



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

ICN2/0125918

## 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 in the person ordering the work

### DETAILS OF THE CLIENT

Client / Address: CC JV , Junction 12, M1, Toddington

Postcode: LU5 6NP

### DETAILS OF THE INSTALLATION

Address: M1 J1 @ MP 52/0 B (58)

Postcode: Now ✓

Extent of the installation covered by this certificate: Power installation supplies to CECLB, CCTV, FTMS and Genrics.

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 JAN 2008 (date)

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 14/04/2012

Name (CAPITALS) [REDACTED] Designer 1

Signature [REDACTED] Date 14/04/2012

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 JAN 2008 (date)

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 14/04/2012

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 (date)

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

Signature [REDACTED] Date 14/04/2012

Name (CAPITALS) [REDACTED] Inspector

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)

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 14/04/2012

Signature [REDACTED] Date 14/04/2012

Name (CAPITALS) [REDACTED]

Name (CAPITALS) [REDACTED] Qualified Supervisor†

Reviewed by

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



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<b>DESIGN (1)</b>	Organisation ↑ SERCO	NICEIC Enrolment No (where appropriate)
Address:	Cavendish House Clearwater Park Stockton on Tees	Branch number: (if applicable)
	Postcode: TS17 6QY	
<b>DESIGN (2)</b>	Organisation ↑	
Address:		NICEIC Enrolment No (where appropriate)
	Postcode:	Branch number: (if applicable)
<b>CONSTRUCTION</b>	Organisation ERH Communications Ltd	NICEIC Enrolment No (Essential Information) 042643
	Address: Communications House Grange Industrial Estate Cwmbran	Branch number: (if applicable)
	Postcode: NP44 8HQ	
<b>INSPECTION AND TESTING</b>	Organisation ↑ ERH Communications Ltd	NICEIC Enrolment No (where appropriate) 042843
	Address: Communications House Grange Industrial Estate Cwmbran	Branch number: (if applicable)
	Postcode: NP44 8HQ	

## **SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS**

*Tick boxes and enter details, as appropriate.*

System Type(s)		Number and Type of Live Conductors					Nature of Supply Parameters						Characteristics of Primary Supply Overcurrent Protective Devices					
TN-S	N/A	s.c.	✓	d.c.	N/A	Nominal Voltage(s):	U <sub>0</sub>	230	V	U <sub>0</sub>	U <sub>0</sub>	V	BS(EN) 1381	Type	Generator Supply			
TN-C-S	✓	1-phase (2-wire)	N/A	1-phase (3-wire)	✓	2 pole	N/A	Nominal frequency, f <sub>m</sub>	50	Hz	After tripping supply		2/3 by enquiry or by measurement	Rated current 100 A	Short-circuit capacity 33 kA			
TN-C	N/A	2-phase (3-wire)	N/A			3 pole	N/A	Prospective fault current, I <sub>pf</sub> (ca)	2.1	kA	2/3 by enquiry or by measurement							
TT	N/A	3-phase (3-wire)	N/A	3-phase (4-wire)	N/A	other		External earth fault loop impedance, Z <sub>ef</sub> (ca)	0.08	Ω	All voltages more than one supply, around the higher or highest voltage							
IT	N/A	Other					Number of supplies	1			All by measurement							

#### PARTICULARS OF INSTALLATION AT THE ORIGIN

*Visit [Learn more](#) and enter details, as prompted.*

Means of Earthing		Details of Installation Earth Electrode (where applicable)										
Distributor's facility:	<input checked="" type="checkbox"/>	Type: (eg rod(s), tape etc)	Location:									
Installation earth electrode:	N/A	Electrode resistance, $R_A$ :	(Ω)	Method of measurement:								
Main Switch or Circuit Breaker (applicable only where an RCD is suitable and is used as a main circuit breaker)				Maximum Demand (Load)			Amps		Protective measures against electric shock:			
Type: BS(EN) 80947/3	Voltage rating 250 V	Earthing conductor			Main protective bonding conductors			Protective Bonding Conductors			Bonding of extraneous-conductive parts (ECP)	
No of Poles 2	Rated current, $I_r$ , 100 A	Conductor material	Copper	Conductor material	Copper	Welder service	N/A	Gas Service	N/A	Structural steel	✓	
Supply conductors material Copper	RCD operating current, $I_{an}$	nA	Conductor csa	16 mm <sup>2</sup>	Conductor csa	10 mm <sup>2</sup>	Oil service	N/A	Lightning protection	N/A	Other incoming services(s)	N/A
Supply conductors CSA 25	mm <sup>2</sup> RCD operating time (at 1.4A)	ms	Continuity connection verified	✓	Continuity connection verified	✓	Lightning protection	N/A	Other incoming services(s)	N/A		

#### **COMMENTS ON EXISTING INSTALLATION**

In the case of an alteration or addition 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

**5 Enter interval in terms of years, months or weeks, as appropriate**

**We the designer(s) RECOMMEND that this installation is further inspected and tested after an interval of not more than**

5 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 identifies the relevant connection relative to each additional source.



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### SCHEDULE OF ITEMS INSPECTED

(See note below)

#### PROTECTIVE MEASURES AGAINST ELECTRIC SHOCK

##### Basic and fault protection

N/A	SELV	N/A	PELV
-----	------	-----	------

##### Double or reinforced insulation

Double or Reinforced insulation

##### Basic Protection

- Insulation of live parts       Barriers or enclosures
- Obstacles       Placing out of reach

##### Fault protection

###### Automatic disconnection of supply

- Presence of earthing conductor
- Presence of circuit protective conductors
- Presence of main protective bonding conductors
- Presence of earthing arrangements for combined protective and functional purposes
- Presence of adequate arrangements for alternative source(s), where applicable
- FELV
- Choice and setting of protective and monitoring devices (for fault protection and/or overcurrent protection)

###### Non-conducting location \*\*

N/A      Absence of protective conductors

###### Earth-free equipotential bonding \*\*

N/A      Presence of earth-free equipotential bonding

###### Electrical separation

- For one item of current using equipment
- For more than one item of current using equipment\*\*

##### Additional protection

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

\*\* for use in controlled supervised/conditions only

#### Prevention of mutual detrimental influence

- Proximity of non-electrical services and other influences
- Segregation of Band I and Band II circuits or Band II insulation used
- Segregation of safety Circuits

#### Identification

- Presence of diagrams, instructions, circuit charts and similar information
- Presence of danger notices and other warning notices
- Labelling of protective devices, switches and terminals
- 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 in an earthed wiring system, or otherwise protected against rats, screws and the like
- Additional protection by 30mA RCD for cables concealed in walls (where required, in premises not under the supervision of skilled or instructed persons)
- 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

### SCHEDULE OF ITEMS TESTED

(See note below)

- External earth fault loop impedance,  $Z_A$
- Installation earth electrode resistance,  $R_A$
- Continuity of protective conductors
- N/A      Continuity of ring final circuit conductors
- Insulation resistance between live conductors
- Insulation resistance between live conductors and Earth
- Protection by separation of circuits
- Basic protection by barrier or enclosure provided during erection
- Insulation of non-conducting floors or walls
- Polarity
- Earth fault loop impedance,  $Z_B$
- Verification of phase sequence
- Operation of residual current devices
- Functional testing of assemblies
- Verification of voltage drop

### SCHEDULE OF ADDITIONAL RECORDS\* (See attached schedule)

Page No(s)

Note: Additional pages must be identified by the Electrical Installation Certificate serial number and page number.

\* 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 an inspection or a test was not applicable to the particular installation.

\* Where the electrical works to which this certificate relates include the installation of a fire alarm system and/or an emergency lighting system (or 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:	EN 5210 B	Supply to distribution board is from:		No of phases:		Nominal voltage:	V
Distribution board designation:	5210 B EI	Oversettent protective device for the distribution circuit: Type: BSIE(6)	Rating:	A	RCD No of poles: RCD (if any: BSIE)	I <sub>AN</sub>	mA

**Original** (to the person entering the work)

<sup>†</sup> See Table 4A2 of Appendix 4 of BS 7871.

A	B	C	D	E	F	G	H	I (Other - please state)
Thermoplastic wires and cables	Thermoplastic cables in specific control	Thermoplastic cables in specific trunking	Thermoplastic cables in non-specific trunking	Thermoplastic SMTA cables	Thermoplastic SMTA cables	Mineral- insulated cables		G1 - TR 2163 D2 - CY

\* In such cases, details of the distributing (bus-mesh) circuit(s), together with the test results for the circuits, must also be provided, no continuation schedules.

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[See next page for  
Schedule of Test Results](#)



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## SCHEDULE OF TEST RESULTS FOR THE INSTALLATION

## TEST RESULTS

TO BE COMPLETED ONLY IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE SOURCE OF THE INSTALLATION					TEST RESULTS				
					Test instruments (serial number) used:				
<b>Characteristics of the distribution board</b>									
<b>Configuration of supply polarity</b>					Earth fault loop impedance	ERH 339	RCD		
* See note above		Z <sub>a</sub>	Ω	Operating times of associated RCD if any	A1 I <sub>Δn</sub>	ms	Insulation resistance	ERH 330	Other
		I <sub>N</sub>	mA		A1 5I <sub>Δn</sub>	ms	Continuity	ERH 339	Other

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

**TESTED BY**

**Signature:**

Name:  
**(CAPITALS)** M. CAINES

**Position:** ELECTRICIAN

Date of testing: 14/04/2012

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Schedule of Course Details.**