DAkkS
Deutsche
Akkreditierungsstelle

# Accreditation

The Deutsche Akkreditierungsstelle attests with this **Accreditation Certificate** that

**JEL Limited**

with its testing laboratory

**JEL Limited**
**2971 Nakabyo, Abiko-Shi, CHIBA 270-1121, JAPAN**

**JEL Limited**
**3032 Nakabyo, Abiko-Shi, CHIBA 270-1121, JAPAN**

meets the requirements according to DIN EN ISO/IEC 17025:2018 for the conformity assessment activities listed in the annex to this certificate. This includes additional existing legal and normative requirements for the testing laboratory, including those in relevant sectoral schemes, provided they are explicitly confirmed in the annex to this certificate

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and confirm generally with the principles of DIN EN ISO 9001.

This accreditation was issued after an accreditation procedure was carried out in compliance with the minimum requirements of DIN EN ISO/IEC 17011 and on the basis of a review and decision of the appointed accreditation committees.

This accreditation certificate with accreditation number D-PL-12156-01 is valid to 13.06.2028. It consists of this cover sheet, the reverse side of the cover sheet and the following annex with a total of 06 pages.

Registration number of the accreditation certificate: **D-PL-12156-01-00**

Berlin, 14.06.2023

Florian Burkart
Head of Technical Unit

*The certificate together with the annex reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH (www.dakks.de).*

See notes overleaf

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# Deutsche Akkreditierungsstelle

# Annex to the Accreditation Certificate D-PL-12156-01-00 according to DIN EN ISO/IEC 17025:2018

| | | | |
|---|---|---|---|
| **Valid from:** | **14.06.2023** | **Valid to:** | **13.06.2028** |
| Date of issue: | 14.06.2023 | | |

Holder of accreditation certificate:

**JEL Limited**

with its testing laboratory

**JEL Limited**
**2971 Nakabyo, Abiko-Shi, CHIBA 270-1121, JAPAN**

**JEL Limited**
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The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and confirm generally with the principles of DIN EN ISO 9001.

Tests in the fields:

**Electromagnetic compatibility (EMC)**

**A: 2971 Nakabyo, Abiko-Shi, CHIBA 270-1121, JAPAN**
**B: 3032 Nakabyo, Abiko-Shi, CHIBA 270-1121, JAPAN**

| Department | Standard/in house procedure/Version | Title of standard or in house procedure (deviations/modifications of standard) | Test area/ reductions | Test Location |
|---|---|---|---|---|
| **Generic Standards** | | | | |
| EMC | IEC 61000-6-1 :2005 | Electromagnetic compatibility (EMC); Part 6-1: Generic standards. Immunity for residential, commercial and light-industrial environments | | B |
| EMC | IEC 61000-6-1 :2016 | Electromagnetic compatibility (EMC); Part 6-1: Generic standards. Immunity for residential, commercial and light-industrial environments | | B |
| EMC | IEC 61000-6-2:2005 | Electromagnetic compatibility (EMC); Part 6-2: Generic standards. Immunity for industrial environments | | B |
| EMC | IEC 61000-6-2:2016 | Electromagnetic compatibility (EMC); Part 6-2: Generic standards. Immunity for industrial environments | | B |
| EMC | IEC 61000-6-3 :2006 /AMD1:2010 | Electromagnetic compatibility (EMC); Part 6-3: Generic standards. Emission standard for residential, commercial and light-industrial environments | | A |
| EMC | IEC 61000-6-4 :2006 /AMD1:2010 | Electromagnetic compatibility (EMC); Part 6-4: Generic standards. Emission standard for industrial environments | | A |
| **Basic Standards** | | | | |
| EMC | IEC 61000-4-2 :2008 BS EN 61000-4-2:2009 | Electromagnetic compatibility (EMC); Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test | | B |
| EMC | IEC 61000-4-3:2006 +AMD1:2007 +AMD2:2010 | Electromagnetic compatibility (EMC); Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test | | B |
| EMC | IEC 61000-4-4 :2004 | Electromagnetic compatibility (EMC); Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test | | B |

| Department | Standard/in house procedure/Version | Title of standard or in house procedure (deviations/modifications of standard) | Test area/ reductions | Test Location |
|---|---|---|---|---|
| EMC | IEC 61000-4-4 :2012 | Electromagnetic compatibility (EMC); Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test | | B |
| EMC | IEC 61000-4-5 :2005 | Electromagnetic compatibility (EMC); Part 4-5: Testing and measurement techniques - Surge immunity test | | B |
| EMC | IEC 61000-4-5 :2014 | Electromagnetic compatibility (EMC); Part 4-5: Testing and measurement techniques - Surge immunity test | | B |
| EMC | IEC 61000-4-6 :2006 | Electromagnetic compatibility (EMC); Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields | | B |
| EMC | IEC 61000-4-6 :2013 | Electromagnetic compatibility (EMC); Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields | | B |
| EMC | IEC 61000-4-8 :2009 | Electromagnetic compatibility (EMC); Part 4-8: Testing and measurement techniques. Power frequency magnetic field immunity test | Except Table 2 – Test level for short duration: 1 s to 3 s | B |
| EMC | IEC 61000-4-8:2001 | Electromagnetic compatibility (EMC); Part 4-8: Testing and measurement techniques. Power frequency magnetic field immunity test | Except Table 2 – Test level for short duration: 1 s to 3 s | B |
| EMC | IEC 61000-4-11:2004 /A1:2017 | Electromagnetic compatibility (EMC); Part 4-11: Testing and measurement techniques. Voltage dips, short interruptions and voltage variations immunity tests | | B |
| EMC | IEC 61000-3-2 :2014 | Electromagnetic compatibility (EMC); Part 3-2: Limits. Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) | | A, B |

| Department | Standard/in house procedure/Version | Title of standard or in house procedure (deviations/modifications of standard) | Test area/ reductions | Test Location |
|---|---|---|---|---|
| EMC | IEC 61000-3-3 :2013 /AMD1:2017 | Electromagnetic compatibility (EMC); Part 3-3: Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection | | A, B |
| EMC | IEC 61000-3-11:2017 | Electromagnetic compatibility (EMC); Part 3-11: Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems. Equipment with rated voltage current ≤75 A and subject to conditional connection | up to 40 A per phase | A, B |
| EMC | IEC 61000-3-11:2000 | Electromagnetic compatibility (EMC); Part 3-11: Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems. Equipment with rated voltage current ≤75 A and subject to conditional connection | up to 40 A per phase | A, B |
| EMC | IEC 61000-3-12:2011 | Electromagnetic compatibility (EMC); Part 3-12: Limits. Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤75 A per phase | | A, B |
| **Product Family Standards and Product Standards** | | | | |
| EMC | CISPR 11 :2015 /AMD1:2016 | Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement | | A |
| EMC | CISPR 14-1:2016 | Electromagnetic compatibility. Requirements for household appliances, electric tools and similar apparatus. Emission / (EQV) | | A |
| EMC | CISPR 14-2:2015 | Electromagnetic compatibility. Requirements for household appliances, electric tools and similar apparatus. Immunity. Product family standard / (EQV) | | B |

| Department | Standard/in house procedure/Version | Title of standard or in house procedure (deviations/modifications of standard) | Test area/ reductions | Test Location |
|---|---|---|---|---|
| EMC | CISPR 22: 2008 | Information technology equipment. Radio disturbance characteristics. Limits and methods of measurement | | A |
| EMC | CISPR 24:2010/A1 :2015 | Information technology equipment. Immunity characteristics. Limits and methods of measurement | | B |
| EMC | IEC 60601-1-2:2007 | Medical electrical equipment; Part 1-2: General requirements for basic safety and essential performance. Collateral Standard. Electromagnetic disturbances. Requirements and tests | | A, B |
| EMC | IEC 60601-1-2:2014 | Medical electrical equipment; Part 1-2: General requirements for basic safety and essential performance. Collateral Standard. Electromagnetic disturbances. Requirements and tests | | A, B |
| EMC | IEC 61326-1:2012 IEC 61326-1:2020 | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements | | A, B |
| EMC | IEC 61326-2-1:2012 | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-1: Particular requirements - Test configurations, operational conditions and performance criteria for sensitive test and measurement equipment for EMC unprotected applications | | A, B |
| EMC | IEC 61326-2-2:2012 | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-2: Particular requirements - Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low-voltage distribution systems | | A, B |

| Department | Standard/in house procedure/Version | Title of standard or in house procedure (deviations/modifications of standard) | Test area/ reductions | Test Location |
|---|---|---|---|---|
| EMC | IEC 61326-2-3:2012 | Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning | | A, B |
| EMC | CISPR 32:2012<br>CISPR 32:2015 | Electromagnetic compatibility of multimedia equipment. Emission requirements | Limitation: frequency up to 6 GHz, Without annex H testing of home satellite receiving systems | A |
| EMC | CISPR 35:2016 | Electromagnetic compatibility of multimedia equipment. Immunity requirements | | B |
| EMC | BS EN 55035:2017 | Electromagnetic compatibility of multimedia equipment. Immunity requirements | Only accepted if standard is actually available in the laboratory | B |

**Abbreviations used:**

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|---|---|
| DIN | Deutsches Institut für Normung e.V. – German institute for standardization |
| EN | Europäische Norm – European Standard |
| IEC | International Electrotechnical Commission |
| ISO | International Organization for Standardisation |
| XYZ | In house method of the CAB |
| AMD | Amendment |
| CISPR | International Special Committee on Radio Interference |
| DIN | Deutsches Institut für Normung e.V. - German institute for standardization |
| EN | European Standard |
| EMC | Electromagnetic compatibility |
| ETSI | European Telecommunications Standards Institute |
| IEC | International Electrotechnical Commission |