


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 <p>Accredited to ISO/IEC 17025:2005</p>	York EMC Services Ltd Issue No: 094 Issue date: 14 August 2017	
	University of York Heslington York EMC Services Ltd YO10 5DD	Contact: Mr N Wainwright Tel: +44 (0)1904 324440 Fax: +44 (0)1904 324434 E-Mail: nick.wainwright@yorkemc.co.uk Website: www.yorkemc.com
Testing performed by the Organisation at the locations specified below		

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Address Unit 46 Beeches Industrial Estate Yate South Gloucestershire BS37 5QT Local contact Mr Adam Pers Tel: +44 (0)1454 326998 Fax: +44 (0) 1454 326930 Email: adam.pers@yorkemc.co.uk Website: www.yorkemc.com	EMC Testing Low Voltage Safety Testing	B
Address Three Lane Ends Business Centre Methley Road Castleford WF10 1PN Local contact Mr Colin Greenfield Tel: +44 (0)1977 731173 Fax: +44 (0)1977 603181 Email: colin.greenfield@yorkemc.co.uk Website: www.yorkemc.com	EMC Testing Low Voltage Safety Testing Radio Testing	C1
Address Unit 5 Speedwell Road Castleford WF10 5PY Local contact Mr Colin Greenfield Tel: +44 (0)1977 731173 Fax: +44 (0)1977 603181 Email: colin.greenfield@yorkemc.co.uk Website: www.yorkemc.com	EMC Testing	C2
Address Unit 1 Grangemouth Technology Park Earls Road Grangemouth FK3 8UZ Local contact Dr Didier Bozec Tel: +44 (0)1324 469000 Email: didier.bozec@yorkemc.co.uk Website: www.yorkemc.com	EMC Testing Low Voltage Safety Testing	G



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Flexible Scope

The Flexible Scope applies to the laboratory's accreditation to ISO/IEC17025:2005 for testing activities in accordance with the standards listed in sections 1 and 2 at sites B, C1, C2 and G.

The scope may also include tests on the same or similar product types against standards, or customer-specified methods that are not specifically listed in this Schedule, providing that:

- (1) The method or standard does not introduce new principles of measurement.
- (2) The method or standard does not require measurements to be made outside the parametric boundaries defined in this Schedule.

Information about flexible scopes of accreditation is available in UKAS document LAB 39.

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
SECTION 1			
EMC TESTS¹			
For all EMC tests listed:			
Computers and Peripherals Domestic Appliances: Electrical Electrical/Electronic Components Electrical/Electronic Connectors Electrical/Electronic Products Electronic Products: Digital Electro-Mechanical Devices Equipment for Installation on Railway Rolling Stock IT Equipment Luminaires Micro-electronic Circuits and Components Printed Circuit Boards Office Equipment: Electrical	1.1 Conducted Emissions - AC and DC Power Ports Excluding Telecom Ports for C1 and C2 9 kHz to 30 MHz	CISPR 11:1997 + A1 + A2 EN 55011:1998 + A1 + A2 EN 55011:2007 + A2 EN 55011:2009 + A1 CISPR 14:2000 + A1 + A2 EN 55014:2000 + A1 + A2 EN 55014-1:2006 + A1 + A2 EN 55015:2006 + A1 + A2 EN 55015:2013 EN 55015:2013 + A1 CISPR 22:1997 + A1 + A2 EN 55022:1998 + A1 + A2 EN 55022:2006 EN 55022:2010 EN 55032:2012 (IT equipment) EN 55032:2015 (IT equipment) CISPR 32:2015 (IT equipment)	B, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2 C1, C2 B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G G G



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SECTION 1 (cont'd) EMC TESTS¹ As listed on page 2	1.1 Conducted Emissions - AC and DC Power Ports Excluding Telecom Ports for C1 and C2 9 kHz to 30 MHz	ANSI C63.4:2000 ANSI C63.4:2003 ANSI C63.4:2009 ANSI C63.4:2014 CFR 47:Part 15B (60 Hz single phase only) CFR 47:Part 18 (60 Hz single phase only) VCCI V3/2015.04 excluding telecoms ports and kit modules ICES-003:2012 EN 55016-1-2:2004 + A1 + A2 (Section 4.3) EN 55016-1-2:2014 EN 55016-2-1:2004 + A1 (Section 7.4.1) EN 55016-2-1:2009 + A2 EN 55016-2-1:2014 EN 55016-2-2:2011	G C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G G B B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2
	1.2 Radiated Emissions E-field: 30 MHz to 40 GHz (B, G) 30 MHz to 18 GHz (C1, C2)	CISPR 11:1997 + A1 + A2 EN 55011:1998 + A1 + A2 EN 55011:2007 EN 55011:2007 + A2 EN 55011:2009 + A1 CISPR 14:2000 + A1 EN 55014:2000 + A1 + A2 EN 55014-1:2006 + A1 + A2 EN 55015:2006 + A1 + A2 EN 55015:2013 + A1 CISPR 22:1997 + A1 + A2 EN 55022:1998 + A1 + A2 EN 55022:2006 EN 55022: 2006 + A1 EN 55022:2010 EN 55032:2012 (IT equipment)	B, C1, C2, G B, C1, C2, G C1, C2 B, C1, C2, G B, C1, C2, G C1 C1 B, C1, C2, G B, C1, C2, G B, C1, C2, G C1, G C1, G B, C1, C2, G B B, C1, C2, G B, C1, C2, G



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SECTION 1 (cont'd) EMC TESTS¹ As listed on page 2	1.2 Radiated Emissions E-field: 30 MHz to 40 GHz (B, G) 30 MHz to 18 GHz (C1, C2)	EN 55032:2015 (IT equipment) CISPR 32:2015 (IT equipment) TRG 1068:1991 RIA 18:1990 EN 55016-2-3:2006 EN 55016-2-3:2010 EN 55016-2-3:2010 + A1 EN 55016-2-3:2010 + A1 + A2 VCCI V3/2015.04 CFR 47:Part 15B CFR 47:Part 18 (60 Hz Single phase only) ANSI C63.4:2000 ANSI C63.4:2003 ANSI C63.4:2009 ANSI C63.4:2014 ICES-003:2012	G G C1 C1 B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C2 G B, C1, C2, G B, C1, C2, G G C1, G B, C1, C2, G B, C1, C2, G B
	1.3 Radiated Emissions H-field: 9 kHz to 30 MHz	CISPR 11:1997 + A1 + A2 (excluding induction cookers) EN 55011:1998 + A1 + A2 (excluding induction cookers) EN 55015:2006 + A1 + A2 EN 55015:2013 + A1 ANSI C63.4:2003 ANSI C63.4:2009 ANSI C63.4:2014 RIA18:1990 EN 60945:2002	G C1, C2, G B, C1, C2, B, C1, C2 C1, G B, C1, C2, G B, C1, C2, G C1, C2 B



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SECTION 1 (cont'd) EMC TESTS¹ As listed on page 2	1.4 Disturbance Power 30 MHz to 300 MHz	CISPR 14:2000 + A1 + A2 EN 55014:2000 + A1 + A2 EN 55014-1:2006 EN 55014-1:2006 + A1 + A2	C1 C1 B, C1, C2 B, C1, C2
	1.5 Discontinuous Emissions (Clicks): 10 kHz to 30 MHz	CISPR 14:2000 + A1 + A2 EN 55014:2000 + A1 + A2 EN 55014-1:2006 + A1 + A2	C1 C1 B, C1, C2
	1.6 Harmonics Harmonic measurements to 40 th harmonic, 13A max	EN 61000-3-2:2006 EN 61000-3-2:2006 + A1 + A2 EN 61000-3-2:2014	C2, G B, C2, G B, C2, G
	1.7 Flicker measurements 230V, 13A Pst, Plt, dT, dmax, dc	EN 61000-3-3:1995 + A1 + A2 EN 61000-3-3:2008 EN 61000-3-3:2013 IEC 61000-3-3:2013	C2, G B, C2, G B, C2, G B, C2, G
	1.8 Insertion Loss 150 kHz to 1605 kHz	EN 55015:1996 (Superseded) EN 55015:2006 + A1 + A2	C2 C2
	1.9 Emissions related to Human exposure	EN 62493:2010	B



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SECTION 1 (cont'd) EMC TESTS¹ As listed on page 2	1.10 Radiated Immunity 80 MHz to 1 GHz Up to 20 V/m (C1, C2)	IEC 61000-4-3:1995 + A1 + A2 EN 61000-4-3:1996 + A1 + A2	C1, C2, G C1, C2, G
	30 MHz to 1 GHz Up to 30V/m (B, G)	IEC 61000-4-3:1995 + A2 EN 61000-4-3:1996 + A2	C1 C1
	1 GHz to 2.7 GHz Up to 10 V/m (C1, C2)	IEC 61000-4-3:2002 + A1 EN 61000-4-3:2002 + A1	B, C1, C2, G B, C1, C2, G
	1 GHz to 6 GHz Up to 10 V/m (B)	IEC 61000-4-3:2006 + A1 + A2 EN 61000-4-3:2006 + A1 + A2	B, C1, C2, G B, C1, C2, G
	1.7 GHz to 6 GHz Up to 20 V/m (B)	RIA 18:1990 Lloyds Reg TS No 1, Sec 21:1990	C1, C2 G
	1.7 GHz to 2.6 GHz Up to 30 V/m (B)	EN55016-2-4:2004	B, C1, C2, G
	2.7 GHz to 6 GHz Up to 10V/m (C2)		
	1 GHz to 6 GHz Up to 20 V/m (G)		
	1.11 Fast Transients/Bursts Up to 4.4 kV (B, C1, C2, G)	EN 61000-4-4:1995 + A1 + A2 IEC 61000-4-4:1995 + A1 + A2 IEC 61000-4-4:2004 EN 61000-4-4:2004 IEC 61000-4-4:2004 + A1 EN 61000-4-4:2004 + A1 EN 61000-4-4:2012 RIA 18:1990 Lloyds Reg TS No 1, Sec 21:1990	B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G G G



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SECTION 1 (cont'd) EMC TESTS¹ As listed on page 2	1.12 Conducted RF Immunity 150 kHz to 230 MHz Up to 10 Vrms	IEC 61000-4-6:1996 + A1 EN 61000-4-6:1996 + A1 IEC 61000-4-6:2007 EN 61000-4-6:2007 IEC 61000-4-6:2008 EN 61000-4-6:2009 EN 61000-4-6:2014 Lloyds Reg TS No 1, Sec 21:1990	B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G G
	1.13 Surge 1.2/50 µs up to 6.6 kV 10/700 µs up to 4 kV (B) 5/50 µs up to 1.8 kV (C) 10/700 µs up to 6.6kV (G)	EN 61000-4-5:1995 + A1 IEC 61000-4-5:1995 + A1 IEC 61000-4-5:2005 EN 61000-4-5:2006 IEC 61000-4-5:2014 EN 61000-4-5:2014	B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G
	1.14 Voltage Dips and Interruptions AC 230V up to 16A, 250A inrush 40%, 70% and 100% output DC 40% 70%, 80%, 120%	IEC 61000-4-11:1994 + A1 EN 61000-4-11:1994 + A1 IEC 61000-4-11:2004 EN 61000-4-11:2004 EN 61000-4-29: 2000	B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B
	1.15 ESD Up to 15 kV air Up to 8 kV contact	IEC 61000-4-2:1995 + A1 + A2 EN 61000-4-2:1995 + A1 + A2 IEC 61000-4-2:2008 EN 61000-4-2:2009	B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G



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SECTION 1 (cont'd) EMC TESTS¹ As listed on page 2	1.16 Power Frequency Magnetic Field Immunity Up to 100 A/m (C,G) Up to 300A/m (B)	IEC 61000-4-8:1993 + A1 EN 61000-4-8:1993 + A1 IEC 61000-4-8:2009 EN 61000-4-8:2010	G G B, C2, G B, C2, G
	1.17 Pulsed Magnetic fields Up to 1200 A/m	EN 61000-4-9:1993 + A1	B, C2
	1.18 Ring Wave Immunity	EN 61000-4-12:2006	B, G
	1.19 Generic and Product Standards These generic and product specific standards are included in this schedule, but limited to those referred basic standards that explicitly listed in Sections 1.1 to 1.18	EN 61000-6-1:2007 IEC 61000-6-1:2007 EN 61000-6-2:2005 IEC 61000-6-2:2005 EN 61000-6-3:2007 IEC 61000-6-3:2006 EN 61000-6-3:2007 + A1 IEC 61000-6-3:2006 + A1 EN 61000-6-4:2007 IEC 61000-6-4:2006 EN 61000-6-4:2007 + A1 IEC 61000-6-4:2006 + A1 EN 12015:2004 EN 12016:2004 + A1	B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G B, C1, C2, G C1, C2 C1, C2



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<p>SECTION 1 (cont'd)</p> <p>EMC TESTS¹</p> <p>As listed on page 2</p>	<p>1.19 Generic and Product Standards</p> <p>These generic and product specific standards are included in this schedule, but limited to those referred basic standards that explicitly listed in Sections 1.1 to 1.18</p>	<p>EN 50121-3-2:2006 excluding traction power ports EN 50121-3-2:2016 excluding THD for AC power outlet for public use</p> <p>EN 50121-4:2006 EN 50121-4:2016 EN50121-5:2017</p> <p>EN 50130-4:1995 + A1 + A2 EN 50130-4:2011 EN 50130-4:2011 + A1</p> <p>ENV 50204:1995 (superseded)</p> <p>EN 50270:2006 EN 50270:2015</p> <p>EN 50293:2000 EN 50293:2012</p> <p>EN 55014-2:1997 + A1 EN 55014-2:1997 + A1 + A2 EN 55014-2:2015</p> <p>EN 55024:1998 + A1 + A2 CISPR 24:1997 + A1 + A2 EN 55024:2010 +A1 EN 55024:2010 (excluding 10/700µs surge)</p> <p>EN 60601-1-2:2007 EN 60601-1-2:2007+ Cor:2010 EN 60601-1-2:2015 IEC 60601-1-2:2014</p> <p>EN 60945:2002 IEC 60945:2002</p>	<p>B, C1, C2, G B, C1, C2, G</p> <p>B, C1, C2, G B, C1, C2 C2, G</p> <p>B, C1, C2, G B, C1, C2, G B, C1, C2, G</p> <p>C1, C2</p> <p>B, C1, C2, G B, C1, C2, G</p> <p>B B, C1, C2</p> <p>C1, C2, G B, C1, C2, G B, G</p> <p>B, C1, C2, G B, C1, C2, G B, G C1, C2</p> <p>B, C1, C2, G B, G B, G B, G</p> <p>G G</p>



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<p>SECTION 1 (cont'd)</p> <p>EMC TESTS¹</p> <p>As listed on page 2</p>	<p>1.19 Generic and Product Standards</p> <p>These generic and product specific standards are included in this schedule, but limited to those referred basic standards that explicitly listed in Sections 1.1 to 1.18</p>	<p>EN 61326-1:2006 IEC 61326-1:2005</p> <p>EN 61326-1:2013 IEC 61326-1:2012</p> <p>EN 61326-2-6:2006 IEC 61326-2-6:2005</p> <p>EN 61326-2-6:2013 IEC 61326-2-6:2012</p> <p>EN 61547:2009</p> <p>EN 61800-3:2004 IEC 61800-3:2004 + A1 (excluding 5.2.2 to 5.2.4 and 6.2)</p> <p>IEC 60533:1999 (excludind AF immunity tests) IEC 60533:2015 (excludind AF immunity tests)</p> <p>EN 62040-2:2006 IEC 62040:2005 (excluding harmonics, inter-harmonics and three phase voltage imbalance tests)</p> <p>ETS 300 342-3:1999 (Ancillary equipment only)</p> <p>EN 300 386-2:V1.1.3, (excluding Clauses 5.1.2.4, 5.1.2.5</p> <p>EN 301 489-3 V1.6.1 (2013-08) EN 301 489-3 V2.1.1 (2017-03) EN 301 489-1 V1.9.2 EN 301 489-1 V2.1.1 (2017-02)</p>	<p>B, C1, C2, G B, C1, C2, G</p> <p>B, C1, C2, G B, C1, C2, G</p> <p>G G</p> <p>G G</p> <p>B, C1, C2, G</p> <p>G G</p> <p>G G</p> <p>C1, C2</p> <p>C1, C2</p> <p>B, C1, C2, G G B, C1, C2, G G</p>



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Note: International Standards, EN, ENV and IEC, listed in this Schedule, that have been adopted nationally as BS EN, DD ENV and BS IEC and are technically identical, can be considered as being included in this Schedule.

Facilities: Three Lane Ends Business Centre, Methley Road, Castleford, WF10 1PN

- 18 GHz ferrite/foam lined anechoic chamber: 7.6m x 3.6m x 3.6m (Unit 9)
- 18 GHz ferrite/foam lined anechoic chamber: 7.0m x 4m x 2.5m (Unit 7)
- 18 GHz ferrite/foam lined anechoic chamber: 6.8m x 3m x 3m (Unit 5)

Screened Room: 6m x 3m x 3m (Unit 8)

Open Area Test Site: 3m and 10m ranges

Power Supplies:

- 230V, 50 Hz, 32A single phase (Units 5, 8, 9 and OATS)
- 230V, 50 Hz, 16A single phase (Unit 7)
- 415V, 50 Hz, 32A 3-phase (Units 5, 7, 8, 9 and OATS)
- 110V, 60 Hz, 5A single phase (mobile supply)

Compressed air up to 5 bar in Units 5, 8, 9 and OATS

Weight Limit for Test Items: 1.5 tonnes

Facilities: Unit 5, Speedwell Road, Castleford, WF10 5PY

- 18 GHz ferrite/hybrid lined semi/anechoic chamber (alternative test site): 8.50 m x 5.0 m x 5.50 m (Lab 1), door size: 2.0 m x 2.50 m
- 8 GHz ferrite/ hybrid lined anechoic chamber: 6.8m x 3m x 3m (Lab 3), door size: 1.0 m x 2.0 m

Screened room: 8.0m x 4.0m x 3.0m (Lab 2), door size: 2.0m x 2.5m

Screened Room: 6m x 3m x 3m (Lab 4), door size: 2.0m x 2.1m

Maximum EUT weight: 1.5 tonnes
Maximum EUT size: 2.0m x 2.0m x 2.5m

Power supplies:

- up to 100 V dc
- 230V 13A 50 Hz Single Phase
- 415V 63A 50 Hz Three Phase
- 120V 9A 60 Hz Single Phase



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<p>Facilities: Unit 1, Grangemouth Technology Park, Earls Road, Grangemouth, FK3 8RU</p> <p>18 GHz ferrite/hybrid lined semi/anechoic chamber (alternative test site): 8.50 m x 5.0 m x 5.50 m (Lab 1), door size: 2.0 m x 2.50 m Screened room: 8.0m x 4.0m x 3.0m (Lab 2), door size: 2.0m x 2.5m Screened room: 8.0m x 4.0m x 3.0m (Lab 3), door size: 2.0m x 2.5m</p> <p>Maximum EUT weight: 1.5 tonnes Maximum EUT size: 2.0m x 2.0m x 2.5m</p> <p>Power supplies: up to 100 V dc 230V 13A 50 Hz Single Phase 415V 63A 50 Hz Three Phase 120V 9A 60 Hz Single Phase</p>			
<p>Facilities: 46 Beeches Industrial Estate, Yate, South Gloucestershire, BS37 5QT</p> <p>18 GHz ferrite/hybrid lined semi/anechoic chamber (alternative test site): 8.9m x 5.6m x 5.4m (Lab 1), door size: 1.75m x 2.5m 6 GHz ferrite/foam lined anechoic chamber: 7.4m x 4.8m x 4.0m (Lab 3), door size: 0.9m x 2.0m Screened room: 7.0m x 4.0m x 3.0m (Lab 2), door size: 2.0m x 2.5m Screened room: 3.7m x 3.7m x 2.4m (Lab 2), door size 0.92m x 2.0m</p> <p>Maximum EUT weight: 1.5 tonnes Maximum EUT size: 2.0m x 1.75m x 2.5m</p> <p>Power supplies Up to 100 V DC 230 V, 16 A, 50 Hz single phase (all labs) 415 V, 63 A, 50 Hz 3-phase (all labs) 5 kVA, 20Hz to 5 kHz supply (all labs)</p>			



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<p>SECTION 2:</p> <p>SAFETY TESTS²</p> <p>Audio, Video and similar electronic apparatus</p>		<p>EN 60065: 2002+A1+A2+A11+A12 Excluding all clauses except: Zx Protection against excessive sound pressure from personal music players</p> <p>EN 60065: 2002+A1+A2+A11+A12</p> <p>Excluding: 6. Hazardous radiation 8.18 Endurance test for wound components 8.22 Non-separable thin sheet insulation 12.1.1 Bump test 12.1.2 Vibration test 12.3 Cable connected remote control devices 12.5 Co-axial sockets 14.2 Capacitors and RC-units 14.4 High voltage components 14.5.1 Thermal releases 14.6 Switches 14.7 Safety interlocks 14.12 Varistors 15.4 Devices forming part of a mains plug 18 Mechanical strength and implosion test of picture tubes 20 Resistance to fire tests 20.Z1 Resistance to candle-flame ignition Zx Protection against excessive sound pressure from personal music players A.10.2.1 Splash treatment Annex H Insulated winding wire Insulation</p>	<p>B</p> <p>C1</p>



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
<p>SECTION 2:</p> <p>SAFETY TESTS²</p> <p>Audio, Video and similar electronic apparatus</p>		<p>EN60065:2014</p> <p>Excluding:</p> <p>6 Hazardous radiation</p> <p>8.1.7 Endurance test for wound components</p> <p>8.21 Non-separable thin sheet insulation</p> <p>12.1.2 Bump test</p> <p>12.1.3 Vibration test</p> <p>12.3 Remote control devices held in hand</p> <p>12.5 Antenna co-axial sockets mounted on the apparatus</p> <p>14.3 Capacitors and RC-Units</p> <p>14.5 High voltage components and assemblies</p> <p>14.6.2 Thermal releases</p> <p>14.7 Switches</p> <p>14.8 Safety interlocks</p> <p>14.13 Surge suppression varistors</p> <p>18 Mechanical strength of picture tubes and protection against implosion</p> <p>20 Resistance to fire – Flammability tests</p> <p>A.10.3.1 Splash treatment</p> <p>G Flammability test methods</p> <p>H Insulated winding wire insulation</p>	<p>C1</p>



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<p>SAFETY TESTS²</p> <p>Household and similar electrical appliances – Safety - General requirements</p>		<p>EN.60335-1: 2012 + A11:2014 IEC 60335-1:2012 Excluding: 15.1.1: IP water ingress tests 21.2: scratch test on insulation 22.16: cord reels 22.32: ageing test on rubbers 22.46: software evaluation 22.47: mains water pressure 22.48: water backsiphonage 23.3: wire flexing test 29.2: tracking test 31: resistance to rusting 32: radiation tests</p>	B, C1
<p>Washing machines</p>		<p>EN 60335-2-7:2010 +A11:2013 IEC 60335-2-7:2008 + A1 Excluding Clause 18.101 – Endurance testing for lids or doors Clause 18.102 – Braking test Clause 21.101.1 – Impact test with rubber hemisphere Clause 22.104 – Testing of lid or door interlocks Annex AA – detergent and rinsing agent Annex BB – Ageing test for elastomeric parts Annex CC – Detergent free electrolyser washing machines</p>	C1
<p>Appliances for heating liquids</p>		<p>EN 60335-2-15: 2002 +A11: 2012 Excluding Clause 3.1.9.103 – Heat resistant glass 22.7 Pressure tests 22.103 – Stress test for appliance couplers</p>	C1



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<p>SECTION 2: (cont'd)</p> <p>SAFETY TESTS²</p> <p>Refrigerating appliances</p>		<p>EN 60335-2-24: 2010 IEC 60335-2-24: 2010</p> <p>Excluding Clause 19.104: Abnormal tests for illuminating equipment Clause 21.101: Vibration tests for appliances for camping or similar use Clause 22.7: Pressure tests of compression-type appliances Clause 22.101: Lampholders for fluorescent lamps Clause 22.103: Pressure tests on transcritical refrigeration system Clause 22.107.1: Leakage tests on cooling systems Clause 22.107.2: Scratch tests on surfaces of protected cooling systems Clause 22.107.3: Salt mist test of IEC 60068-2-11 Clause 22.108: Testing to Annex CC for group IIA gases Clause 22.109: Testing to Annex CC for group IIA gases Clause 23: Flexing test Annex CC: Non-sparking "n" electrical apparatus</p>	<p>B, C1</p>



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SECTION 2: (cont'd) SAFETY TESTS² Battery chargers		EN 60335-2-29: 2004 A2: 2010 IEC 60335-2-29: 2010 Excluding: 21.102, Vibration test	B, C1
Room Heaters		EN60335-2-30:2009 + A11:2012 IEC 60335-2-30:2009 Excluding 15.2 Rinsing agent specified in Annex AA of EN 60335-2-5 30.101 Needle flame test	C1
Motor-compressors		EN 60335-2-34: 2013 IEC 60335-2-34: 2012 Excluding: Clause 19.105: Primary single-phase failure tests for three-phase motor-compressors Clause 22.7: High side and Low side test pressures Annex AA: Running overload tests for motor-compressors classified as tested with Annex AA	C1



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<p>SECTION 2: (cont'd)</p> <p>SAFETY TESTS²</p> <p>Electrical heat pumps, air-conditioners and dehumidifiers</p>		<p>EN60335-2-40:2003 + A13:2012 IEC60335-2-40:2002 + A1 + A2 Excluding: Clause 15.2: Continuous overflow Clause 21.1: Requirements of ISO 5149 Clause 22.104: Water pressure tests Clause 22.105: Measurement of air or vapour cushion Clause 22.108: Vacuum pressure tests Clause 22.112: Constructional requirements of Section 3 ISO 5149 Clause 22.116: Appliances using flammable refrigerants Clause 31: Salt mist test Annex EE: Pressure tests Annex FF: Leak simulation tests Annex GG: Charge limits, ventilation requirements and requirements for secondary circuits. Annex ZE: Specific additional requirements for appliances and machines intended for commercial use Annex ZAB: Emission of acoustical noise from appliances covered by Annex ZE</p>	<p>C1</p>



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<p>SECTION 2: (cont'd)</p> <p>SAFETY TESTS²</p> <p>Commercial dispensing appliances and vending machines</p>		<p>EN60335-2-75:2004 + A2:2008 IEC60335-2-75:2002 +A1:2004 +A2:2008 Excluding:</p> <p>Clause 11.101: Testing of compressors not complying with IEC 60335-2-34</p> <p>Clause 15.1.1: Splash test for appliances classified IPX3 or lower</p> <p>Clause 22.7: Pressure testing above 30 bar</p> <p>Clause 23.3: Flexing tests for internal wiring</p> <p>Clause 24.102: Testing of interlock switches</p> <p>Annex AA: Aging test for elastomeric parts</p> <p>Annex ZAA: Commercial electric espresso-coffee machines that can also be heated by gas</p> <p>Annex ZBB: Measurement of acoustical noise</p>	C1
Fans		<p>EN 60335-2-80: 2003 A2:2009 IEC 60335-2-80: 2004 +A2:2008</p>	B, C1



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SECTION 2: (cont'd) SAFETY TESTS² IT Equipment		EN 60950-1:2006 + A1 + A2 + A11+ A12 IEC 60950-1:2006 + A2 Excluding: 2.10.6.6, Abrasion resistance 4.2.8, Cathode ray tubes 4.3.12, Flammable liquids 4.3.13.2, Ionizing radiation 4.3.13.3, Effect of ultraviolet (UV) radiation on materials 4.3.13.4, Human Exposure to ultraviolet (UV) Radiation 4.3.13.5, Lasers (including LEDs) Clause 7.4.2 Voltage surge test (limited to 6.6 kV) Annex A Tests for resistance to fire Annex B4 and B6, Running overload tests	B, C1, G
		EN 60950-1:2006 + A1 + A2 + A11+ A12 IEC 60950-1:2006 + A2 Excluding: (cont'd) Annex K, Thermal controls Annex U, Insulated winding wires Annex AA, Mandrel test Annex CC, Evaluation of integrated circuit (IC) current limiters	B, G
		EN 60950-1:2006 + A1 + A2 + A11+ A12 IEC 60950-1:2006 + A2 Excluding: (cont'd) Annex K, Thermal controls Annex U, Insulated winding wires Annex AA, Mandrel test Annex CC, Evaluation of integrated circuit (IC) current limiters	B, C1, G



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<p>SECTION 2: (cont'd)</p> <p>SAFETY TESTS²</p> <p>Electrical equipment for measurement, control and laboratory use</p>		<p>EN 61010-1:2010 IEC 61010-1:2010</p> <p>EN61010-2-010:2014 IEC61010-2-010:2014</p> <p>Excluding: 6.8.3.3:Voltage impulse tests > 6.6 kV 9.3.2:Constructional requirements 10.5.3b Insulating material, resistance to heat: Vicat softening test 11.2:Cleaning (steam sterilization) 11.6 Specially protected equipment (IP rating) 12.2.1:Ionizing radiation 12.3:Ultraviolet (UV) radiation 12.4:Microwave radiation 12.5:Sonic and ultrasonic pressure 12.6:Laser sources 13.2.3:Implosion of cathode ray tubes 14.3:Overtemperature protection devices 17: Risk assessment Annex H: Conformal coatings tests Annex K: Impulse voltage >6.6kV, AC test voltage >5.0kV, DC test voltage >5.0kV</p>	<p>B, C1, G</p> <p>C1, G</p>
In vitro diagnostic (IVD) medical equipment		<p>EN 61010-2-101:2002 +A1: 2016 IEC 61010-2-101:2002 +A1</p> <p>IEC 61010-2-101:2014</p>	<p>C1, G</p> <p>C1</p>



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<p>SECTION 2: (cont'd)</p> <p>SAFETY TESTS²</p> <p>Medical Electrical Equipment</p>		<p>EN 60601-1:2006 + A1</p> <p>Excluding:</p> <p>8.5.5.1: Defibrillation protection 8.5.5.2: Energy reduction test 8.8.3: Electric strength test above 10kV r.m.s, 5kV d.c 8.8.4.2: Resistance to environmental stress 8.9.1.7: Material groups classification 9.5.2: Cathode ray tubes 9.6.2.1: Audible acoustic energy 9.6.2.2: Infrasound and ultrasound energy 9.6.3: Hand transmitted vibration 9.7.5: Pressure vessels 10: Protection against unwanted and excessive radiation hazards 11.2: Fire prevention (Oxygen rich environment) 11.3: Constructional requirements for fire enclosures (FV tests in IEC 60695-11-10) 11.6.5: Ingress of water or particulate matter 11.6.7: Sterilisation 15.4.2: Temperature and overload control devices 15.4.3.4: Lithium batteries 15.4.7.3: Entry of liquids Annex G: Protection against hazards of ignition of flammable anaesthetic mixtures Annex L: Insulated winding wires for use without interleaved insulation</p>	B, C1, C2, G

² Unless stated otherwise all safety standards include the IEC and BS EN versions where they are technically identical



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
SECTION 3 RADIO TESTS Short Range Devices Wideband transmission Systems	3.1 Frequency Error 0.5MHz to 2.6GHz(C) (0.01MHz to 40GHz) (B) 3.2 Transmitter Carrier Power 5mW to 500mW 3.3 Adjacent Carrier Power 20MHz to 1000MHz 3.4 Modulation Bandwidth 3.5 Frequency Stability 3.6 Transient Power 3.7 Conducted Spurious Emissions 9kHz to 26GHz (C) 9kHz to 40GHz (B) 3.8 Radiated Spurious Emissions 9kHz to 26GHz (C) (9kHz to 40GHz) (B) 3.9 Receiver Sensitivity 3.10 Adjacent Channel Selectivity 3.11 Receiver Blocking 3.12 Receiver Spurious Response Rejection 3.13 Receiver Spurious Emissions 9kHz to 26GHz	EN 300 220-1 V2.4.1 2012 EN 300 220-2 V2.3.1 2009 Excluding Clause 9 Listen before Talk and DSSS apparatus EN 300 330-1 V1.7.1 2010 EN 300 330-2 V1.5.1 2014 Product Class 1 and 4 only EN 302 291-1 V1.1.1 EN 302 291-2 V1.1.1 EN 300 328 V1.8.1 for: Clause 4.3.1.9: Transmitter unwanted emissions in the spurious Domain” for FHSS apparatus Method Clause 5.3.10.2.2: Radiated measurement Clause 4.3.1.10: Receiver spurious emissions for FHSS apparatus Clause 4.3.2.8: Transmitter unwanted emissions in the spurious domain For other type of wide band modulation Method: Clause 5.3.10.2.2 Radiated measurement Clause 4.3.2.9: Receiver spurious emission Method: Clause 5.3.11.2.2: Radiated measurement	B, C1



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SECTION 3 (cont'd) RADIO TESTS	As listed on page 21.	EN 301 893 V1.7.1 for: Clause 5.3.2.2: Carrier Frequencies Clause 5.3.3.2: Occupied Channel Bandwidth Clause 5.3.5: Transmitter unwanted emission outside the 5GHz RLAN bands Clause 5.3.5.2.2: Radiated measurements (ERP) Clause 5.3.6.2: Transmitter unwanted emission within the 5GHz RLAN bands Clause 5.3.7: Receiver spurious emissions Clause 5.3.7.2.2: Radiated measurement	B B B, C1 B, C1 B B, C1 B, C1
	3.14 Transmitter carrier power 10mW to 4W EIRP or equivalent 3.15 Permitted Range of operating frequencies 1 to 40GHz 3.16 Conducted spurious Emissions, 1 to 40GHz 3.17 Radiated spurious Emissions, 1 to 40GHz 3.18 Adjacent channel selectivity, Conducted only 1 to 40GHz 3.19 Receiver blocking or desensitization, Conducted only, 1 to 40GHz	ETSI EN 300 440-2 V1.4.1 ETSI EN 300 440-1 V1.6.1 Excluding GBSAR systems	B



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SECTION 3 (cont'd) RADIO TESTS	3.20 Receiver spurious Emissions Conducted 1 to 40GHz 3.21 2.45GHz RFID systems, Power limits and frequency	ETSI EN 300 440-2 V1.4.1 ETSI EN 300 440-1 V1.6.1 Excluding GBSAR systems	B
	3.22 Occupied Channel Bandwidth, Conducted and Radiated, 2.4GHz 3.23 Transmitter Spurious emissions, Conducted and Radiated, 30MHz to 12.75GHz 3.24 Receiver spurious Emissions Conducted and Radiated, 30MHz to 12.75GHz	EN 300 328 V1.9.1 (2015-02) These specific clauses only: Clause 4.3.1.8 'Occupied Channel Bandwidth' Method: Clause 5.3.8.2 Clause 4.3.1.9 "Transmitter unwanted emissions in the out-of-band domain" Method: Clause 5.3.9.2	B



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SECTION 4 EU/USA MRA FCC CAB Accredited Scope UNINTENTIONAL RADIATORS FCC Part 15, subpart B	Radiated Emissions 9 kHz to 40 GHz Conducted Emissions 9 kHz to 30 MHz	ANSI C63.4-2014	B, C2, G B, C2, G
INDUSTRIAL, SCIENTIFIC AND MEDICAL EQUIPMENT Consumer ISM Equipment FCC Part 18	Radiated Emissions 9 kHz to 40 GHz Conducted Emissions 9 kHz to 30 MHz	FCC MP-5 (February 1986),	B, C2, G
INTENTIONAL RADIATORS FCC Part 15, subpart C	Radiated Emissions 9 kHz to 40 GHz Conducted Emissions 9 kHz to 30 MHz Radio tests as per standard. Includes but not limited to: Peak transmit power Emission bandwidth / Occupied BW Modulation Power spectral density Band edge tests Permitted Frequency range In-band unwanted emissions Out-of-band emissions Spurious Emissions Reaction time Frequency and Time Stability	ANSI C63.10-2013	C2
END			