (measured end to end)			All circuits (At least one column to be completed)		Line/ Line	Line/ Neutral	Line/ Earth	Earth/ Neutral			Operating times		Test button operation
	r_1 (Line)	r_n (Neutral)	r_2 (cpc)	$R_1 + R_2$	R_2	MΩ	MΩ	MΩ	MΩ		Ω	At $I_{\Delta n}$ ms	At $5I_{\Delta n}$ ms	
1/L1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1/L2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1/L3	N/A	N/A	N/A	0.50	N/A	N/A	200	200	200	✓	0.93	27.1	7.4	✓
2/L1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2/L2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2/L3	N/A	N/A	N/A	0.40	N/A	N/A	200	200	200	✓	0.80	27.1	7.5	✓
3/L1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/L2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/L3	N/A	N/A	N/A	0.36	N/A	N/A	200	200	200	✓	0.76	27.0	7.5	✓
4/L1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4/L2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4/L3	N/A	N/A	N/A	0.51	N/A	N/A	200	200	200	✓	0.91	27.0	7.49	✓
5/L1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/L2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/L3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/L1	N/A	N/A	N/A	0.57	N/A	N/A	200	200	200	✓	0.97	29.0	8.8	✓
6/L2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/L3	N/A	N/A	N/A	0.37	N/A	N/A	200	200	200	✓	0.77	27.1	7.4	✓

Tested By

Signature	R. Felstead	Position	Owner
Name	Richard Felstead	Date of testing	07/09/2016

Comments Continued From Page 2

Not tested any circuit not altered.

ELECTRICAL INSTALLATION CERTIFICATE
GUIDANCE NOTES FOR RECIPIENTS

This safety certificate has been issued to confirm that the electrical installation work to which it relates has been designed, constructed, inspected and tested in accordance with British Standard 7671:2008 (as amended) (The IET Wiring Regulations).

You should have received an 'original' Certificate and the contractor should have retained a duplicate Certificate. If you were the person ordering the work, but not the owner of the installation, you should pass this Certificate, or a full copy of it including the schedules, immediately to the owner.

The "original" Certificate should be retained in a safe place and be shown to any person inspecting or undertaking further work on the electrical installation in the future. If you later vacate the property, this Certificate will demonstrate to the new owner that the electrical installation complied with the requirements of British Standard 7671 at the time the Certificate was issued. The Construction (Design and Management) Regulations require that, for a project covered by those Regulations, a copy of this Certificate together with schedules, is included in the project health and safety documentation.

For safety reasons, the electrical installation will need to be inspected at appropriate intervals by a skilled person orpersons competent in such work. The maximum time interval recommended before the next inspection is stated on page 2 under "Next Inspection".

This Certificate is intended to be issued only for a new electrical installation or for new work associated with an alteration or addition to an existing installation. It should not have been issued for the inspection of an existing electrical installation. An "Electrical Installation Condition Report" should be issued for such an inspection.

The certificate is only valid if accompanied by the Schedule of Inspections and the Schedule(s) of Test Results.

These notes are based on those seen in Appendix 6 BS 7671:2008 (as amended)