

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Programmable Electronic System**with type designation(s)
MELSEC iQ-R Series

Issued to

Mitsubishi Electric Corporation, Nagoya Works
NAGOYA AICHI, Japan

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Temperature B****Humidity B****Vibration A****EMC B****Enclosure Required protection according to DNV rules shall be provided upon installation onboard**Issued at **Busan** on **2017-02-06**This Certificate is valid until **2019-06-30**.for **DNV GL**DNV GL local station: **Kobe**Approval Engineer: **Dong Ho Park**

Baeg Soon Choi
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

Mitsubishi Electric Corporation MELSEC-iQ-R series as listed below :

CPU Module :	R04CPU, R08CPU, R16CPU, R32CPU, R120CPU, R04ENCPU, R08ENCPU, R16ENCPU, R32ENCPU, R120ENCPU, R12CCPU-V
Base Unit :	R312B, R38B, R35B, R612B, R68B, R65B, RQ612B, RQ68B, RQ65B, R310B-HT, R610B-HT
Power Supply Module :	R61P, R62P, R63P, R64P
Extension Cable :	RC06B, RC12B, RC30B, RC50B
Input/Output Module :	RH42C4NT2P, RX40C7, RX41C4, RX42C4, RY40NT5P, RY40PT5P, RY41NT2P, RY41PT1P, RY42NT2P, RY42PT1P, RX10, RY10R2, RX41C6HS, RX61C6HS, RX40PC6H, RX40NC6H, RY41NT2H, RY41PT2H
Analog Unit :	R60AD4, R60ADV8, R60ADI8, R60DA4, R60DAV8, R60DAI8, R60ADH4
High Speed Counter Module :	RD62P2, RD62D2, RD62P2E
Positioning Unit :	RD75P2, RD75P4, RD75D2, RD75D4
CC Link System Master/Local:	RJ61BT11
CC-Link IE Controller Network :	RJ71GP21-SX
CC-Link IE Field Network Master/Local :	RJ71GF11-T2
Serial Communication Module :	RJ71C24, RJ71C24-R2, RJ71C24-R4
Ethernet Interface with CC-Link IE :	RJ71EN71
Extended SRAM Unit:	NZ2MC-1MBS, NZ2MC-2MBS, NZ2MC-4MBS, NZ2MC-8MBS, NZ2MC-16MBS
SD Memory Card:	L1MEM-2GBSD, L1MEM-4GBSD
MES Interface Module:	RD81MES96
Intelligent Communication Module:	RD55UP06-V
High Speed Data Logger Module:	RD81DL96
Temperature Control Module:	R60TCTRT2TT2, R60TCTRT2TT2BW, R60TCRT4, R60TCRT4BW

The products listed above are the ones without coating. When special coating is applied for the purpose to enhance resistance to corrosive gas(not for insulation), suffix "(C)" will be added at the end of the product type designation.

Type designation of specialty coatings:

- MELQUID V985-15E Liquid type
- MELQUID V985-SE Spray type

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNVGL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNVGL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate

Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The certification test is to be performed at the manufacturer of the application system according to an approved test program before the system is shipped to the yard. After the certification the clause for application software control will be put into force.

Type Approval documentation

Tests carried out

Applicable tests according to DNV GL class guideline, DNVGL-CG-0339, Nov 2016.

Marking of product

- Manufacturer name - Model name - Serial number

Periodical assessment

The scope of the retention/renewal survey is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the survey are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE