



Nemko Laboratory Authorisation Aut. No.: ELA 202

EMC Laboratory:

**Hursley EMC Services Limited
Trafalgar House, Trafalgar Close
Chandlers Ford, Eastleigh
Hampshire SO53 4BW
United Kingdom**

Scope of
Authorization:

**All standards for EMC and radio transmission that are listed
on the accompanying page.**

Nemko has assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfil the conditions described in Nemko Document NLA -10. During the visit by the Nemko representative it was found that the Laboratory is capable of performing tests within the Scope of the Authorisation.

Accordingly, Nemko will normally accept test results from the laboratory on a partial or complete basis for certification of the products.

In order to maintain the Authorisation, the information given in the pertinent NLA-10 must be carefully followed. Nemko is to be promptly notified about any changes in the situation at the Laboratory, which may affect the basis for this Authorisation. The Authorisation may be withdrawn at any time if the conditions are no longer considered to be fulfilled.

The Authorisation is valid through 31. December 2017.

Oslo, 04 December 2015

For Nemko AS:

Jon Fredrik Mo, Nemko ELA Auditor



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SCOPE OF AUTHORIZATION

BASIC TESTS AND ASSOCIATED STANDARDS

Capability to perform a basic test implies also that any product (family) standard calling up this basic test is also within the scope if mentioned below or not.

| Disturbance emissions | |
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| <i>Electromagnetic radiation disturbance, 9 kHz to 30 MHz:</i> | EN 55011 (CISPR 11), EN 60945 (IEC 60945) |
| <i>Electromagnetic radiation disturbance, 30 to 1000 MHz:</i> | EN 55011 (CISPR 11), EN 55013 (CISPR 13), EN 55022 (CISPR 22), EN 55032 (CISPR 32), ANSI C63.4 |
| <i>Electromagnetic radiation disturbance, above 1 GHz:</i> | EN 55011 (CISPR 11), EN 55022 (CISPR 22), EN 55032 (CISPR 32), ANSI C63.4 |
| <i>Electromagnetic radiation disturbance, LAS, 9 kHz to 30 MHz:</i> | EN 55014-1 (CISPR 14-1), EN 55015 (CISPR 15) |
| <i>Electromagnetic radiation disturbance, 50 Hz to 50 kHz:</i> | EN 55103-1 |
| <i>Mains terminal disturbance voltage, 9kHz to 30MHz:</i> | EN 55011 (CISPR 11), EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1), EN 55015 (CISPR 15), EN 55022 (CISPR 22), EN 55032 (CISPR 32), EN 60945 (IEC 60945), ANSI C63.4 |
| <i>Conducted common-mode disturbance power, 30-300 MHz:</i> | EN 55013 (CISPR 13), EN 55014-1 (CISPR 14-1) |
| <i>Conducted terminal disturbance, Hi-Z probe:</i> | EN 55011 (CISPR 11), EN 55014-1 (CISPR 14-1) |
| <i>Conducted discontinuous disturbance on power port:</i> | EN 55014-1 (CISPR 14-1), section 4.2 |
| <i>Conducted common-mode disturbance at telecom/network ports:</i> | EN 55022 (CISPR 22) |
| <i>Conducted antenna terminal disturbance:</i> | EN 55013 (CISPR 13) |
| <i>Mains inrush current:</i> | EN 55103-1 |
| <i>Harmonic current emissions:</i> | EN 61000-3-2 (IEC 61000-3-2), EN 61000-3-12 (IEC 61000-3-12) |
| <i>Voltage fluctuations and flicker in low-voltage supply systems:</i> | EN 61000-3-3 (IEC 61000-3-3), EN 61000-3-11 (IEC 61000-3-11) |
| Disturbance Immunity | |
| <i>Electrostatic discharge immunity test:</i> | EN 61000-4-2 (IEC 61000-4-2) |
| <i>Radiated, radio-frequency, electromagnetic field immunity test:</i> | EN 61000-4-3 (IEC 61000-4-3) ENV 50140:1993, ENV 50204:1995 |
| <i>Electrical fast transient/burst immunity test:</i> | EN 61000-4-4 (IEC 61000-4-4) |
| <i>Surge immunity test:</i> | EN 61000-4-5 (IEC 61000-4-5) |
| <i>Immunity to conducted disturbances, induced by radio-frequency fields:</i> | EN 61000-4-6 (IEC 61000-4-6) ENV 50141:1993 |
| <i>Power frequency magnetic field Immunity test:</i> | EN 61000-4-8 (IEC 61000-4-8) |
| <i>Pulsed magnetic field Immunity test:</i> | EN 61000-4-9 (IEC 61000-4-9) |
| <i>Immunity to damped oscillatory magnetic field:</i> | EN 61000-4-10 (IEC 61000-4-10) |
| <i>Immunity to voltage dips, short interruptions and voltage variation, re.:</i> | EN 61000-4-11 (IEC 61000-4-11) |
| <i>Immunity to oscillatory waves, re.:</i> | EN 61000-4-12 (IEC 61000-4-12) |
| <i>Radiated audio-frequency H-field, re:</i> | EN 55103-2 |
| <i>Radiated E-field, 150 kHz to 150 MHz, re:</i> | EN 55020 (CISPR 20) |
| <i>Conducted antenna terminal, re:</i> | EN 55020 (CISPR 20) |
| <i>Conducted audio/video ports, re:</i> | EN 55020 (CISPR 20) |



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PRODUCT-FAMILY STANDARDS

Unless specifically noted, only the sections of the standards below which are covered by the capability listing above are assumed covered by this authorisation. When the capability is expanded, more parts of the product standards will be covered.

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|---|---|
| UPS – Uninterruptible power supplies | EN 62040-2:2006 (doc=exp) IEC 62040-2:2005 |
| Alarm systems – immunity | EN 50130-4:2011 (doc=exp) |
| Broadcast receivers – emission | EN 55013 :2001 + A1:03 (doc=exp) +A2:06 (doc=exp) CISPR 13 :2001 (mod) +A1:03 +A2:06 EN 55013 :2013 (doc=22.04.2016) CISPR 13 :2009 (mod) Radio receivers only |
| Household appliances – emission | EN 55014-1 :2006 +A1:09 +A2:11 (doc=exp) CISPR 14-1 :2005 +A1:08 +A2:11 |
| Household appliances - immunity | EN 55014-2:1997 + A1:01 +A2:08 (doc=exp) CISPR 14-2:1997 + A1 :01+A2:08 |
| Luminaries - emission | EN 55015:2006 +A1:07 +A2:09 (doc=exp) CISPR 15:2005 +A1:06 +A2:08 EN 55015:2013 (doc=12.6.2016) CISPR 15:2013 |
| ITE - emission | EN 55022:2010 (doc=exp) CISPR 22:2008 mod |
| ITE – immunity | EN 55024:2010 (doc=exp) CISPR 24:2010 |
| MME - emission | EN 55032:2012 (doc=exp) CISPR 32:2012 |
| Professional AV – emission | EN 55103-1:2009 (doc=exp) |
| Professional AV - immunity | EN 55103-2:2009 (doc=exp) |
| Collateral EMC standard for Medical Devices | EN 60601-1-2:2007 (doc=exp) IEC 60601-1-2:2007 EN 60601-2-x as applicable to EMC |
| Maritime navigation and radio | EN 60945:2002 (doc=exp) IEC 60945:2002 |
| Harmonics | EN 61000-3-2 :2006 +A1:09 +A2:09 (doc=exp) IEC 61000-3-2 :2005 + A1:08 + A2:09 EN 61000-3-2 :2014 (doc=30.6.17) IEC 61000-3-2 :2014 EN 61000-3-12 :2011 (doc=exp) IEC 61000-3-12 :2011 |
| Flicker | EN 61000-3-3 :2008(doc=exp) IEC 61000-3-3 :2008 EN 61000-3-2 :2013 (doc=30.6.17) IEC 61000-3-2 :2013 EN 61000-3-11 :00 (doc=exp) IEC 61000-3-11 :00 |
| Generic immunity - light | EN 61000-6-1:2007 (doc=exp) IEC 61000-6-1:2005 |
| Generic immunity – Industrial | EN 61000-6-2:2005 (doc= exp) IEC 61000-6-2:2005 |



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| Generic emission – light | EN 61000-6-3 :2007 +A1:11 (doc=exp) IEC 61000-6-3 :2006+A1:10 |
| Generic emission - industry | EN 61000-6-4 :2007 +A1:11 (doc=exp) IEC 61000-6-4 :2006 +A1:10 |
| DC output Power supply | EN 61204-3:2000 (doc=exp) IEC 61204-3:2000 |
| Laboratory equipment | EN 61326-1 :2013 (doc=exp) IEC 61326-1 :2012 EN 61326-2-1 :2013 (doc=exp) IEC 61326-2-1 :2012 EN 61326-2-2 :2013 (doc=exp) IEC 61326-2-2 :2012 EN 61326-2-3 :2013 (doc=exp) IEC 61326-2-3 :2012 |
| Luminaries - immunity | EN 61547:2009 IEC 61547:2009 |
| Telecom network equipment | EN 300 386 V1.6.1 (doc=exp) |
| Radio equipment | EN 301 489-01 V1.9.2 (doc=exp) EN 301 489-03 V1.4.1 (doc=exp) EN 301 489-04 :V2.1.1 (doc=exp) EN 301 489-04 :V2.2.1 (doc=28.2.2017) EN 301 489-07 :V1.3.1 (doc=exp) |
| AS/NZ 2064 :1997 | AS/NZ 3548:1995 |
| AS/NZ 4521: 1997 | ANSI C63.4 :1992 ANSI C63.4 : 2001 ANSI C63.4 : 2003 |

Nemko Group