

## Deutsche Akkreditierungsstelle GmbH

### Annex to the Accreditation Certificate D-PL-12156-01-00 according to ISO/IEC 17025:2005

Period of validity: 18.07.2018 to 17.07.2023

Date of issue: 18.07.2018

Holder of certificate:

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

Tests in the fields:

**Electromagnetic Compatibility (EMC)**

Department	Standard / in house procedure / Version	Title of standard or in house procedure (deviations / modifications of standard)	Test area / reductions
<b>Generic Standards</b>			
EMC	IEC 61000-6-1 :2005 EN 61000-6-1 :2007 IEC 61000-6-1 :2016	Electromagnetic compatibility (EMC); Part 6-1: Generic standards. Immunity for residential, commercial and light-industrial environments	
EMC	IEC 61000-6-2:2005 EN 61000-6-2:2005 IEC 61000-6-2:2016	Electromagnetic compatibility (EMC); Part 6-2: Generic standards. Immunity for industrial environments	
EMC	IEC 61000-6-3 :2006 /AMD1:2010 EN 61000-6-3:2007 /A1:2011	Electromagnetic compatibility (EMC); Part 6-3: Generic standards. Emission standard for residential, commercial and light-industrial environments	
EMC	IEC 61000-6-4 :2006 /AMD1:2010 EN 61000-6-4:2007 /A1:2011	Electromagnetic compatibility (EMC); Part 6-4: Generic standards. Emission standard for industrial environments	

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<b>Basic Standards</b>			
EMC	IEC 61000-4-2 :2008 EN 61000-4-2:2009	Electromagnetic compatibility (EMC); Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	
EMC	IEC 61000-4-3 +AMD1:2007+AMD2 :2010 EN 61000-4-3 +AMD1:2008+AMD2 :2010	Electromagnetic compatibility (EMC); Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	
EMC	IEC 61000-4-4 :2004 EN 61000-4-4 :2004 IEC 61000-4-4 :2012 EN 61000-4-4 :2012	Electromagnetic compatibility (EMC); Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	
EMC	IEC 61000-4-5 :2005 EN 61000-4-5 :2006 IEC 61000-4-5 :2014 EN 61000-4-5 :2014	Electromagnetic compatibility (EMC); Part 4-5: Testing and measurement techniques - Surge immunity test	
EMC	IEC 61000-4-6 :2006 EN 61000-4-6:2007 IEC 61000-4-6 :2013 EN 61000-4-6:2014	Electromagnetic compatibility (EMC); Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	
EMC	IEC 61000-4-8 :2009 EN 61000-4-8:2010 IEC 61000-4-8:2001  EN 61000-4-8:1993 +AMD1:2001	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
EMC	IEC 61000-4-11:2004 /A1:2017 EN 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	
EMC	IEC 61000-3-2 :2014 EN 61000-3-2:2014	Electromagnetic compatibility (EMC); Part 3-2: Limits. Limits for harmonic current emissions (equipment input current $\leq 16$ A per phase)	

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EMC	IEC 61000-3-3 :2013 /AMD1:2017 EN 61000-3-3:2013	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 $\leq 16$ A per phase and not subject to conditional connection	
EMC	IEC 61000-3-11:2017 IEC 61000-3-11:2000 EN 61000-3-11:2000 (up to 40 A per phase)	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 $\leq 75$ A and subject to conditional connection	
EMC	IEC 61000-3-12 :2011 EN 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 $\leq 75$ A per phase	
<b>Product Family Standards and Product Standards</b>			
EMC	CISPR 11 :2015 /AMD1:2016 EN 55011:2016 /A1:2017	Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement	
EMC	CISPR 14-1:2016 EN 55014-1:2017	Electromagnetic compatibility. Requirements for household appliances, electric tools and similar apparatus. Emission / (EQV)	
EMC	CISPR 14-2:2015 EN 55014-2:2015	Electromagnetic compatibility. Requirements for household appliances, electric tools and similar apparatus. Immunity. Product family standard / (EQV)	
EMC	CISPR 22: 2008 EN 55022: 2010	Information technology equipment. Radio disturbance characteristics. Limits and methods of measurement	
EMC	CISPR 24:2010/A1 :2015 EN 55024:2010/A1 :2015	Information technology equipment. Immunity characteristics. Limits and methods of measurement	
EMC	EN 50130-4:2011	Alarm systems. Electromagnetic compatibility. Product family standard. Immunity requirements for components of fire, intruder, hold up, CCTV, access control and social alarm systems	

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EMC	IEC 60601-1-2:2007 EN 60601-1-2:2007 IEC 60601-1-2:2014 EN 60601-1-2:2015	Medical electrical equipment; Part 1-2: General requirements for basic safety and essential performance. Collateral Standard. Electromagnetic disturbances. Requirements and tests	
EMC	IEC 61326-1:2012 EN 61326-1:2013	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	
EMC	IEC 61326-2-1:2012 EN 61326-2-1:2013	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	
EMC	IEC 61326-2-2:2012 EN 61326-2-2:2013	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	
EMC	IEC 61326-2-3:2012 EN 61326-2-3:2013	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	
EMC	CISPR 32:2012 EN 55032:2012 CISPR 32:2015 EN 55032:2015	Electromagnetic compatibility of multimedia equipment. Emission Requirements	
EMC	CISPR 35:2016 EN 55035:2017	Electromagnetic compatibility of multimedia equipment. Immunity requirements	
EMC	ETSI_EN_301 489-1_V1.9.2 (2011) ETIS EN 301 489-1 V2.1.1 (2017-02)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements	

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EMC	ETSI EN 301 489-3 V1.6.1 (2013)	Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz	
EMC	ETSI EN 301 489-6 V2.1.0 (2016-04)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 6: Specific conditions for Digital Enhanced Cordless Telecommunications (DECT) equipment	
EMC	ETSI_EN_301 489-17_V2.2.1 (2012)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems	