



This certificate is not valid if the serial number has been defaced or altered

ICN2/0125922

**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, LU6 5ZK

**DETAILS OF THE CLIENT**

Client / Address: CCJV, Junction 12, M1, Toddington Postcode: LU6 6HP

**DETAILS OF THE INSTALLATION**

Address: M1 E1 @ MP 50/08 (G4) Postcode:   
 The installation is:   
 Extent of the installation covered by this certificate: Power installation supplies to CECLB, CCTV, FTMS and Geotries.   
 Now    
 An addition   
 An alteration

**DESIGN**

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 JANUARY 2008 (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/signatories is limited to the work described above as the subject of this certificate. For the DESIGN of the installation:   
 Signature [redacted] Date 14/03/2012 Name (CAPITALS) [redacted] Designer 1   
 Signature [redacted] Date 14/03/2012 Name (CAPITALS) [redacted] Designer 2   
 \*\* (Where there is divided responsibility for the design)

**CONSTRUCTION**

I/We, being the person(s) responsible for the construction of the electrical installation (as indicated by my/our 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/we have been responsible is, to the best of my/our knowledge and belief, in accordance with BS 7671 amended to JANUARY 2008 (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 CONSTRUCTION of the installation:   
 Signature [redacted] Date 14/03/2012 Name (CAPITALS) [redacted] Constructor

**INSPECTION AND TESTING**

I/We, being the person(s) responsible for the inspection and testing 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 BS 7671 amended to JANUARY 2008 (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/signatories is limited to the work described above as the subject of this certificate. For the INSPECTION AND TESTING of the installation:   
 Signature [redacted] Date 14/03/2012 Name (CAPITALS) [redacted] Inspector   
 Signature [redacted] Date 14/03/2012 Name (CAPITALS) [redacted] 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.

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 said work for which I have been responsible is to the best of my knowledge and belief, in accordance with BS 7671, amended to (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 [redacted] Date 18/05/2012 Name (CAPITALS) [redacted]   
 Signature [redacted] Date 18/05/2012 Name (CAPITALS) [redacted] 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.

Please see the 'Notes for Recipients' on the reverse of this page

Duplicate (to be retained by the contractor)



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

<b>DESIGN (1)</b>	Organisation ↑ SERCO Address: Cavendish House Clearwater Park Stockton on Tees Postcode: TS17 8QY	NICEIC Enrolment No (where appropriate) Branch number: (if applicable)
<b>DESIGN (2)</b>	Organisation ↑ Address: Postcode:	NICEIC Enrolment No (where appropriate) Branch number: (if applicable)
<b>CONSTRUCTION</b>	Organisation ERH Communications Ltd Address: Communications House Grange Industrial Estate Cwmbran Postcode: NP44 8HD	NICEIC Enrolment No (Essential Information) 042643 Branch number: (if applicable)
<b>INSPECTION AND TESTING</b>	Organisation ↑ ERH Communications Ltd Address: Communications House Grange Industrial Estate Cwmbran Postcode: NP44 8HQ	NICEIC Enrolment No (where appropriate) 042643 Branch number: (if applicable)

Duplicate (to be retained by the contractor)

**SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS**

System Type(s)	Number and Type of Live Conductors	Nature of Supply Parameters	Characteristics of Primary Supply Overcurrent Protective Device(s)
TNS	a.c. ✓ d.c. N/A	Nominal Voltage(s), U <sub>n</sub> 230 V U <sub>e</sub> m V	BS(EN) 1361 Type Rated current: 100 A Short-circuit capacity: 33 kA
TN-C-S	1-phase (2 wire) N/A 1-phase (3 wire) ✓ 2 pole N/A	Nominal frequency, f <sub>n</sub> 50 Hz Prospective fault current, I <sub>p</sub> 1.08 kA	
TN-C	2-phase (3 wire) N/A 3 pole N/A	External earth fault loop impedance, Z <sub>s</sub> 0.22 Ω	
TT	3-phase (3 wire) N/A 3-phase (4 wire) N/A other	Number of supplies 1	
IT	Other		

*Notes: (1) by supply (2) by supply or by arrangement (3) where more than one supply, record the higher or highest values (4) by measurement*

**PARTICULARS OF INSTALLATION AT THE ORIGIN**

Means of Earthing	Type: (eg rod(s), tape etc)	Electrode resistance, R <sub>A</sub> (Ω)	Location:	Method of measurement:
Distributor's facility: ✓				
Installation earth electrode: N/A				

*\* Applicable only where an RCD is available and is used as a main circuit-breaker*

Main Switch or Circuit-breaker	Maximum Demand (Load)	Amperes	Protective measures against electric shock:
Type: BS(EN) 60947/3			
No of Poles: 2			
Supply conductors material: Copper			
Supply conductors CSA: 25 mm <sup>2</sup>			

Earthing conductor	Protective Bonding Conductors	Handing of extraneous-conductive parts (4)
Conductor material: Copper	Main protective bonding conductors	Water service: N/A
Conductor CSA: 16 mm <sup>2</sup>	Conductor material: Copper	Oil service: N/A
Continuity/connection verified: ✓	Conductor CSA: 10 mm <sup>2</sup>	Lightning protection: N/A
	Continuity/connection verified: ✓	Other incoming services: N/A

**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**

UWe the designer(s), RECOMMEND that this installation is further inspected and tested after an interval of not more than <sup>5</sup> SIX YEARS

† 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 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 includes the relevant information relating to each additional source.

SCHEDULE OF ITEMS INSPECTED				† See note below
<b>PROTECTIVE MEASURES AGAINST ELECTRIC SHOCK</b>				
<b>Basic and fault protection</b>				
Extra low voltage				
N/A	SELV	N/A	PELV	Prevention of mutual detrimental influence
Double or reinforced insulation				✓ Proximity of non-electrical services and other influences
✓ Double or Reinforced Insulation				✓ Segregation of Band I and Band II circuits or Band II insulation used
<b>Basic Protection</b>				✓ Segregation of safety Circuits
✓ Insulation of live parts				Identification
✓ Barriers or enclosures				✓ Presence of diagrams, instructions, circuit charts and signifier information
✓ Obstacles **				✓ Presence of danger notices and other warning notices
✓ Placing out of reach **				✓ Labelling of protective devices, switches and terminals
<b>Fault protection</b>				✓ identification of conductors
Automatic disconnection of supply				Cables and Conduits
✓ Presence of earthing conductor				✓ Selection of conductors for current carrying capacity and voltage drop
✓ Presence of circuit protective conductors				✓ Erection methods
✓ Presence of main protective bonding conductors				✓ Routing of cables in prescribed zones
✓ Presence of earthing arrangements for combined protective and functional purposes				✓ Cables incorporating earthed armour or sheath or run in an earthed wiring system, or otherwise protected against nails, screws and the like
✓ Presence of adequate arrangements for alternative source(s), where applicable				✓ Additional protection by 30mA RCD for cables concealed in walls (where required, in premises not under the supervision of skilled or instructed persons)
✓ FELV				✓ Connection of conductors
✓ Choice and setting of protective and monitoring devices (for fault protection and/or overcurrent protection)				✓ Presence of fire barriers, suitable seals and protection against thermal effects
Non-conducting location **				General
N/A Absence of protective conductors				✓ Presence and correct location of appropriate devices for isolation and switching
Earth-free equipotential bonding **				✓ Adequacy of access to switchgear and other equipment
N/A Presence of earth-free equipotential bonding				✓ Particular protective measures for special installations and locations
Electrical separation				✓ Connection of single-pole devices for protection or switching in live conductors only
✓ For one item of current using equipment				✓ Correct connection of accessories and equipment
✓ For more than one item of current using equipment **				✓ Presence of undervoltage protective devices
<b>Additional protection</b>				✓ Selection of equipment and protective measures appropriate to external influences
✓ Presence of residual current device(s)				✓ Selection of appropriate functional switching devices
✓ Presence of supplementary bonding conductors				
** for use in controlled supervised conditions only				
SCHEDULE OF ITEMS TESTED				† See note below
✓ External earth fault loop impedance, $Z_0$				✓ Basic protection by barrier or enclosure provided during erection
✓ Installation earth electrode resistance, $R_A$				✓ Insulation of non-conducting floors or walls
✓ Continuity of protective conductors				✓ Polarity
N/A Continuity of ring final circuit conductors				✓ Earth fault loop impedance, $Z_0$
✓ Insulation resistance between live conductors				✓ Verification of phase sequence
✓ Insulation resistance between live conductors and Earth				✓ Operation of residual current devices
✓ Protection by separation of circuits				✓ Functional testing of assemblies
				✓ Verification of voltage drop
SCHEDULE OF ADDITIONAL RECORDS* (See attached schedule)				Page No(s)
<small>Note: Additional pages must be identified by the Electrical Installation Certificate serial number and page number(s).</small>				

† All boxes must be completed. ✓ indicates that an inspection or a test was carried out and that the result was satisfactory. 'N/A' indicates that no inspection or a test was not applicable to the particular installation

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



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## SCHEDULE OF CIRCUIT DETAILS FOR THE INSTALLATION

CIRCUIT DETAILS					
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:	50/0 B	Supply to distribution board is from:	No of phases:	Nominal voltage:	V
Distribution board designation:	50/0 B EI	Overcurrent protective device for the distribution circuit:	Associated RCD (if any): BS(E)N	RCD No of poles:	LA <sub>n</sub> mA
		Type: BS(E)N	Rating:	A	

Circuit number and phase	Circuit designation	Type of wiring (see notes)	Reference method	Number of points served	Circuit capacity (see notes)		Max. connection time permitted by BS 7671 (s)	Overcurrent protective devices				RCD Maximum permitted by BS 7671 (s)	
					Live (mm <sup>2</sup> )	CPC (mm <sup>2</sup> )		BS (EN)		Rating (A)	Short-circuit capacity (kA)		Operating current, I <sub>Δn</sub> (mA)
					Type No	Rating							
1	CECLB @ 50/3 B	02	D	1	70	70	5	BB		63	80		0.82
2	CECLB @ 50/3 B	02	D	1	50	50	5	BB		63	80		0.82
3	CECR @ 50/3 A	02	F	1	50	50	5	BB		63	80		0.82
	CECLB												
1	HSM CCTV @ MIP 50/4 B	02	D	1	10	10	5	BB		16	80		4.18
	CECR												
1	HSM CCTV @ MIP 50/3 A	02	D	1	10	10	5	BB		16	80		4.18
2	HSM CCTV @ MIP 50/4 A	02	D	1	10	10	5	BB		16	80		4.18
3	AMI LBS1 G4	01	E	1	2.5	2.5	5	00888	C	6	6		3.83
4	AMI LBS2 G4	01	E	1	2.5	2.5	5	00888	C	6	6		3.83
5	AMI LBS3 G4	01	E	1	2.5	2.5	5	00888	C	6	6		3.83
6	AMI LBS4 G4	01	E	1	2.5	2.5	5	00888	C	6	6		3.83
7	MS4 G4	01	E	1	10	10	5	00888	C	20	6		1.15

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† See Table 4A2 of Appendix 4 of BS 7671

QUESTIONS TO BE ANSWERED							
A	B	C	D	E	F	G	H
Thermoplastic insulated electrical cables	Thermoplastic cables in metallic conduit	Thermoplastic cables in non-metallic conduit	Thermoplastic cables in metallic trunking	Thermoplastic cables in non-metallic trunking	Thermoplastic RVA cables	Thermoplastic RVA cables	Alloyed twisted cables
0 (Other - please state)							

\* In each case, details of the distribution (sub-main) circuit(s), together with the test results for the circuit(s), must also be provided, on completion schedule(s).

See next page for  
Schedule of Test Results

