

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

| | | |
|--|--|---|
|  <p style="text-align: center;">Accredited to ISO/IEC 17025:2005</p> | <h3 style="margin: 0;">Sira Test and Certification Ltd</h3> <p style="margin: 0;">Issue No: 026 Issue date: 01 January 2011</p> | |
| | <p>Hazardous Area Centre Rake Lane Eccleston Chester CH4 9JN</p> | <p>Contact: Mr S P Cork Tel: +44 (0)1244 670900 Fax: +44 (0)1244 681330 E-Mail: steve.cork@siracertification.com Website: www.siracertification.com</p> |
| <p>Testing performed by the Organisation at the locations specified below</p> | | |

Locations covered by the organisation and their relevant activities

Laboratory locations:

| Location details | Activity | Location code | | |
|---|---|---|----------------|---|
| <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Address Hazardous Area Centre Rake Lane Eccleston Chester CH4 9JN</td> <td style="width: 50%; border: none;">Local contact Mr S P Cork Tel: +44 (0)1244 670900 Fax: +44 (0)1244 681330 Email: steve.cork@siracertification.com Website: www.siracertification.com</td> </tr> </table> | Address Hazardous Area Centre Rake Lane Eccleston Chester CH4 9JN | Local contact Mr S P Cork Tel: +44 (0)1244 670900 Fax: +44 (0)1244 681330 Email: steve.cork@siracertification.com Website: www.siracertification.com | Sections 1 - 2 | C |
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| <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Address 12 Acorn Industrial Park Crayford Road Crayford Dartford Kent DA1 4AL</td> <td style="width: 50%; border: none;">Local contact Mr R Cooper Tel: +44 (0)1322 520500 Fax: +44 (0)1322 520501 Email: bob.cooper@siracertification.com Website: www.siracertification.com</td> </tr> </table> | Address 12 Acorn Industrial Park Crayford Road Crayford Dartford Kent DA1 4AL | Local contact Mr R Cooper Tel: +44 (0)1322 520500 Fax: +44 (0)1322 520501 Email: bob.cooper@siracertification.com Website: www.siracertification.com | Sections 3 - 4 | D |
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DETAIL OF ACCREDITATION

| Materials/Products tested | Type of test/Properties measured/Range of measurement | Standard specifications/ Equipment/Techniques used | Location Code |
|---|---|---|---------------|
| <p>SECTION 1: Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres</p> <p>Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres</p> | <p>Electrical Product Tests</p> <p>Tests for the General Requirements for Electrical Apparatus for Potentially Explosive Atmospheres or Hazardous (Classified) Locations</p> <p>General Requirements</p> <p>Thermal Stability min temp - 80 °C</p> <p>Max enclosure size for Thermal Stability test 795 x 825 x 800 mm</p> | <p>EN 50014:1997, Amds 1 and 2, (withdrawn) EN 50014:1992 (withdrawn) EN 50014:1977, Amds A1 to A5, (withdrawn) IEC 60079-0:2007 IEC 60079-0:2004 (withdrawn) IEC 60079-0:2000 (withdrawn) IEC 60079-0:1998 (withdrawn) IEC 60079-0:1983 (withdrawn) Excluding: Resistance to light on Non-metallic enclosures Ageing Chemical Compatibility Charging tests (Clause 26.14, 60079-0:2004 and 2007)</p> | C |
| | <p>Tests for Oil Immersed Apparatus (Exo)</p> | <p>EN 50015:1998 EN 50015:1994 (withdrawn) EN 50015:1977, Amd A1, (withdrawn) IEC 60079-6:2007 IEC 60079-6:1995 (withdrawn)</p> | C |
| | <p>Tests for Pressurised and Purged Apparatus (Exp)</p> | <p>EN 50016:2002 (withdrawn) EN 50016:1995 (withdrawn) EN 50016:1977, Amd A1, (withdrawn) IEC 60079-2:2007 IEC 60079-2:2001 (withdrawn) IEC 60079-2:1983 (withdrawn)</p> | C |
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| SECTION 1: Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd) | Electrical Product Tests (cont'd) Tests for Sand Filled Apparatus (Exq) | EN 50017:1998 EN 50017:1994 EN 50017:1977, Amd A1, (withdrawn) IEC 60079-5:2007 IEC 60079-5:1997 (withdrawn) | C |
| | Tests for Apparatus in Flameproof Enclosures (Exd) For 60079-1 Clause 15.1.2/15.1.3, min temp - 80 °C Clause 15.2, max temp 300 °C | EN 50018:2000 (withdrawn) EN 50018:1994 (withdrawn) EN 50018:1977, Amds A1 to A3, (withdrawn) IEC 60079-1:2007 Excluding: Clause 19.3.2, Flammability test IEC 60079-1:2003 (withdrawn) IEC 60079-1:1971, Amds 1 and 2, (withdrawn) IEC 60079-1A:1975 (withdrawn) | C |
| | Tests for Increased Safety Apparatus (Exe) | EN 50019:2000 (withdrawn) EN 50019:1994 (withdrawn) EN 50019:1977, Amds A1 to A5, (withdrawn) IEC 60079-7:2006 IEC 60079-7:2001, corrig, (withdrawn) IEC 60079-7:1990, Amds 1 and 2, (withdrawn) Excluding: Mechanical tests for screwed lampholders Interturn Voltage Test as in HD 553 and IEC 60044-6 | C |
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| SECTION 1: Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd) | Electrical Product Tests (cont'd) Tests for Increased Safety Apparatus (Exe) (cont'd) | Tests on Secondary Batteries greater than 25 Ah Ventilation of Battery Enclosures Sulphur dioxide test for bi-pin lamp caps/lampholders Vibration test luminaires with bi-pin caps/lampholders Tests for high-voltage machines | C |
| | Tests for Intrinsically Safe Apparatus, Associated Apparatus and Systems (Exi) | EN 50020:2002 EN 50020:1994, Amd 1, (withdrawn) EN 50020:1977, Amds A1 to A5, (withdrawn) EN 50039:1980 (withdrawn) IEC 60079-11:2006 IEC 60079-11:1999 (withdrawn) IEC 60079-11:1991 (withdrawn) | C |
| | Tests for Encapsulated Apparatus (Exm) | EN 50028:1987 (withdrawn) IEC 60079-18:2009 IEC 60079-18:2004 IEC 60079-18:1992 (withdrawn) | C |
| | Tests for Electrical Apparatus for Explosive Atmospheres with Type of Protection n (Exn) | BS 6941:1988 (withdrawn) EN 50021:1999 (obsolescent) IEC 60079-15:2010 IEC 60079-15:2005 IEC 60079-15:2001 IEC 60079-15:1987 (withdrawn) Excluding: Tests for ballasts in circuits with ignitors Mechanical shock for batteries Ignition tests for large high-voltage machines | C |
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| SECTION 1: Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd) | Electrical Product Tests (cont'd) | | |
| Intrinsically safe systems | Construction, safety and marking | IEC 60079-25:2010 IEC 60079-25:2003 | C |
| Special requirements for construction, Test and Marking of Electrical Apparatus of Equipment Group II, Category 1G | Construction, safety and marking | IEC 60079-26:2006 IEC 60079-26:2004 (withdrawn) EN 50284:1999 (withdrawn) | C |
| Tests for Fieldbus intrinsically safe concept (FISCO) | Construction, safety and marking | IEC 60079-27:2005 IEC TS 60079-27:2002 (withdrawn) | C |
| Equipment dust ignition protection by enclosure "t" | Construction, safety and marking | IEC 60079-31:2008 | C |
| Tests for Electrical Apparatus with Protection by Enclosure for use in the presence of Combustible Dusts | Construction, safety and marking Thermal Stability min temp - 80°C Max enclosure size for Thermal Stability test 795 x 825 x 800 mm | BS 6467:Part 1:1985 (withdrawn) Excluding: Appendix H.2 | C |
| Tests for Electrical Apparatus with Protection by Enclosure for use in the presence of Combustible Dusts General requirements | Construction, safety and marking | IEC 61241-0:2004 Excluding: Resistance to light Ageing test for material | C |
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| SECTION 1: Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd) | Electrical Product Tests (cont'd) | | |
| Construction and Testing | Construction, safety and marking | EN 50281-1-1:1998 Excluding: Clause 6.10 Radiating equipment IEC 61241-1-1:1999 | C |
| Protection by enclosure "tD" | Construction, safety and marking | IEC 61241-1:2004 | C |
| Protection by enclosure "pD" | Construction, safety and marking | IEC 61241-4:2001 | C |
| Protection by enclosure "iD" | Construction, safety and marking | IEC 61241-11:2005 | C |
| Protection by enclosure "mD" | Construction, safety and marking | IEC 61241-18:2004 | C |
| Metering pumps and dispensers to be installed at filling stations and used to dispense liquid fuel | Safety Tests | BS 7117:Part 1:1991, Amds 1 and 2 (withdrawn) | C |
| Miners Cap Lamps | Safety Tests | EN 50033:1991 IEC 62013-1:2005 IEC 62013-1:1999 Excluding: Clause 10.13.2, Store of dangerous charge | C |
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| <p>SECTION 1: Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd)</p> <p>Electrical Trace Heating Tapes</p> | <p>Non-Electrical Product Tests</p> <p>Tests to demonstrate compliance with constructional requirements and prove thermal performance</p> <p>Clause 5.1.7 min temp - 80 °C</p> | <p>IEC 60079-30-1:2007 IEC 62086-1:2001 Excluding: Flammability test Verification of rated output (Method b)</p> | C |
| <p>Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in Potentially Explosive Atmospheres</p> <p>Basic Methods and Requirements</p> | <p>Tests similar to those indicated above for electrical equipment</p> <p>Construction, safety and marking</p> | <p>EN 13463-1:2009 Excluding Clause 8.3, flammability Clause 8.4.4, Protective coating Clause 8.5.6, Chemical Substances Appendix D, charging test</p> | C |
| <p>Protection by flow restricting enclosure "fr"</p> | <p>Construction, safety and marking</p> | <p>EN 13463-2:2004</p> | C |
| <p>Protection by flameproof enclosure 'd'</p> | <p>Construction, safety and marking</p> | <p>EN 13463-3:2005</p> | C |
| <p>Mechanical Cable Glands</p> | <p><u>DIMENSIONAL TESTS</u></p> <p>Tests to demonstrate compliance with Constructional Requirements</p> | <p>BS 6121:Part 1:1989 (withdrawn) BS 6121:Part 2:1989 (withdrawn) Excluding: Seal Compression and Hardness Tensile Tests</p> | C |



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| SECTION 1: Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in potentially Explosive Atmospheres (cont'd) | Non-Electrical Product Tests (cont'd) | | |
| In the above section 1, where IEC or EN standards have exact equivalents in BS, EN or BS EN Standards, these BS, EN or BS EN standards are also included in the accreditation. | | | |
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| SECTION 2: INGRESS PROTECTION TESTS | <u>Ingress Protection Tests</u> | | |
| Enclosures for Electrical Equipment | IP1X Protected against solid objects greater than 50 mm diameter | IEC 60529:1989 EN 60947-1:1997, Amd 1, (withdrawn) Appendix C only BS 4999:Part 105:1988, (withdrawn) EN 60034:Part 5:1986 (withdrawn) | C |
| | IP2X Protected against solid objects greater than 12 mm diameter | | C |
| | IP3X Protected against solid objects greater than 2.5 mm diameter | | C |
| | IP4X Protected against solid objects greater than 1.0 mm diameter | | C |
| | IP5X Dust Protected Excluding: Objects greater than 810 x 760 x 800 mm | | C |
| | IP6X Dust Tight Excluding: Objects greater than 810 x 760 x 800 mm | | C |
| | IPX1 Protected against dripping water | | C |
| | IPX2 Protected against dripping water when tilted up to 15° | | C |
| | IPX3 Protected against spraying water | | C |
| | IPX4 Protected against splashing water | | C |
| IPX5 Protected against water jets | C | | |
| IPX6 Protected against heavy seas | C | | |



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| SECTION 2: INGRESS PROTECTION TESTS (cont'd) Enclosures for Electrical Equipment (cont'd) | <u>Ingress Protection Tests</u> (cont'd) | IEC 60529:1989 EN 60947-1:1997, Amd 1, (withdrawn) Appendix C only BS 4999:Part 105:1988, (withdrawn) EN 60034:Part 5:1986 (withdrawn) | C |
| | IPX7 Protected against the effects of immersion Excluding: Objects greater than Ø 350 x 500 mm | | C |
| | IPX8 Protected against submersion Excluding: Objects greater than Ø 350 x 500 mm | | C |

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| <p>SECTION 3: INSTRUMENTS FOR MEASURING VEHICLE EXHAUST EMISSIONS</p> <p>INSTRUMENTS FOR MEASURING VEHICLE EXHAUST EMISSIONS</p> | <p>Performance Tests</p> <p>PERFORMANCE TESTS FOR PATTERN APPROVAL</p> <p>**RF and EMC Susceptibility tests carried out at another UKAS lab which provides the E-M influence.</p> | <p>OIML International Recommendation R99 Annex A1 to A7, A9, A10.1 and A16 to A23</p> <p>Vehicle Inspectorate Specifications: MOT/05/01/01 Sections 8.5.1 to 8.5.12 and 8.6 MOT Exhaust Gas Analysers VPB/07/24/20 Excluding RF and EMC Susceptibility**</p> | <p>D</p> <p>D</p> |
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| SECTION 4 : GAS DETECTORS | Performance Tests | | |
| ELECTRICAL APPARATUS FOR THE DETECTION AND MEASUREMENT OF FLAMMABLE GASES | | | |
| General requirements and test methods | Performance tests | BS EN 50054:1999* (withdrawn) BS EN 61779-1:2000* | D |
| Performance requirements for Group I apparatus indicating up to 5 % (V/V) methane in air | Performance tests | BS EN 50055:1999* (withdrawn) BS EN 61779-2:2000* | D |
| Performance requirements for Group I apparatus indicating up to 100 % (V/V) methane in air | Performance tests | BS EN 50056:1999* (withdrawn) BS EN 61779-3:2000* | D |
| Performance requirements for Group II apparatus indicating up to 100 % lower explosive limit | Performance tests | BS EN 50057:1999* (withdrawn) BS EN 61779-4:2000* | D |
| Performance requirements for Group II apparatus indicating up to 100 % (V/V) gas | Performance tests | BS EN 50058:1999* (withdrawn) BS EN 61779-5:2000* | D |
| Detectors for flammable gases | Performance tests | IEC 60079-29-1:2007* | D |
| ELECTRICAL APPARATUS USED FOR DETECTION OF COMBUSTIBLE GASES IN DOMESTIC PREMISES | | | |
| Test Methods and performance requirements | Performance tests | BS EN 50194-1:2009 BS EN 50194:2000* | D |
| Specification for carbon monoxide detectors (electrical) for domestic use | Performance tests | BS EN 50291:2001* BS 7860:1996, Amd 1* (withdrawn) | D |



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| <p>SECTION 4 : GAS DETECTORS (cont'd)</p> <p>ELECTRICAL APPARATUS FOR THE DETECTION AND MEASUREMENT OF FLAMMABLE GASES (cont'd)</p> | <p>Performance Tests (cont'd)</p> | | |
| <p>Note 1</p> | <p>* Excluding tests concerned with:</p> <ul style="list-style-type: none"> i) Electromagnetic compatibility; ii) Explosion protection; iii) Alarm and sound level; iv) Electrical safety; v) Degree of mechanical strength and protection; vi) Battery connections vii) Software evaluation viii) vibration | | |
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| <p style="text-align: center;">END</p> | | | |