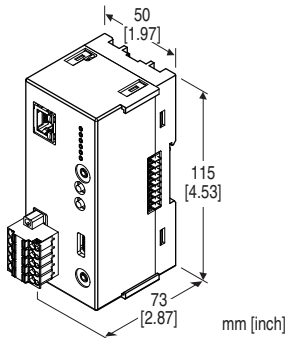


Remote I/O JC Series

I/O CONNECTION MODULE

Functions and features

- I/O mapping function connects the I/O from devices on the network.
- Supporting Modbus/TCP client and SLMP client
- Transmitting the data between different protocol
- Monitoring input value and configuring output value via web browser



MODEL: JC-IO-N-R[1]

ORDERING INFORMATION

- Code number: JC-IO-N-R[1]
Specify a code from below for [1].
(e.g. JC-IO-N-R/Q)
- Specify the specification for option code /Q
(e.g. /C01)

MODULE TYPE

N: Standard

POWER INPUT

DC power

R: 24 V DC

(Operational voltage range: $\pm 10\%$; ripple 10 %p-p max.)

[1] OPTIONS

blank: none

/Q: Options other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to our web site.)

/C01: Silicone coating

/C02: Polyurethane coating

RELATED PRODUCTS

- PC Configurator cable (model: MCN-CON or COP-US)
- PC configurator software (model: JCIOCFG)

PACKAGE INCLUDES...

- Protective cover
- Ferrite core

GENERAL SPECIFICATIONS

Connection

•Power supply, RUN contact output:

Tension clamp terminal (Front Twin connection)

Unit side connector: MSTB2,5/5-GF-5,08AU

Cable side connector: TFKC2,5/5-STF-5,08AU

(Applicable wire size: 0.2 - 2.5 mm², stripped length 10 mm)

Recommended solderless terminal

AI0,25-10YE 0.25 mm² (Phoenix Contact)

AI0,34-10TQ 0.34 mm² (Phoenix Contact)

AI0,5-10WH 0.5 mm² (Phoenix Contact)

AI0,75-10GY 0.75 mm² (Phoenix Contact)

AI1-10RD 1.0 mm² (Phoenix Contact)

AI1,5-10BK 1.5 mm² (Phoenix Contact)

AI2,5-10BU 2.5 mm² (Phoenix Contact)

•Ethernet: RJ-45 connector

Housing material: Flame-resistant resin (gray)

Isolation: Ethernet to power supply to RUN contact output to FE

Calendar clock: Year (4 digits), month, date, day, hour, minute, second

Status indicator LED: POWER, RUN, COM, ERROR

RUN contact output: Photo MOSFET relay (no polarity); (OFF in error detected)

•Peak load voltage: 50 V max.

•Continuous load current: 50 mA max.

•Peak load current: 300 mA max. (≤ 0.1 sec.)

•Operation

Power down: OFF

Firmware operating: ON

Error in Ethernet LNK: OFF

ETHERNET COMMUNICATION

Communication Standard: IEEE 802.3u

Transmission: 10BASE-T, 100BASE-TX

Baud rate: 10/100 Mbps (Auto Negotiation function)

Protocol: TCP/IP, Modbus/TCP, SLMP, HTTP, SNTP

Transmission media: 10BASE-T (STP, Category 5)

100BASE-TX (STP, Category 5e)

Max. length of fieldbus segment: 100 meters

INSTALLATION

Power consumption

•DC: Approx. 2 W 24 V DC

Operating temperature: -10 to +55°C (14 to 131°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Atmosphere: No corrosive gas or heavy dust

Mounting: DIN rail

Weight: 190 g (0.42 lb)

PERFORMANCE

Battery: Vanadium-lithium secondary battery
(undetachable)

Calendar clock accuracy: Monthly deviation 2 minutes at
25°C

Battery backup: Approx. 2 months

Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute (Power to
Ethernet to RUN contact output to FE)

STANDARDS & APPROVALS

EU conformity:

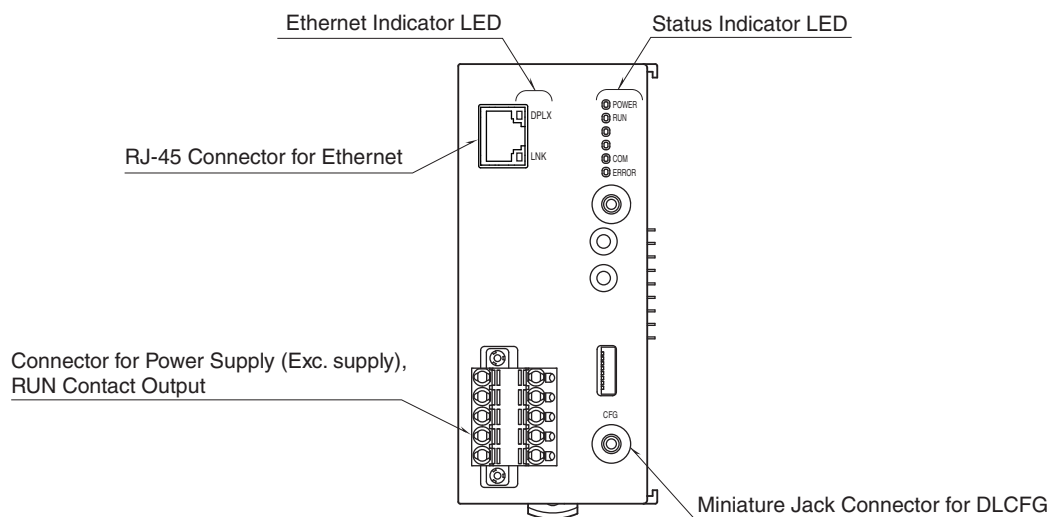
EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

EXTERNAL VIEW



■ STATUS INDICATOR LED

LED	Color	Function
POWER	Green	ON at device operating normally
		Blinking at Ethernet LINK error
		Blinking before obtaining DHCP address
SD CARD	Green	ON at normal operation
COM	Green	Blinking at remote I/O communication error
		Blinking at communication (except Modbus/TCP & SLMP)
ERROR	Red	ON at CPU error

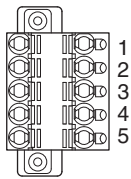
■ Ethernet INDICATOR LED

LED	Color	Function
DPLX	Yellow	ON with full-duplex communication
LNK	Green	ON at LINK is established

CONNECTION DIAGRAMS

■ POWER SUPPLY AND RUN DISCRETE OUTPUT CONNECTOR TERMINAL ASSIGNMENT

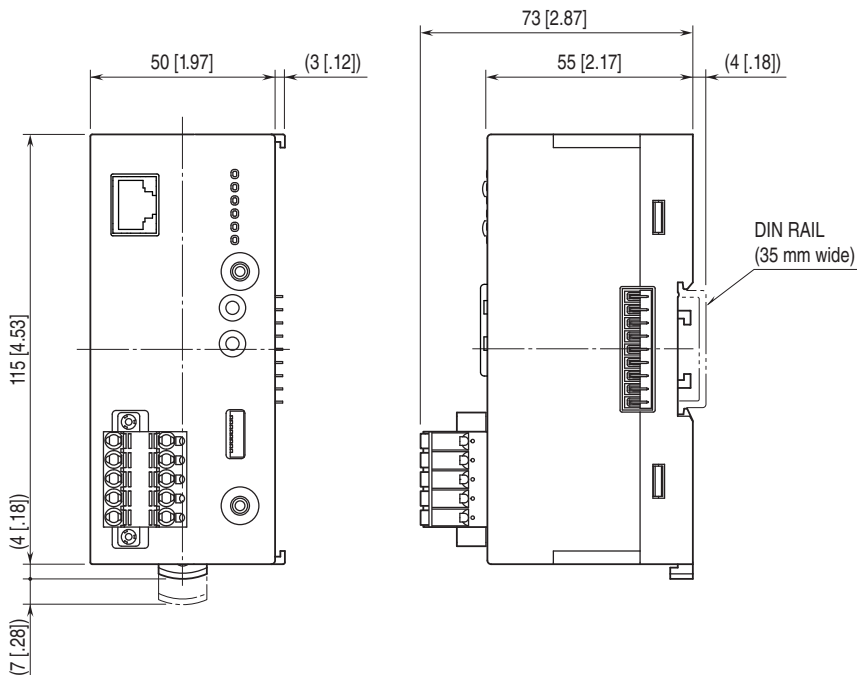
Printed-circuit board connector (Phoenix Contact)
Unit side connector: MSTBV2,5/5-GF-5,08AU
Cable side connector: TFKC2,5/5-STF-5,08AU



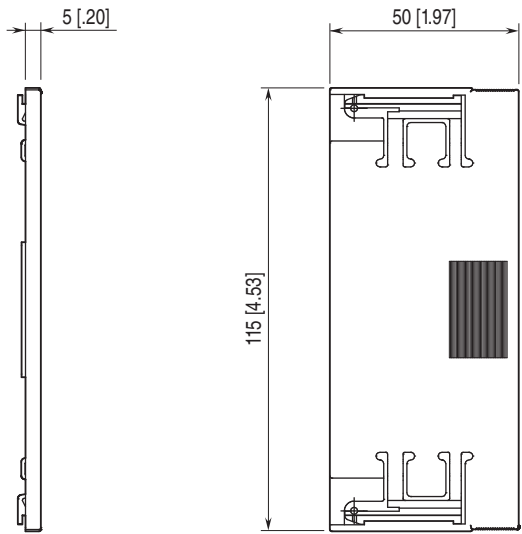
No.	ID	FUNCTION
1	24V	Power supply (exc. supply) 24 V DC
2	0V	Power supply (exc. supply) 0 V DC
3	RUN	RUN discrete output
4	RUN	RUN discrete output
5	FE	Power supply earth

EXTERNAL DIMENSIONS unit: mm [inch]

■ UNIT

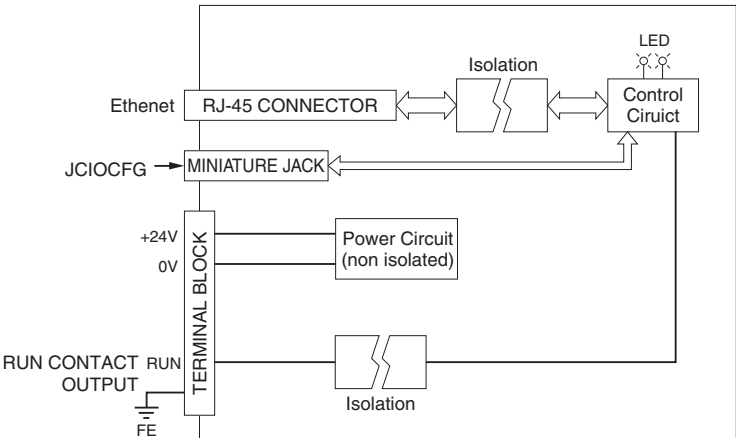


PROTECTIVE COVER



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

Note: In order to improve EMC performance, bond the FE terminal to ground.
Caution: FE terminal is NOT a protective conductor terminal.



COMMUNICATION**IP:**

DHCP client is supported. Manual setting of IP address, subnet mask, default gateway and DNS server available too.

Modbus/TCP master:

I/O expansion with remote I/O, e.g. R3 or R7 series, is available. Measuring points in multiple locations can be handled collectively.

Connectable Devices (Modbus/TCP)

- TR30-G
- DL8
- DL30
- R30NE1
- R3-NE1
- R3-GE1
- R7E
- R9EWTU
- R6-NE1
- R6-NE2
- R5-NE1
- D3-NE1
- D3-NE2
- D3-GE2
- D5-NE1
- IB10W2
- IB10W4
- IB10WS2
- WL40EW2
- WL40EWS2
- 72EM2-M4
- GR8-EM
- IT series
- SG6

SLMP Client:

JC-IO allows I/O expansion by connecting with the SLMP compatible CPU unit of Mitsubishi programmable-controller MELSEC; and collectively handles data from measuring points in multiple locations.

Connecting Device (SLMP sever)

- MELSEC iQ-R series
- MELSEC iQ-F series
- MELSEC Q series

Max. no. of connectable devices

32 nodes (selectable from Modbus/TCP and SLMP devices)

Web server function (Direct):

This unit can be a web server, and manually operate to monitoring input status and setting output values via browser.

Compatible Terminals & Browsers

Windows 10 (32bit/64bit)

Firefox: 126.0

Chrome: 125.0

Edge: 125.0

Windows 11 (64bit)

Firefox: 126.0

Chrome: 125.0

Edge: 125.0

iPadOS 17.5.1

Safari

Android 14

Chrome: 125.0

Max. number of I/O modules: 4

I/O MAPPING

Registration of Input-to-Internal register-to-Output mapping information allows multiplex data transmission for remote I/Os via internal register and allows JC-IO to work as an IP telemeter.

- Internal register

L: A register to save 32-bits data. Possible to allocate max. 256 points.

S: A register to save 16-bits data. Possible to allocate max. 256 points.

Allocating upper/lower 16-bit of L as 16-bit data is possible.

B: A register to save 1-bit data. Possible to allocate max. 512 points. Allocating a specific bit of L or S as 1-bit data is possible.

P: A register to save 32-bit data and to output differential value of previous sampling as 16 bit data. Possible to allocate max. 256 points.

OTHER FUNCTIONS

Configuration: Configurable with the dedicated software model: JCIOCFG

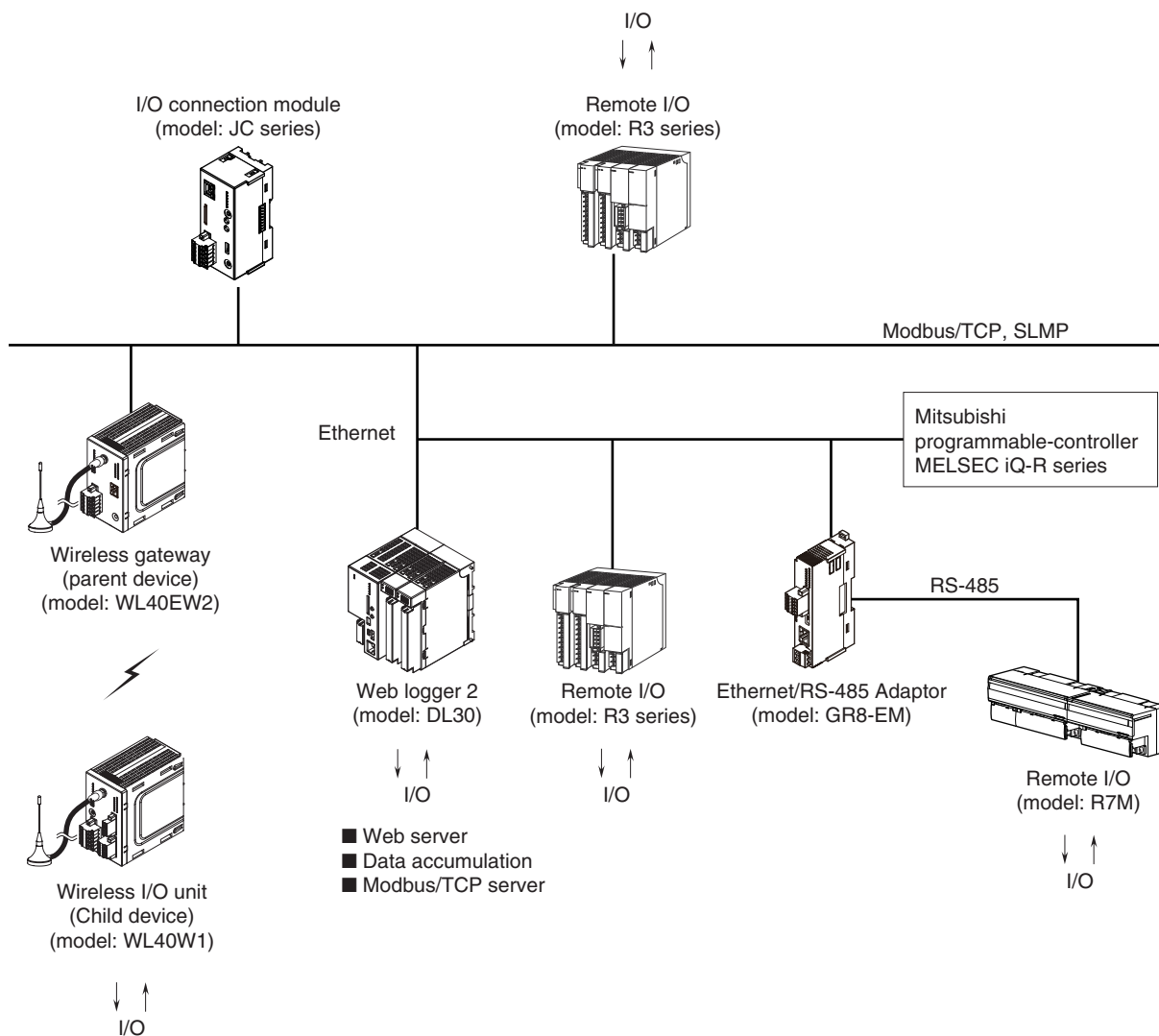
Time zone: Selectable between -12:00 and +13:00

SYSTEM CONFIGURATION EXAMPLES

Devices other than the JC-IO in the configuration below shall be provided by the user.

Connect the I/O signal from remote I/O, wireless gateway, and Mitsubishi programmable-controller via I/O connection module (model: JC-IO) freely.

I/O mapping function allows to connect I/O like multiplex transmission.



Specifications are subject to change without notice.