

Reference Number:

DADO 21001

ORIGINAL

ELECTRICAL INSTALLATION CONDITION REPORT

(REQUIREMENTS FOR ELECTRICAL INSTALLATIONS - BS7671 (IET WIRING REGULATIONS))

| Details of the Client | | 1 |
|--|---|---|
| Details of the Client: <i>Viamed Limited 15 Station Road Crosshills Keighley</i> | Reason for producing the report: <i>Client request</i> | |
| | | |
| Details of the Installation | | |
| Occupier and Address: <i>As above</i> | Description of premises: <i>Commercial</i> | 2 |
| | Estimated age of wiring system (years): <i>70</i> | |
| | Evidence of additions / alterations: <input checked="" type="checkbox"/> Yes | If yes, estimate age: (years) <i>50/20</i> |
| | Installation records available: <input type="checkbox"/> No | Date of last inspection: <i>Not known</i> |
| Extent and Limitations of Inspection and Testing | | |
| Extent of installation covered by this report: <i>Whole installation</i> | 3 | |
| Agreed and operational limitations on inspection and testing (include reasons and person agreed with): <i>Inaccessible accessories not inspected See below</i> | | |
| The inspection and testing detailed in this report and accompanying schedules has been carried out in accordance with BS7671:2008 (IET Wiring Regulations) as amended to <i>2011</i> . Cables concealed within trunking and conduits, under floors, in roof spaces, and generally within the fabric of the building or underground, have not been inspected unless specifically agreed between the client and inspector prior to the inspection. | | |
| Summary of the Condition of the Installation | | |
| See page 2 for a summary of the general condition of the installation in terms of electrical safety. | 4 | |
| Overall assessment of the installation in terms of its suitability for continued use*: <i>satisfactory</i> | | |
| *An unsatisfactory assessment indicates that dangerous (Code C1) and/or potentially dangerous (Code C2) conditions have been identified. | | |
| Declaration | | |
| 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 declare that the information in this report, including the observations and attached schedules, provides an accurate assessment of the condition of the electrical installation taking into account the stated extent and limitations listed above. | | |
| Inspected and Tested by: | | Report reviewed and authorised for Issue by: |
| Name: <i>D Dower</i> | Name: <i>D Dower</i> | |
| Position: <i>Qualified Supervisor</i> | Position: <i>Proprietor</i> | |
| Date: <i>17/12/2013</i> | Date: <i>17/12/2013</i> | |
| Signature:  | Signature:  | |

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ORIGINAL**Observations**

Referring to the attached schedules of inspection and test results, and subject to the limitations specified on page 1 of this report under 'Extent and Limitations of Inspection and Testing':

No remedial action is required:

N/A

The following observations are made:



Classification
Code:
Further Investigation
Required:

Observation(s):

| | | |
|---|--|----|
| 1 | No RCD protection in place for sockets outlets that could be used to supply equipment outdoors | C4 |
| 2 | Switch lines are not correctly colour coded throughout the installation | C4 |
| 3 | Green and yellow sleeving not always present to uninsulated circuit protective conductors | C4 |
| 4 | Cable conductor colours do not comply with current wiring regulations e.g. red and black | C4 |
| 5 | No RCD protection in place for cables buried in walls less than 50mm from surface | C4 |
| 6 | No single point of isolation for the complete installation | C4 |
| 7 | No RCD in place for lighting circuits | C4 |

Code C4 indicates items which do not comply with the current edition of BS7671:but are consider safe under previous editions

Code C1 Indicates that danger is present. Immediate remedial action required.
Code C2 Indicates that an item is potentially dangerous. Urgent remedial action required.
Code C3 Indicates that improvement is recommended.

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Inspection Schedule (2)

5 - DISTRIBUTION EQUIPMENT (Continued)

| | Comments | Outcome | Further Investigation required |
|--|----------|---------|--------------------------------|
| Presence and effectiveness of obstacles | | N/A | |
| Placing out of reach | | N/A | |
| Presence of main switch(es), linked where required | | ✓ | |
| Operation of main switch(es) (functional check) | | ✓ | |
| Manual operation of circuit-breakers and RCD(s) to prove disconnection | | N/A | |
| Confirmation that integral test button / switch causes RCD(s) to trip when operated (functional check) | | N/A | |
| RCD(s) provided for fault protection - includes RCBOs | | N/A | |
| RCD(s) provided for additional protection where required - includes RCBOs | | ✓ | |
| Presence of RCD quarterly test notice at or near equipment where required | | ✓ | |
| Presence of diagrams, charts or schedules at or near equipment where required | | ✓ | |
| Presence of non-standard (mixed) cable colour warning notice at or near equipment where required | | ✓ | |
| Presence of alternative supply warning notice at or near equipment where required | | N/A | |
| Presence of next inspection recommended label | | ✓ | |
| Presence of other required labelling (Please specify) | | N/A | |
| Examination of protective device(s) and base(s); correct type and rating (no signs of unacceptable thermal damage, arcing and overheating) | | ✓ | |
| Single-pole protective devices in line conductor only | | ✓ | |
| Protection against mechanical damage where cables enter equipment | | ✓ | |
| Protection against electromagnetic effects where cables enter ferromagnetic enclosures | | ✓ | |

6 - DISTRIBUTION CIRCUITS

| | |
|--|---|
| Identification of conductors | ✓ |
| Cables correctly supported throughout their run | ✓ |
| Condition of insulation of live parts | ✓ |
| Non-sheathed cables protected by enclosure in conduit, duct or trunking | ✓ |
| Suitability of containment systems for continued use (including flexible conduit) | ✓ |
| Cables correctly terminated in enclosures | ✓ |
| Examination of cables for signs of unacceptable thermal and mechanical damage / deterioration | ✓ |
| Adequacy of cables for current-carrying capacity with regard for the type and nature of installation | ✓ |
| Adequacy of protective devices; type and rated current for fault protection | ✓ |
| Presence and adequacy of circuit protective conductors | ✓ |
| Coordination between conductors and overload protective device | ✓ |

✓ : Acceptable condition. C1 or C2 : Unacceptable condition. C3 : Improvement recommended. N/V : Not verified. LIM : Limitation. N/A : Not applicable

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Inspection Schedule (4)

7 - FINAL CIRCUITS (Continued)

Cables concealed under floors, above ceilings, in walls / partitions less than 50mm from a surface, and in partitions containing metal parts

installed in prescribed zones (see *Extent and limitations*) •

incorporating earthed armour or sheath, or run within earthed wiring system, or otherwise protected against mechanical damage from nails, screws and the like (see *Extent and limitations*) or

*for an installation not under the supervision of skilled or instructed persons, provided with additional protection by a 30mA RCD

Provision of additional protection by 30mA RCD

*for circuits used to supply mobile equipment not exceeding 32A rating for use outdoors in all cases •

*for all socket outlets of rating 20A or less provided for use by ordinary persons unless exempt

Provision of fire barriers, sealing arrangements and protection against thermal effects

Band II cables segregated / separated from band I cables

Cables segregated / separated from non-electrical services

Termination of cables at enclosures - identify / record numbers and locations of items inspected

Connections under no undue strain •

No basic insulation of a conductor visible outside enclosure •

Connections of live conductors adequately enclosed •

Adequately connected at point of entry to enclosure (glands, bushes etc) •

Condition of accessories including socket-outlets, switches and joint boxes

Suitability of accessories for external influences

*Note: Older installations designed prior to BS7671:2008 may not have been provided with RCDs for additional protection

8 - ISOLATION AND SWITCHING

Isolators

Presence and condition of appropriate devices •

Acceptable location - state if local or remote from equipment in question •

Capable of being secured in the OFF position •

Correct operation verified •

Clearly identified by position and / or durable marking •

Warning label posted in situations where live parts cannot be isolated by the operation of a single device •

Comments

Outcome
Further investigation required

LIM

N/A

LIM

C4

C4



compressor only



local



N/A

Switching off for mechanical maintenance

Presence and condition of appropriate devices •

Acceptable location - state if local or remote from equipment in question •

Capable of being secured in the OFF position •

Correct operation verified •

Clearly identified by position and / or durable marking •

N/A

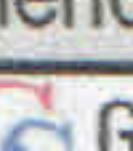
N/A

N/A

N/A

N/A

✓ : Acceptable condition. C1 or C2 : Unacceptable condition. C3 : Improvement recommended. N/V : Not verified. LIM : Limitation. N/A : Not applicable

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Intentionally Blank

Reference Number:

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Test Results

DB Reference:

No1

DB Location:

Intake cupboard

Tested by:

Name:

Signature:

Date:

D Dower
Dobbed
17/12/2013

Test instrument serial numbers:

Earth electrode resistance:

Earth fault loop impedance:

Insulation resistance:

Other:

649/040204 2685

Details of circuits and/or installed equipment vulnerable to damage when testing

| Circuit Number | Test Results | | | | | | | | | | | | | Circuit Comments |
|----------------|---------------------------|--------------------------|----------------------------|---------------------------------|------------------------------------|------------------|--------------|------------|---------------|-----------------------|-----------------|-----------------------|-----------------------|-------------------------------|
| | Ring final continuity (Ω) | Continuity (Ω) | Insulation Resistance (MΩ) | RCD | Distribution Board Characteristics | Nominal Voltage: | 400 | Polarity: | ✓ | Test Button Operation | Measured Zs (Ω) | Measured Zs (Ω) @ 1mA | Measured Zs (Ω) @ 5mA | |
| | R ₁ (line) | R _n (neutral) | R ₂ (cpc) | R ₁ * R ₂ | R ₂ | Live-Live | Live-Neutral | Live-Earth | Neutral-Earth | Polarity | Impedance (ms) | Impedance (ms) | Impedance (ms) | |
| 1 | | | | 0.41 | 299 | 299 | 299 | 299 | ✓ | 0.40 | N/A | | | |
| 2 | | | | 0.41 | 299 | 299 | 299 | 299 | ✓ | 0.42 | N/A | | | |
| 3 | | | | 0.41 | 299 | 299 | 299 | 299 | ✓ | 0.41 | N/A | | | |
| 4 | | | | 0.27 | N/A | 299 | 299 | 299 | ✓ | 0.29 | N/A | | | 2 core SWA with Armour as cpc |
| 5 | | | | N/A | 299 | 299 | 299 | 299 | N/A | N/A | | | | Disconnected -no live tests |
| 6 | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |
| 13 | | | | 0.30 | N/A | 299 | 299 | ✓ | 0.32 | N/A | | | | |

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Reference Number:

DADO 21001

DB Reference:

No 2

DB Location:

Intake cupboard

Test Results

| Circuit Number | Test Results | | | | | | | | | | RCD | Distribution Board Characteristics | Nominal Voltage: | No. of phases: | Polarity: | Phase rotation: |
|----------------|---------------------------|----------------|----------------------------|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----|------------------------------------|------------------|----------------|-----------|-----------------|
| | Ring final continuity (Ω) | Continuity (Ω) | Insulation Resistance (MΩ) | Insulation resistance (ms) | Measured Zs (Ω) @ 1mA | Measured Zs (Ω) @ 5mA | Test Button Operation | Test Button Operation | Test Button Operation | Test Button Operation | | | | | | |
| 1 | 0.10 | N/A | 299 | 299 | ✓ | 0.28 | N/A | | | | | | | | | |
| 2 | 0.11 | 0.19 | 0.09 | N/A | 299 | 299 | ✓ | 0.27 | N/A | | | | | | | |
| 3 | | | | N/A | 299 | 299 | ✓ | 0.38 | N/A | | | | | | | |
| 4 | 0.41 | 0.43 | 0.73 | N/A | 299 | 299 | ✓ | 0.47 | N/A | | | | | | | |
| 5 | | | | N/A | 299 | 299 | ✓ | 0.31 | N/A | | | | | | | |
| 6 | | | | N/A | 299 | 299 | ✓ | 0.31 | N/A | | | | | | | |
| 7 | | | | N/A | 299 | 299 | ✓ | 0.31 | N/A | | | | | | | |
| 8 | | | | N/A | 299 | 299 | ✓ | N/A | | | | | | | | |
| 9 | | | | N/A | 299 | 299 | ✓ | N/A | | | | | | | | |
| 10 | | | | N/A | 299 | 299 | ✓ | 0.37 | N/A | | | | | | | |
| 11 | | | | N/A | 299 | 299 | ✓ | 0.31 | N/A | | | | | | | |
| 12 | | | | N/A | 299 | 299 | ✓ | 0.31 | N/A | | | | | | | |
| 13 | | | | N/A | 299 | 299 | ✓ | 1.06 | N/A | | | | | | | |
| 14 | | | | N/A | 299 | 299 | ✓ | 0.56 | N/A | | | | | | | |
| 15 | | | | N/A | 299 | 299 | ✓ | 1.00 | N/A | | | | | | | |
| 16 | | | | N/A | 299 | 299 | ✓ | 0.29 | N/A | | | | | | | |
| 17 | | | | N/A | 299 | 299 | ✓ | 0.36 | N/A | | | | | | | |
| 18 | | | | N/A | 299 | 299 | ✓ | 1.29 | N/A | | | | | | | |
| | | | | N/A | 299 | 299 | ✓ | 0.20 | N/A | | | | | | | |

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Reference Number:

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DB Reference:

No 3,4,5

DB Location:

Basement store room 5

Test Results

| Test Results | | Test instrument serial numbers: | | Distribution Board Characteristics | | Details of circuits and/or installed equipment vulnerable to damage when testing | |
|----------------|------|-----------------------------------|-----------------------------|------------------------------------|------------------------|--|--|
| | | Continuity: | Earth electrode resistance: | RCDs: | Nominal Voltage: | No. of phases: | Polarity: |
| | | Earth fault loop impedance: | Insulation resistance: | Other: | 230 | 1 | ✓ |
| Circuit Number | | Ring final circuit continuity (Ω) | Continuity (Ω) | Insulation Resistance (MΩ) | Zs: 0.28 Ω | Ipf: 0.82 kA | |
| | | R ₁ (line) | R _n (neutral) | R ₂ (cpc) | RCD | | |
| | | R ₁ × R _n | R ₂ | | | | |
| | | Live-Live | Live-Neutral | Live-Earth | Measured Zs (Ω) | Test Button Operation | |
| | | | | | @ 1m | @ 5m | |
| | | | | | | | |
| 1 | | 0.01 | N/A | 299 | ✓ 0.29 | N/A | Insulation resistance P+N vs E |
| 0.06 | 0.08 | 0.14 | 0.05 | N/A | ✓ 0.31 | 30.6 | Ins. Res. P+N vs E |
| 2 | | 0.34 | N/A | N/A | ✓ 0.62 | 17.8 | Ins Res P+N vs E |
| 3 | | 0.14 | N/A | 299 | ✓ 0.42 | 37.4 | 27.7 |
| 4 | | N/A | 299 | 299 | ✓ 0.59 | N/A | Unknown load not found |
| 5 | | 0.31 | N/A | 299 | ✓ 0.72 | 29.6 | 16.1 ✓ Ins Res P+N vs E |
| 6 | | 0.44 | N/A | 299 | ✓ 0.66 | N/A | Ins Res P+N vs E switches closed, emergency light test switches open |
| 7 | | 0.34 | N/A | 299 | ✓ 0.69 | N/A | Ins Res P+N vs E. No cpc to stair head golfballs |
| 8 | | N/A | N/A | 299 | ✓ 1.08 | N/A | MMS cable into ceiling to unknown load |
| | | | | | | | |
| 1 | | | | | Not connected | | |
| 2 | 0.20 | 0.19 | 0.36 | 0.14 | N/A N/A 299 299 ✓ 0.42 | N/A | Ins Res P+N vs E |
| | | | | | | | Ins Res P+N vs E |
| 3 | 0.14 | 0.14 | 0.23 | 0.64 | N/A N/A 299 299 ✓ 0.45 | N/A | Ins Res P+N vs E |
| | | | | | | | Ins Res P+N vs E |
| 4 | | | | | N/A N/A 299 299 ✓ 0.92 | 32.1 | 13.8 ✓ |
| | | | | | | | Ins Res P+N vs E |
| | | | | | | | Ins Res P+N vs E switch open. Phase to sink area from workshop switched live |
| 1 | | | | | | | Zs 0.38 ohms at board 5 |
| 2 | | | | | | | PVC cables connect to conduit cables with conduit as earth |
| | | | | | | | Ins Res @ 250 volts only P+N vs E |

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| Test Results | | | | | | | | | | DB Reference: No 6 | | DB Location: Old Boiler room | |
|--|-----------------------|--|----------------------|--|-----------------------------------|---|-----------------|--|-----------------------------------|--|---|--|--|
| Tested by: Name: Signature: Date: | | Test instrument serial numbers: Continuity: RCD: Other: | | Earth electrode resistance: Earth fault loop impedance: Insulation resistance: | | Distribution Board Characteristics: Nominal Voltage: No. of phases: Polarity: Phase rotation: | | Details of circuits and/or installed equipment vulnerable to damage when testing | | | | | |
| Circuit Number | R ₁ (line) | R _n (neutral) | R ₂ (cpc) | R ₁ × R ₂ | Ring final circuit continuity (Ω) | Continuity (Ω) | Resistance (MΩ) | RCD | Z _s : 0.29 Ω | Phase rotation: N/A | Insulation resistance: 649/040204 2685 | Insulation resistance: 649/040204 2685 | Insulation resistance: 649/040204 2685 |
| | | | | | Live-Live | Live-Neutral | Live-Earth | Neutral-Earth | Measured Z _s (Ω) @ 1ms | Insulation resistance: 649/040204 2685 | Insulation resistance: 649/040204 2685 | Insulation resistance: 649/040204 2685 | Insulation resistance: 649/040204 2685 |
| 1 | 0.08 | 0.08 | 0.14 | 0.05 | N/A | 299 | 299 | ✓ | 0.32 | N/A | ✓ | Earth electrode resistance: 0.79 kA | Earth fault loop impedance: 0.79 kA |
| 2 | | | | | N/A | 299 | 299 | ✓ | | N/A | | | |
| 3 | | | | | 0.57 | N/A | 299 | 299 | ✓ | 0.86 | 17.8 | 8.7 | Insulation resistance: 17.8 ms |
| 4 | | | | | N/A | 299 | 299 | ✓ | | N/A | | | |
| 5 | | | | | N/A | 299 | 299 | ✓ | | N/A | | | |
| 6 | | | | | N/A | 299 | 299 | ✓ | 0.21 | N/A | Disconnected | | |
| 7 | | | | | N/A | 299 | 299 | ✓ | 0.34 | N/A | Insulation resistance P+N vs E, Z _s at FCU | | |
| 8 | | | | | N/A | 299 | 299 | ✓ | 1.52 | N/A | Ins Res at FCU | | |
| 9 | | | | | N/A | 299 | 299 | ✓ | 0.72 | N/A | Ins Res P+N vs E | | |
| 10 | | | | | N/A | 299 | 299 | ✓ | 0.37 | N/A | Ins Res with switch open | | |
| 11 | | | | | 1.54 | N/A | 299 | 299 | ✓ | 1.83 | N/A | Redundant cct isolated in C/I/U | |
| 12 | | | | | 0.14 | N/A | 299 | 299 | ✓ | 0.43 | N/A | Fans tested at 3 pole isolator | |
| | | | | | 0.36 | N/A | 299 | 299 | ✓ | 0.65 | N/A | | |
| | | | | | 0.16 | N/A | 299 | 299 | ✓ | 0.42 | N/A | | |
| | | | | | 0.03 | 0.03 | 0.37 | N/A | 299 | 299 | ✓ | 0.64 | 27.1 ms |
| | | | | | | | | | 14.8 | ✓ | High resistance of cpc | | |

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