

Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 Accredited to ISO/IEC 17025:2017	Malvern Optical Limited	
	Issue No: 012 Issue date: 21 June 2021	
	Hangar 3 Pershore Airfield Long Lane Throckmorton WR10 2JH	Contact: Ryan Heath Tel: +44 (0)1386 553188 E-Mail: rmheath@malvernoptical.co.uk Website: www.malvernoptical.co.uk
Testing performed by the Organisation at the locations specified		

Flexible Scope

The Flexible Scope applies to the laboratory's accreditation to ISO/IEC17025:2017 for testing activities in accordance with the standards listed in the schedule for EMC. This 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 GEN 4

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Hangar 3 Pershore Airfield Long Lane Throckmorton WR10 2JH Local contact: Ryan Heath Tel: +44 (0)1386 553188 Email: rmheath@malvernoptical.co.uk	EMC Tests Optical Tests	A

Site activities performed away from the locations listed above:

Location details	Activity	Location code
The customers' site or premises must be suitable for the nature of the particular tests undertaken and will be the subject of contract review arrangements between the laboratory and the customer. Local contact Ryan Heath Tel: +44 (0)1386 553188 Email: rmheath@malvernoptical.co.uk	EMC Tests	B



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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
Communications Equipment Electrical/Electronic Products Industrial Trucks Military Vehicles and Devices Motor Vehicles Radar Equipment Rescue Appliances Security Equipment Sensors Weapons Systems	1 EMC Tests 1.1 Military Tests 1.1.1 Earth Bonding	DEF STAN 59-411:Part 4:A1:2008 and Issue 2 2014 Clause B.3 Documented in-house procedures: MO2014WI002 & MO2014WI019	A, B
	1.1.2 Antenna Radiated Patterns - antenna patterns: 1 MHz to 1 GHz - antenna gains: 30 MHz to 1 GHz -antenna VSWR 1 MHz to 1 GHz	DEF STAN 59-411:Part 4:Issue 1 + A1:2008 and Issue 2 2014 Clause B.4 (excluding B.4.7) Documented in-house procedure: MO2014WI001 Documented in-house procedure: MO2014WI003	A, B
	1.1.3 RF Power -1 MHz to 30 MHz 1000 W - 30 MHz to 1 GHz 100 W	DEF STAN 59-411:Part 4:A1:2008 and Issue 2 2014 Clause B.4 & B.5 Documented in-house procedure: MO2014WI005	A, B
	1.1.4 Mutual Interference - maximum forward power for VSWR measurement: 1000 Watts (1 MHz to 30 MHz) - maximum forward power for VSWR measurement: 100 Watts (30 MHz to 1 GHz)	DEF STAN 59-411:Part 4:Issue 1 + A1:2008 and Issue 2 2014 Clause B.6 Documented in-house procedure: MO2014WI005 Documented in-house procedure: MO2014WI009	A, B



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	<p>1.1.5 Radiation Hazard to Personnel</p> <ul style="list-style-type: none"> - electric field: 0.4 V/m to 400 V/m, 1 MHz to 1 GHz - magnetic field: 0.012 A/m to 1 A/m, 1 MHz to 27 MHz - magnetic field: 0.025 A/m to 1 A/m, 27 MHz to 100 MHz - magnetic field: 0.025 A/m to 0.23 A/m, 100 MHz to 1 GHz - contact and limb current: 1 mA to 1000 mA, 1 MHz to 100 MHz <p>1.1.6 Radiation Hazard to Ordnance</p> <ul style="list-style-type: none"> - electric field: 0.4 V/m to 400 V/m, 1 MHz to 3 GHz <p>1.1.7 Radiated Emissions</p> <ul style="list-style-type: none"> - installed antenna: 1.6 to 30 MHz Tuneable Antenna 30 MHz to 450MHz Non Tuneable Antenna 	<p>SEIG/EI/E3A/LRH/GUIDE/A002/2011:February 2012</p> <p>EG/EI/LRH/Guide/A002/2011: June 2013</p> <p>LRH/Guide/Issue 2: Oct 2015</p> <p>Documented in-house procedure: MO2014WI006 and MO2014WI008</p> <p>Documented in-house procedure: MO2014WI007 and MO2016WI048</p> <p>Documented in-house procedure: MO2014WI049</p> <p>DEF STAN 59-411: Part 4:Issue 1 + A1:2008 and Issue 2 2014 Clause B.2.3.3: test DRE04</p> <p>Documented in-house procedure: MO2014WI014</p>	<p>A, B</p> <p>A, B</p>



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	<p>1.1.8 Conducted Emissions</p> <p>- 500 Hz to 150 MHz</p>	<p>DEF STAN 59-411: Part 3 Issue 1 + A1:2008 and Issue 2:2014 Clause B.1: test DCE01.B and Clause B.2: test DCE02.B</p> <p>DEF STAN 59-411:Part 4 Issue 1 + A1:2008 and Issue 2:2014 Clause B.2.2 Conducted Emissions Documented in-house procedure: MO2014WI012 and MO2014WI013</p>	A, B
	<p>1.1.9 Radio Enhanced Level Test</p> <p>- maximum RF power output 500 Watts, 10 kHz to 250 MHz 200 Watts, 250 MHz to 1 GHz</p>	<p>DEF STAN 59-411:Part 4 Issue 1 + A1:2008 and Issue 2:2014 Clause B.2.8.1 Documented in-house procedure: MO2014WI015</p>	A, B
	<p>1.1.10 Bulk Current Injection Enhanced Level Test</p> <p>- 10 kHz to 450 MHz</p>	<p>DEF STAN 59-411:Part 4 Issue 1 + A1:2008 and Issue 2:2014 Clause B.2.8.2 Documented in-house procedure: MO2016WI045</p>	A, B
	<p>1.1.11 Degradation of Communications while Stationary or on the Move</p> <p>- 1.6 MHz to 512 MHz</p>	<p>DEF STAN 59-411:Part 4 Issue 1 + A1:2008 and Issue 2:2014 Clause B.5 (speech and CW link only) Documented in-house procedures: MO2014WI010 and MO2014WI011</p>	A, B
	<p>1.1.12 Antenna Isolation</p> <p>- minimum dynamic range: 100 dB (20 MHz to 1 GHz) - minimum dynamic range: 90 dB (1 GHz to 4 GHz)</p>	<p>CRD/09/11/41, 20 Sept 2011 Documented in-house procedure: MO2014WI004</p>	A, B



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	<p>1.1.13 Conducted Susceptibility</p> <p>50 kHz to 400 MHz</p>	<p>DEF STAN 59-411: Part 3 Issue 1 + A1:2008 and Issue 2:2014 Clause B.5: test DCS02.B</p> <p>DEF STAN 59-411: Part 4 Issue 1 + A1:2008 and Issue 2:2014 Clause B.2.5: Conducted Susceptibility (DCS02 only)</p> <p>Documented in-house procedures: MO2017WI058</p>	A, B
	<p>1.1.14 High Level Bulk Current Injection</p> <p>- 500 kHz to 450 MHz</p>	<p>DEF STAN 59-411: Part 4 Issue 1 + A1:2008 and Issue 2:2014 Clause B.2.6.3.</p> <p>Documented in-house procedures: MO2017WI057</p>	A, B
	<p>1.1.15 ESD</p> <p>0 to 30 kV</p>	<p>DEF STAN 59-411: Part 4 Issue 1 + A1:2008 and Issue 2:2014 Clause 9.13</p> <p>BS EN 61000-4-2:2009</p> <p>BS ISO 10605: 2008</p> <p>AECTP-500 Ed 4 2011, Category 501 NCS12 and 508 Leaflet 2</p> <p>Documented in-house procedures: MO2018WI067</p>	A, B



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Paints, matt, non-metallic	2 Optical Tests 2.1 Gloss Tests 60° 2.2 Infra-Red Reflectance Facilities for EMC Testing: Antenna Range Max weight 70 Tonnes Turntable diameter 7.3m Antenna element length up to 7.86m Screened room Size 16 m * 16 m * 7.8 m Door 5 m * 5 m Max Weight 70 Tonnes	BS EN ISO 2813:2014 DEF STAN 00-023 Issue 6	A A
END			