

Scope of Accreditation

(Measurement Method)

Accreditation Number : VLAC-022-1

Expiration Date : November 28, 2022

[Name of Laboratory]

**MITSUBISHI ELECTRIC ENGINEERING Co., Ltd.
EMC West Japan Center**

[Test site name]

EMC West Japan Center (MEE EMC WJC)

[Test site Address]

3-29-18 Akebono-cho, Fukuyama city, HIROSHIMA 721-0952, JAPAN

[Measurement Method]

Emission test

Radiated disturbance : Enclosure Port

Disturbance electric field test

[Test condition] **On the reference ground plane, Measurement distance : 3m/10m
Measurement Frequency Range : 30 MHz - 1 GHz**

[Test condition] **Quasi Free Space
Measurement Frequency Range : 1 GHz - 18 GHz**

Disturbance magnetic field strength measurement

[Test condition] **Loop Antenna, 3-axis loop antenna**

Disturbance power measurement

[Test condition] **Absorption clamp (CMAD)**

Conducted disturbance Measurement: AC mains port

Voltage Measurement [Test condition] AMN, High-impedance probe

Conducted disturbance Measurement: Telecommunication port

Voltage measurement [Test condition] ISN, AAN

Current measurement [Test condition] Current probe

Conducted disturbance Measurement: DC power line port

Voltage Measurement [Test condition] AMN, High-impedance probe

Conducted disturbance Measurement: PLC port

Current measurement [Test condition] Current probe

Immunity test

Electro static discharge test Contact discharge, Air discharge, Indirect discharge

Radiated electromagnetic field strength Measurement Frequency Range : 80 MHz - 6 GHz

Electrical fast transient/burst (EFT/B) Mains port, Telecommunication/Signal port

Surge Mains port, Telecommunication/Signal port

RF conducted interference

Mains port measurement frequency range: 150 kHz - 230 MHz

Telecommunication/ Signal port measurement frequency Range : 150 kHz - 230 MHz

Bulk current injection test, measurement frequency range: 150 kHz - 230 MHz

Conducted Common mode disturbances

Radiated magnetic field

Interruptions and Voltage variations

Power transmission equipment Immunity test

Damped oscillatory wave immunity test

Ripple on d.c. input power port immunity test

Harmonics and interharmonics including mains signaling at a.c. power port, low frequency immunity tests

Harmonic current

Harmonic current test

Voltage changes, Voltage fluctuations and Flicker test

Voluntary EMC Laboratory Accreditation Center Inc.

Scope of Accreditation

(Test standards)

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[Test Standards]

Emission test

VCCI Technical Requirements:VCCI-CISPR 32

FCC 47 CFR Part15 Subpart B: ANSI C63.4-2014 (up to 18 GHz)

FCC 47 CFR Part18: FCC MP-5 (up to 18 GHz)

CISPR 11, CISPR 12, CISPR 14-1, CISPR 15, CISPR 22, CISPR 32

EN 55011, EN 55012, EN 55014-1, EN 55015, EN 55022, EN 55032

IEC 61800-3, EN 61800-3

**Technical requirements under the Electrical Appliances and Materials safety Act appendix 10
Chapter 2/3/4/5**

J55001, J55011, J55014-1, J55015, J55022, J55032

**Enforcement rule of Radio Law: Article 46.2.1.5 (Broad band electric power line carrier
communication facility) /Ministry of Public Management, Home Affairs, Posts and
Telecommunications notification No.520 (H18.10.4)**

AS CISPR 11, AS/NZS CISPR 12, AS CISPR 14.1, AS CISPR 15

AS/NZS CISPR 22, AS/NZS CISPR 32, AS/NZS 61000.6.3, AS/NZS 61000.6.4

IEC 61131-2, EN 61131-2, ICES-001, ICES-003, IEC 61000-6-3, IEC 61000-6-4

EN 61000-6-3, EN 61000-6-4, IEC 60945, EN 60945

**Nippon Kaiji Kyokai Technical rule of Materials and Equipment for Marine Use: Article 7 Chapter
1(Rules for the Automatic and Remote control)**

IEC 61326-1, IEC 61326-2-1/-2-2/-2-3/2-6

EN 61326-1, EN 61326-2-1/-2-2/-2-3/2-6

IEC 60601-1-2

EN 60601-1-2

JIS T 0601-1-2

Immunity test

IEC 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-9/-4-10/-4-11/-4-16/-4-17/-4-18/-4-29

EN 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8/-4-9/-4-10/-4-11/-4-16/-4-17/-4-18/-4-29

CISPR 14-2, CISPR 24, EN 55014-2, EN 55024

IEC 61000-6-1, IEC 61000-6-2, EN 61000-6-1, EN 61000-6-2

AS/NZS CISPR 14.2, AS/NZS CISPR 24, AS/NZS 61000.6.1, AS/NZS 61000.6.2

JIS C 61000-6-1, JIS C 61000-6-2

IEC 61800-3, EN 61800-3, IEC 61326-3-1, EN 61326-3-2, IEC 60945, EN 60945

**Nippon Kaiji Kyokai Technical rule of Materials and Equipment for Marine Use : Article 7 Chapter
1 (Rules for the Automatic and Remote control)**

IEC 61326-1, IEC 61326-2-1/-2-2/-2-3/2-6

EN 61326-1, EN 61326-2-1/-2-2/-2-3/2-6

IEC 60601-1-2

EN 60601-1-2

JIS T 0601-1-2

IEC 60255-26

JEC-2501 (except for Square Wave Impulse Immunity Test)

Harmonic Test in Public Low Voltage Systems

IEC 61000-3-2, EN 61000-3-2, JIS C 61000-3-2, IEC 61000-3-3, EN 61000-3-3

IEC 61000-6-3, EN 61000-6-3

IEC 61326-1, IEC 61326-2-1/-2-2/-2-3/2-6

EN 61326-1, EN 61326-2-1/-2-2/-2-3/2-6

IEC 60601-1-2

EN 60601-1-2

JIS T 0601-1-2

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