TYPE APPROVAL CERTIFICATE
No. **ELE020420PU**

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

Description	**Programmable logic controller**
Type	**MELSEC iQ-R Series**
Applicant	**MITSUBISHI ELECTRIC CORPORATION** **5-CHOME, 1-14 YADA-MINAMI HIGASHI-KU** **461-8670 Nagoya, JAPAN**
Manufacturer	**MITSUBISHI ELECTRIC CORPORATION**
Place of manufacture	**5-CHOME, 1-14 YADA-MINAMI HIGASHI-KU** **461-8670 Nagoya, JAPAN**
Reference standards	**Rules for the classification of ships - Part C - Machinery, Systems and Fire Protection - Chapter 3, Section 6, Table 1**

Issued in **BUSAN** on **March 25, 2020**. *This Certificate is valid until* **March 24, 2025**

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This certificate consists of this page and 1 enclosure

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TYPE APPROVAL CERTIFICATE

No. **ELE020420PU**

Enclosure - Page 1 of 1

MELSEC iQ-R Series

- **Product Description:**

Programmable Logic Controller, Type MELSEC iQ-R Series comprising CPU modules, Base Unit, Power Supply, I/O modules, Positioning Modules, High-Speed Counter Modules and A/D Conversion Modules, etc.

- Refer to Appendix to the attachment for detailed description of the units

- **Reference Documents:**

- Mitsubishi's User's Manual

N°SH-081262ENG-C/ N°SH-081256ENG-D N°SH-081262ENG-C/ N°SH-081243ENG-C /N°SH-081239ENG-C
N°SH-081232ENG-C/ N°SH-081235ENG-B N°SH-081247ENG-A/ N°SH-081250ENG-A /N°SH-081256ENG-D
N°SH-081269ENG-A/ N°SH-081256ENG-D N°SH-081262ENG-C/ N°BCN-P5759C
N°SH(NA)-081580ENG-A(1601)MEE/ N°SH(NA)-081535ENG-B(1605)MEE
N°SH(NA)-081367ENG-H(1704)KWIX/ N°SH(NA)-081263ENG-H(1701)MEE,
N°SH(NA)-081566ENG-C(1704)KWIX/ N°SH-(NA)-081561ENG-C(1612)KWIX
N°SH(NA)-081247ENG-F(1702)MEE/ N°SH-(NA)-081422ENG-D(1703)KWIX
N°SH(NA)-081262ENG-K(1702)MEE
N°IB(NA)-0800525-J /N°SH(NA)-081655ENG-A / N°SH(NA)-081493ENG-B / N°SH(NA)-081485ENG-B
N°SH(NA)-081263ENG-I / N°SH(NA)-081489ENG-B / N° SH(NA)-081619ENG-A / N°SH(NA)-081247ENG-F
N°SH(NA)-081614ENG-C / N°BCN-P5999-0188-D(1610)MEE / N°BCN-P5999-0189-D(1703)MEE
N°BCN-P5999-0191-A(1406)MEE / N°BCN-P5999-0192-C(1507)MEE

- Mitsubishi's Technical Drawings & Document List Ref. No. BCN-88000-0708-B/ N° BCN-88000-0937 / N° BCN-88000-1023
- Asbestos Free Declaration Ref. N° SQ-T-16739 dated 25 May, 2015

- **Test Report:**

- Mitsubishi's Report N° BCN-80000-0736 with Appendix (Test Program) dated 26 November, 2014
- Mitsubishi's Report N° BCN-80000-0997 with Appendix (Test Program) dated 28 November, 2016
- Mitsubishi's Report n° BCN-80000-1239 dated 22 March, 2018 (JQA File No. KL80170456, KL05170112-2-3-4)

- This certificate has been renewed updating the result of design assessment of the following technical documen& report for newly added 25 type modules dated 25/03/2020 :

- Technical document & Document list
  N° BCN-80000-1389, N° BCN-80000-1390, N° BCN-80000-1391
  N° BCN-80000-1360, N° BCN-80000-1393
- Manual
  BCN-P5999-0192-D(1804)MEE
  SH(NA)-081263ENG-P (October 2019), SH(NA)-081247ENG-G (April 2018),

SH(NA)-081734ENG-B (September 2017), SH(NA)-081765ENG-A (April 2017), SH(NA)-081855ENG-A (December 2017), SH(NA)-081679ENG-A (May 2017)

- Test report

N° BCN-80000-1439 (JQA File KL80180658, KL05180148-2) dated 7 May 2019

• **Note**

- The product is subject to the compliance with RINA Rules and other Standards mentioned on Certificate
- Type Approval certifies that a representative sample of the product has been found to meet the applicable design criteria
- Any modification or change shall not be valid until approval, resulted from due assessment, is granted by RINA.

• **Renewal/Revision History**

- 25/06/2015: Issued Original Certificate No. ELE151715PU
- 22/05/2017: Revision and Addition Certificate No. ELE051517PU
- 17/10/2018: Revision and Addition ELE122118PU
- 25/03/2020: Renewal

BUSAN 2020-03-25

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Appendix to the Certificate No. ELE020420PU

Module Name	Type	Specification
CPU Modules	R04CPU	5Vdc 0.67A
	R08CPU	5Vdc 0.67A
	R16CPU	5Vdc 0.67A
	R32CPU	5Vdc 0.67A
	R120CPU	5Vdc 0.67A
Base Units	R312B	5Vdc 0.88A
	R38B	5Vdc 0.71A
	R35B	5Vdc 0.58A
	R612B	5Vdc 0.92A
	R68B	5Vdc 0.81A
	R65B	5Vdc 0.70A
	RQ612B	5Vdc 0.32A
	RQ68B	5Vdc 0.31A
	RQ65B	5Vdc 0.28A
	R310RB	5VDC 0.91A
	R38RB-HT	5VDC 0.86A
	R610RB	5VDC 0.97A
	R68RB-HT	5VDC 0.93A
Positioning Modules	RD75P2	5/24Vdc 5mA Input / 24Vdc 0.1A Output 2 axes, Pulse output transistor
	RD75P4	5/24Vdc 5mA Input / 24Vdc 0.1A Output 4 axes, Pulse output transistor
	RD75D2	5/24Vdc 5mA Input / 24Vdc 0.1A Output 2 axes, Pulse differential output
	RD75D4	5/24Vdc 5mA Input / 24Vdc 0.1A Output 4 axes, Pulse differential output

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Module Name	Type	Specification
A/D Conversion Module	R60AD4	-10 ~ 10 Vdc/ 0 ~ 20mAdc : 4 Points
	R60ADV8	-10 ~ 10 Vdc: 8 Points
	R60ADI8	0 ~ 20mAdc: 8 Points
	R60AD8-G	0 ~ 20mAdc: 8 Points
	R60AD16-G	0 ~ 20mAdc: 16 Points
	R60ADH4	Number of analog input points: 4 points(4 channels) Analog input(voltage): -10 to 10VDC(Input resistance 1MΩ) Analog input(current): 0 to 20mADC(Input resistance 250Ω)
D/A Conversion Module	R60DA4	-10 ~ 10 Vdc/ 0 ~ 20mAdc : 4 Points
	R60DAV8	-10 ~ 10 Vdc: 8 Points
	R60DAI8	0 ~ 20mAdc: 8 Points
	R60DA8-G	0 ~ 20mAdc: 8 Points
	R60DA16-G	0 ~ 20mAdc: 16 Points
	R60DAH4	High Speed Digital-Analog Converter Module Number of analog output points: 4 points(4 channels) Analog output(voltage): -10 to 10VDC(external load resistance value 1kΩ or higher) 0 to 5VDC(external load resistance value 500Ω or higher) Analog output(current): 0 to 20mADC(external load resistance value 50 to 600Ω)
Ethernet Interface with CC-Link IE	RJ71EN71	
CC-Link System Master/Local Module	RJ61BT11	CC-Link dedicated cable type
CC-Link IE Field Module	RJ71GF11-T2	Ethernet cable type
CC-Link IE Control Network Module	RJ71GP21-SX	Optical fiber type
Serial Communication Module	RJ71C24	RS-232, RS-422/485
	RJ71C24-R2	RS-232
	RJ71C24-R4	RS-422/485

Module Name	Type	Specification
I/O Modules	RH42C4NT2P	24Vdc, 4.0mA Input/ 12/24Vdc,0.2A
	RX40C7	24Vdc, 7.0mA : 16 points
	RX41C4	24Vdc, 4.0mA: 32 points
	RX42C4	24Vdc, 4.0mA: 64 points
	RY40NT5P	12/24Vdc,0.5A 5A Output Sink type: 16 points
	RY40PT5P	12/24Vdc,0.5A 5A Output Source type: 16 points
	RY41NT2P	12/24Vdc,0.2A 2A Output Sink type: 32 points
	RY41PT1P	12/24Vdc,0.1A 2A Output Source type: 32 points
	RY42NT2P	12/24Vdc,0.2A 2A Output Sink type: 64 points
	RY42PT1P	12/24Vdc,0.1A 2A Output Source type: 64 points
	RX10	100-120Vac 6.8~9.8mA Input module: 16 points
	RY10R2	24Vdc / 240Vac, 2A/point,8A/ Common Output: 16 points
	RX41C6HS	Input module 32points 24 V dc, 6.0 mA input;
	RX61C6HS	Input module 32points 5 V dc, 6.0 mA input;
	RX40PC6H	16-point high-speed input module.(positive common type.) 24 V dc, 6.0 mA input
	RX40NC6H	16-point high-speed input module.(negative common type.) 24 V dc, 6.0 mA input
	RY41NT2H	32-point high-speed output module.(sink type) Rated output voltage is DC5/12/24V. Maximum load current is 0.2A/point, 2A/common.
	RY41PT2H	32-point high-speed output module.(source type) Rated output voltage is DC5/12/24V. Maximum load current is 0.2A/point, 2A/common.
	RX40NC6B	Rated input voltage:24V dc Rated input current:6.0mA TYP
	RY40PT5B	Rated load voltage:24V dc Maximum load current:0.5A/point, 5A/common
	RX28	8-points input module. 100-240VAC, 6.8-19.7 mA input;
	RY20S6	16-point triac output module. Rated output voltage is 100-240VAC. Maximum load current is 0.6A/point, 4.8A/common.
	RY18R2A	8-points all independent output module. Rated output voltage is 24VDC or 100-240VAC. Maximum load current is 2A/point, 8A/unit.

Module Name	Type	Specification
Accessory, Extended Cables	RC06B	5Vdc
	RC12B	5Vdc
	RC30B	5Vdc
	RC50B	5Vdc
SD Memory Cards	L1MEM-2GBSD	3.3Vdc
	L1MEM-4GBSD	3.3Vdc
High-Speed Counter Module	RD62P2	5/12/24Vdc 10mA Input / 12/24Vdc 0.5A Output DC input, 2 channel, Transistor/Sink type
	RD62D2	5/12/24Vdc 10mA Input / 12/24Vdc 0.5A Output Difference input, 2 channel, Transistor/Sink type
	RD62P2E	5/12/24Vdc 10mA Input / 12/24Vdc 0.5A Output DC input, 2 channel, Transistor/Source type
Power supply Modules	R61P	100~240Vac (50/60Hz) Input / 5Vdc 6.5A Output
	R63P	24Vdc Input / 5Vdc 6.5A Output
	R62P	100-240 V ac, 50/60 Hz, MAX 120 VA; 5V dc, 3.5A output 24 V dc, 0.6 A output
	R64P	100-240 V ac, 50/60 Hz, MAX 160 VA; 9.0A, 5 V dc output
	R63RP	24 V dc, MAX 50 W; 5 V dc, 6.5A output
	R64RP	100-240 V ac, 50/60 Hz, MAX 160 VA; 9.0A, 5 V dc output
Extended temperature range base	R310B-HT	5VDC 0.82A
	R610B-HT	5VDC 0.85A
Redundant Function Modules	R6RFM	optical fiber cable
Remote Head Module	RJ72GF15-T2	CC-Link IE Field Network remote head 1Gbps, remote station
Accessory, Extended SRAM unit	NZ2MC-8MBSE	3.3VDC 0.11A
Accessory, Extension cables	RC100B	5VDC

Module Name	Type	Specification
CPU Modules	R04ENCPU	CC-Link IE embedded Program capacity: 40K steps basic operation processing speed (LD instruction): 0.98 ns
	R08ENCPU	CC-Link IE embedded Program capacity: 80K steps basic operation processing speed (LD instruction): 0.98 ns
	R16ENCPU	CC-Link IE embedded Program capacity: 160K steps basic operation processing speed (LD instruction): 0.98 ns
	R32ENCPU	CC-Link IE embedded Program capacity: 320K steps basic operation processing speed (LD instruction): 0.98 ns
	R120ENCPU	CC-Link IE embedded Program capacity: 1200K steps basic operation processing speed (LD instruction): 0.98 ns
	R12CCPU-V	5VDC 6.31A （MAX)
	R08PCPU	5VDC 0.76A
	R16PCPU	5VDC 0.76A
	R32PCPU	5VDC 0.76A
	R120PCPU	5VDC 0.76A
Temperature Input Modules	R60TD8-G	Thermocouple input 8 channels
	R60RD8-G	RTD Input 8 points
Accessory, Extended SRAM Units	NZ2MC-1MBS	3.3Vdc, 0.03A
	NZ2MC-2MBS	3.3Vdc, 0.03A
	NZ2MC-4MBS	3.3Vdc, 0.03A
	NZ2MC-8MBS	3.3Vdc, 0.03A

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Module Name	Type	Specification
MES Interface Module	RD81MES96	5VDC 6.31A(MAX)
Intelligent Communication Module	RD55UP06-V	5VDC 6.31A(MAX)
High Speed Data Logger Module	RD81DL96	5VDC 6.31A(MAX)
Temperature Control Module	R60TCTRT2TT2	Number of temperature input points: 4 points Type of temperature sensors (thermocouple): R,K,J,T,S,B,E,N,U,L,PL II,W5Re/W26Re Type of temperature sensors (platinum resistance thermometer): Pt100,JPt100 Number of transistor output (sink type) points: 4 points Rated load voltage: 10 to 30VDC Maximum load current: 0.1A/point, 0.4A/common
	R60TCTRT2TT2BW	Number of temperature input points: 4 points Type of temperature sensors (thermocouple): R,K,J,T,S,B,E,N,U,L,PL II,W5Re/W26Re Type of temperature sensors (platinum resistance thermometer): Pt100,JPt100 Number of transistor output (sink type) points: 4 points Rated load voltage: 10 to 30VDC Maximum load current: 0.1A/point, 0.4A/common Number of current input points: 8points Type of current sensors: CTL-12-S36-10,CTL-12-S56-10,CTL-6-P-H,CTL-6-S-H,CTL-12L-8
Temperature Control Module	R60TCRT4	Number of temperature input points: 4 points Type of temperature sensors (platinum resistance thermometer): Pt100,JPt100 Number of transistor output (sink type) points: 4 points Rated load voltage: 10 to 30VDC Maximum load current: 0.1A/point, 0.4A/common
	R60TCRT4BW	Number of temperature input points: 4 points Type of temperature sensors (platinum resistance thermometer): Pt100,JPt100 Number of transistor output (sink type) points: 4 points Rated load voltage: 10 to 30VDC Maximum load current: 0.1A/point, 0.4A/common Number of current input points: 8points Type of current sensors: CTL-12-S36-10,CTL-12-S56-10,CTL-6-P-H,CTL-6-S-H,CTL-12L-8
Extended SRAM cassette	NZ2MC-16MBS	3.3VDC 0.05A 16M bytes

Note: The products provided with specialty coatings resistant to corrosive gas are designated by the suffix "-(C)" following the type designation.

Module Name	Type	Specification
Battery-less option cassette	NZ1BLC*	3.3VDC, 0.15A
CPU Module	R00CPU*	5VDC, 0.67A
	R01CPU*	5VDC, 0.67A
	R02CPU*	5VDC, 0.67A
	R08PSFCPU*	5VDC, 0.76A
	R16PSFCPU*	5VDC, 0.76A
	R32PSFCPU*	5VDC, 0.76A
	R120PSFCPU*	5VDC, 0.76A
SIL2 Function Module	R6PSFM*	5VDC, 0.67A
DeviceNet Module	RJ71DN91*	DeviceNet Master/Slave Module
PROFIBUS-DP Module	RJ71PB91V*	PROFIBUS-DP Master/Slave Module
CANopen Module	RJ71CN91*	
PROFINET Module	RJ71PN92*	PROFINET IO Controller Module
EtherNet IP Module	RJ71EIP91*	EtherNet/IP Network Interface Module
I/O Module	RX10-TS*	Input module 16 point 100 to 120VAC, 8.2mA(100VAC,60Hz), 6.8mA(100VAC,50Hz)
	RX40C7-TS*	Input module 16 points24VDC, 7.0mA
	RX41C4-TS*	Input module 32 points24VDC, 4.0mA
	RX70C4*	Input module 16 points5VDC, 1.7mA / 12VDC, 4.8mA
	RX71C4*	Input module 32 points5VDC, 1.7mA / 12VDC, 4.8mA
	RX72C4*	Input module 64 points5VDC, 1.7mA / 12VDC, 4.8mA
	RY10R2-TS*	Output module 16 points24VDC/240VAC, 2A/point, 8A/common
	RY40NT5P-TS*	Output module 16 points (sink type)12/24VDC, 0.5A/point, 5A/common
	RY40PT5P-TS*	Output module 16 points (source type)12/24VDC, 0.5A/point, 5A/common
	RY41NT2P-TS*	Output module 32 points (sink type)12/24VDC, 0.2A/point, 2A/common
	RY41PT1P-TS*	Output module 32 points (source type)12/24VDC, 0.1A/point, 2A/common

(*) marked modules have been added in this renewal.

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