

ELECTRICAL INSTALLATION CERTIFICATE

REQUIREMENTS FOR ELECTRICAL INSTALLATIONS

Acknowledgement: this certificate is based on the model in appendix 6 of BS 7671: 2008

CP Scheme: ☐ N/A ☐

Membership No. ☐

Page **1** of **5**

KEWTECH

Certificate No. **00734**

CLIENT DETAILS		INSTALLATION ADDRESS	
MERVYN LAMBERT PLANT		MILL POND FARM, CARBOLDISHAM	
MILL POND FARM, CARBOLDISHAM		DISS	
DISS NORFOLK	Postcode IP22 2SP	NORFOLK	Postcode IP22 2SP

DESCRIPTION AND EXTENT OF THE INSTALLATIONS (tick boxes as appropriate)

NEW INSTALLATION ☒ ADDITION TO AN EXISTING INSTALLATION ☐ ALTERATION TO AN EXISTING INSTALLATION ☐

Description of installation **HGV WORKSHOP**

Extent of installation covered by this certificate **COMPLETE INSTALLATION**

DESIGN

I/We being the person(s) responsible for the design of the electrical installation (as indicated by my/our signatures 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:

BS7671 **2008** amended to **2011** (date) except for the departures, if any, details as follows:-

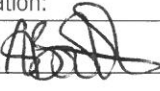
Details of departure from BS7671: Regulations 120:3 and 133.5

NONE

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

For the design of the installation:

** (Where there is mutual responsibility for the design)

Designer No1 - Signature 	Name (Capitals) A BOOTH	Date 05/06/15
Designer No2** - Signature	Name (Capitals)	Date

CONSTRUCTION

I/We being the person(s) responsible for the construction of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design hereby CERTIFY that the construction work for which I/we have been responsible is to the best of my/our knowledge and belief in accordance with:

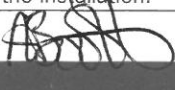
BS7671 **2008** amended to **2011** (date) except for the departures, if any, details as follows:-

Details of departure from BS7671: Regulations 120:3 and 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:

Installer - Signature 	Name (Capitals) A BOOTH	Date 05/06/15
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INSPECTION & TESTING

I/We being the person(s) responsible for the inspection of the electrical installation (as indicated by my/our signatures 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/we have been responsible is to the best of my/our knowledge and belief in accordance with:

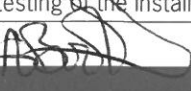
BS7671 **2008** amended to **2011** (date) except for the departures, if any, details as follows:-

Details of departure from BS7671: Regulations 120:3 and 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:

Inspector - Signature 	Name (Capitals) A BOOTH	Date 05/06/15
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NEXT INSPECTION

I/We the designer(s), recommend that this installation is further inspected and tested after an interval of not more than:

YEARS **5**

MONTHS **—**

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PARTICULARS OF SIGNATORIES TO THE ELECTRICAL INSTALLATION CERTIFICATE

Designer (No1)		Designer (No2) if applicable	
Name	A BOOTH	Name	
Company	AB ELECTRICAL SERVICES	Company	
Address	4 CRICKS ROAD	Address	
	WEST ROW		
	SUFFOLK		
Postcode	IP28 8PQ	Postcode	
Tel No		Tel No	
Constructor		Inspector	
Name		Name	
Company		Company	
Address	AS ABOVE	Address	AS DESIGNER (NO1)
Postcode		Postcode	
Tel No		Tel No	

SUPPLY CHARACTERISTICS & EARTHING ARRANGEMENTS

Earthing Arrangements		Number of Live Conductors		Nature of Supply Parameters		
TN-C	TN-S	Phase 3	Wire 4	Normal Voltage U/U ₀	400 V	
TN-C-S ✓	TT	Other NA		Nominal Frequency f	50 Hz	
IT		Confirmation of supply polarity	✓	Prospective fault current I _{pf} *	1.4 kA	
Supply Protective Device Characteristics				External loop impedance Z _e *		0.32 Ω
Type	BS EN 60898 (C)	Nominal current rating	63 A	* by enquiry or by measurement		

PARTICULARS OF INSTALLATION REFERRED TO IN THE CERTIFICATE

Means of Earthing		Details of Installation Earth Electrode (where applicable)	
Distributor's facility	✓	Type [eg. rod(s) tape etc]	NA
Installation earth electrode		Electrode resistance to Earth	NA Ω
Maximum Demand		Location	
Maximum demand (load)		63 kVA / Amps	

Main Protective Conductors

Earthing conductor:	Material	COPPER	csa	16 mm ²	Continuity and connection verified	✓
Main protective bonding conductors:	Material	COPPER	csa	16 mm ²	Continuity and connection verified	✓
To incoming water and/or gas service	<input type="checkbox"/>	To other elements STRUCTURAL STEEL				

Main Switch or Circuit-breaker

BS, Type	EN 61008	No. of poles	4	Voltage rating	400 V
Location		Current rating	80 A	Fuse rating or setting	NA A
Rated residual operating current I _{Δn} = 30 mA, and operating time of 200 ms (at I _{Δn})				(applicable only where an RCD is suitable and is used as a main circuit-breaker)	

Comments on existing installation (in the case of an addition or alteration see Section 633)

Schedules

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

No. of Inspection Schedules attached. Page **1** of **1** pages

No. of Test Result Schedules attached. Page **2** of **2** pages

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SCHEDULE OF INSPECTIONS

(FOR NEW INSTALLATION WORK ONLY)

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KEWTECH

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METHODS OF PROTECTION AGAINST ELECTRIC SHOCK

Both basic and fault protection:

- ☒ (i) SELV
- ☒ (ii) PELV
- ☒ (iii) Double insulation
- ☒ (iv) Reinforced insulation

Basic protection:

- ☒ (i) Insulation of live parts
- ☒ (ii) Barriers or enclosures
- ☒ (iii) Obstacles
- ☒ (iv) Placing out of reach

Fault protection:

(i) Automatic disconnection of supply:

- ☒ Presence of earthing conductor
- ☒ Presence of circuit protective conductors
- ☒ Presence of protective bonding conductors
- ☒ Presence of supplementary bonding conductors
- ☒ Presence of earthing arrangements for combined protective and functional purposes
- ☒ Presence of adequate arrangements for other sources, where applicable
- ☒ FELV
- ☒ Choice and setting of protective and monitoring devices (for fault and/or overcurrent protection)

(ii) Non-conducting location:

- ☒ Absence of protective conductors

(iii) Earth-free local equipotential bonding:

- ☒ Presence of earth-free local equipotential bonding

(iv) Electrical separation:

- ☒ Provided for one item of current-using equipment
- ☒ Provided for more than one item of current-using equipment

Additional protection:

- ☒ Presence of residual current device(s)
- ☒ Presence of supplementary bonding conductors

PREVENTION OF MUTUAL DETRIMENTAL INFLUENCE

- ☒ (a) Proximity to non-electrical services and other influences
- ☒ (b) Segregation of Band I and Band II circuits or use of Band II insulation
- ☒ (c) Segregation of safety circuits

Identification

- ☒ (a) Presence of diagrams, instructions, circuit charts and similar information
- ☒ (b) Presence of danger notices and other warning notices
- ☒ (c) Labelling of protective devices, switches and terminals
- ☒ (d) Identification of conductors

Cables and conductors

- ☒ Selection of conductors for current-carrying capacity and voltage drop
- ☒ Erection methods
- ☒ Routing of cables in prescribed zones
- ☒ Cables incorporating earthed armour or sheath, or run within an earthed wiring system, or otherwise adequately protected against nails, screws and the like
- ☒ Additional protection provided by 30 mA RCD for cables concealed in walls (where required in premises not under the supervision of a skilled or instructed person)
- ☒ Connection of conductors
- ☒ Presence of fire barriers, suitable seals and protection against thermal effects

General

- ☒ Presence and correct location of appropriate devices for isolation and switching
- ☒ Adequacy of access to switchgear and other equipment
- ☒ Particular protective measures for special installations and locations
- ☒ Connection of single-pole devices for protection or switching in line conductors only
- ☒ Correct connection of accessories and equipment
- ☒ Presence of undervoltage protective devices
- ☒ Selection of equipment and protective measures appropriate to external influences
- ☒ Selection of appropriate functional switching devices

NOTES: An entry must be made in every box

- ☒ to indicate an inspection has been carried out and the result is satisfactory
- N/A to indicate that the inspection is not applicable to a particular item

Inspected by:
Name (Capitals)

A BOOTH

Signature

A Booth

Date

05/06/15

TC1/c

CP Scheme: N/A

Membership No.

DB reference no.		Details of circuits and/or installed equipment vulnerable to damage when testing										Details of test instruments used (state serial and/or asset numbers)											
Location HGV workshop												Multifunction Fuke 1653 / 8934057											
Zs at DB (Ω) 0.32		Ip at DB (kA) 1.4												Insulation / continuity									
Correct supply polarity confirmed		<input checked="" type="checkbox"/>												Earth fault loop impedance									
Phase sequence confirmed (where appropriate)		<input checked="" type="checkbox"/>												RCD		Earth electrode res.							
Tested by: Name (Capitals) A. Brown		Date 09/06/15		Test Results																			
Signature		Circuit Details																					
		Overcurrent Device				Conductor Details				Ring Final Circuit Continuity (Ω)		Continuity (Ω) (R ₁ +R ₂) or R ₂		Insulation Resistance (MΩ)		Polarity		Zs (Ω)		RCD (ms)		Remarks (continue on a separate sheet if necessary)	
		BS (EN)		Type		Rating (A)		Breaking Capacity (kA)		Reference Method		Live (mm ²)		CPC (mm ²)		R ₁ (line)		R _n (neutral)		R ₂ (cpc)			
Circuit number		Circuit Description																					
BEL												2.5	~										
BEL	LEFT HAND ROUGH DOOR	60918 C		16	10	B						2.5	2.5										
Q1												2.5	~										
BEL												2.5	~										
BEL	16 AMP SOKETS NO. 1	60918 D		16	10	B						2.5	2.5										
Q2												2.5	~										
BEL												4.0	~										
BEL	16 AMP SOKETS NO. 3	60918 D		16	10	B						4.0	2.5										
Q3												4.0	~										
BEL												4.0	~										
BEL	COMPRESSOR	60918 D		32	10	F						4.0	4.0										
Q4												4.0	~										

*Where there are no spurs connected to a ring final circuit this value is also (R₁ + R₂) of the circuit.

Circuit Details

Test Results

Circuit number	Circuit Description	Overcurrent Device				Conductor Details			Ring Final Circuit Continuity (Ω)			Continuity (Ω) ($R_1 + R_2$) or R_2		Insulation Resistance (M Ω)		Polarity	Zs (Ω)	RCD (ms)		Remarks (continue on a separate sheet if necessary)
		BS (EN)	Type	Rating (A)	Breaking Capacity (kA)	Reference Method	Live (mm ²)	cpc (mm ²)	r_1 (line)	r_n (neutral)	r_2 (cpc)	($R_1 + R_2$) *	R_2	Live-Live	Live-Earth			@ 5 lAn	@ lAn	
BL5	Blank															X or ✓				
BL5	Blank																			
GL5	EXTERNAL LIGHTING	60998	B	10	6	F	1.5	1.5	-	-	-	1.15	-	7500	7500	✓	1.45			
GL6	CONF ROOM LIGHT	60998	B	6	6	F	1.5	1.5	-	-	-	0.56	-	7500	7500	✓	0.70			
GL6	INSULATION PIP LIGHTS	60998	B	6	6	F	2.5	2.5	-	-	-	1.34	-	7500	7500	✓	1.78			
GL6	HIGH BAY ENERGY LIGHTS	60998	B	10	6	F	2.5	2.5	-	-	-	0.54	-	7500	7500	✓	0.72			
GL7							2.5	-	-	-	-	0.42	-	7500	7500	✓	0.77			
GL7	RIGHT HAND ROULETTE DOOR	60998	C	16	10	B	2.5	2.5	-	-	-	0.46	-	7500	7500	✓	0.76			
GL7							2.5	-	-	-	-	0.44	-	7500	7500	✓	0.75			
GL8							2.5	-	-	-	-	0.45	-	7500	7500	✓	0.78			
GL8	16AMP Sockets N°2	60998	D	16	10	B	2.5	2.5	-	-	-	0.46	-	7500	7500	✓	0.84			
GL8							2.5	-	-	-	-	0.45	-	7500	7500	✓	0.85			
GL9							4.0	-	-	-	-	0.46	-	7500	7500	✓	0.85			
GL9	16AMP Sockets N°4	60998	D	16	10	B	4.0	2.5	-	-	-	0.46	-	7500	7500	✓	0.81			
GL9							4.0	-	-	-	-	0.46	-	7500	7500	✓	0.91			
GL10	Blank																			
GL10	Blank																			
GL10	Blank																			
GL11	Blank																			
GL11	20AMP ISO for 110V TRAN	60998	B	20	6	B	2.5	2.5	-	-	-	0.10	-	7500	2500	✓	0.51			
GL11	INTRODUC ALARM	60998	B	10	6	B	2.5	2.5	-	-	-	0.01	-	7500	7500	✓	0.48			
GL12	WATER HEATER	60998	B	16	6	B	2.5	2.5	-	-	-	0.10	-	7500	7500	✓	0.56			
GL12	13AMP Sockets	60998	B	32	6	B	2.5	1.5	0.24	0.20	0.21	0.10	-	7500	2500	✓	0.38			
GL12	32AMP ISO (CHARGES)	60998	D	32	10	B	4.0	2.5	-	-	-	0.38	-	7500	7500	✓	0.22			

*Where there are no spurs connected to a ring final circuit this value is also ($R_1 + R_2$) of the circuit.