


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>0512</p> <p>Accredited to ISO/IEC 17025:2005</p>	<p>ERA Technology Ltd trading as Cobham Technical Services</p> <p>Issue No: 027 Issue date: 25 November 2009</p>	
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<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
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SECTION 1: FUSES, CIRCUIT BREAKERS AND THERMAL LINKS Cartridge fuse-links (rated up to 5A) for ac and dc service	ELECTRICAL PRODUCT TESTS Electrical Safety	BS 646:1958, Amd 1 for 50 Hz ratings only
General purpose fuse-links for domestic and similar purposes (primarily for use in plugs)	Electrical safety	BS 1362:1973, Amds 1 and 2
Residual current-operated circuit breakers without integral overcurrent protection (RCCB's)	Electrical safety Maximum prospective current 10,000A	BS EN 61008-1:2004 Excluding: Clause 9.13, Resistance to heat Clause 9.14, Resistance to abnormal heat and fire
Residual current-operated circuit breakers with integral overcurrent protection (RCBO's)	Electrical safety Maximum prospective current 10,000A	BS EN 61009-1:2004 Excluding: Clause 9.14, Resistance to heat Clause 9.15, Resistance to abnormal heat and fire
Portable residual current devices	Electrical safety	BS 7071:1992 For the following clauses only: Clauses 8.9 and 8.16
Socket - Outlets incorporating residual current devices	Electrical safety	BS 7288:1990, Amd 1 For the following clauses only: Clauses 8.9 and 8.16
Miniature cartridge fuse links for use on printed wiring boards	Electrical safety	BS 6885:1988
General requirements for miniature fuses	Electrical safety	BS EN 60127-1:2006 EN 60127-1:2006 IEC 60127-1:2006



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SECTION 1: FUSES, CIRCUIT BREAKERS AND THERMAL LINKS (cont'd) Cartridge fuse links	ELECTRICAL PRODUCT TESTS (cont'd) Electrical safety	BS EN 60127-2:2003, Amd 1 EN 60127-2:2003, Amd 1 IEC 60127-2:2003, Amd 1
Sub-miniature fuses	Electrical safety	BS EN 60127-3:1996 EN 60127-3:1996, Corrig IEC 60127-3:1988, Amd A1
Miniature fuses: Quality assessment	Electrical safety	BS EN 60127-5:1991 EN 60127-5:1991 IEC 60127-5:1988
Thermal links	Electrical safety	BS EN 60691:2003, Amd 1 EN 60691:2003, Amd A1 IEC 60691:2002, Amd A1 Excluding: Annex C Conductive heat ageing test Annex G Indelibility of markings
Circuit-Breakers for overcurrent protection for household and similar installations	Electrical safety Maximum current 10kA a.c.	BS EN 60898-1:2003 + A1:2004 IEC 60898-1:2002 Excluding: Clause 9.7.1 Clause 9.11, Endurance Clauses 9.13, Mechanical shock Clauses 9.14, Resistance to heat Clauses 9.15, Resistance to abnormal heat and fire Clauses 9.16, Resistance to rusting



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SECTION 2: LOW VOLTAGE SWITCHGEAR AND CONTROLGEAR Low voltage switchgear and controlgear General rules	ELECTRICAL PRODUCT TESTS Electrical safety Maximum current 10kA a.c.	BS EN 60947-1:2007 Excluding: Clause 7.3, EMC tests Clause 8.4, EMC tests Annex C, Degree of protection
Low voltage switchgear and controlgear assemblies	Electrical safety Maximum current 10kA a.c.	IEC 61439-2:2009 BS EN 60947-5-1:2004, Corrig 1 EN 60947-5-1:2003 IEC 60947-5-1:2003, Amd 1 Excluding: Annex C, Degree of protection
General requirements	Electrical safety	IEC 61439-1:2009 Excluding: Clause 10.2 Strength of material and parts Clause 10.3, Degree of protection Clause 10.12, EMC tests BS EN 60439-1:1999 Excluding: Clause 8.2.7, Degree of protection Clause 8.2.8, EMC tests EN 60439-1:1990
Busbar trunking systems	Electrical safety Maximum rating 63 A at 250 V ac	IEC 61439-6:2009 BS EN 60439-2:2000 IEC 60439-2:2000 Excluding: Clause 8.2.7, Degree of protection Clause 8.2.8, EMC tests Clause 8.2.10, Structural strength Clause 8.2.14, Flame-propagation Clause 8.2.15, Fire-proofing in building penetrations



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<p>SECTION 2: LOW VOLTAGE SWITCHGEAR AND CONTROLGEAR (cont'd)</p> <p>LV Switchgear and Controlgear Assemblies to be Installed on Places where Unskilled Persons have Access</p>	<p>ELECTRICAL PRODUCT TESTS (cont'd)</p> <p>Electrical safety</p> <p>Short-circuit withstand 7kA maximum at 240 V</p>	<p>IEC 61439-3:2009 BS EN 60439-3:1991, Amds 1 and 2 Excluding: Clause 8.2.7, Degree of protection Clause 8.2.9, Impact strength Clause 8.2.10, Structural strength Clause 8.2.11, Resistance to rusting Clause 8.2.12, Resistance of insulating materials to heat Clause 8.2.13, Abnormal heat and fire Clause 8.2.14, Humidity</p>
<p>SECTION 3: UTILITY METERING AND ASSOCIATED PRODUCTS eg: AC watt-hour meters and static var-hour meters</p>	<p><u>Influence Tests</u></p> <p>Short time overcurrents</p>	<p>BS EN 62053-11:2003 BS EN 62053-21:2003 BS EN 62053-22:2003 BS EN 62053-23:2003 EN 62053-11:2003 EN 62053-21:2003 EN 62053-22:2003 EN 62053-23:2003 IEC 62053-11:2003 IEC 62053-21:2003 IEC 62053-22:2003 IEC 62053-23:2003</p> <p>For the following tests only: Clause 7.2, Short-time currents</p>



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<p>SECTION 4: IMPULSE VOLTAGE TESTING</p> <p>Low-voltage surge protective devices. Surge protective devices connected to low-voltage power systems.</p> <p>Requirements and tests</p>	<p>ELECTRICAL PRODUCT TESTS</p> <p><u>Impulse Voltage Tests</u></p> <ul style="list-style-type: none"> - Peak voltage 8.0 kV - Impulse 1.2/50 μs - Short-circuit 8/20 μs 	<p>BS EN 61643-11:2002 EN 61643-11:2002 IEC 61643-11:2005 For the following tests only: Clauses 7.4 to 7.8 BS EN 61643-21:2001 EN 61643-21:2001 IEC 61643-21:2000, Amd 1 For the following tests only: Clause 6.2.1</p>
<p>Information technology equipment Safety</p> <p>General requirements</p>		<p>BS EN 60950-1:2006 EN 60950-1:2001 IEC 60950-1:2005 For the following tests only: Clause 2.10.3.4 a) and Appendix G5 a)</p>
<p>Audio, video and similar electronic apparatus</p>		<p>IEC 60065:2005 BS EN 60065:2002, Corrig 1 EN 60065:2002 For the following tests only: Clause 13.3.4 a) and Appendix J5 a)</p>
<p>Household and Similar Electrical Appliances</p> <p>General requirements</p>		<p>BS EN 60335-1:2002 + A2:2006 EN 60335-1:2002 IEC 60335-1:2004 For the following tests only: Clause 14</p>
<p>Incandescent lamps</p> <p>Tungsten filament lamps for domestic and similar general purpose lighting</p>		<p>BS EN 60432-1:2000 For the following tests only: Appendix D</p>



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SECTION 4: IMPULSE VOLTAGE TESTING (cont'd) Electrical equipment for measurement, control and laboratory use	ELECTRICAL PRODUCT TESTS (cont'd)	BS EN 61010-1:2001, Corrigs 1 and 2 EN 61010-1:2001, Corrigs 1 and 2 IEC 61010-1:2001, Corrigs 1 and 2 For the following tests only: Clause 14.9
13A rewirable and non-rewirable plugs	<u>Impulse Voltage Tests</u> - Peak voltage 8.0 kV - Impulse 1.2/50 μ s - Short-circuit 8/20 μ s (cont'd)	BS 1363-1:1995, Amd 1 to 3 For the following tests only: Annexes D and F
13A switched and unswitched socket-outlets		BS 1363-2:1995, Amd 1 to 3 For the following tests only: Annexes D and F
13A adaptors		BS 1363-3:1995, Amd 1 to 3 For the following tests only: Annexes D and F
13A fused connection units switched and unswitched		BS 1363-4:1995, Amd 1 to 3 For the following tests only: Annexes D and F



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SECTION 5: POLYMER and ALLOYS; REINFORCED POLYMERS	<p><u>Mechanical Tests</u></p> <p>Tensile strength (Loads up to 10 kN in temperature range 20°C to 250°C)</p> <p>Creep and Stress (Loads up to 50 kN at 20°C, Loads up to 5 kN in temperature range 20°C to 250°C)</p> <p>Flexural</p>	<p>BS 2782:Part 3:Methods 320A to F: 1976 (obsolescent) ISO R527-1:1993 ISO R527-2:1993 ISO R527-3:1995</p> <p>BS EN ISO 899-1:2003</p> <p>BS EN ISO 178:2003</p>
SECTION 6: THERMOPLASTIC AND FLEXIBLE METAL PIPEWORK FOR UNDERGROUND INSTALLATION AT PETROL FILLING STATIONS	<p><u>Mechanical Tests</u></p> <p>Leakage, hydrostatic strength, burst pressure</p> <p>Vacuum</p> <p>Cyclic pressure</p> <p>Estimated working life</p>	<p>Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second edition 2001 Clause 6.2.1 only BS EN 14125:2004 Clause 5.1.2 only</p> <p>Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second Clause 6.2.2 only BS EN 14125:2004 Clause 5.1.3 only</p> <p>Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second Clause 6.2.3 only BS EN 14125:2004 Clause 5.1.4 only</p> <p>BS EN 14125:2004 Clause 5.2 a only</p>



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SECTION 6: THERMOPLASTIC AND FLEXIBLE METAL PIPEWORK FOR UNDERGROUND INSTALLATION AT PETROL FILLING STATIONS (cont'd)	<p><u>Mechanical Tests</u> (cont'd)</p> <p>Crush resistance</p> <p>Bend radius and low temperature flexibility</p> <p>Forces up to 10 kN</p> <p>Impact</p> <p>Puncture resistance</p> <p>Pull test on connectors</p> <p>Fuel compatibility</p>	<p>Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second Clause 6.3.1 only BS EN 14125:2004 Clause 5.4.1 only</p> <p>Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second Clause 6.3.2 only BS EN 14125:2004 Clause 5.4.2 only</p> <p>Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second Clause 6.3.3 only BS EN 14125:2004 Clause 5.4.3 only</p> <p>Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second Clause 6.3.4 only BS EN 14125:2004 Clause 5.4.4 only</p> <p>Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second Clause 7.3.1 only BS EN 14125:2004 Clause 5.4.4 only</p> <p>Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second Clause 6.4 only BS EN 14125:2004 Clause 5.5.1 only</p>



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SECTION 6: THERMOPLASTIC AND FLEXIBLE METAL PIPEWORK FOR UNDERGROUND INSTALLATION AT PETROL FILLING STATIONS (cont'd)	<u>Mechanical Tests</u> (cont'd) Fuel permeation and swelling	Institute of Petroleum Specification for underground pipework systems for petrol filling stations, second Clause 6.5 only BS EN 14125:2004 Clauses 5.5.2 and 5.5.3 only
SECTION 7: GEOSYNTHETIC MATERIALS	Creep testing (Loads up to 50 kN at 20°C, Loads up to 5 kN in temperature range 20°C to 250°C) Tensile (wide strip) (Forces up to 10 kN) Breaking Strength and Elongation (strip method) Accelerated tensile Creep by stepped isothermal method (Forces up to 10 kN) Accelerated compressive creep by stepped isothermal method (Pressures up to 1000 kPa)	BS EN ISO 13431:1999, Amd 1 ISO 13431:1999 BS EN ISO 10319:2008 ISO 10319:2008 BS EN ISO 13934-1:1999 ASTM D6992-03 ASTM D 7361-07
	END	