

Remote I/O Series

This symbol identifies those products which contain less than the maximum levels of the 10 restricted substances specified by the RoHS Directive.

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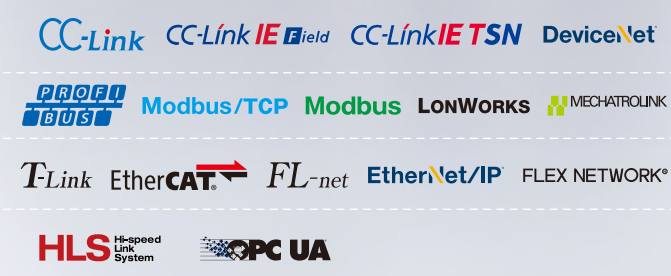


Remote I/O Other Series & Related Products

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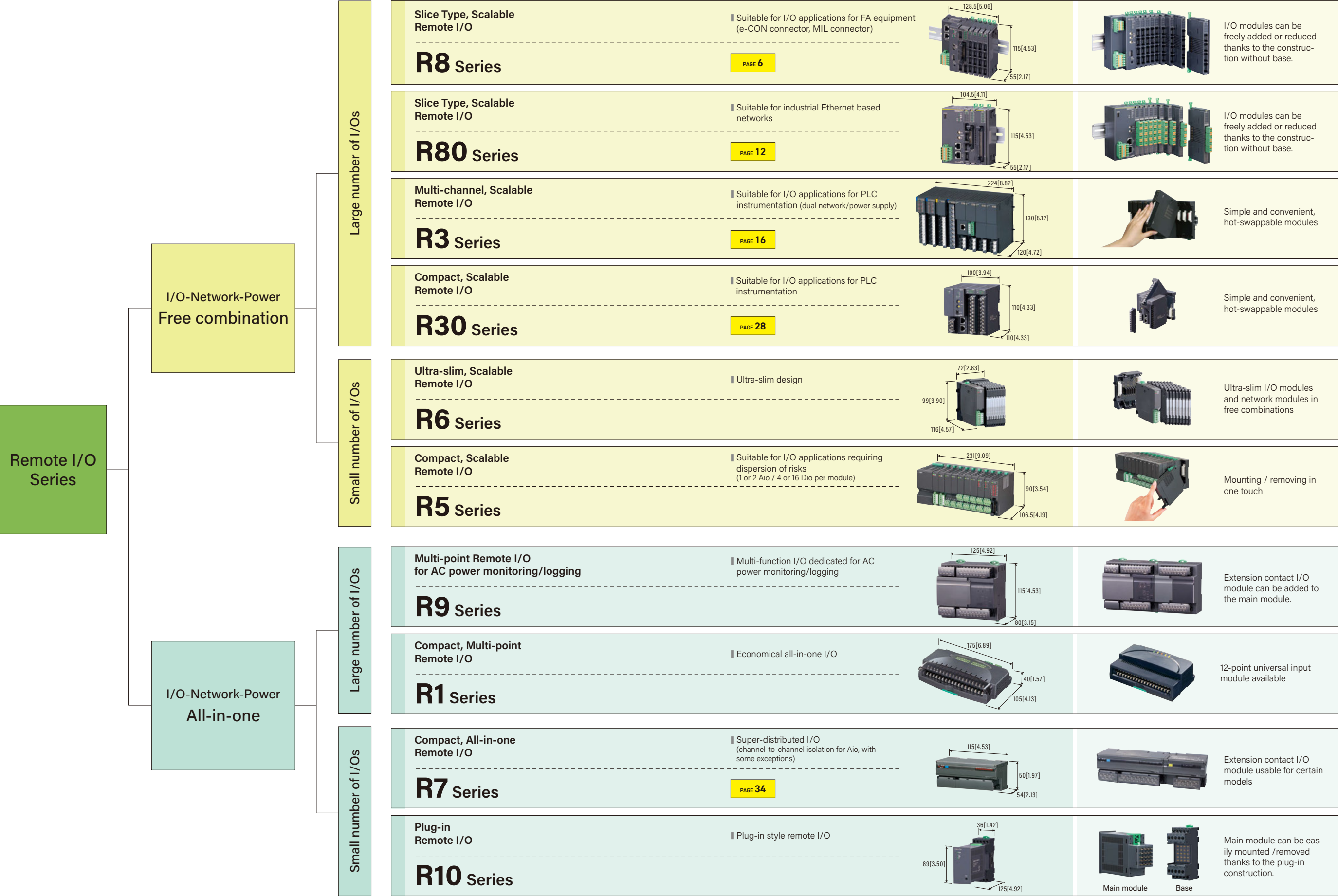


The Remote I/O Series,
evolving without limit



Your local representative:

Remote I/O Series Categories



Matrix Table

Specifications typical for each series are compared in the table. Details may differ depending on models.

		Slice Type, Scalable R8 Series	Slice Type, Scalable R80 Series	Multi-channel, Scalable R3 Series	Compact, Scalable R30 Series		Compact, All-in-one R7 Series	Plug-in R10 Series	Multi-point R9 Series	Ultra-slim, Scalable R6 Series	Compact, Scalable R5 Series	Compact, Multi-point R1 Series
External view		    PAGE 6	   PAGE 12	   PAGE 16	   PAGE 28		    PAGE 34	  	  	  	  	  
Features		■ 12- or 24-mm wide, slim modules ■ Space-saving: no need of a backplane base ■ Power/network module can be replaced without disturbing other modules. ■ I/O variations being added	■ High speed, real-time Ethernet based networks ■ 12- or 24-mm wide, slim modules ■ Space-saving: no need of a backplane base	■ A wide range of network and I/O module with economy ■ Suitable for AC power monitoring by multi-power input, CT and PT input ■ Network and power supply redundancy	■ Suitable for Ethernet based networks ■ High internal bus speed ■ Compact 110-mm high modules allow for easy installation alongside the latest PLCs. ■ Network and power supply redundancy (under development)		■ Network, I/O and power supply in all-in-one package ■ The smallest-size series ■ Extension discrete I/O modules are available for certain models. ■ Analog I/O can be mixed with discrete I/O in one node. ■ A wide variety of networks	■ Main module can be easily mounted / removed thanks to the plug-in construction. ■ Modbus-RTU protocol ■ High-density mounting	■ Network, I/O and power supply in all-in-one package ■ Low-profile housing can be easily fitted into a shallow panel. ■ Calculating various AC power measurands	■ Ultra-slim I/O modules can be freely combined with a network module. ■ Tension-clamp, screw, euro terminal types available ■ Only 78-mm wide with 8 I/O modules (R6D or R6S)	■ A wide variety of analog input modules ■ 4-20 mA output option selectable ■ Network and power supply redundancy	■ Compact, all-in-one package ■ Low cost temperature input ■ Universal input type available ■ 1500 V AC isolation option
Network (*Future plan)			---		---			---				
					---			---	---			
		---	 *		 *		---	---	---			---
		---	Modbus/TCP *	Modbus/TCP	Modbus/TCP		Modbus/TCP	---	Modbus/TCP	Modbus/TCP	Modbus/TCP	---
		Modbus	---	Modbus	---		Modbus	Modbus	Modbus	Modbus	Modbus	Modbus
		---	---	LONWORKS			LONWORKS	---	LONWORKS	---	---	---
		---	---	 MECHATROLINK-III	 *		 MECHATROLINK-III	---	---	---	---	---
								---	---	---	---	---
		EtherNet/IP	EtherNet/IP	EtherNet/IP	EtherNet/IP *		EtherNet/IP	---	---	---	---	---
		---	---	---	---		 HLS High-speed Link System	---	---	---	---	---
		---	---	<i>FL-net</i> <i>T-Link</i>	---		FLEX NETWORK® <i>T-Link</i>	---	---	<i>T-Link</i>	<i>T-Link</i>	---
		---	CC-Link IETSN	CC-Link IEfield	CC-Link IEfield CC-Link IETSN		CC-Link IEfield	---	---	---	---	---
Network redundancy		---	---	X	---		---	---	---	X	X	---
Number of I/O module types	Analog input	15 models	2 models	63 models	9 models		55 models	2 models	5 models	18 models	38 models	6 models
	Pulse input	4 models	---	8 models	1 model		14 models	---	---	---	2 models	---
	Contact input	7 models	2 models	10 models	1 model		59 models	---	---	3 models	3 models	1 model
	Analog I/O	---	---	---	---		2 models	---	---	---	---	---
	Contact I/O	---	---	5 models	---		61 models	---	1 model	---	---	1 model
	Analog output	8 models	2 models	7 models	2 models		27 models	---	---	6 models	8 models	---
	Pulse output	2 models	---	5 models	---		---	---	---	---	2 models	---
	Contact output	13 models	3 models	14 models	2 models		101 models	---	---	6 models	3 models	1 model
	Analog/pulse/contact	1 model	---	1 model	---		---	---	---	---	---	---
Total I/O types / number of modules types		18 types / 50 models	7 types / 9 models	50 types / 113 models	13 types / 15 models		59 types / 319 models	1 type / 2 models	3 types / 6 models	10 types / 33 models	22 types / 56 models	7 types / 9 models
Power supply		24 V DC	24 V DC	85-132 V AC, 100-120 V AC, 170-264 V AC, 200-240 V AC, 24 V DC, 110 V DC	24 V DC		24 V DC, 24 V AC/24 V DC (limited availability for universal type)	24 V DC	100-240 V AC/ 110-240 V DC (universal type)	100-240 V AC, 24 V DC	100-120 V AC, 200-240 V AC, 24 V DC	100-240 V AC, 100 V AC, 24 V DC
Power supply redundancy		---	---	X (under development)	---		---	---	---	---	X	---
Dimensions mm [inch]		W152.5xH115xD59 [6.00x4.53x2.32] 8 x 12-mm-wide modules	W128.5xH115xD73 [5.06x4.53x2.87] 6 x 12-mm-wide modules	W224xH130xD120 [8.82x5.12x4.72] 8 modules W336xH130xD120 [13.23x5.12x4.72] 12 modules W448xH130xD120 [17.64x5.12x4.72] 16 modules	W100xH114xD110 [3.94x4.49x4.33] 2 slots W450xH114xD110 [17.72x4.49x4.33] 16 slots		W115xH50xD54 [4.53x1.97x2.13] R7C base module; Depend upon models; See data sheet.	W36xH99xD125 [1.42x3.90x4.92] Main module and base combined	W125xH140xD80 [4.92x5.51x3.15] R9MWTU	W78xH99xD116 [3.07x3.90x4.57] 8 x tension-clamp terminal type; Depend upon terminal type; See data sheet.	W157xH90xD106.5 [6.18x3.54x4.19] 4 or 5 modules W231xH90xD106.5 [9.09x3.54x4.19] 8 or 9 modules W379xH90xD106.5 [14.92x3.54x4.19] 16 modules	W175xH40xD129 [6.89x1.57x5.08] R1MS-GH3T

Slice Type, Scalable Remote I/O

R8 Series

Remote I/O designed for customer needs



LARGE
NUMBER I/O



SCALABLE

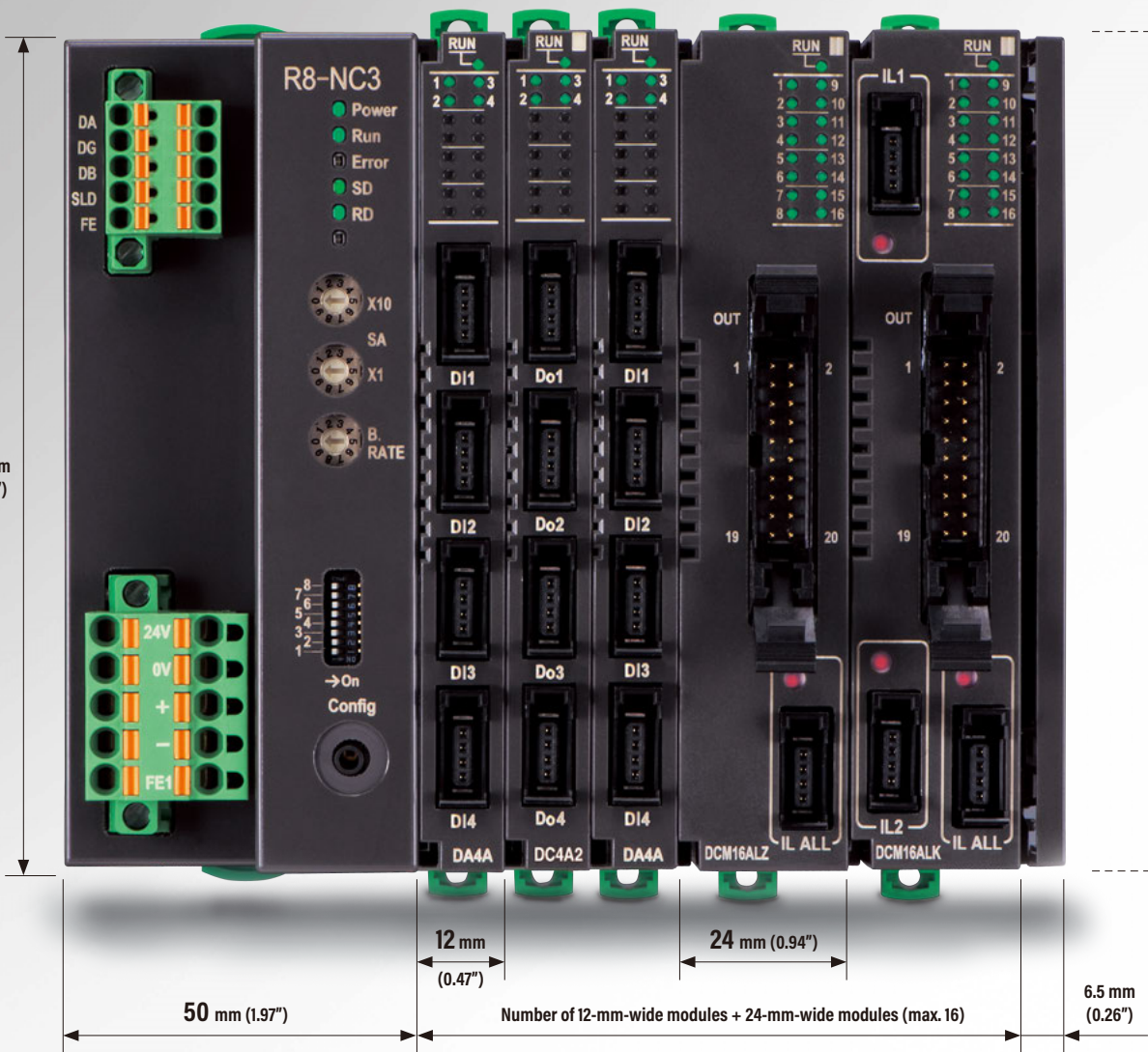


24 V_{DC}
POWER
SUPPLY



Compliance/approval depends upon models.

24-mm-wide I/O module,
tension clamp terminal type



Slice construction

This remote I/O can be freely configured with the necessary ultra-slim type I/O modules, and does not require a backplane base.

12-mm-wide I/O modules

A range of analog input modules is available for the 12-mm-wide slim modules.

24-mm-wide multi-function I/O modules

Modules equipped with an interlock function that turns OFF multiple outputs all at once when connected to the contacts of an emergency stop switch or other safety device are also available.

Careful consideration of customer requests

We will consider use with terminal blocks and connectors from any manufacturer, so please feel free to consult with us.
We can accommodate customer requests such as an interlock function. Please consult with us.

Supporting the latest networks

The power/network module now also supports EtherCAT.

Power supply

The power supply is 24 V DC.

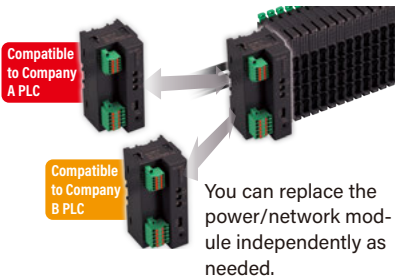


R8 Series External Dimensions ►► PAGE 9

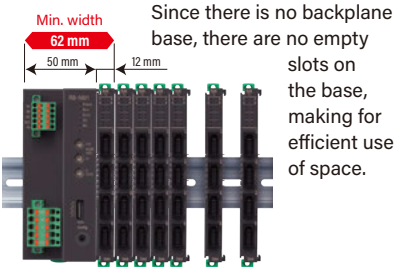
Supported network protocols



Power/network module can be freely changed



Efficient use of space without waste

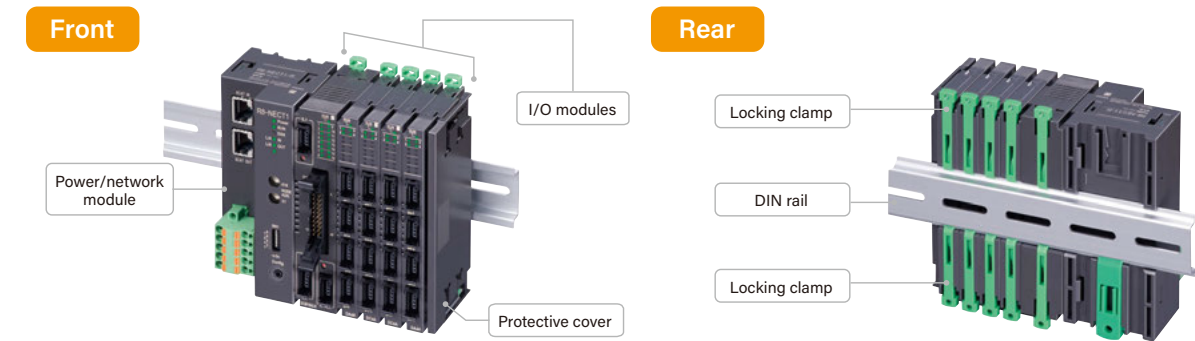


Simply replace one module

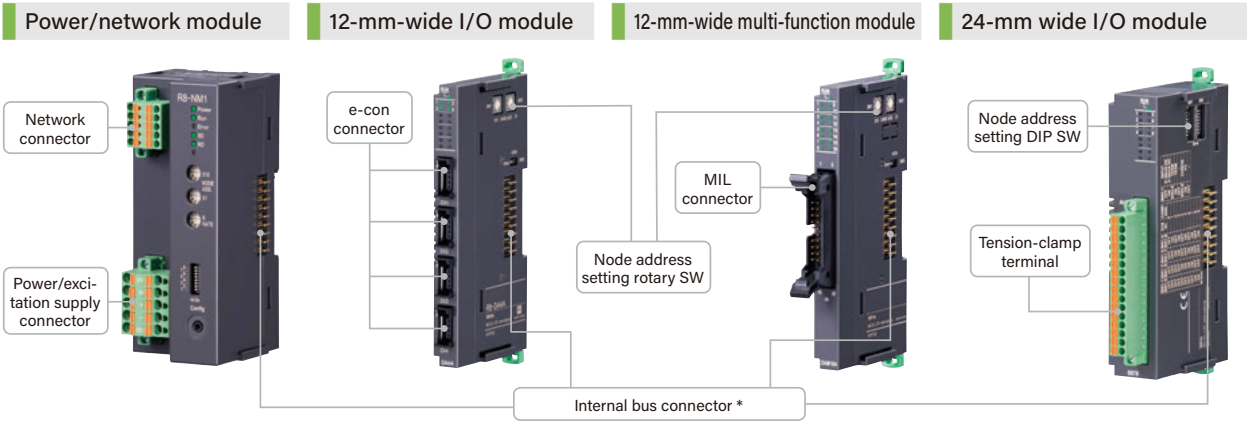


The R8 Series has a construction that enables smooth and reliable insertion and removal even when replacing just one module.

Construction and component identification



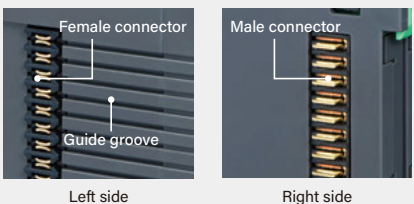
The R8 Series uses a slice construction without a backplane base. The locking clamps on the back at top and bottom of the I/O modules allow for mounting on a DIN rail. Communication with the neighboring modules uses the internal bus. The construction of the R80 Series makes insertion and removal smooth and reliable even when replacing just one module. Up to 16 I/O modules can be connected (total current consumption of I/O modules within 1.6 A).



* Internal bus connector

Internal bus connectors make it possible to install and remove individual modules

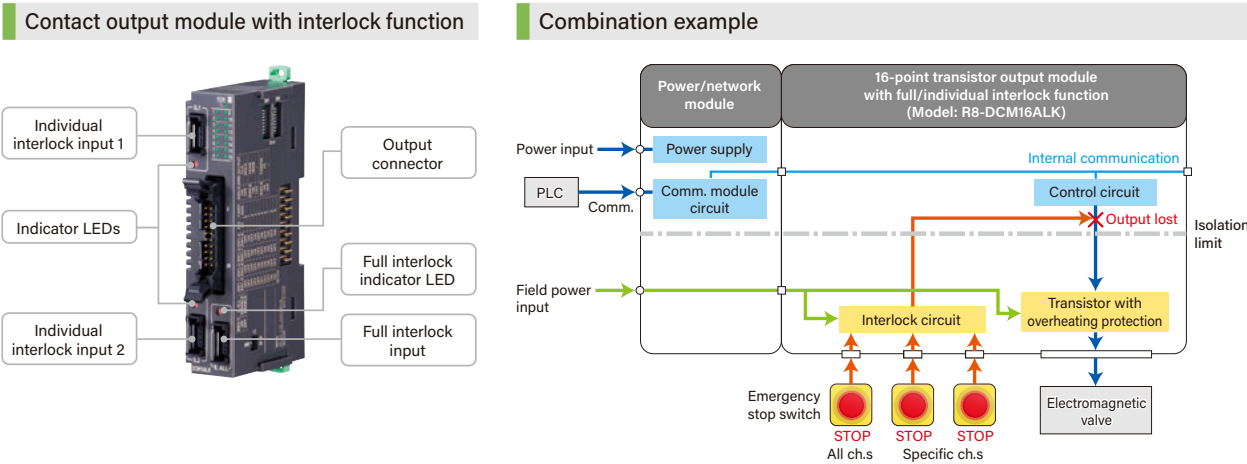
The female connector terminals clamp the male connector terminals, so they are resistant to vibration and shock, and the terminals are plated with highly-corrosion-resistant gold plating.



Individual I/O modules can be replaced. The module address can be set as needed, regardless of the mounting position.

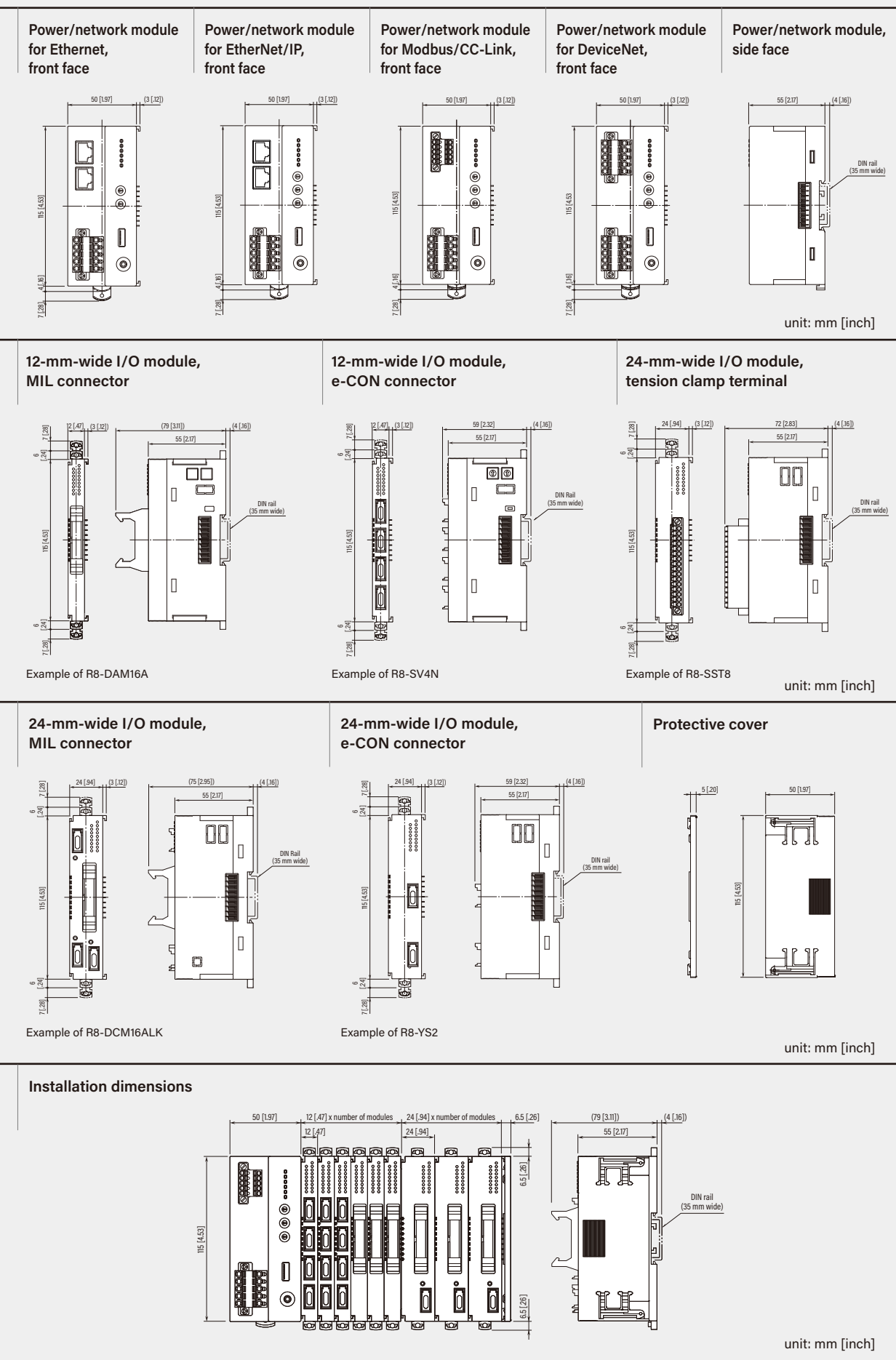
Contact output modules with interlock functions

This function (Model: R8-DCM16ALZ) turns OFF all 16 output points when connected to the contacts of an emergency stop switch or other safety device, and is ideal for applications such as simultaneous disconnection of all solenoid valves. The lineup also includes a type (Model: R8-DCM16ALK) that can interlock individually with any two of the 16 output points.



EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



POWER/NETWORK MODULE

PRODUCT	UL	MODEL
POWER/NETWORK MODULE (DeviceNet)	--	R8-ND1
POWER/NETWORK MODULE (DeviceNet, automatic area size optimization)	--	R8-ND2
POWER/NETWORK MODULE (Modbus)	--	R8-NM1
POWER/NETWORK MODULE (EtherCAT)	--	R8-NECT1
POWER/NETWORK MODULE (EtherNet/IP)	--	R8-NEIP1
POWER/NETWORK MODULE (CC-Link Ver.2.00; for 64-point analog signals)	✓	R8-NC3
POWER/NETWORK MODULE (CC-Link Ver.2.00; 1 - 4 configurable required nodes, for 64-point analog signals)	--	R8-NC3A

EXTENSION POWER SUPPLY MODULE

PRODUCT	UL	MODEL
EXTENSION POWER SUPPLY MODULE (non-isolated)	--	R8-PS1

ANALOG INPUT MODULE

PRODUCT	UL	MODEL
DC CURRENT INPUT MODULE (2 points, isolated)	--	R8-SS2
DC CURRENT INPUT MODULE (built-in excitation, 4 points, non-isolated)	--	R8-SS4NJ
DC CURRENT INPUT MODULE (4 points, non-isolated)	--	R8-SS4N
DC CURRENT INPUT MODULE (8 points, isolated, tension clamp terminal block)	--	R8-SST8
DC VOLTAGE INPUT MODULE (2 points, isolated)	--	R8-SV2
DC VOLTAGE INPUT MODULE (4 points, non-isolated)	--	R8-SV4N
DC VOLTAGE INPUT MODULE (8 points, isolated, tension clamp terminal block)	✓	R8-SVT8
THERMOCOUPLE INPUT MODULE (2 points, isolated)	--	R8-TS2
THERMOCOUPLE INPUT MODULE (2 points, isolated, tension clamp terminal block)	--	R8-TST2
RTD INPUT MODULE (4 points, non-isolated)	--	R8-RS4N
RTD INPUT MODULE (4 points, non-isolated, tension clamp terminal block)	--	R8-RST4N
DC VOLTAGE/CURRENT INPUT MODULE (built-in excitation, 16 points, non-isolated)	--	R8-FS16N
DC VOLTAGE/CURRENT INPUT MODULE (built-in excitation, 4 points, non-isolated, tension clamp terminal block)	--	R8-FST4N

ANALOG OUTPUT MODULE

PRODUCT	UL	MODEL
DC CURRENT OUTPUT MODULE (2 points, isolated)	--	R8-YS2
DC CURRENT OUTPUT MODULE (2 points, isolated, tension clamp terminal block)	--	R8-YST2
DC CURRENT OUTPUT MODULE (built-in excitation, 2 points, non-isolated)	--	R8-YS2NJ
DC CURRENT OUTPUT MODULE (4 points, non-isolated, tension clamp terminal block)	--	R8-YST4N
DC VOLTAGE OUTPUT MODULE (2 points, isolated, tension clamp terminal block)	--	R8-YVT2
DC VOLTAGE OUTPUT MODULE (4 points, non-isolated)		R8-YV4N
DC VOLTAGE OUTPUT MODULE (4 points, non-isolated, MIL connector)	--	R8-YVM4N
DC VOLTAGE OUTPUT MODULE (4 points, non-isolated, tension clamp terminal block)	--	R8-YVT4N

AC POWER INPUT MODULE

PRODUCT	UL	MODEL
AC CURRENT INPUT MODULE (RMS sensing, clamp-on current sensor, non-isolated, 4 points)	--	R8-CT4E
MULTI POWER INPUT MODULE (clamp-on current sensor type CLSE use)	--	R8-WTU

PULSE I/O MODULE

PRODUCT	UL	MODEL
TOTALIZED PULSE INPUT MODULE, 4 points (NPN / PNP / voltage pulse input)	--	R8-PA4
HIGH-SPEED TOTALIZED PULSE INPUT MODULE, 4 points (NPN input)	--	R8-PA4F
HIGH-SPEED TOTALIZED PULSE INPUT MODULE, 4 points (NPN input, tension clamp terminal block)	--	R8-PAT4F
HIGH SPEED PULSE INPUT MODULE (tension clamp terminal block)	--	R8-PFT1
PULSE OUTPUT MODULE (NPN transistor output, 4 points)	--	R8-PC4A
PULSE OUTPUT MODULE (NPN transistor output, 4 points, tension clamp terminal block)	--	R8-PCT4A

DISCRETE I/O MODULE

PRODUCT	UL	MODEL
DISCRETE INPUT MODULE (4 points)	--	R8-DA4A
DISCRETE INPUT MODULE, 16 points (MIL connector)	--	R8-DAM16A
NPN DISCRETE INPUT MODULE, 8 points (tension clamp terminal block)	--	R8-DAT8A2
PNP DISCRETE INPUT MODULE, 8 points (tension clamp terminal block)	--	R8-DAT8B2
NPN DISCRETE INPUT MODULE, 16 points (tension clamp terminal block)	--	R8-DAT16A2
PNP DISCRETE INPUT MODULE, 16 points (tension clamp terminal block)	--	R8-DAT16B2
NPN TRANSISTOR OUTPUT MODULE (with shortcircuit protection, 4 points)	--	R8-DC4A
NPN TRANSISTOR OUTPUT MODULE (voltage contact, with shortcircuit protection, 4 points)	--	R8-DC4A2
PHOTO MOSFET RELAY OUTPUT MODULE (4 points)	--	R8-DC4C
RELAY OUTPUT MODULE (4 points, tension clamp terminal block)	--	R8-DCT4D
NPN TRANSISTOR OUTPUT MODULE, 8 points (with shortcircuit protection, tension clamp terminal block)	--	R8-DCT8A2
PNP TRANSISTOR OUTPUT MODULE, 8 points (with shortcircuit protection, tension clamp terminal block)	--	R8-DCT8B2
NPN TRANSISTOR OUTPUT MODULE, 16 points (with shortcircuit protection)	--	R8-DCM16A
NPN TRANSISTOR OUTPUT MODULE, 16 points (with shortcircuit protection, full interlock)	--	R8-DCM16ALZ
NPN TRANSISTOR OUTPUT MODULE, 16 points (with shortcircuit protection, full and individual interlock)	--	R8-DCM16ALK
NPN TRANSISTOR OUTPUT MODULE, 16 points (with shortcircuit protection, full and partial interlock)	--	R8-DCM16ALH
PNP TRANSISTOR OUTPUT MODULE, 32 points (with shortcircuit protection)	--	R8-DCM32B2
NPN TRANSISTOR OUTPUT MODULE, 16 points (with shortcircuit protection, tension clamp terminal block)	--	R8-DCT16A2
PNP TRANSISTOR OUTPUT MODULE, 16 points (with short circuit protection, tension clamp terminal block)	--	R8-DCT16B2

TEMPERATURE CONTROL MODULE

PRODUCT	UL	MODEL
TEMPERATURE CONTROL MODULE	--	R8-TC2

DIGITAL INPUT MODULE

PRODUCT	UL	MODEL
DIGITAL INPUT MODULE (8 points, non-isolated)	NEW --	R8-DAHVT8N2

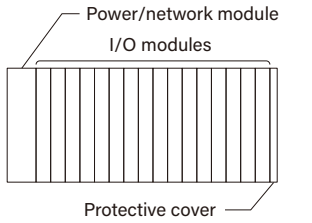
ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

· R8 Configurator Software (Model: RCFG), ESI files and EDS files are downloadable from our website.

PRODUCT	MODEL
CLAMP-ON CURRENT SENSOR	CLSE-R5
	CLSE-05
	CLSE-10
	CLSE-20
	CLSE-40
	CLSE-60

Basic module configurations



Consult us for installation on Extension Power Supply Module (Model: R8-PS1).

The number of I/O modules that can be mounted changes depending on power/network modules. Refer to the specifications of each power/network module for details.

Although module addresses can be set arbitrarily regardless of their relative positions, make sure to avoid from address overlapping.

The 4-point analog I/O module takes two addresses per module. For example with the model R8-SV4N located at the module address 5, the inputs 1 and 2 are assigned to the address 5, and the inputs 3 and 4 are to the address 6. Do not assign another module to the address 6.

All 4 inputs (input 1 through 4) can be used with Data Allocation 2, while only the inputs 1 and 3 can be used with Data Allocation 1.

The 4-point totalized pulse input module have 4 addresses available per module. Set to Data Allocation 2.

For modules which use more than 2 addresses, set an address so that the last address is not over 31. For 4-point totalized pulse input module, its address should not be over 28.

Enable the termination resistor only of the rightmost module. A protective cover is included in the package of power/network modules.

Calculating current consumption

I/O modules operate by the DC voltage (5 V DC) supplied from the power/network module. Arrange these modules in order that the total current consumed by them be within the supply current capacity. If the current consumption exceeds the limit, insert an extension power supply module. Even if the total consumption current of I/O modules is less than the supply current capacity, the total number of the modules that can be installed is max. 16 (except extension power supply module).

Model	Max. current consumption (mA)
R8-SS2	100
R8-SS4NJ	80
R8-SS4N	80
R8-SST8	200
R8-SV2	100
R8-SV4N	80
R8-SVT8	200
R8-TS2	100
R8-TST2	100
R8-RS4N	100
R8-RST4N	100
R8-FS16N	100
R8-FST4N	100
R8-YS2	80
R8-YST2	80
R8-YS2NJ	70
R8-YST4N	70

Model	Max. current consumption (mA)
R8-YVT2	160
R8-YV4N	160
R8-YVM4N	160
R8-YVT4N	160
R8-CT4E	100
R8-WTU	100
R8-PA4	80
R8-PA4F	90
R8-PAT4F	90
R8-PFT1	200
R8-PC4A	100
R8-PCT4A	100
R8-DA4A	80
R8-DAM16A	100
R8-DAT8A2	100
R8-DAT8B2	100
R8-DAT16A2	100
R8-DAT16B2	100

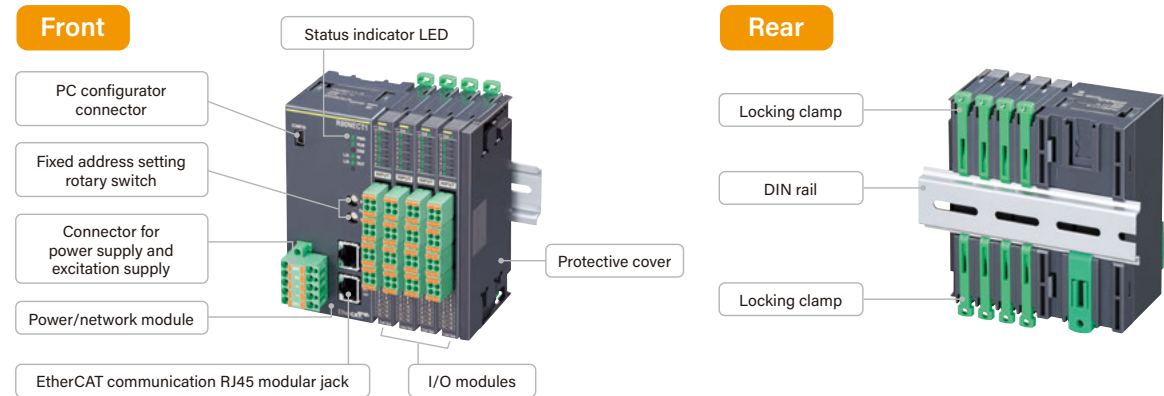
Model	Max. current consumption (mA)
R8-DC4A	100
R8-DC4A2	100
R8-DC4C	120
R8-DCT4D	100
R8-DCT8A2	110
R8-DCT8B2	110
R8-DCM16A	110
R8-DCM16ALZ	160
R8-DCM16ALK	160
R8-DCM16ALH	160
R8-DCM32B2	110
R8-DCT16A2	110
R8-DCT16B2	110
R8-TC2	200
R8-DAHVT8N2	160

CE 



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Construction and component identification

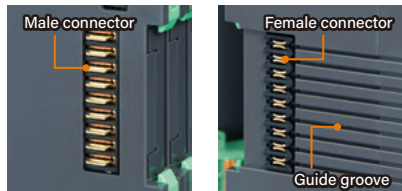


The R80 Series uses a slice construction without a backplane base. The locking clamps on the back at top and bottom of the I/O modules allow for mounting on a DIN rail. Communication with the neighboring modules uses the internal bus. The construction of the R80 Series makes insertion and removal smooth and reliable even when replacing just one module. Up to 16 I/O modules can be connected.

More compact with higher-speed internal bus using slicing technology

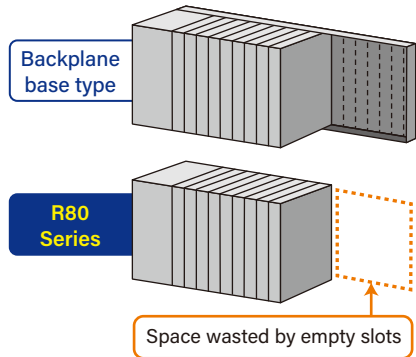
Connector for internal bus

The I/O modules have communication connectors for the internal bus on both sides, and the structure connects securely when the I/O modules are installed by sliding together.



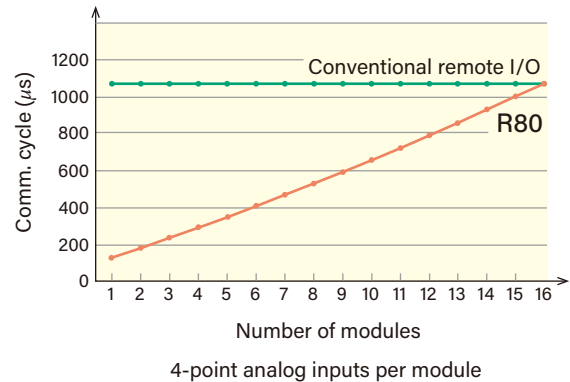
Effective use of space

Remote I/O types that use a backplane base include empty slots, which wastes space. With the R80 Series, there is no backplane base, so only the required number of I/O modules need to be installed and no space is wasted.

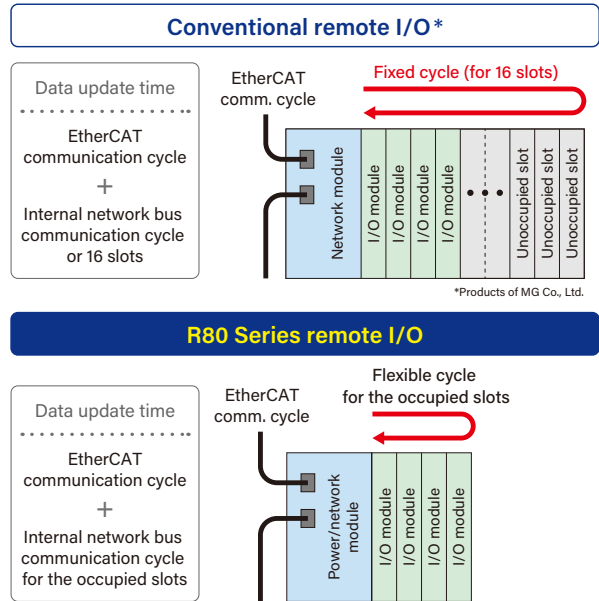


Mechanism for a faster communication cycle on the internal bus

With the R80 Series, a new technology was adopted that varies the internal bus cycle depending on the number of modules being used. (See figure below.) When fewer modules are installed, the communication cycle is faster for host communication and data can be updated on a faster cycle. The communication cycle can be set with the R80 PC Configurator Software (model: RCFG).



Communication cycle of the R80 Series Remote I/O



POWER/NETWORK MODULE

PRODUCT	MODEL
POWER/NETWORK MODULE (CC-Link IE TSN)	R80NCIT1
POWER/NETWORK MODULE (EtherCAT)	R80NECT1
POWER/NETWORK MODULE (EtherNet/IP)	R80NEIP1
POWER/NETWORK MODULE (DeviceNet)	R80ND2

EXTENSION POWER SUPPLY MODULE

PRODUCT	MODEL
EXTENSION POWER SUPPLY MODULE (non-isolated)	R80PS1

ANALOG INPUT MODULE

PRODUCT	MODEL
DC VOLTAGE/CURRENT INPUT MODULE, 4 points (built-in excitation, non-isolated, tension clamp terminal block)	R80FST4NJ
UNIVERSAL INPUT MODULE, 4 points (isolated, tension clamp terminal block)	R80UST4

ANALOG OUTPUT MODULE

PRODUCT	MODEL
DC CURRENT OUTPUT MODULE, 4 points (non-isolated, tension clamp terminal block)	R80YST4N
DC VOLTAGE OUTPUT MODULE, 4 points (non-isolated, tension clamp terminal block)	R80YVT4N

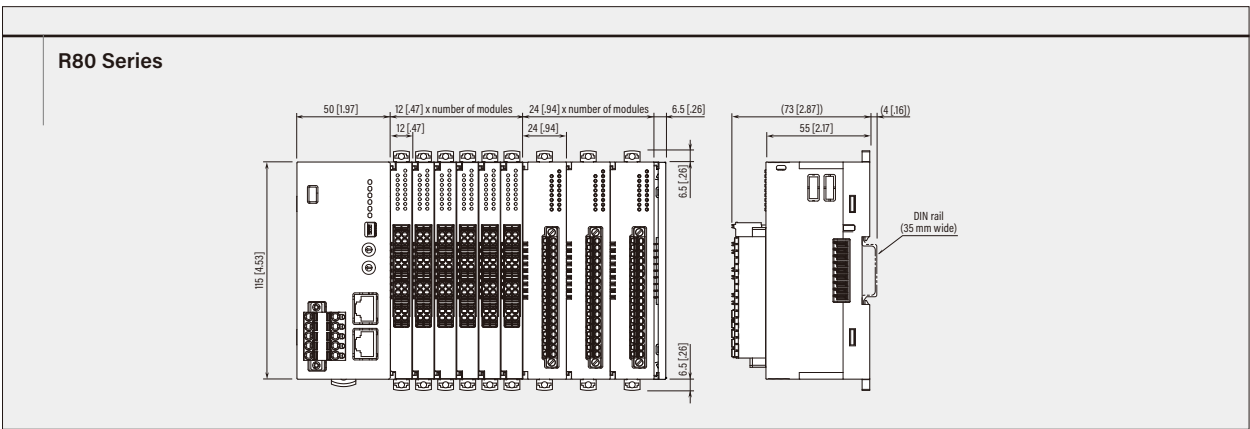
DISCRETE I/O MODULE

PRODUCT	MODEL
NPN DISCRETE INPUT MODULE, 8 points (tension clamp terminal block)	R80DAT8A
DISCRETE INPUT MODULE, 16 points (tension clamp terminal block)	R80DAT16A2
RELAY OUTPUT MODULE, 4 points (tension clamp terminal block)	R80DCT4D
NPN TRANSISTOR OUTPUT MODULE, 8 points (tension clamp terminal block)	R80DCT8A
NPN TRANSISTOR OUTPUT MODULE, 16 points (tension clamp terminal block)	R80DCT16A2

· R80 Configurator Software (Model: RCFG), ESI files, CSP+ files and EDS files are downloadable from our website.
CSP+ files are also downloadable from CC-Link Partner Association website.
· Use a commercially available USB MINI B cable to connect the device to a PC (prepared by the customer).

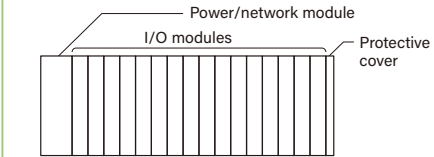
EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



Basic module configurations

Basic configurations



Module positions

The number of I/O modules that can be mounted changes depending on power/network modules. Refer to the specifications of each power/network module for details. Although module addresses can be set arbitrarily regardless of their relative positions, make sure to avoid from address overlapping. Enable the termination resistor only of the rightmost module. A protective cover is included in the package of power/network modules.

Calculating current consumption

I/O modules operate by the DC voltage (5 V DC) supplied from the power/network module. Arrange these modules in order that the total current consumed by them be within the supply current capacity. If the current consumption exceeds the limit, insert an extension power supply module. Even if the total consumption current of I/O modules is less than the supply current capacity, the total number of the modules that can be installed is max. 16 (except extension power supply module).

I/O module

Model	Max. current consumption (mA)	Model	Max. current consumption (mA)
R80FST4NJ	120	R80DAT16A2	125
R80UST4	170	R80DCT4D	110
R80YST4N	100	R80DCT8A	120
R80YVT4N	210	R80DCT16A2	160
R80DAT8A	100		

Multi-channel, Scalable Remote I/O

R3 Series

Comprehensive support for various networks and I/O modules



Compliance/approval depends upon models.

Supports many network types

13 network types are supported.

Economical I/O modules

The number of contact points per module is high, so this remote I/O offers excellent cost performance per signal point.

Special function modules

Multi power input modules that calculate electric power measurements, temperature control modules, and a wide lineup of other modules with special functions are available.

Three terminal block types

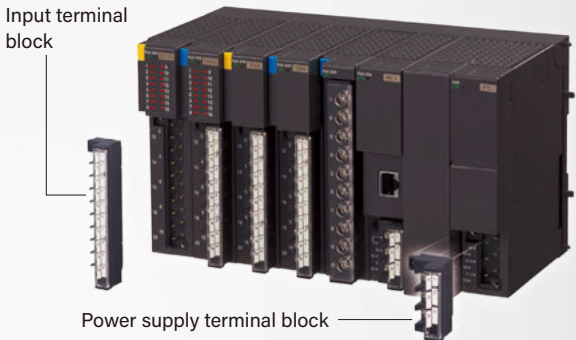
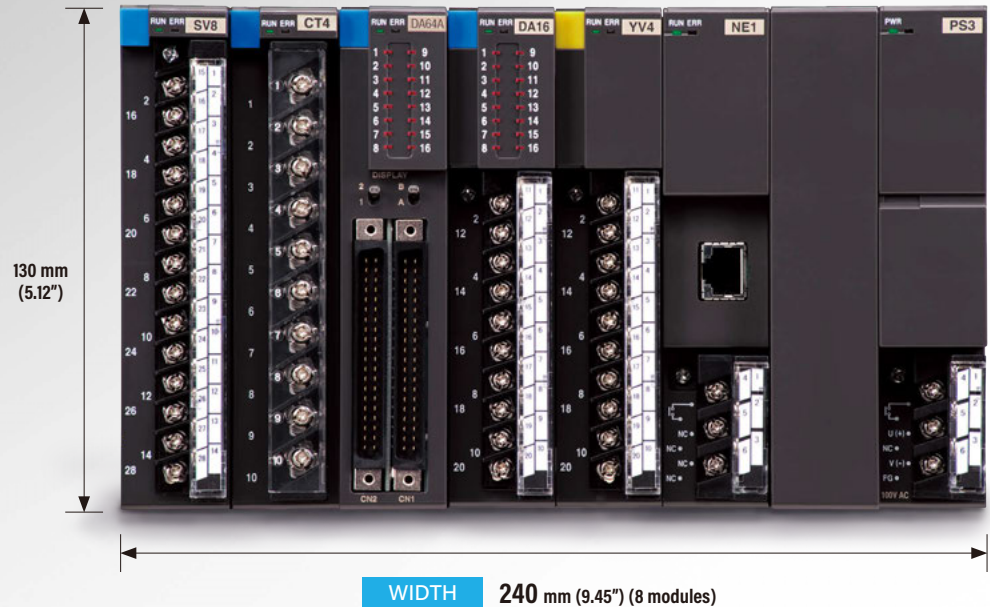
In addition to screw terminal blocks, connector types (19 models) and tension clamp terminal blocks (12 models) are also available.

Dual communication network system

This can improve the reliability of data communication.

Dual power supply system

This allows the construction of systems that support redundant systems of 100 or 200 V AC and 24 V DC.



Separable terminal block

The R3 Series terminal blocks utilize a structure that allows each terminal block to be removed and installed individually. This makes them very convenient, especially during inspections and specification changes.



R3 Series External Dimensions ►► PAGE 19

Supported network protocols



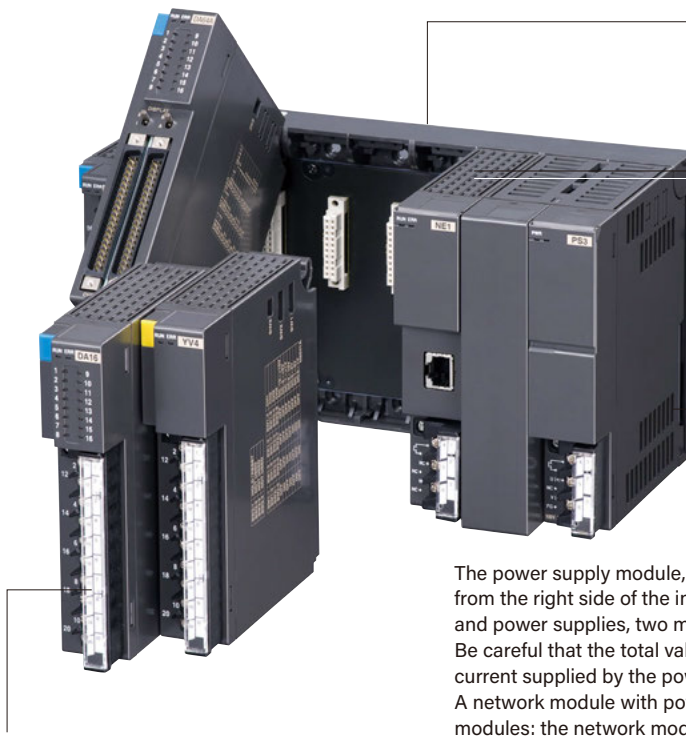
Easily mounted and firmly connected

Hot swappable modules

Each I/O and network module has an independent CPU. Data is renewed by serial communications between modules. Therefore no momentary lapse or bumping of analog output occurs when switching communication buses in the dual communication mode. Furthermore, removing or replacing modules does not adversely affect other modules on the same backplane. It is possible to replace them without removing the power supply.



Selectable modules for installation base



Base
2 types 16 models

Network module
13 types 23 models

Gateway module
..... 6 models

Power supply module
..... 2 models

The power supply module, network module, and I/O module are aligned in sequence from the right side of the installation base. When using dual communication networks and power supplies, two modules are installed next to each other.
Be careful that the total value of I/O module current consumption does not exceed the current supplied by the power supply module.
A network module with power supply can make a minimum system with only two modules: the network module and an I/O module.

I/O module

DC input module	24 models	Alarm module	7 models
Sensor input module	20 models	Discrete I/O module	29 models
AC power input module	10 models	BCD code I/O module	2 models
Analog output module	7 models	Specialized module for air conditioning	1 model
Pulse I/O module	13 models	Temperature control module	1 model

Three terminal block types are selectable

Screw terminal block type I/O module

R3

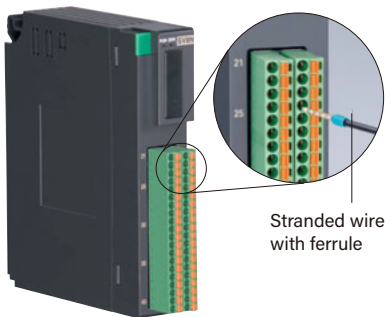
Terminal blocks with 20 or 28 M3 terminals or 10 or 20 M3.5 AC power terminals are available.



Tension clamp terminal block type I/O module

R3S

Can be connected simply by inserting a single wire or stranded wire with ferrule. A screwdriver is used for disconnecting. When inserting and removing a stranded wire without ferrule, use the lever to open and close the spring. Resistant to vibration and easy to wire.



12 models

Connector type I/O module

R3Y

A 40-pin connector enables consolidated wiring for a wide range of input and output signal types, from analog to discrete.

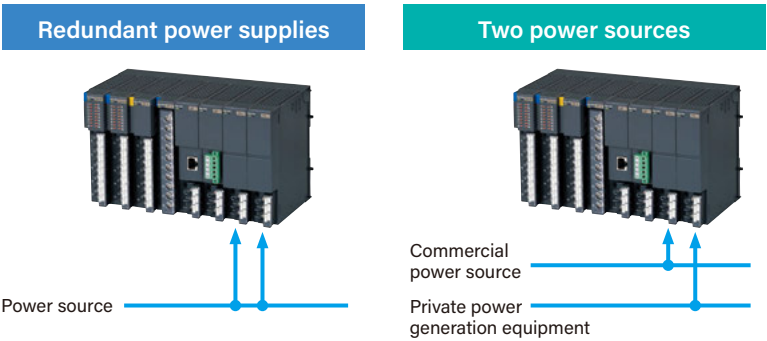


19 models

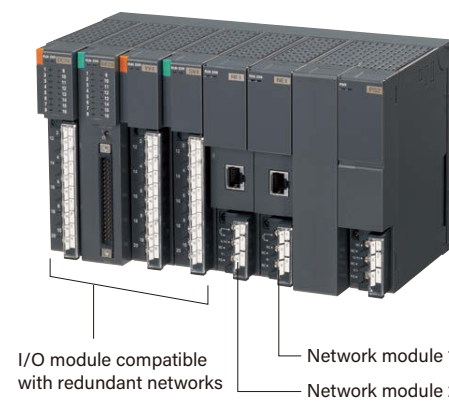
Dual power supplies for power outage and failure countermeasures

Reliable redundant power supply system

A range of power supply systems can be selected, including a redundant power supply option that supplies power to a module from two power supply modules and a two power sources option with separate power sources for each power supply module.



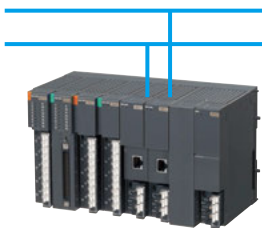
Supports dual communication networks



A dual redundant communication system can be easily achieved by employing two network modules and using dual communication type I/O modules (model suffix code 'W').
Each I/O module is equipped with two independent communication ports, which are connected to the separate network modules. In normal conditions, output modules receive data from both network modules and output the signal from the preferred communication bus A.
When an error is detected in the fieldbus wiring, network module, or in the internal bus (comm. time error, data error, etc.), the output is switched to the data from the communication bus B. The bus A is checked and automatically back for use if it is in normal conditions.
If both are in error, the output modules hold the signal and stand by until one of the communications recovers. (The output could be turned to OFF by setting.)
Input modules continuously respond to request-to-send from the both lines. This secures two independent communications.

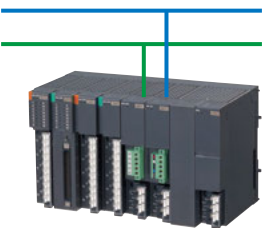
Redundant networks

Two network modules of the same type can be installed for communication redundancy. Mitsubishi Electric programmable controller redundant systems are also supported.



Two network protocols

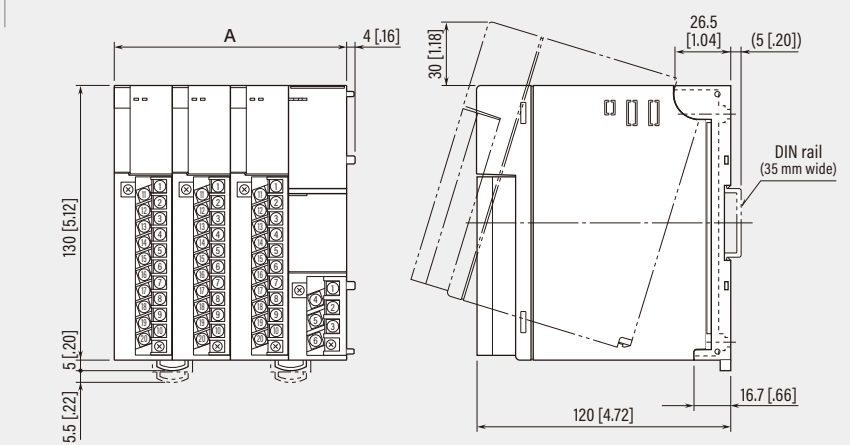
The same signal can be communicated to two different types of networks by connecting a network module for each type.



EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.

R3 Series



Model	Size	A
R3-BS02 [2 slots]	56 [2.20]	
R3-BS04 [4 slots]	112 [4.41]	
R3-BS06 [6 slots]	168 [6.61]	
R3-BS08 [8 slots]	224 [8.82]	
R3-BS10 [10 slots]	280 [11.02]	
R3-BS12 [12 slots]	336 [13.23]	
R3-BS14 [14 slots]	392 [15.43]	
R3-BS16 [16 slots]	448 [17.64]	

■ INSTALLATION BASE

PRODUCT	MODEL
INSTALLATION BASE	R3-BS02
	R3-BS02P
	R3-BS04
	R3-BS06
	R3-BS08
	R3-BS10
	R3-BS12
	R3-BS14
INSTALLATION BASE (free I/O address)	R3-BS16
	R3-BSW04
	R3-BSW06
	R3-BSW08
	R3-BSW10
	R3-BSW12
	R3-BSW14
	R3-BSW16

■ POWER SUPPLY MODULE

PRODUCT	MODEL
POWER SUPPLY MODULE (single slot, continuous output current 750 mA)	R3-PS1
POWER SUPPLY MODULE (double slot, continuous output current 2.0 A)	R3-PS3

■ NETWORK MODULE

PRODUCT	MODEL
CC-Link INTERFACE MODULE (CC-Link Ver.1.0; for 16-point analog signals)	R3-NC1
CC-Link INTERFACE MODULE (CC-Link Ver.1.0; for 32-point analog signals)	R3-NC2
CC-Link INTERFACE MODULE (CC-Link Ver. 2)	R3-NC3
NETWORK INTERFACE MODULE (CC-Link IE Field network)	R3-NCIE1
DeviceNet INTERFACE MODULE (for 16-point analog signals)	R3-ND1
DeviceNet INTERFACE MODULE (for 32-point analog signals)	R3-ND2
DeviceNet INTERFACE MODULE (for 64-point analog signals)	R3-ND3
ETHERNET INTERFACE MODULE (Modbus/TCP)	R3-NE1
NETWORK INTERFACE MODULE (EtherCAT)	R3-NECT1
EtherNet/IP INTERFACE MODULE	R3-NEIP1
T-Link INTERFACE MODULE (Fuji Electric T-Link use)	R3-NF1
T-Link INTERFACE MODULE (Fuji Electric T-Link interface module equivalent)	R3-NF2
T-Link INTERFACE MODULE (Fuji Electric T-Link capsule equivalent)	R3-NF3
FL-net INTERFACE MODULE (OPCN-2, Ver.2.0 supported)	R3-NFL1
MODBUS INTERFACE MODULE	R3-NM1
MODBUS INTERFACE MODULE (for temperature control module)	R3-NM3
MODBUS INTERFACE MODULE (for 115.2 kbps)	R3-NM4
MECHATROLINK INTERFACE MODULE (MECHATROLINK-III)	R3-NML3
PROFIBUS-DP INTERFACE MODULE	R3-NP1
LonWorks INTERFACE MODULE (analog I/O 16 points, discrete I/O 48 points)	R3-NL1
LonWorks INTERFACE MODULE (I/O 56 points)	R3-NL2

■ NETWORK MODULE (WIRELESS) USA: FCC Part 15 compliant

PRODUCT	MODEL
MODBUS INTERFACE MODULE (Modbus Wired Communication, Modbus-RTU Transparent 900 MHz Band Devices Use)	R3-NMW1F

■ NETWORK MODULE (GATEWAY)

PRODUCT	MODEL
CC-Link INTERFACE MODULE (CC-Link Ver.1.0/Ver.2.00)	R3-GC1
DeviceNet INTERFACE MODULE (for 64-point analog signals)	R3-GD1
INTERFACE I/O MODULE (Modbus/TCP)	R3-GE1
FL-net INTERFACE MODULE (OPCN-2, Ver.2.0 supported)	R3-GFL1
MODBUS INTERFACE MODULE	R3-GM1
INTERFACE I/O MODULE (for SLMP Client)	R3-GSLMP1

■ ANALOG INPUT MODULE

PRODUCT	MODEL
DC CURRENT INPUT MODULE (4 points, isolated)	R3-SS4
DC CURRENT INPUT MODULE (8 points, isolated)	R3-SS8
DC CURRENT INPUT MODULE (8 points, isolated, connector type)	R3Y-SS8
DC CURRENT INPUT MODULE (8 points, non-isolated)	R3-SS8N
DC CURRENT INPUT MODULE (8 points, non-isolated, connector type)	R3Y-SS8N
DC CURRENT INPUT MODULE (8 points, non-isolated, tension clamp terminal block)	R3S-SS8N
DC CURRENT INPUT MODULE (16 points, non-isolated)	R3-SS16N
DC CURRENT INPUT MODULE (16 points, non-isolated, connector type)	R3Y-SS16N
DC VOLTAGE INPUT MODULE (4 points, isolated)	R3-SV4
DC MILLIVOLT INPUT MODULE (4 points, isolated)	R3-SV4A
DC VOLTAGE INPUT MODULE (4 points, isolated, wide span voltage)	R3-SV4B
DC VOLTAGE INPUT MODULE (4 points, isolated, wide span voltage up to ±50 V)	R3-SV4C
DC VOLTAGE INPUT MODULE (8 points, isolated)	R3-SV8
DC VOLTAGE INPUT MODULE (8 points, isolated, connector type)	R3Y-SV8
DC MILLIVOLT INPUT MODULE (8 points, isolated)	R3-SV8A
DC MILLIVOLT INPUT MODULE (8 points, isolated, connector type)	R3Y-SV8A
DC VOLTAGE INPUT MODULE (8 points, isolated, wide span voltage)	R3-SV8B
DC VOLTAGE INPUT MODULE (8 points, isolated, wide span voltage up to ±50 V)	R3-SV8C
DC VOLTAGE INPUT MODULE (8 points, non-isolated)	R3-SV8N
DC VOLTAGE INPUT MODULE (8 points, non-isolated, connector type)	R3Y-SV8N
DC VOLTAGE INPUT MODULE (8 points, non-isolated, tension clamp terminal block)	R3S-SV8N
DC VOLTAGE INPUT MODULE (16 points, non-isolated)	R3-SV16N
DC VOLTAGE INPUT MODULE (16 points, non-isolated, connector type)	R3Y-SV16N
THERMOCOUPLE INPUT MODULE (4 points, isolated)	R3-TS4
THERMOCOUPLE INPUT MODULE (8 points, isolated)	R3-TS8
THERMOCOUPLE INPUT MODULE (high accuracy, 8 points, isolated)	R3-TS8A
RTD INPUT MODULE (4 points, isolated)	R3-RS4
RTD INPUT MODULE (high accuracy, 4 points, isolated)	R3-RS4A
RTD INPUT MODULE (high accuracy, 4 points, isolated, tension clamp terminal block)	R3S-RS4A
RTD INPUT MODULE (8 points, isolated)	R3-RS8
RTD INPUT MODULE (8 points, isolated, connector type)	R3Y-RS8
RTD INPUT MODULE (high accuracy, 8 points, isolated)	R3-RS8A
RTD INPUT MODULE (high accuracy, 8 points, isolated)	R3-RS8B
THERMISTOR INPUT MODULE (8 points, isolated)	R3-RT8A

R3Y: Connector type, R3S: Tension clamp terminal block type

PRODUCT	MODEL
POTENTIOMETER INPUT MODULE (4 points, isolated)	R3-MS4
POTENTIOMETER INPUT MODULE (8 points, isolated)	R3-MS8
POTENTIOMETER INPUT MODULE (8 points, isolated, connector type)	R3Y-MS8
4 – 20 mA INPUT MODULE (2-wire transmitter excitation supply; 4 points, isolated)	R3-DS4
4 – 20 mA INPUT MODULE (2-wire transmitter excitation supply; 4 points, isolated, connector type)	R3Y-DS4
4 – 20 mA INPUT MODULE (2-wire transmitter exc. supply with switch; 4 points, isolated)	R3-DS4A
4 – 20 mA INPUT MODULE (2-wire transmitter excitation supply; 8 points, non-isolated)	R3-DS8N
4 – 20 mA INPUT MODULE (2-wire transmitter excitation supply; 8 points, non-isolated, connector type)	R3Y-DS8N
STRAIN GAUGE INPUT MODULE (2 points, isolated)	R3-LC2
UNIVERSAL INPUT MODULE (4 points, isolated)	R3-US4

■ ANALOG OUTPUT MODULE

PRODUCT	MODEL
DC VOLTAGE OUTPUT MODULE (4 points, isolated)	R3-YV4
DC VOLTAGE OUTPUT MODULE (4 points, isolated, tension clamp terminal block)	R3S-YV4
DC VOLTAGE OUTPUT MODULE (8 points, isolated)	R3-YV8
DC VOLTAGE OUTPUT MODULE (8 points, isolated, connector type)	R3Y-YV8
DC CURRENT OUTPUT MODULE (4 points, isolated)	R3-YS4
DC CURRENT OUTPUT MODULE (4 points, isolated, connector type)	R3Y-YS4
DC CURRENT OUTPUT MODULE (4 points, isolated, tension clamp terminal block)	R3S-YS4

■ AC POWER INPUT MODULE

PRODUCT	MODEL
CT INPUT MODULE (4 points, isolated, true RMS sensing)	R3-CT4
AC CURRENT INPUT MODULE (4 points, isolated, clamp-on current sensor type CLSA use)	R3-CT4A
AC CURRENT INPUT MODULE (4 points, isolated, clamp-on current sensor type CLSB use)	R3-CT4B
AC CURRENT INPUT MODULE (4 points, isolated, clamp-on current sensor type CLSB-R5 use)	R3-CT4C
AC CURRENT INPUT MODULE (8 points, isolated, clamp-on current sensor type CLSA use)	R3-CT8A
AC CURRENT INPUT MODULE (8 points, isolated, clamp-on current sensor type CLSB use)	R3-CT8B
AC CURRENT INPUT MODULE (8 points, isolated, clamp-on current sensor type CLSB-R5 use)	R3-CT8C
AC VOLTAGE INPUT MODULE (4 points, isolated, true RMS sensing)	R3-PT4
ZERO-PHASE CURRENT INPUT MODULE (4 points, isolated, with noise filter)	R3-CZ4
MULTI POWER INPUT MODULE (clamp-on current sensor type CLSE use)	R3-WTU

PULSE I/O MODULE

PRODUCT	MODEL
ENCODER INPUT MODULE (RS-422 input; alarm output)	R3-PA2
HIGH SPEED PULSE INPUT MODULE (4 points, isolated)	R3-PA4
HIGH SPEED TOTALIZED PULSE INPUT MODULE (4 points, isolated)	R3-PA4A
LOW SPEED TOTALIZED PULSE INPUT MODULE (4 points, isolated)	R3-PA4B
TOTALIZED PULSE INPUT MODULE (Pi 8 points, 32 bits)	R3-PA8
TOTALIZED PULSE INPUT MODULE (Pi 8 points, 32 bits, tension clamp terminal block)	R3S-PA8
TOTALIZED PULSE INPUT MODULE (Pi 16 points)	R3-PA16
TOTALIZED PULSE INPUT MODULE (Pi 16 points, connector type)	R3Y-PA16
PULSE OUTPUT MODULE (open collector output, 16 points)	R3-PC16A
ONE-SHOT PULSE OUTPUT MODULE (relay contact output, 16 points)	R3-PD16
ONE-SHOT PULSE OUTPUT MODULE (NPN transistor output, 16 points)	R3-PD16A
ONE-SHOT PULSE OUTPUT MODULE (triac output, 16 points)	R3-PD16B
ONE-SHOT PULSE OUTPUT MODULE (PNP transistor output, 16 points)	R3-PD16C

DISCRETE I/O MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (Di 16 points; with excitation supply)	R3-DA16
DISCRETE INPUT MODULE (Di 16 points; with excitation supply, connector type)	R3Y-DA16
DISCRETE INPUT MODULE (Di 16 points; with excitation supply, tension clamp terminal block)	R3S-DA16
DISCRETE INPUT MODULE (Di 16 points; with external excitation supply)	R3-DA16A
DISCRETE INPUT MODULE (Di 16 points; with external excitation supply, connector type)	R3Y-DA16A
AC CONTACT INPUT MODULE (Di 16 points)	R3-DA16B
AC CONTACT INPUT MODULE (Di 16 points, connector type)	R3Y-DA16B
DISCRETE INPUT MODULE (Di 32 points; with external excitation supply)	R3-DA32A
DISCRETE INPUT MODULE (Di 64 points; with external excitation supply)	R3-DA64A
DISCRETE INPUT MODULE (Di 8 points (3-wire), with external excitation supply)	R3-DA8C
DISCRETE OUTPUT MODULE (Do 8 points (relay))	R3-DC8
DISCRETE OUTPUT MODULE (Do 8 points (relay), tension clamp terminal block)	R3S-DC8
DISCRETE OUTPUT MODULE (relay contact output, 16 points)	R3-DC16
DISCRETE OUTPUT MODULE (relay contact output, 16 points, connector type)	R3Y-DC16
DISCRETE OUTPUT MODULE (open collector output, 16 points)	R3-DC16A
DISCRETE OUTPUT MODULE (triac output, 16 points)	R3-DC16B
DISCRETE OUTPUT MODULE (PNP transistor output, 16 points)	R3-DC16C

R3Y: Connector type, R3S: Tension clamp terminal block type

PRODUCT	MODEL
DISCRETE OUTPUT MODULE (Do 32 points; open collector)	R3-DC32A
DISCRETE OUTPUT MODULE (PNP transistor output, 32 points, shortcircuit protection)	R3-DC32C
DISCRETE OUTPUT MODULE (Do 64 points; open collector)	R3-DC64A
DISCRETE OUTPUT MODULE (PNP transistor output, 64 points, shortcircuit protection)	R3-DC64C
DISCRETE OUTPUT MODULE (Do 8 points (photo MOSFET relay))	R3-DC8D
REMOTE CONTROL RELAY CONTROL MODULE (Do 8 points)	R3-RR8
REMOTE CONTROL RELAY CONTROL MODULE (Do 8 points, tension clamp terminal block)	R3S-RR8
DISCRETE INPUT OUTPUT MODULE (Di 8 points, Do 8 points)	R3-DAC16
DISCRETE INPUT OUTPUT MODULE (Di 8 points, Do 8 points, tension clamp terminal block)	R3S-DAC16
DISCRETE INPUT OUTPUT MODULE (Di & Do 8 points each; internal power)	R3-DAC16A
DISCRETE INPUT OUTPUT MODULE (Di & Do 8 points each; internal power, tension clamp terminal block)	R3S-DAC16A
DISCRETE INPUT OUTPUT MODULE (Di 8 points (internal power), Do 8 points (photo MOSFET relay), connector type)	R3Y-DAC16D

BCD CODE I/O MODULE

PRODUCT	MODEL
BCD CODE INPUT MODULE (7-digit BCD)	R3-BA32A
BCD CODE OUTPUT MODULE (7-digit BCD; open collector)	R3-BC32A

ALARM MODULE

PRODUCT	MODEL
DC CURRENT INPUT ALARM MODULE (4 points, isolated)	R3-AS4
DC CURRENT INPUT ALARM MODULE (8 points, isolated)	R3-AS8
DC VOLTAGE INPUT ALARM MODULE (4 points, isolated)	R3-AV4
DC VOLTAGE INPUT ALARM MODULE (8 points, isolated)	R3-AV8
THERMOCOUPLE INPUT ALARM MODULE (4 points, isolated)	R3-AT4
RTD INPUT ALARM MODULE (4 points, isolated)	R3-AR4
4 – 20 mA INPUT ALARM MODULE (2-wire transmitter excitation supply; 4 points, isolated)	R3-AD4

SPECIALIZED I/O MODULE FOR AIR CONDITIONING

PRODUCT	MODEL
VALVE POSITIONER MODULE (for 2 systems; built-in SSR)	R3-MEX2

TEMPERATURE CONTROL MODULE

PRODUCT	MODEL
TEMPERATURE CONTROL MODULE	R3-TC2

· Compatible only with Modbus Interface Module (Model: R3-NM3).

ACCESSORY

PRODUCT	MODEL
BLANK FILLER MODULE	R3-DM
CONNECTOR TERMINAL BLOCK	CNT
CABLE (with FCN connectors; 40-pin to 40-pin, shielded)	FCN
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON
CLAMP-ON CURRENT SENSOR	CLSA-08
	CLSA-12
	CLSA-30
	CLSA-50
SPECIAL CABLE	CLSA-08C
	CLSB-R5
	CLSB-05
	CLSB-10
CLAMP-ON CURRENT SENSOR	CLSB-20
	CLSB-40
	CLSB-60

900 MHz Band Wireless Remote I/O (for use in USA)

License-free 900 MHz ISM band
FCC Part 15 compliant wireless module

The WL40F Wireless I/O System employs a license-free 900 MHz ISM band module.

Compared with 2.4 GHz / 5 GHz wireless LANs and other wireless networks dedicated for instrumentation using higher frequency bands, the 900 MHz band ensures stable communication quality for a long distance transmission, suitable for telemetry, multiplex transmission systems and data logging applications with various sensors/devices including low-speed moving entities.

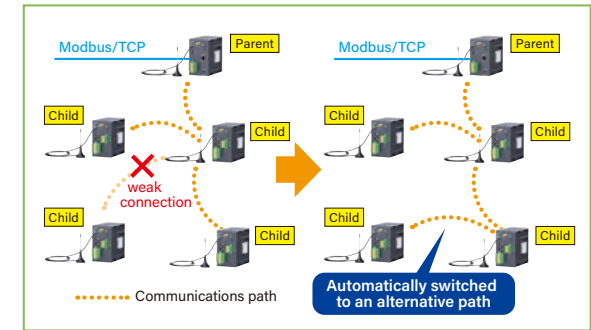
Modbus-RTU transparent devices can easily replace existing wired ones, and various industry standard sensors/devices can be added to the network.

Multi-hop technology

Multi-hop wireless communication is a wireless network conveying data through a number of wireless communication devices in a “bucket-brigade” manner.

Relaying paths are automatically switched to an alternative one when one section of the connection is weak.

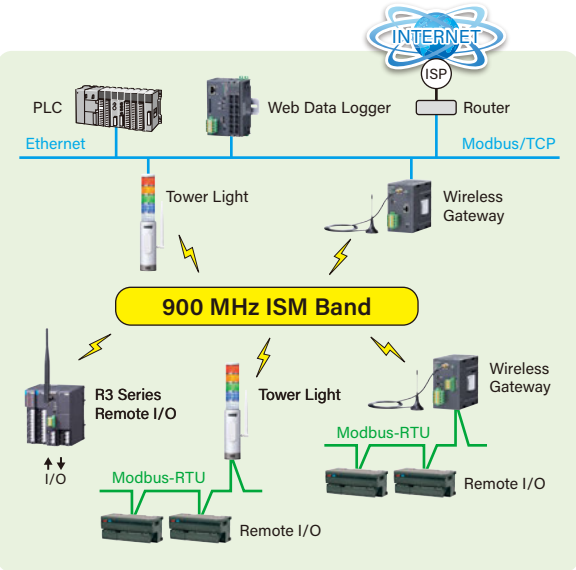
In the WL40F Series, up to 100 child stations connect to a single parent station. The communications distance between stations can be up to 0.62 miles (1 km), thus making it possible to construct a wireless network in a wide range.



- Use of wireless products is restricted by national radio regulations of individual countries. Please consult us for the details of certified products.
- Signal strength site survey is required before introducing wireless modules.

PRODUCT	MODEL
CLAMP-ON CURRENT SENSOR (1 A output)	CLSC-10
	CLSC-25
	CLSC-50
	CLSC-60
CLAMP-ON CURRENT SENSOR (1 A output)	CLSD-A
	CLSD-B
	CLSD-C
	CLSD-D
CLAMP-ON CURRENT SENSOR	CLSE-R5
	CLSE-05
	CLSE-10
	CLSE-20
	CLSE-40
	CLSE-60
CLAMP-ON PULSE SENSOR	CLSP

· R3 Configurator Software (Model: R3CON), EDS files, GSD files and XIF files (Device Interface Files) are downloadable from our website.



Wireless Gateway
WL40F Series*

USA

Parent Child

*920 MHz band products certified for use in Korea, Taiwan, Thailand and Vietnam are also available.

Remote I/O R3 Series
Modbus Interface Module
R3-NMW1F

USA

Child

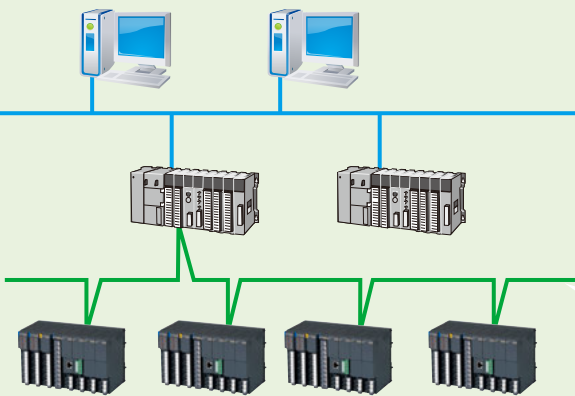
Tower Light
ITxxSW5F / ITxxSW6F
xx : 40, 50, 60 (light diameter)

Parent Child

USA

Limitless applications

Remote I/O for PLC and DCS

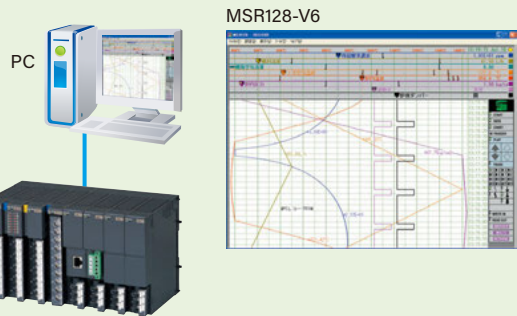


■ **Eliminate waste and acquire high-precision data**
Using direct sensor input or input and output modules with channel-to-channel isolation eliminates the need for a signal conditioner or isolation amplifier. AD conversion of the sensor signal is performed directly, so process values with higher precision can be acquired.

■ **Supported open networks**

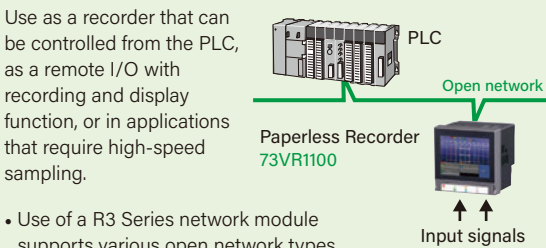


High-speed PC Recorder



Combining an R3 Series and PC Recorder (MSR128-V6) creates a high-speed recorder with 100 ms speed and 128 points.

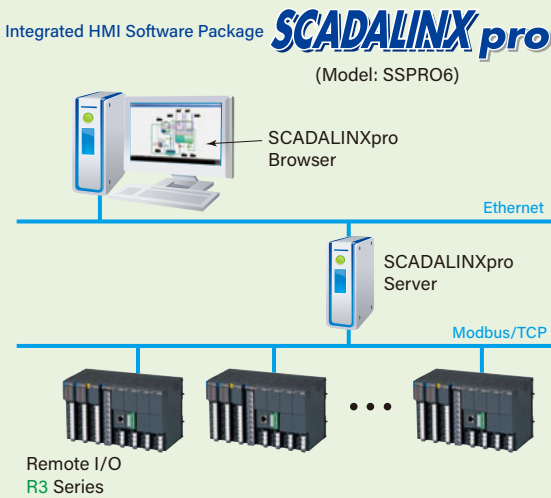
Paperless recorder using R3 I/O modules



- Use of a R3 Series network module supports various open network types.
- A wide range of R3 Series I/O modules can be used, including DC voltage/current and pulse/AC current.
- Can be operated and configured from the PLC.
- Multi-channel input of up to 64 channels
- High-speed sampling with a maximum speed of 20 ms is possible.
- Record data for a specified period can be output as a CSV file to USB memory (even while recording).

SCADA system

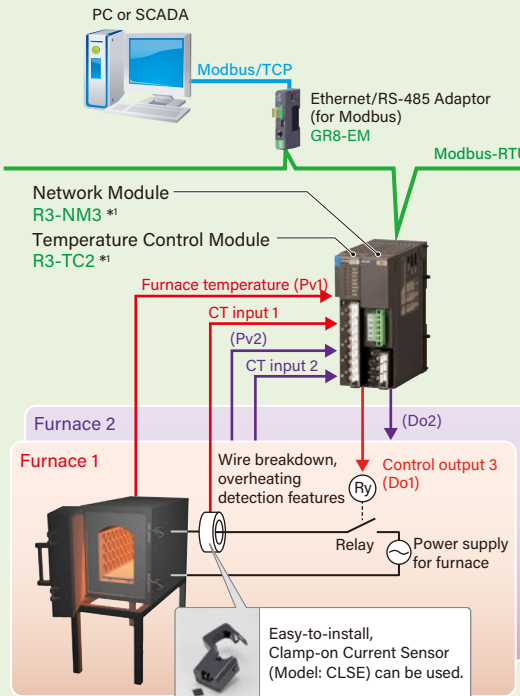
Limited to Japanese market



SCADALINXpro is a client/server system that provides remote monitoring and operating functions via Modbus/TCP. It can be used in many fields, including FA, PA, and BA. In addition to our own products, drivers for a wide range of PLC manufacturers are available.

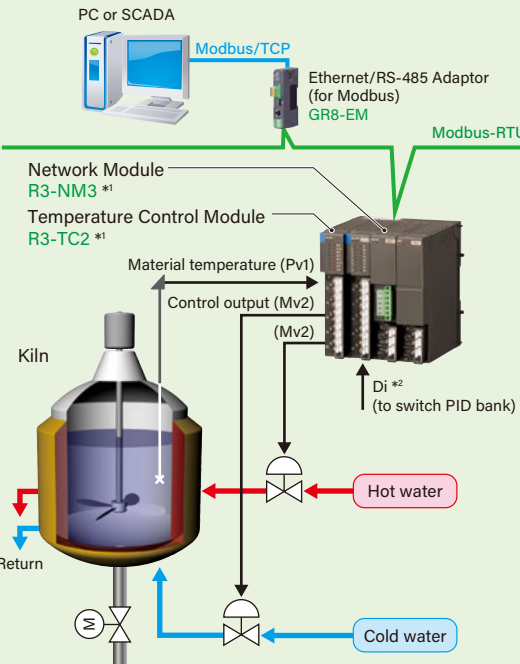
Temperature control

■ **Two loops ON/OFF control**
Wire breakdown detection of heating furnace



*1. The R3-TC2 is compatible only with the R3-NM3.

■ **Heating & cooling PID control**

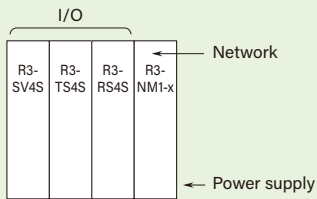


*2. Bank setting option examples: SP / PID parameter / deadband / PV alarm Hi or Lo setpoint

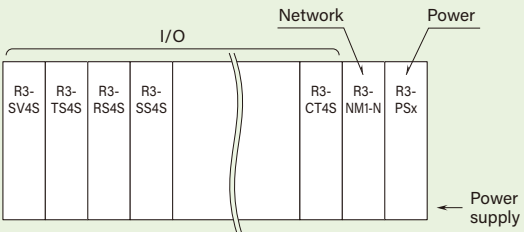
Basic module configurations

Single communication mode

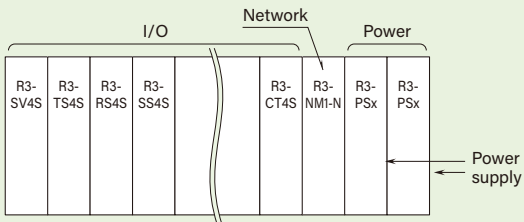
- Single network module with internal power supply; no power supply module



- Single network module with external power supply module



- Single network module with two external power supply modules

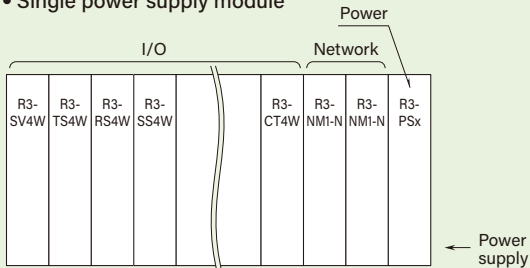


Caution

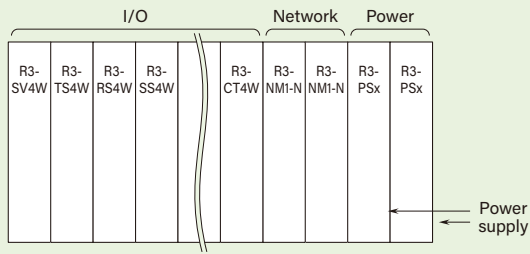
- No additional power supply module is available for the network module with internal power supply.

Dual communication mode

- Single power supply module



- Two power supply modules



Caution

- Network module with internal power supply cannot be used for dual communication mode. Combinations of two network modules with internal power supply, or of a network module with internal supply and an external power supply is not possible.
- One of the network modules must be set to 'Main', while the other must be set to 'Sub' with DIP switches at the side of the module.

Calculating current consumption

The network and I/O modules operates by the DC voltage (20V) supplied from the power module. Arrange these modules in order that the total current consumed by these modules be within this capacity.

If the current consumption exceeds the limit, reduce the number of modules to be supplied from the power module.

Please refer to the data sheet of individual models for details.

MODEL	CONTINUOUS OUTPUT RATING (mA)	MAXIMUM OUTPUT RATING (mA)	MINIMUM CONSUMPTION (mA)	MAXIMUM CONSUMPTION (mA)
R3-PS1	750	1000	--	--
R3-PS3	2000	2200	--	--
R3-NC1	250 (350)*2	400 (500)*2	--	120
R3-NC2	250 (350)*2	400 (500)*2	--	130
R3-NC3	250 (350)*2	400 (500)*2	--	120
R3-NCIE1	--	--	--	170
R3-ND1	270 (350)*2	420 (500)*2	--	80
R3-ND2	270 (350)*2	420 (500)*2	--	80
R3-ND3	270 (350)*2	420 (500)*2	--	80
R3-NE1	250 (350)*2	400 (500)*2	--	100
R3-NECT1	--	--	--	100
R3-NEIP1	--	--	--	130
R3-NF1	250 (350)*2	400 (500)*2	--	130
R3-NF2	230 (350)*2	380 (500)*2	--	120
R3-NF3	230 (350)*2	380 (500)*2	--	120
R3-NFL1	--	--	--	130
R3-NM1	250 (350)*2	400 (500)*2	--	100
R3-NM3	250 (350)*2	400 (500)*2	--	100
R3-NM4	280 (350)*2	430 (500)*2	--	70
R3-NML3	250 (350)*2	400 (500)*2	--	110
R3-NP1	220 (350)*2	370 (500)*2	--	130
R3-NL1	250 (350)*2	400 (500)*2	--	100
R3-NL2	250 (350)*2	400 (500)*2	--	100
R3-GC1	--	--	--	120
R3-GD1	--	--	--	80
R3-GE1	--	--	--	100
R3-GFL1	--	--	--	150
R3-GM1	--	--	--	100
R3-GSLMP1	--	--	--	100

*1. Maximum output rating for 10 minutes

*2. Values in parentheses do not include the current consumption of network interface modules

'-' under 'Minimum Consumption' column indicates that the maximum current consumption value is always applied.

The maximum current consumption for the output modules such as R3-DS4, R3-YS4, R3-DC16, R3-DC16A, R3-DC16B is applied when all channels are at their full-scale value or at ON.

The minimum current consumption for these modules is applied when all channels are at their minimum value or at OFF.

The total of the maximum current consumption must be within the limit of the continuous output rating. If the ON ratio is clearly identified, the current consumption can be calculated according to the following equation:

Current consumption = Min. consumption + (Max. consumption - Min. consumption) × ON ratio

In this case, the total of the maximum current consumption must not exceed the maximum output rating.

MODEL	MINIMUM CONSUMPTION (mA)	MAXIMUM CONSUMPTION (mA)	MODEL	MINIMUM CONSUMPTION (mA)	MAXIMUM CONSUMPTION (mA)
R3-SS4	--	60	R3-LC2	--	300
R3-SS8	--	100	R3-US4	--	60
R3Y-SS8	--	100	R3-PA2	--	80
R3-SS8N	--	60	R3-PA4	80	130
R3Y-SS8N	--	60	R3-PA4A	80	130
R3S-SS8N	--	60	R3-PA4B	80	130
R3-SS16N	--	100	R3-PA8	--	70
R3Y-SS16N	--	100	R3S-PA8	--	70
R3-SV4	--	60	R3-PA16	--	100
R3-SV4A	--	60	R3-PA16x/A	--	80
R3-SV4B	--	60	R3Y-PA16	--	100
R3-SV4C	--	60	R3Y-PA16x/A	--	80
R3-SV8	--	100	R3-PC16A	--	100
R3Y-SV8	--	100	R3-PD16	--	180
R3-SV8A	--	100	R3-PD16A	100	100
R3Y-SV8A	--	70	R3-PD16B	130	140
R3-SV8B	--	100	R3-PD16C	--	100
R3-SV8C	--	100	R3-BA32A	--	90
R3-SV8N	--	100	R3-BC32A	--	150
R3Y-SV8N	--	100	R3-DA8C	--	40
R3S-SV8N	--	100	R3-DA16	80	100
R3-SV16N	--	100	R3Y-DA16	80	100
R3Y-SV16N	--	100	R3S-DA16	80	100
R3-YV4	--	150	R3-DA16A	--	80
R3S-YV4	--	150	R3Y-DA16A	--	80
R3-YV8	--	200	R3-DA16B	--	80
R3Y-YV8	--	200	R3Y-DA16B	--	80
R3-YS4	150	180	R3-DA32A	--	90
R3-YS4x/H	200	260	R3-DA64A	--	100
R3Y-YS4	150	180	R3-DAC16	--	130
R3Y-YS4x/H	200	260	R3S-DAC16	--	130
R3S-YS4	150	180	R3-DAC16A	--	350
R3S-YS4x/H	200	260	R3S-DAC16A	--	350
R3-TS4	--	70	R3Y-DAC16D	--	150
R3-TS8	--	100	R3-DC8	30	60
R3-TS8A	--	100	R3S-DC8	30	60
R3-RS4	--	70	R3-DC16	130	180
R3-RS4A	--	70	R3Y-DC16	130	180
R3S-RS4A	--	70	R3-DC16A	100	100
R3-RS8	--	100	R3-DC16B	130	140
R3Y-RS8	--	100	R3-DC16C	--	100
R3-RS8A	--	100	R3-DC32A	150	150
R3-RS8B	--	120	R3-DC32C	--	110
R3-RT8A	--	60	R3-DC64A	160	160
R3-MS4	--	50	R3-DC64C	--	160
R3-MS8	--	100	R3-DC8D	30	70
R3Y-MS8	--	100	R3-RR8	--	40
R3-DS4	150	210	R3S-RR8	--	40
R3Y-DS4	--	210	R3-AS4	--	60
R3-DS4A	150	210	R3-AS8	--	100
R3-DS8N	--	60	R3-AV4	--	60
R3Y-DS8N	--	60	R3-AV8	--	100
R3-CT4	--	60	R3-AT4	--	70
R3-CT4A	--	60	R3-AR4	--	70
R3-CT4B	--	60	R3-AD4	--	210
R3-CT4C	--	60	R3-MEX2	--	50
R3-CT8A	--	100	R3-TC2	--	120
R3-CT8B	--	100			
R3-CT8C	--	100			
R3-PT4	--	60			
R3-CZ4	--	60			
R3-WTU	--	60			

Compact, Scalable Remote I/O

R30 Series

Optimal scalable remote I/O for Ethernet networks



LARGE
NUMBER I/O



SCALABLE



24 V_{DC}
POWER
SUPPLY



DUAL
POWER^{*1}



DUAL
NETWORK^{*1}



Compliance/approval depends upon models.
*1. Dual power/network options are under development.

110 mm height matches the latest PLCs

The R30 Series is compact at only 110 mm high, so it can be easily installed alongside the latest PLCs.

Improved internal bus speed

16 I/O modules, each with 16 I/O points (total 256 points), can transmit to the host network in approximately 1 ms.



DEPTH 110 mm (4.33")

R30 Series External Dimensions ►► PAGE 31

Supported network protocols

















Dual network option is under development.

*2. Future plan

Significantly smaller and faster than the R3 Series



Remote I/O R3 Series

Volume
approx. 30%
Smaller

Bus speed
approx. 60x
Faster



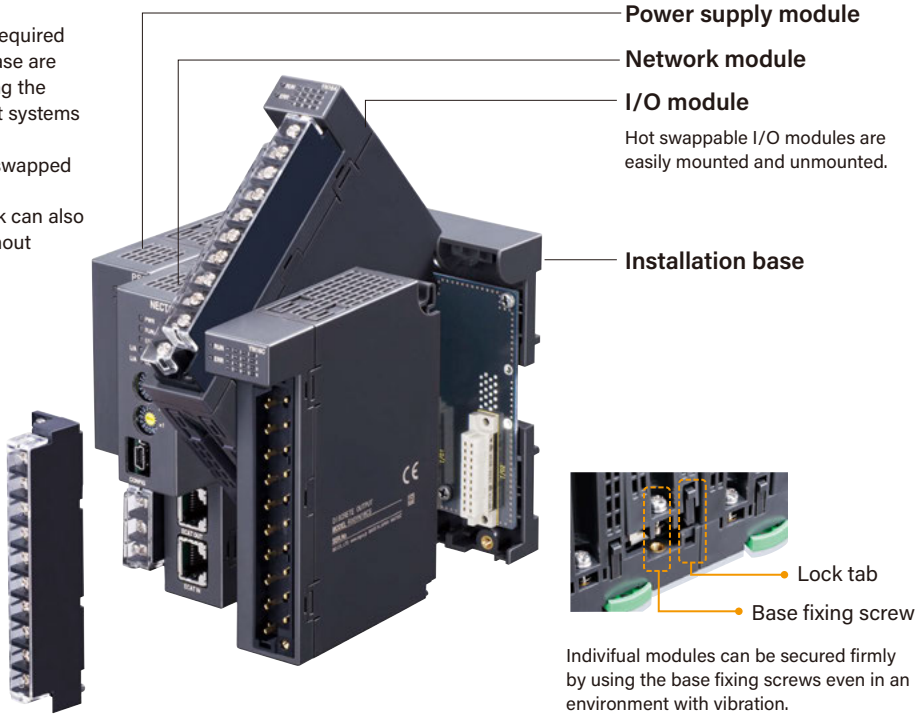
Remote I/O R30 Series

Compared to the similar R3 Series multi-channel, scalable remote I/O, the volume of each R30 Series module has been reduced by more than 30%. The speed of the internal bus has been increased by around 60x.

Selectable modules for installation base

With the R30 Series, just the required modules for the installation base are selected and installed, allowing the construction of highly efficient systems with no waste. The I/O modules can be hot-swapped even when the wiring is live. The I/O module terminal block can also be removed and installed without disconnecting the wiring, for convenient module changes.

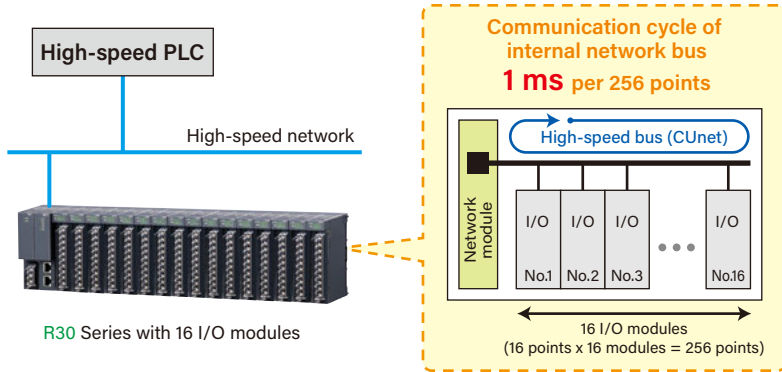
Terminal blocks can be separated without removing the wiring.



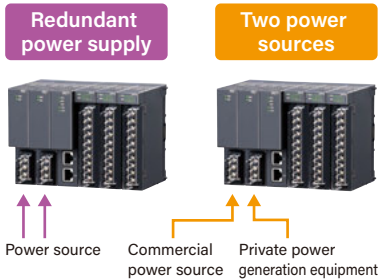
R30 Series features

Increased speed for internal network bus

For example, with 16 I/O modules with 16 discrete signal inputs and outputs for a total of 256 connections, the internal communication bus offers a blazing-fast communication cycle of about 1 millisecond.

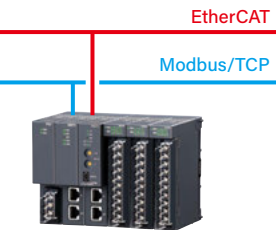


Dual power supply system (under development)



The R30 Series offers a range of power supply systems, including a redundant power supply option that supplies power to a module from two power supply modules and a two power sources option with separate power sources for each power supply module. (An installation base for dual power supplies is necessary. Please contact us for details.)

Dual network system (under development)



The R30 Series can communicate the same signal to two different types of networks by connecting a network module for each type. This is useful when an existing network and new network need to be used in parallel when constructing a new line in a plant.

Connecting with the R3 Series

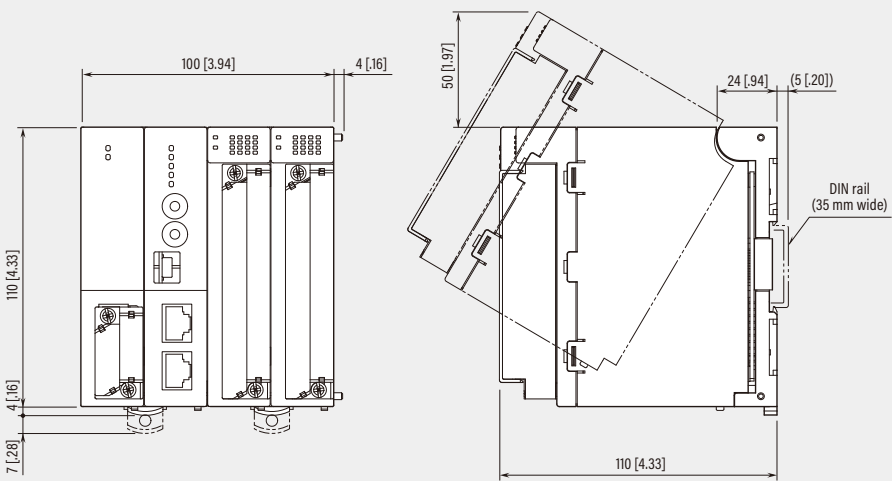


The installation base of the R30 Series allows for connection with our R3 Series remote I/O that features high cost performance and a broad lineup of I/O module types. Connecting the R30 Series and R3 Series makes it easy to take advantage of the strengths of both series. Connection requires the Installation Base for R3 I/O extension use (model: R30EBS). For the internal bus cycle of the R3 Series I/O modules, refer to the specifications of the Installation Base for R3 I/O extension use (model: R30EBS).

EXTERNAL DIMENSIONS unit: mm [inch]

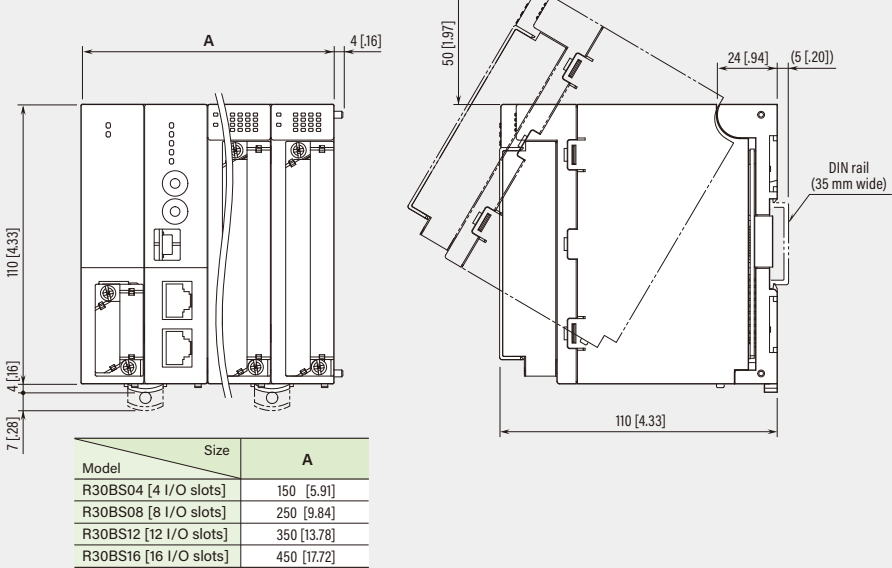
Dimensions may be slightly different depending upon models.

R30BS02 (2 I/O slots)



unit: mm [inch]

R30BS04, R30BS08, R30BS12, R30BS16



unit: mm [inch]

■ INSTALLATION BASE

PRODUCT	MODEL
INSTALLATION BASE	R30BS00 (for single use of models TR30, DL30)
	R30BS02
	R30BS04
	R30BS08
	R30BS12
	R30BS16
INSTALLATION BASE (R3 I/O module extension use)	R30EBS04
	R30EBS08

■ POWER SUPPLY MODULE

PRODUCT	MODEL
POWER SUPPLY MODULE (current capacity 800 mA)	R30PS1

■ NETWORK MODULE

PRODUCT	MODEL
NETWORK MODULE (CC-Link IE Field network)	R30NCIE1
NETWORK MODULE (CC-Link IE TSN)	R30NCIT1
NETWORK MODULE (EtherCAT)	R30NECT1
NETWORK MODULE (OPC UA)	R30NOUA1
MODBUS/TCP INTERFACE MODULE	R30NE1

■ NETWORK MODULE (gateway)

PRODUCT	MODEL
EtherCAT INTERFACE I/O MODULE (EtherCAT)	R30GECT1
CC-Link INTERFACE MODULE (CC-Link IE Field network)	R30GCIE1

. ESI files and CSP+ files are downloadable from our website.
CSP+ files are also downloadable from CC-Link Partner Association website.

■ ACCESSORY

PRODUCT	MODEL
BLANK FILLER MODULE	R30DM

■ ANALOG INPUT MODULE

PRODUCT	MODEL
DC VOLTAGE/CURRENT INPUT MODULE (2 points, isolated)	R30SV2
DC VOLTAGE/CURRENT INPUT MODULE (4 points, isolated)	R30SV4
HIGH-SPEED DC VOLTAGE/CURRENT INPUT MODULE (4 points, isolated)	R30SVF4
THERMOCOUPLE INPUT MODULE (4 points, isolated)	R30TS4
RTD INPUT MODULE (4 points, isolated)	R30RS4
POTENTIOMETER INPUT MODULE (4 points, isolated)	R30MS4
UNIVERSAL INPUT MODULE (2 points, isolated)	R30US2
UNIVERSAL INPUT MODULE (4 points, isolated)	R30US4

■ ANALOG OUTPUT MODULE

PRODUCT	MODEL
DC VOLTAGE OUTPUT MODULE (4 points, isolated)	R30YV4
DC CURRENT OUTPUT MODULE (4 points, isolated)	R30YS4

■ AC POWER INPUT MODULE

PRODUCT	MODEL
AC CURRENT INPUT MODULE (4 points, isolated, clamp-on current sensor type CLSE use)	R30CT4E

■ PULSE INPUT MODULE

PRODUCT	MODEL
TOTALIZED PULSE INPUT MODULE (Pi 2 points, 32 bits)	R30PA2

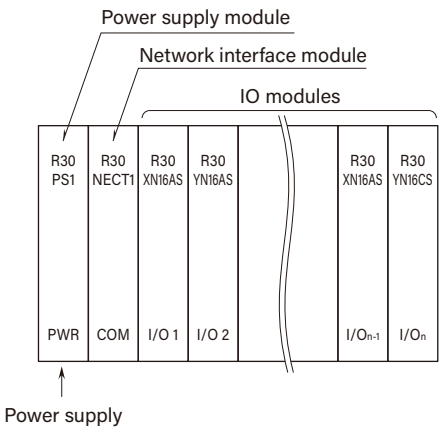
■ DISCRETE I/O MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (Di 16 points; with external excitation supply)	R30XN16A
DISCRETE OUTPUT MODULE (NPN transistor output, 16 points)	R30YN16A
DISCRETE OUTPUT MODULE (PNP transistor output, 16 points)	R30YN16C

PRODUCT	MODEL
CLAMP-ON CURRENT SENSOR	CLSE-R5
	CLSE-05
	CLSE-10
	CLSE-20
	CLSE-40
	CLSE-60

Basic module configurations

■ Basic configurations



■ Module positions

Mount the power supply module and network module on the dedicated slots (PWR and COM), and do not mount on I/O slots. PWR slot is on the left end and COM slot is on the immediate right of PWR slot.

The I/O slots are numbered in the ascending order starting from the one on the immediate right of the network module (slot 1, slot 2...).

A code indicating the I/O slot number is assigned to each I/O slot and I/O data is allocated in the order of this code.

When an I/O slot is vacant, blank data is sent or received to/from the PLC, etc.

Calculating current consumption

The network module and I/O modules operate with approx. 21 V DC power supply via the power supply module.

The total current consumption of the network module and I/O modules is required to be not more than the max. rated output current of the power supply module.

If the total current consumption exceeds the capacity of the power supply module, change the combination of I/O modules or reduce the number of I/O modules.

■ Power supply module

Model	Max. current consumption (mA)
R30PS1	800

■ Network module

Model	Max. current consumption (mA)
R30NCIE1	160
R30NCIT1	160
R30NECT1	110
R30NOUAT	115
R30NE1	110

■ Network module (gateway)

Model	Max. current consumption (mA)
R30GCIE1	140
R30GECT1	80

■ I/O module

Model	Max. current consumption (mA)
R30SV2	40
R30SV4	50
R30SVF4	50
R30TS4	55
R30RS4	50
R30MS4	60
R30US2	45
R30US4	50
R30YV4	60
R30YS4	120
R30CT4E	45
R30PA2	30
R30XN16A	40
R30YN16A	75
R30YN16C	75

■ R30 Configurator Software

The R30 Configurator Software is used to set and change parameters (input type, zero/span adjustments) for the R30 Series I/O modules, and to simulate input signals for loop testing. These parameters can be saved as a PC file.

Use a commercially available USB MINI B cable to connect the device to a PC (prepared by the customer).

The R30 Configurator Software (Model: RCFG) is downloadable from our website.

R30 Configurator Software
(Model: **RCFG**)

Commercially available
USB cable (MINI B)



Remote I/O
R30 Series

Compact, All-in-one Remote I/O

R7 Series

All-in-one, compact remote I/O



Compliance/approval depends upon models.

All-in-one, compact package

This is an economical remote I/O that fits in the palm of your hand and integrates the communication, power supply, and I/O sections.

Adding discrete signal input and output with extension modules

Extension modules for discrete signal input and output are available in a wide range of types.

Wide variety of networks

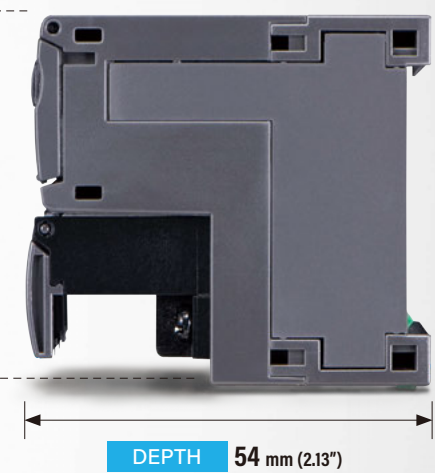
Supports a wide range of network types.

1/10000 high resolution

With an analog input module, 0 to 100% is transmitted as data resolved to 0 to 10000.

Power supply

Universal power supplies for 24 V AC/DC (R7L etc.) are also available.



Freely separable terminal block

The R7 Series terminal blocks utilize a structure that allows each terminal block to be removed and installed individually. This makes them very convenient, especially during inspections and specification changes.



The R7F4DH Series and others that are capable of I/O processing with e-CON (mini-clamp) connectors, MIL connectors, separable tension clamp terminal blocks, and other connectors are also available.



Network Protocols

	CC-Link use	R7C Series	PAGE 36		MECHATROLINK-III use	R7x4xML3 Series	PAGE 46
		R7F4DC Series	PAGE 37			R7ML Series	PAGE 49
		R7F4HC Series	PAGE 38			R7x4xML Series	PAGE 50
		R7K4GC Series	PAGE 38				
	CC-Link IE Field use	R7I4DCIE Series	PAGE 39		T-Link use	R7F Series	PAGE 51
	DeviceNet use	R7D Series	PAGE 39		FLEX NETWORK use	R7FN Series	PAGE 52
		R7F4DD Series	PAGE 40				
		R7F4HD Series	PAGE 41				
	Modbus use	R7M Series	PAGE 42		HLS (Hi-speed Link System) use	R7HL Series	PAGE 52
		R7K4FM Series	PAGE 43			R7F4DH Series	PAGE 53
		R7G4FM Series	PAGE 43			R7K4DH Series	PAGE 54
						R7G4HH Series	PAGE 54
	Modbus/TCP (Ethernet) use	R7E Series	PAGE 44		EtherCAT use	R7I4DECT Series	PAGE 55
		R7K4FE Series	PAGE 44			R7G4JECT Series	PAGE 55
	LONWORKS use	R7L Series	PAGE 45		EtherNet/IP use	R7F4HEIP Series	PAGE 56
						R7G4HEIP Series	PAGE 57
						R7I4DEIP Series	PAGE 57

One-touch extension module

Only one extension module can be connected to a base module. When adding contacts to the contact module, it is possible to add an extension module to an analog module and use it as a mixed analog and contact unit. Extension modules for FLEX NETWORK or HLS are not available.

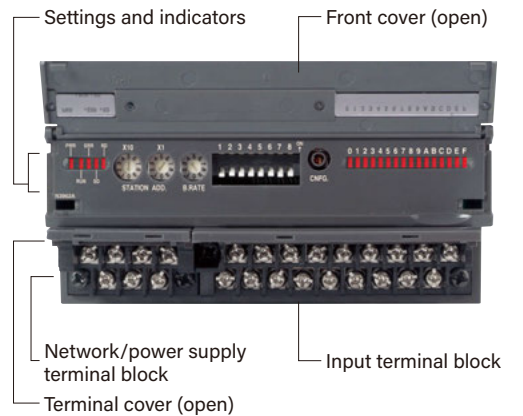


Base module

Extension module

Front panel

The front module cover provides access to the address setting rotary switch and setting DIP switch, allowing the sensor type and range to be selected. (The inside of the front cover varies depending on the network. The photo shows R7C-DA16.)



CC-Link use R7C Series



BASE MODULE

PRODUCT	UL	MODEL
DISCRETE INPUT MODULE (CC-Link Ver. 110, 16 points)	✓	R7C-DA16
NPN TRANSISTOR OUTPUT MODULE (CC-Link Ver. 110, 16 points)	✓	R7C-DC16A *1
PNP TRANSISTOR OUTPUT MODULE (CC-Link Ver. 110, 16 points)	✓	R7C-DC16B *1
RELAY CONTACT OUTPUT MODULE (CC-Link Ver. 110, 8 points)	--	R7C-DC8C *2
RELAY CONTACT OUTPUT MODULE (CC-Link Ver. 110, 8 points)	--	R7C-DC8E *1
CURRENT LOOP SUPPLY INPUT MODULE (CC-Link Ver. 110, 4 points, non-isolated)	--	R7C-DS4N
REMOTE CONTROL RELAY CONTROL MODULE (CC-Link Ver. 110, 4 points)	--	R7C-RR4 *2
DC VOLTAGE/CURRENT INPUT MODULE (CC-Link Ver. 110, 4 points)	✓	R7C-SV4
THERMOCOUPLE INPUT MODULE (CC-Link Ver. 110, 4 points)	✓	R7C-TS4
RTD INPUT MODULE (CC-Link Ver. 110, 4 points)	--	R7C-RS4
THERMISTOR INPUT MODULE (CC-Link Ver. 110, 4 points)	--	R7C-RT4A
POTENTIOMETER INPUT MODULE (CC-Link Ver. 110, 4 points)	--	R7C-MS4
AC CURRENT INPUT MODULE (CC-Link Ver. 110, 4 points, clamp-on current sensor CLSE use)	--	R7C-CT4E
TOTALIZED PULSE INPUT MODULE (CC-Link Ver. 110, 8 points)	--	R7C-PA8
DC VOLTAGE OUTPUT MODULE (CC-Link Ver. 110, 2 points)	✓	R7C-YV2
DC VOLTAGE OUTPUT MODULE (CC-Link Ver. 110, 4 points)	--	R7C-YV4 *2
DC CURRENT OUTPUT MODULE (CC-Link Ver. 110, 2 points)	✓	R7C-YS2
DC CURRENT OUTPUT MODULE (CC-Link Ver. 110, 4 points)	--	R7C-YS4 *2

*1. Extension module R7C-ECxA, R7C-ECxB and R7C-EN8 can be connected.
*2. Not usable with extension modules.
. To fulfill UL/C-UL requirements, this equipment is to be supplied by a Class 2 power supply.

EXTENSION MODULE

PRODUCT	UL	MODEL
DISCRETE INPUT MODULE (CC-Link Ver. 110, 8 points)	--	R7C-EA8
DISCRETE INPUT MODULE (CC-Link Ver. 110, 16 points)	✓	R7C-EA16
NPN TRANSISTOR OUTPUT MODULE (CC-Link Ver. 110, 8 points)	--	R7C-EC8A
NPN TRANSISTOR OUTPUT MODULE (CC-Link Ver. 110, 16 points)	✓	R7C-EC16A
PNP TRANSISTOR OUTPUT MODULE (CC-Link Ver. 110, 8 points)	--	R7C-EC8B
PNP TRANSISTOR OUTPUT MODULE (CC-Link Ver. 110, 16 points)	✓	R7C-EC16B
RELAY CONTACT OUTPUT MODULE (CC-Link Ver. 110, 8 points)	--	R7C-EC8C

. To fulfill UL/C-UL requirements, this equipment is to be supplied by a Class 2 power supply.

MULTI POWER MONITORING MODULE

PRODUCT	MODEL
MULTI POWER MONITORING MODULE (CC-Link Ver. 110, clamp-on current sensor CLSE)	R7CWTU *2

*2. Not usable with extension modules.

GATEWAY MODULE

PRODUCT	MODEL
GATEWAY MODULE	R7G

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

. R7 Configurator Software (Model: R7CON), R7xWTU Configurator Software (Model: PMCFG) and CSP+ files are downloadable from our website.

PRODUCT	MODEL
CLAMP-ON CURRENT SENSOR	CLSE-R5
	CLSE-05
	CLSE-10
	CLSE-20
	CLSE-40
	CLSE-60

CC-Link use R7F4DC Series



R7F4DC SERIES

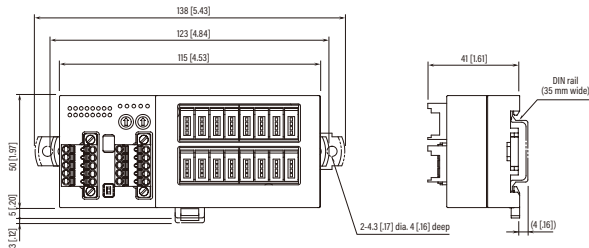
PRODUCT	MODEL
CC-Link I/O MODULE (NPN discrete input, 16 points)	R7F4DC-DA16A-x
CC-Link I/O MODULE (PNP discrete input, 16 points)	R7F4DC-DA16B-x
CC-Link I/O MODULE (NPN transistor output, 16 points)	R7F4DC-DC16A-x *1
CC-Link I/O MODULE (PNP transistor output, 16 points)	R7F4DC-DC16B-x *1
CC-Link I/O MODULE (NPN transistor output, 8 points)	R7F4DC-DC8A-x *2
CC-Link I/O MODULE (NPN discrete input & NPN transistor output, 8 points each)	R7F4DC-DAC16C-x
CC-Link I/O MODULE (PNP discrete input & PNP transistor output, 8 points each)	R7F4DC-DAC16D-x *1

· “x” is filled with the terminal block type code H: e-CON connector, C: Tension clamp terminal block, or J: One-touch connector.
*1. Terminal block type H: e-CON connector or C: Tension clamp terminal block are selectable.
*2. Terminal block type J: One-touch connector is selectable.
· CSP+ files are downloadable from our website.

EXTERNAL DIMENSIONS unit: mm [inch]

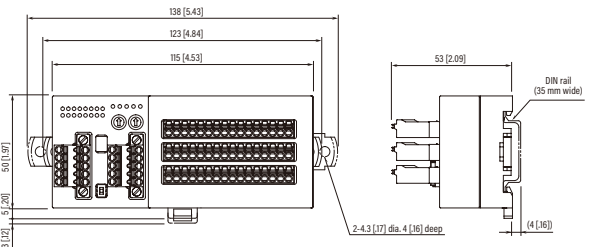
Dimensions may be slightly different depending upon models.

e-CON connector



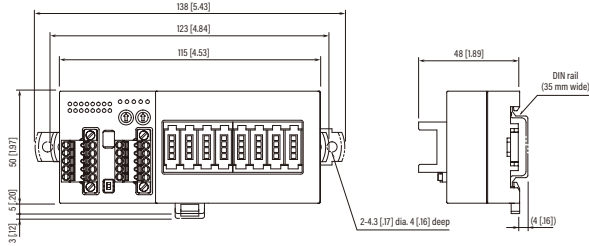
e-CON connector type

Tension clamp terminal block



Tension clamp terminal block type

One-touch connector



One-touch connector type

Other Series
&
Related Products

R8 Series

R80 Series

R3 Series

R30 Series

R7 Series

Other Series
&
Related Products

CC-Link use R7F4HC Series



R7F4HC SERIES FCN connector

PRODUCT	MODEL
CC-Link I/O MODULE (NPN/PNP discrete input, 32 points)	R7F4HC-DA32-K
CC-Link I/O MODULE (NPN transistor output, 32 points)	R7F4HC-DC32A-K
CC-Link I/O MODULE (PNP transistor output, 32 points)	R7F4HC-DC32B-K
CC-Link I/O MODULE (NPN/PNP discrete input, NPN discrete output, 16 points each)	R7F4HC-DAC32C-K
CC-Link I/O MODULE (NPN/PNP discrete input, PNP discrete output, 16 points each)	R7F4HC-DAC32D-K

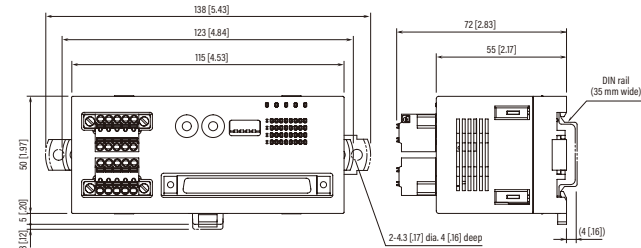
· CSP+ files are downloadable from our website.
CSP+ files are also downloadable from CC-Link Partner Association web site.



R7F4HC Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



CC-Link use R7K4GC Series



R7K4GC SERIES Tension clamp terminal block

PRODUCT	MODEL
CC-Link I/O MODULE (NPN/PNP discrete input, 32 points)	NEW R7K4GC-DA32
CC-Link I/O MODULE (NPN transistor output, 32 points)	NEW R7K4GC-DC32A
CC-Link I/O MODULE (NPN/PNP discrete input, NPN transistor output, 16 points each)	NEW R7K4GC-DAC32C

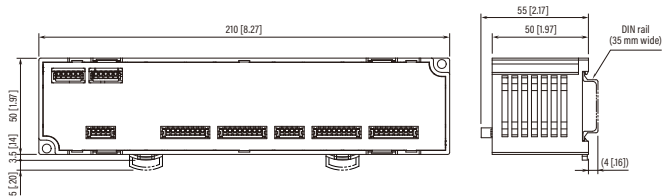
· CSP+ files are downloadable from our website.
CSP+ files are also downloadable from CC-Link Partner Association web site.



R7K4GC Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R8 Series

R80 Series

R3 Series

R30 Series

R7 Series

Other Series
&
Related Products

CC-Link IE Field use R7I4DCIE Series



R7I4DCIE SERIES

PRODUCT	MODEL
CC-Link I/O MODULE (CC-Link IE Field network, strain gauge input, 2 points, isolated)	NEW R7I4DCIE-LC2-9

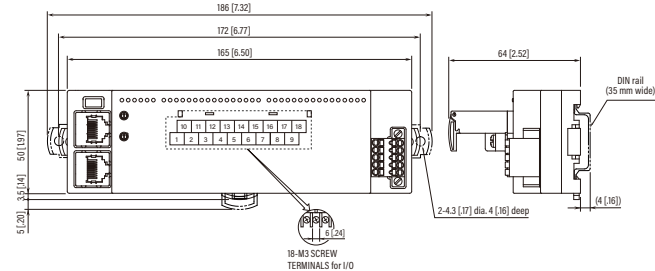
· R7xxx Configurator Software (Model: R7CFG) and CSP+ files are downloadable from our website.
CSP+ files are also downloadable from CC-Link Partner Association web site.



R7I4DCIE Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



DeviceNet use R7D Series



BASE MODULE

PRODUCT	UL	MODEL
DISCRETE INPUT MODULE (DeviceNet, 16 points)	--	R7D-DA16
NPN TRANSISTOR OUTPUT MODULE (16 points, DeviceNet)	--	R7D-DC16A
PNP TRANSISTOR OUTPUT MODULE (DeviceNet, 16 points)	--	R7D-DC16B
RELAY CONTACT OUTPUT MODULE (DeviceNet, 8 points)	--	R7D-DC8C *1
RELAY CONTACT OUTPUT MODULE (DeviceNet, 8 points)	--	R7C-DC8E
REMOTE CONTROL RELAY CONTROL MODULE (DeviceNet, 8 points)	--	R7D-RR8
DC VOLTAGE/CURRENT INPUT MODULE (DeviceNet, 4 points)	✓	R7D-SV4
THERMOCOUPLE INPUT MODULE (DeviceNet, 4 points)	✓	R7D-TS4
RTD INPUT MODULE (DeviceNet, 4 points)	--	R7D-RS4
POTENTIOMETER INPUT MODULE (DeviceNet, 4 points)	--	R7D-MS4
AC CURRENT INPUT MODULE (DeviceNet, 4 points, clamp-on current sensor CLSE use)	--	R7D-CT4E
TOTALIZED PULSE INPUT MODULE (DeviceNet, 8 points)	--	R7D-PA8
DC VOLTAGE OUTPUT MODULE (DeviceNet, 2 points)	✓	R7D-YV2
DC VOLTAGE OUTPUT MODULE (DeviceNet, 2 points, external power supply)	--	R7D-YV2A
DC CURRENT OUTPUT MODULE (DeviceNet, 2 points)	✓	R7D-YS2
DC CURRENT OUTPUT MODULE (DeviceNet, 2 points, external power supply)	--	R7D-YS2A

*1. Not usable with extension modules.
· To fulfill UL/C-UL requirements, this equipment is to be supplied by a Class 2 power supply.

EXTENSION MODULE

PRODUCT	UL	MODEL
DISCRETE INPUT MODULE (DeviceNet, 8 points)	--	R7D-EA8
DISCRETE INPUT MODULE (DeviceNet, 16 points)	--	R7D-EA16
NPN TRANSISTOR OUTPUT MODULE (DeviceNet, 8 points)	--	R7D-EC8A
NPN TRANSISTOR OUTPUT MODULE (DeviceNet, 16 points)	--	R7D-EC16A
PNP TRANSISTOR OUTPUT MODULE (DeviceNet, 8 points)	--	R7D-EC8B
PNP TRANSISTOR OUTPUT MODULE (DeviceNet, 16 points)	--	R7D-EC16B
RELAY CONTACT OUTPUT MODULE (DeviceNet, 8 points)	--	R7D-EC8C

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

· R7 Configurator Software (Model: R7CON) and EDS files are downloadable from our website.

PRODUCT	MODEL
CLAMP-ON CURRENT SENSOR	CLSE-R5
	CLSE-05
	CLSE-10
	CLSE-20
	CLSE-40
	CLSE-60

R8 Series

R80 Series

R3 Series

R30 Series

R7 Series

Other Series
&
Related Products

DeviceNet use R7F4DD Series



R7F4DD SERIES

PRODUCT	MODEL
DeviceNet I/O MODULE (NPN discrete input, 16 points)	R7F4DD-DA16A-x
DeviceNet I/O MODULE (PNP discrete input, 16 points)	R7F4DD-DA16B-x
DeviceNet I/O MODULE (NPN discrete output, 16 points)	R7F4DD-DC16A-x
DeviceNet I/O MODULE (PNP discrete output, 16 points)	R7F4DD-DC16B-x
DeviceNet I/O MODULE (NPN discrete input, NPN discrete output, 8 points each)	R7F4DD-DAC16C-x
DeviceNet I/O MODULE (PNP discrete input, PNP discrete output, 8 points each)	R7F4DD-DAC16D-x

· "x" is filled with the terminal block type code C: Tension-clamp terminal block, or H: e-CON connector.

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

· R7xxx Configurator Software (Model: R7CFG) and EDS files are downloadable from our website.

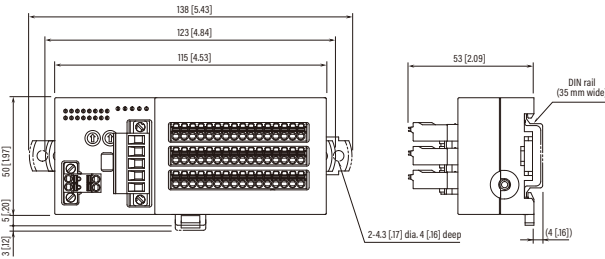
EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.

Tension clamp terminal block



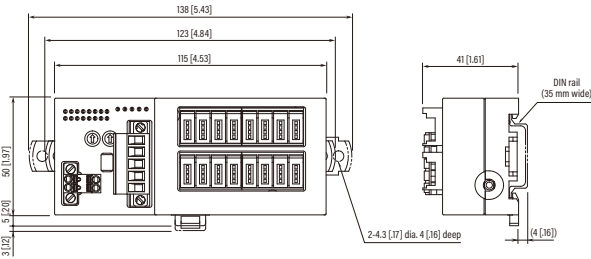
Tension clamp terminal block type



e-CON connector



e-CON connector type



R8 Series

R80 Series

R3 Series

R30 Series

R7 Series

Other Series
&
Related Products

DeviceNet use R7F4HD Series



R7F4HD SERIES MIL connector

PRODUCT	MODEL
DeviceNet I/O MODULE (NPN discret input, 32 points)	R7F4HD-DA32A
DeviceNet I/O MODULE (PNP discret input, 32 points)	R7F4HD-DA32B
DeviceNet I/O MODULE (NPN discrete input & NPN transistor output, 16 points each)	R7F4HD-DAC32C
DeviceNet I/O MODULE (PNP discrete input & PNP transistor output, 16 points each)	R7F4HD-DAC32D
DeviceNet I/O MODULE (NPN transistor output, 32 points)	R7F4HD-DC32A
DeviceNet I/O MODULE (PNP transistor output, 32 points)	R7F4HD-DC32B

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

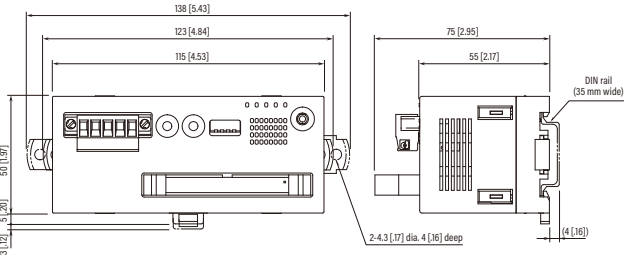
· R7xxx Configurator Software (Model: R7CFG) and EDS files are downloadable from our website.

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R7F4HD Series external view



R8 Series

R80 Series

R3 Series

R30 Series

R7 Series

Other Series
&
Related Products

Modbus use R7M Series



Modbus

BASE MODULE

PRODUCT	UL	MODEL
DISCRETE INPUT MODULE (Modbus, 16 points)	✓	R7M-DA16
DISCRETE INPUT MODULE (Modbus, 16 points, 115.2 kbps)	--	R7M-DA16F
NPN TRANSISTOR OUTPUT MODULE (Modbus, 16 points)	✓	R7M-DC16A
PNP TRANSISTOR OUTPUT MODULE (Modbus, 16 points)	✓	R7M-DC16B
NPN DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE (Modbus, 8 points each, 115.2 kbps)	--	R7M-DAC16C
PNP DISCRETE INPUT & PNP TRANSISTOR OUTPUT MODULE (Modbus, 8 points each, 115.2 kbps)	--	R7M-DAC16D
RELAY CONTACT OUTPUT MODULE (Modbus, 8 points)	--	R7M-DC8C *1
RELAY C CONTACT OUTPUT MODULE (Modbus, 4 points, 115.2 kbps)	--	R7M-DC4G *1
REMOTE CONTROL RELAY CONTROL MODULE (Modbus, 8 points, 115.2 kbps)	--	R7M-RR8
REMOTE CONTROL RELAY CONTROL MODULE (Modbus, 8 points, 115.2 kbps, independent output common)	--	R7M-RR8C
DC VOLTAGE/CURRENT INPUT MODULE (Modbus, 4 points)	✓	R7M-SV4
THERMOCOUPLE INPUT MODULE (Modbus, 4 points)	✓	R7M-TS4
RTD INPUT MODULE (Modbus, 4 points)	--	R7M-RS4
POTENTIOMETER INPUT MODULE (Modbus, 4 points)	--	R7M-MS4
AC CURRENT INPUT MODULE (Modbus, 4 points, clamp-on current sensor CLSE use)	--	R7M-CT4E
TOTALIZED PULSE INPUT MODULE (Modbus, 8 points, 115.2 kbps)	--	R7M-PA8
DC VOLTAGE OUTPUT MODULE (Modbus, 2 points)	✓	R7M-YV2
DC CURRENT OUTPUT MODULE (Modbus, 2 points)	✓	R7M-YS2

*1. Not usable with extension modules.

· To fulfill UL/C-UL requirements, this equipment is to be supplied by a Class 2 power supply.

MULTI POWER MONITORING MODULE

PRODUCT	MODEL
MULTI POWER MONITORING MODULE (Modbus, clamp-on current sensor CLSE)	R7MWTU *2

*2. R7MWTU-EA8 is usable only with the 2-system type.

EXTENSION MODULE FOR R7MWTU

PRODUCT	MODEL
EXTENSION MODULE (Modbus, 8 points)	R7MWTU-EA8 *3

*3. Only the R7MWTU-221-AD4, 2-system type, can use the extension module.

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

· R7 Configurator Software (Model: R7CON) and R7xWTU Configurator Software (Model: PMCFG) are downloadable from our website.

PRODUCT	MODEL
CLAMP-ON CURRENT SENSOR	CLSE-R5
	CLSE-05
	CLSE-10
	CLSE-20
	CLSE-40
	CLSE-60

Other Series & Related Products

www.mgco.jp

Modbus use R7K4FM Series

Modbus

R7K4FM SERIES

PRODUCT	MODEL
MODBUS I/O MODULE (NPN/PNP discrete input, 32 points, Modbus use)	R7K4FM-DA32

· R7xxx Configurator Software (Model: R7CFG) is downloadable from our website.

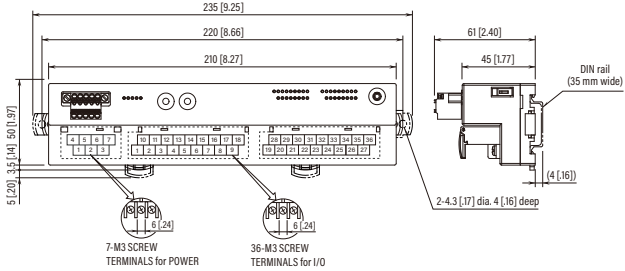
· A dedicated cable is required to connect the device to a PC. For applicable cable models, refer to our website or the instruction manual for PC Configurator Software.

R7K4FM Series external view



EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



Other Series & Related Products

www.mgco.jp

Modbus use R7G4FM Series

Modbus

R7G4FM SERIES

PRODUCT	MODEL
MODBUS I/O MODULE (NPN/PNP discrete input, 16 points, Modbus use)	R7G4FM-DA16

· R7xxx Configurator Software (Model: R7CFG) is downloadable from our website.

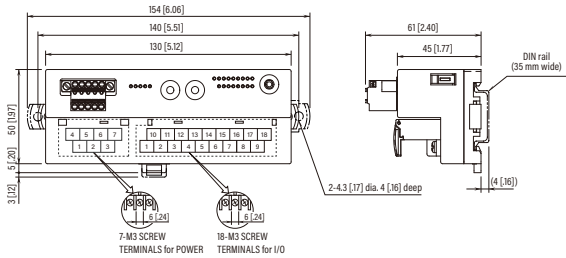
· A dedicated cable is required to connect the device to a PC. For applicable cable models, refer to our website or the instruction manual for PC Configurator Software.

R7G4FM Series external view



EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



Other Series & Related Products

www.mgco.jp

Modbus/TCP use R7E Series



Modbus/TCP

BASE MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (Ethernet Modbus/TCP, 16 points)	R7E-DA16
NPN TRANSISTOR OUTPUT MODULE (Ethernet Modbus/TCP, 16 points)	R7E-DC16A
PNP TRANSISTOR OUTPUT MODULE (Ethernet Modbus/TCP, 16 points)	R7E-DC16B
DC VOLTAGE/CURRENT INPUT MODULE (Ethernet Modbus/TCP, 4 points)	R7E-SV4
THERMOCOUPLE INPUT MODULE (Ethernet Modbus/TCP, 4 points)	R7E-TS4
RTD INPUT MODULE (Ethernet Modbus/TCP, 4 points)	R7E-RS4
POTENTIOMETER INPUT MODULE (Ethernet Modbus/TCP, 4 points)	R7E-MS4
AC CURRENT INPUT MODULE (Ethernet Modbus/TCP, 4 points, clamp-on current sensor CLSE use)	R7E-CT4E
TOTALIZED PULSE INPUT MODULE (Ethernet Modbus/TCP, 8 points)	R7E-PA8
DC VOLTAGE OUTPUT MODULE (Ethernet Modbus/TCP, 2 points)	R7E-YV2
DC CURRENT OUTPUT MODULE (Ethernet Modbus/TCP, 2 points)	R7E-YS2

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

· R7 Configurator Software (Model: R7CON) and R7xWTU Configurator Software (Model: PMCFG) are downloadable from our website.

EXTENSION MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (Ethernet Modbus/TCP, 8 points)	R7E-EA8
DISCRETE INPUT MODULE (Ethernet Modbus/TCP, 16 points)	R7E-EA16
NPN TRANSISTOR OUTPUT MODULE (Ethernet Modbus/TCP, 8 points)	R7E-EC8A
NPN TRANSISTOR OUTPUT MODULE (Ethernet Modbus/TCP, 16 points)	R7E-EC16A
PNP TRANSISTOR OUTPUT MODULE (Ethernet Modbus/TCP, 8 points)	R7E-EC8B
PNP TRANSISTOR OUTPUT MODULE (Ethernet Modbus/TCP, 16 points)	R7E-EC16B

MULTI POWER MONITORING MODULE

PRODUCT	MODEL
MULTI POWER MONITORING MODULE (Ethernet Modbus/TCP, clamp-on current sensor CLSE)	R7EWTU *1

*1. Not usable with extension modules.

PRODUCT	MODEL
CLAMP-ON CURRENT SENSOR	CLSE-R5
	CLSE-05
	CLSE-10
	CLSE-20
	CLSE-40
	CLSE-60

Modbus/TCP use R7K4FE Series

Modbus/TCP

R7K4FE SERIES

PRODUCT	MODEL
ETHERNET I/O MODULE (Modbus/TCP (Ethernet), relay contact output, 16 points)	R7K4FE-6-DC16

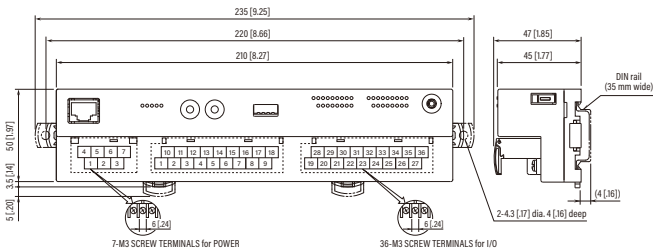
ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

· R7 Configurator Software (Model: R7CON) and R7xWTU Configurator Software (Model: PMCFG) are downloadable from our website.

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R7K4FE Series external view

LONWORKS use R7L Series



LONWORKS

BASE MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (LONWORKS, 16 points)	R7L-DA16 *1
NPN TRANSISTOR OUTPUT MODULE (LONWORKS, 16 points)	R7L-DC16A *2 *4
PNP TRANSISTOR OUTPUT MODULE (LONWORKS, 16 points)	R7L-DC16B *2 *4
PNP DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE (LONWORKS, 8 points each)	R7L-DAC16 *3
REMOTE CONTROL RELAY CONTROL MODULE (LONWORKS, 8 points)	R7L-RR8 *4
DC VOLTAGE/CURRENT INPUT MODULE (LONWORKS, 4 points)	R7E-SV4
THERMOCOUPLE INPUT MODULE (LONWORKS, 4 points)	R7E-TS4
RTD INPUT MODULE (LONWORKS, 4 points)	R7E-RS4
DC VOLTAGE OUTPUT MODULE (LONWORKS, 2 points)	R7L-YV2 *4
DC CURRENT OUTPUT MODULE (LONWORKS, 2 points)	R7L-YS2 *4

- *1. Compatible with totaled pulse inputs.
*2. Compatible with one-shot pulse outputs.
*3. Compatible with totaled pulse inputs and one-shot pulse outputs.
*4. Compatible with totaled pulse inputs when an extension module is connected.

EXTENSION MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (LONWORKS, 8 points)	R7L-EA8
DISCRETE INPUT MODULE (LONWORKS, 16 points)	R7L-EA16
NPN TRANSISTOR OUTPUT MODULE (LONWORKS, 8 points)	R7L-EC8A
NPN TRANSISTOR OUTPUT MODULE (LONWORKS, 16 points)	R7L-EC16A
PNP TRANSISTOR OUTPUT MODULE (LONWORKS, 8 points)	R7L-EC8B
PNP TRANSISTOR OUTPUT MODULE (LONWORKS, 16 points)	R7L-EC16B

MULTI POWER MONITORING MODULE

PRODUCT	MODEL
MULTI POWER MONITORING MODULE (LONWORKS, clamp-on current sensor CLSE)	R7LWTU *5

*5. R7LWTU-EA8 is usable only with the 2-system type.

EXTENSION MODULE FOR R7LWTU

PRODUCT	MODEL
EXTENSION MODULE (LONWORKS, 8 points)	R7LWTU-EA8 *6

*6. Only the R7LWTU-221-AD4, 2-system type, can use the extension module.

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

· LNS Plug-in Software (Model: R7LPLG), XIF files (Device Interface File) and R7xWTU Configurator Software (Model: PMCFG) are downloadable from our website.

PRODUCT	MODEL
CLAMP-ON CURRENT SENSOR	CLSE-R5
	CLSE-05
	CLSE-10
	CLSE-20
	CLSE-40
	CLSE-60

MECHATROLINK-III use R7K4FML3 Series



R7K4FML3 SERIES

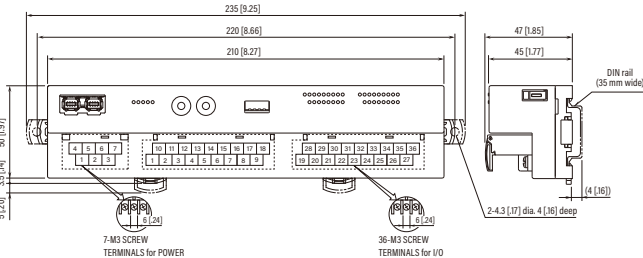
PRODUCT	UL	MODEL
MECHATROLINK I/O MODULE (NPN/PNP discrete input, 32 points, MECHATROLINK-III use, external excitation 24 V)	✓	R7K4FML3-6-DA32
MECHATROLINK I/O MODULE (NPN/PNP discrete input, 32 points, MECHATROLINK-III use, external excitation 12 V)	--	R7K4FML3-6-DA32-1
MECHATROLINK I/O MODULE (NPN transistor output, 32 points, MECHATROLINK-III use, external excitation 24 V)	✓	R7K4FML3-6-DC32A
MECHATROLINK I/O MODULE (NPN transistor output, 32 points, MECHATROLINK-III use, external excitation 12 V)	--	R7K4FML3-6-DC32A1
MECHATROLINK I/O MODULE (PNP transistor output, 32 points, MECHATROLINK-III use, external excitation 24 V)	--	R7K4FML3-6-DC32B
MECHATROLINK I/O MODULE (NPN/PNP discrete input & NPN transistor output, 16 points each, MECHATROLINK-III use)	✓	R7K4FML3-6-DAC32A
MECHATROLINK I/O MODULE (NPN/PNP discrete input & PNP transistor output, 16 points each, MECHATROLINK-III use)	--	R7K4FML3-6-DAC32B

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R7K4FML3 Series



MECHATROLINK-III use R7K4JML3 Series



R7K4JML3 SERIES Tension clamp terminal block

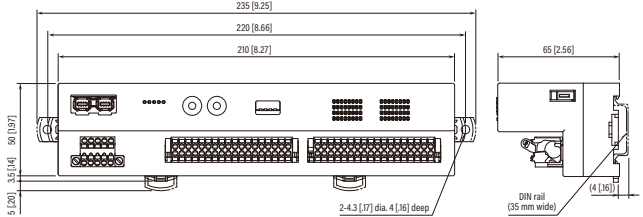
PRODUCT	MODEL
MECHATROLINK I/O MODULE (MECHATROLINK-III use, NPN/PNP discrete high-speed input & NPN transistor output, 32 points each)	R7K4JML3-E-DAFC64A

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R7K4JML3 Series



R8 Series

R80 Series

R3 Series

R30 Series

R7 Series

Other Series
&
Related Products

MECHATROLINK-III use R7G4FML3 Series



R7G4FML3 SERIES

PRODUCT	UL	MODEL
MECHATROLINK I/O MODULE (NPN/PNP discret input, 16 points, MECHATROLINK-III use)	✓	R7G4FML3-6-DA16
MECHATROLINK I/O MODULE (NPN discret input, 16 points, e-CON connector, MECHATROLINK-III use)	--	R7G4FML3-B-DA16A
MECHATROLINK I/O MODULE (NPN transistor output, 16 points, MECHATROLINK-III use)	✓	R7G4FML3-6-DC16A
MECHATROLINK I/O MODULE (PNP transistor output, 16 points, MECHATROLINK-III use)	✓	R7G4FML3-6-DC16B

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

. R7xxx Configurator Software (Model: R7CFG) is downloadable from our website.

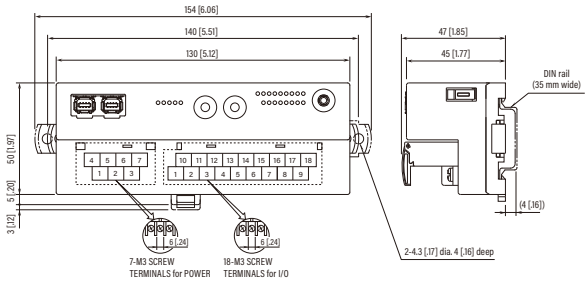
EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.

Screw terminal block



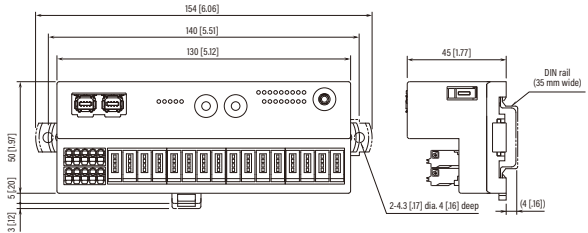
R7G4FML3 external view (screw terminal block)



e-CON connector



R7G4FML3 external view (e-CON connector)



MECHATROLINK-III use R7F4HML3 Series



R7F4HML3 SERIES MIL connector

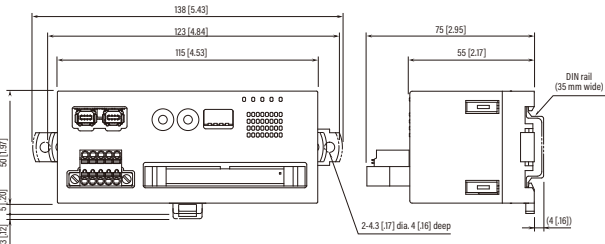
PRODUCT	MODEL
MECHATROLINK I/O MODULE (NPN/PNP discrete input & NPN transistor output, 16 points each, MECHATROLINK-III use)	R7F4HML3-D-DAC32A
MECHATROLINK I/O MODULE (NPN/PNP discrete input & PNP transistor output, 16 points each, MECHATROLINK-III use)	R7F4HML3-D-DAC32B

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R7F4HML3 Series external view



R8 Series

R80 Series

R3 Series

R30 Series

R7 Series

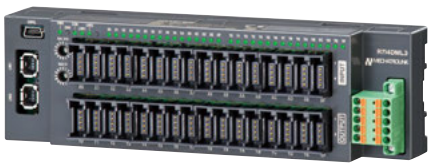
Other Series
&
Related Products

MECHATROLINK-III use R7I4DML3 Series



R7I4DML3 SERIES e-CON connector

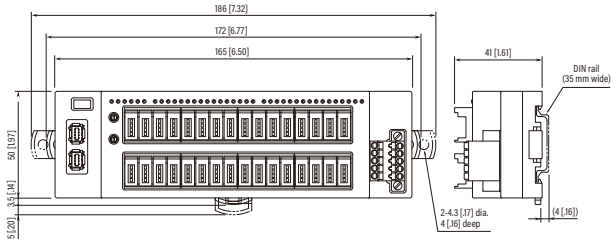
PRODUCT	MODEL
MECHATROLINK I/O MODULE (NPN discrete input, 32 points, MECHATROLINK-III use)	R7I4DML3-DA32A
MECHATROLINK I/O MODULE (NPN discrete input & NPN transistor output, 16 points each, MECHATROLINK-III use)	R7I4DML3-DAC32C
MECHATROLINK I/O MODULE (NPN transistor output, 32 points, MECHATROLINK-III use)	R7I4DML3-DC32A



R7I4DML3 Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



MECHATROLINK-III use R7G4HML3 Series



R7G4HML3 SERIES

PRODUCT	UL	MODEL
MECHATROLINK I/O MODULE (DC voltage/current input, 4 points, isolated, MECHATROLINK-III use)	--	R7G4HML3-6-SV4
MECHATROLINK I/O MODULE (high-speed DC voltage/current input, 4 points, isolated, MECHATROLINK-III use)	✓	R7G4HML3-6-SVF4
MECHATROLINK I/O MODULE (high resolution, high-speed DC voltage/current input, 4 points, isolated, MECHATROLINK-III use)	--	R7G4HML3-6-SVAF4
MECHATROLINK I/O MODULE (thermocouple input, 4 points, isolated, MECHATROLINK-III use)	--	R7G4HML3-6-TS4
MECHATROLINK I/O MODULE (strain gauge input, 2 points, isolated, message transmission command, MECHATROLINK-III use)	--	R7G4HML3-6-LC2
MECHATROLINK I/O MODULE (tension sensor input (Nireco tension sensor), 2 points, isolated, message transmission command, MECHATROLINK-III use)	--	R7G4HML3-6-LC2A
MECHATROLINK I/O MODULE (encoder input, 1 point, MECHATROLINK-III use)	--	R7G4HML3-6-PA1
MECHATROLINK I/O MODULE (self-synch input & DC voltage/current output, 1 point each, isolated, message transmission command, MECHATROLINK-III use)	--	R7G4HML3-6-STYVS1
MECHATROLINK I/O MODULE (high-speed DC voltage output, 4 points, isolated, MECHATROLINK-III use)	✓	R7G4HML3-6-YVF4
MECHATROLINK I/O MODULE (high-speed DC current output, 4 points, isolated, MECHATROLINK-III use)	--	R7G4HML3-6-YSF4

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

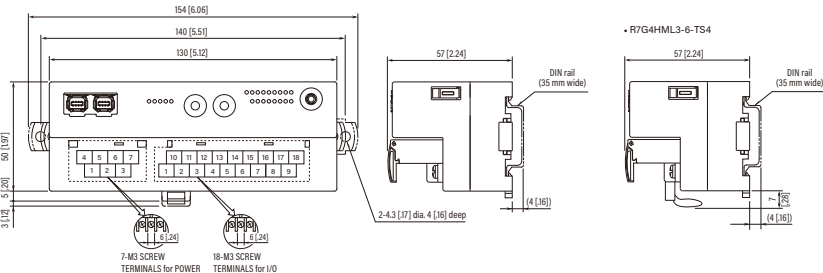
- R7xxx Configurator Software (Model: R7CFG) is downloadable from our website.



R7G4HML3 Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



MECHATROLINK-III use R7K4GML3 Series



R7K4GML3 SERIES Tension clamp terminal block

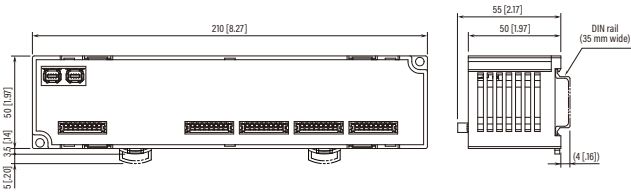
PRODUCT	MODEL
MECHATROLINK I/O MODULE (NPN/PNP discrete input & NPN transistor output, 16 points each, MECHATROLINK-III use)	R7K4GML3-DAC32C



R7K4GML3 Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



MECHATROLINK-I/-II use R7ML Series



BASE MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (MECHATROLINK-I/-II, 16 points)	R7ML-DA16
NPN TRANSISTOR OUTPUT MODULE (MECHATROLINK-I/-II, 16 points)	R7ML-DC16A
PNP TRANSISTOR OUTPUT MODULE (MECHATROLINK-I/-II, 16 points)	R7ML-DC16B
PNP TRANSISTOR OUTPUT MODULE (MECHATROLINK-I/-II, 16 points, shortcircuit protection)	R7ML-DC16D
DC VOLTAGE/CURRENT INPUT MODULE (MECHATROLINK-I/-II, 4 points)	R7ML-SV4
THERMOCOUPLE INPUT MODULE (MECHATROLINK-I/-II, 4 points)	R7ML-TS4
RTD INPUT MODULE (MECHATROLINK-I/-II, 4 points)	R7ML-RS4
STRAIN GAUGE INPUT MODULE (MECHATROLINK-I/-II, 2 points, with monitor output)	R7ML-LC2
DC VOLTAGE OUTPUT MODULE (MECHATROLINK-I/-II, 2 points)	R7ML-YV2
DC CURRENT OUTPUT MODULE (MECHATROLINK-I/-II, 2 points)	R7ML-YS2

EXTENSION MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (MECHATROLINK-I/-II, 8 points)	R7ML-EA8
DISCRETE INPUT MODULE (MECHATROLINK-I/-II, 16 points)	R7ML-EA16
NPN TRANSISTOR OUTPUT MODULE (MECHATROLINK-I/-II, 8 points)	R7ML-EC8A
NPN TRANSISTOR OUTPUT MODULE (MECHATROLINK-I/-II, 16 points)	R7ML-EC16A
PNP TRANSISTOR OUTPUT MODULE (MECHATROLINK-I/-II, 8 points)	R7ML-EC8B
PNP TRANSISTOR OUTPUT MODULE (MECHATROLINK-I/-II, 16 points)	R7ML-EC16B
PNP TRANSISTOR OUTPUT MODULE (MECHATROLINK-I/-II, 8 points, shortcircuit protection)	R7ML-EC8D
PNP TRANSISTOR OUTPUT MODULE (MECHATROLINK-I/-II, 16 points, shortcircuit protection)	R7ML-EC16D

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

- R7 Configurator Software (Model: R7CON) is downloadable from our website.

MECHATROLINK-I/-II use R7K4FML Series



R7K4FML SERIES

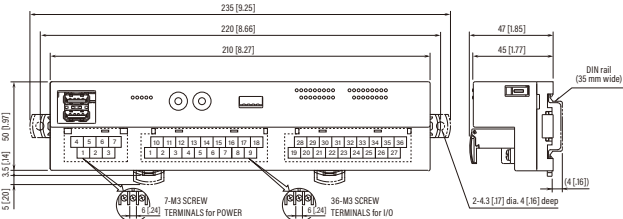
PRODUCT	MODEL
MECHATROLINK I/O MODULE (NPN/PNP discrete input, 32 points, MECHATROLINK-I/-II use)	R7K4FML-6-DA32
MECHATROLINK I/O MODULE (NPN transistor output & NPN/PNP discrete input, 16 points each, MECHATROLINK-I/-II use)	R7K4FML-6-DCA32A
MECHATROLINK I/O MODULE (NPN transistor output, 32 points, MECHATROLINK-I/-II use)	R7K4FML-6-DC32A
MECHATROLINK I/O MODULE (PNP transistor output, 32 points, MECHATROLINK-I/-II use)	R7K4FML-6-DC32B



R7K4FML Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R8 Series

R80 Series

R3 Series

MECHATROLINK-I/-II use R7K4DML Series



R7K4DML SERIES e-CON connector

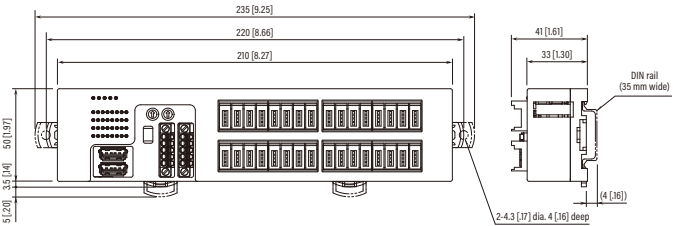
PRODUCT	MODEL
MECHATROLINK I/O MODULE (NPN discrete input, 32 points, MECHATROLINK-I/-II use)	R7K4DML-B-DA32A
MECHATROLINK I/O MODULE (PNP discrete input, 32 points, MECHATROLINK-I/-II use)	R7K4DML-B-DA32B
MECHATROLINK I/O MODULE (PNP discrete input, NPN transistor output, 16 points each, MECHATROLINK-I/-II use)	R7K4DML-B-DAC32A
MECHATROLINK I/O MODULE (NPN discrete input, PNP transistor output, 16 points each, MECHATROLINK-I/-II use)	R7K4DML-B-DAC32B
MECHATROLINK I/O MODULE (NPN discrete input, NPN transistor output, 16 points each, MECHATROLINK-I/-II use)	R7K4DML-B-DAC32C
MECHATROLINK I/O MODULE (PNP discrete input, PNP transistor output, 16 points each, MECHATROLINK-I/-II use)	R7K4DML-B-DAC32D



R7K4DML Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



Other Series
&
Related Products

MECHATROLINK-I/-II use R7G4HML Series



R7G4HML SERIES

PRODUCT	MODEL
MECHATROLINK I/O MODULE (high-speed DC voltage/current input, 4 points, isolated, MECHATROLINK-I/-II use)	R7G4HML-6-SVF4
MECHATROLINK I/O MODULE (high-speed DC voltage input, 8 points, non-isolated, MECHATROLINK-I/-II use)	R7G4HML-6-SVF8N
MECHATROLINK I/O MODULE (high-speed DC voltage output, 4 points, isolated, MECHATROLINK-I/-II use)	R7G4HML-6-YVF4

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

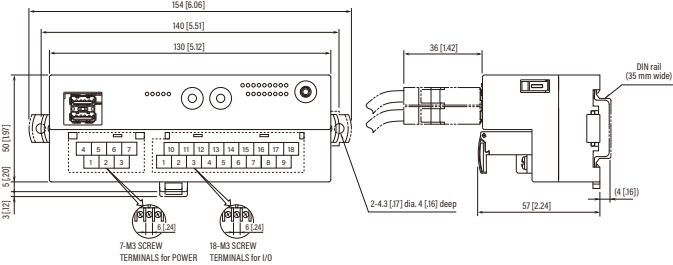
. R7xxx Configurator Software (Model: R7CFG) is downloadable from our website.



R7G4HML Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R8 Series

R80 Series

R3 Series

T-Link use R7F Series



T-Link

BASE MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (T-Link, 16 points)	R7F-DA16
NPN TRANSISTOR OUTPUT MODULE (T-Link, 16 points)	R7F-DC16A
PNP TRANSISTOR OUTPUT MODULE (T-Link, 16 points)	R7F-DC16B
RELAY CONTACT OUTPUT MODULE (T-Link, 8 points)	R7F-DC8C *1

*1. Not usable with extension modules.

EXTENSION MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (T-Link, 8 points)	R7F-EA8
DISCRETE INPUT MODULE (T-Link, 16 points)	R7F-EA16
NPN TRANSISTOR OUTPUT MODULE (T-Link, 8 points)	R7F-EC8A
NPN TRANSISTOR OUTPUT MODULE (T-Link, 16 points)	R7F-EC16A
PNP TRANSISTOR OUTPUT MODULE (T-Link, 8 points)	R7F-EC8B
PNP TRANSISTOR OUTPUT MODULE (T-Link, 16 points)	R7F-EC16B

R30 Series

R7 Series

Other Series
&
Related Products

FLEX NETWORK use R7FN Series



FLEX NETWORK®

BASE MODULE

PRODUCT	MODEL
DISCRETE INPUT MODULE (FLEX NETWORK, 16 points)	R7FN-DA16
NPN TRANSISTOR OUTPUT MODULE (FLEX NETWORK, 16 points)	R7FN-DC16A
PNP TRANSISTOR OUTPUT MODULE (FLEX NETWORK, 16 points)	R7FN-DC16B
PNP DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE (FLEX NETWORK, 8 points each)	R7FN-DAC16A
NPN DISCRETE INPUT & PNP TRANSISTOR OUTPUT MODULE (FLEX NETWORK, 8 points each)	R7FN-DAC16B
RELAY CONTACT OUTPUT MODULE (FLEX NETWORK, 8 points)	R7FN-DC8C
DC VOLTAGE/CURRENT INPUT MODULE (FLEX NETWORK, 4 points, isolated)	R7FN-SV4
HIGH SPEED DC VOLTAGE/CURRENT INPUT MODULE (FLEX NETWORK, 4 points, non-isolated)	R7FN-SVF4

PRODUCT	MODEL
THERMOCOUPLE INPUT MODULE (FLEX NETWORK, 4 points, isolated)	R7FN-TS4
RTD INPUT MODULE (FLEX NETWORK, 4 points, isolated)	R7FN-RS4
DC VOLTAGE OUTPUT MODULE (FLEX NETWORK, 2 points, isolated)	R7FN-YV2
DC CURRENT OUTPUT MODULE (FLEX NETWORK, 2 points, isolated)	R7FN-YS2

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

· R7 Configurator Software (Model: R7CON) is downloadable from our website.

HLS use R7HL Series



HLS Hi-speed
Link
System

BASE MODULE

PRODUCT	MODEL
HLS I/O MODULE (discrete input, 16 points)	R7HL-DA16
HLS I/O MODULE (NPN transistor output, 16 points)	R7HL-DC16A
HLS I/O MODULE (PNP transistor output, 16 points)	R7HL-DC16B
HLS I/O MODULE (discrete input, 8 points & NPN transistor output, 7 points, independent I/O common)	R7HL-DAC15E
HLS I/O MODULE (PNP discrete input & NPN transistor output, 8 points each)	R7HL-DAC16A
HLS I/O MODULE (NPN discrete input & PNP transistor output, 8 points each)	R7HL-DAC16B
HLS I/O MODULE (NPN discrete input & NPN transistor output, 8 points each)	R7HL-DAC16C
HLS I/O MODULE (discrete input & NPN transistor output, 8 points each (independent I/O common))	R7HL-DAC16ES
HLS I/O MODULE (relay contact output, 8 points)	R7HL-DC8C
HLS I/O MODULE (DC voltage/current input, 4 points)	R7HL-SV4
HLS I/O MODULE (DC voltage/current input, high speed, 4 points, non-isolated)	R7HL-SVF4
HLS I/O MODULE (thermocouple input, 4 points)	R7HL-TS4
HLS I/O MODULE (RTD input, 4 points)	R7HL-RS4
HLS I/O MODULE (strain gauge input, 2 points, with monitor output)	R7HL-LC2

PRODUCT	MODEL
HLS I/O MODULE (totalized pulse input, 4 points)	R7HL-PA4E
HLS I/O MODULE (encoder speed/position input, 2 points (RS-422 input))	R7HL-PA2SJ
HLS I/O MODULE (encoder speed/position input, 2 points (5 V open collector input))	R7HL-PA2SA1
HLS I/O MODULE (encoder speed/position input, 2 points (12 V open collector input))	R7HL-PA2SA4
HLS I/O MODULE (encoder speed/position input, 2 points (24 V open collector input))	R7HL-PA2SA7
HLS I/O MODULE (DC voltage output, 2 points)	R7HL-YV2
HLS I/O MODULE (DC current output, 2 points)	R7HL-YS2
HLS I/O MODULE (DC current output, 4 points, isolated, 12 bits data)	R7HL-YS4L
HLS I/O MODULE (DC voltage input, high speed, 8 points, non-isolated, 12 bits data)	R7HL-SVF8NL
HLS I/O MODULE (DC voltage output, 4 points, isolated, 12 bits data)	R7HL-YV4L

GATEWAY MODULE

PRODUCT	MODEL
GATEWAY MODULE	R7G

ACCESSORY

PRODUCT	MODEL
HUB MODULE	JC-HL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

· R7 Configurator Software (Model: R7CON) is downloadable from our website.

HLS use R7F4DH Series

HLS Hi-speed
Link
System

R7F4DH SERIES

PRODUCT	MODEL
NPN DISCRETE INPUT MODULE (HLS, 16 points)	R7F4DH-x-DA16A
PNP DISCRETE INPUT MODULE (HLS, 16 points)	R7F4DH-x-DA16B
NPN TRANSISTOR OUTPUT MODULE (HLS, 16 points)	R7F4DH-x-DC16A
PNP TRANSISTOR OUTPUT MODULE (HLS, 16 points)	R7F4DH-x-DC16B
PNP DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE (HLS, 8 points each)	R7F4DH-x-DAC16A
NPN DISCRETE INPUT & PNP TRANSISTOR OUTPUT MODULE (HLS, 8 points each)	R7F4DH-x-DAC16B
NPN DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE (HLS, 8 points each)	R7F4DH-x-DAC16C
PNP DISCRETE INPUT & PNP TRANSISTOR OUTPUT MODULE (HLS, 8 points each)	R7F4DH-x-DAC16D
PNP DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE (HLS, 16 points each)	R7F4DH-x-DAC32A *1
NPN DISCRETE INPUT & PNP TRANSISTOR OUTPUT MODULE (HLS, 16 points each)	R7F4DH-x-DAC32B *1
NPN DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE (HLS, 16 points each)	R7F4DH-x-DAC32C *1
PNP DISCRETE INPUT & PNP TRANSISTOR OUTPUT MODULE (HLS, 16 points each)	R7F4DH-x-DAC32D *1

· “x” is filled with the terminal block type code 1: e-CON connector, 2: MIL connector 1, 3: MIL connector 2, or 4: ension clamp terminal block.
*1. Terminal block type code 2: MIL connector 1 or 3: MIL connector 2 is selectable.



e-CON connector



MIL connector (16 points)

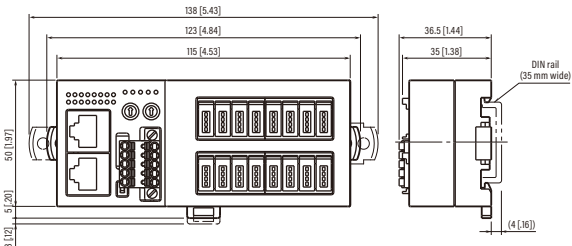


Tension clamp terminal block

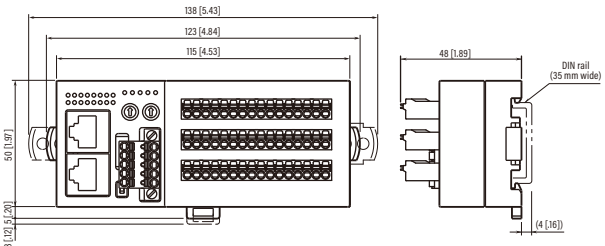
EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.

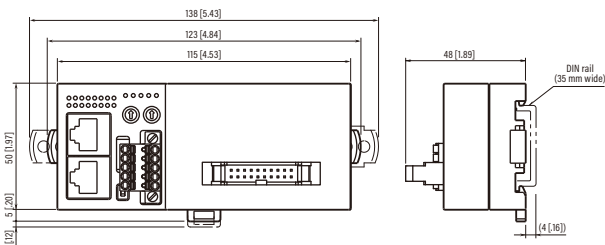
Terminal block type code 1: e-CON connector



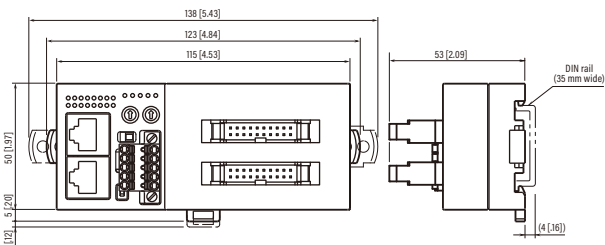
Terminal block type code 4: Tension clamp terminal block



Terminal block type code 2, 3: MIL connector (16 points)



Terminal block type code 2, 3: MIL connector (32 points)



HLS use R7K4DH Series



R7K4DH SERIES e-CON connector

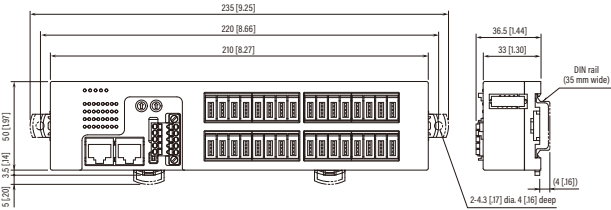
PRODUCT	MODEL
PNP DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE (HLS, 16 points each)	R7K4DH-1-DAC32A
NPN DISCRETE INPUT & PNP TRANSISTOR OUTPUT MODULE (HLS, 16 points each)	R7K4DH-1-DAC32B
NPN DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE (HLS, 16 points each)	R7K4DH-1-DAC32C
PNP DISCRETE INPUT & PNP TRANSISTOR OUTPUT MODULE (HLS, 16 points each)	R7K4DH-1-DAC32D



R7K4DH Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R8 Series

R80 Series

R3 Series

HLS use R7G4HH Series



R7G4HH SERIES

PRODUCT	MODEL
HI-SPEED LINK SYSTEM I/O MODULE (HLS-compatible, high-speed DC voltage/current input, 4 points, isolated)	R7G4HH-A-SVF4
HI-SPEED LINK SYSTEM I/O MODULE (HLS-compatible, high-speed DC voltage output, 4 points, isolated)	R7G4HH-A-YVF4

ACCESSORY

PRODUCT	MODEL
PC CONFIGURATOR CABLE (USB - miniature jack, isolated)	COP-US
PC CONFIGURATOR CABLE	MCN-CON

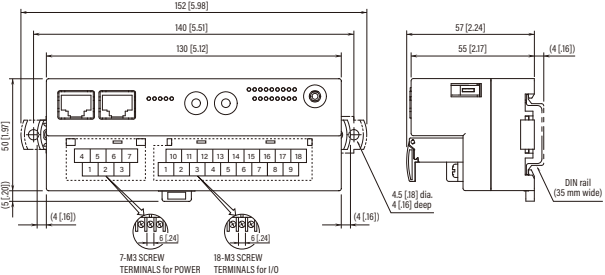
. R7xxx Configurator Software (Model: R7CFG) is downloadable from our website.



R7G4HH Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



Other Series
&
Related Products

EtherCAT use R7I4DECT Series



R7I4DECT SERIES e-CON connector

PRODUCT	MODEL
EtherCAT I/O MODULE (NPN discrete input, 32 points)	R7I4DECT-1-DA32A
EtherCAT I/O MODULE (NPN discrete input & NPN transistor output, 16 points each)	R7I4DECT-1-DAC32C
EtherCAT I/O MODULE (NPN transistor output, 32 points each)	R7I4DECT-1-DC32A
EtherCAT I/O MODULE (high-speed DC voltage input, 8 points, non-isolated)	R7I4DECT-1-SVF8N
EtherCAT I/O MODULE (high-speed DC voltage input, DC current input, 4 points each, non-isolated)	R7I4DECT-1-SVSF8N
EtherCAT I/O MODULE (high-speed totalized pulse input, 8 points)	R7I4DECT-1-PA8A
EtherCAT I/O MODULE (high-speed DC voltage output, 4 points)	R7I4DECT-1-YVF4

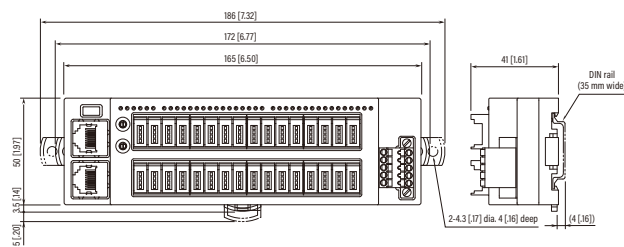
- . R7xxx Configurator Software (Model: R7CFG) and ESI files are downloadable from our website.
- . Use a commercially available USB MINI B cable to connect the device to a PC (prepared by the customer).
- . Junction slave module is available. See Page 59.



Discrete I/O module (DA32A, DAC32C, DC32A) external view
. Details vary depending upon models. Refer to the data sheet.

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R8 Series

R80 Series

R3 Series

EtherCAT use R7G4JECT Series



R7G4JECT SERIES

PRODUCT	MODEL
EtherCAT I/O MODULE (strain gauge input, 2 points, isolated)	NEW R7G4JECT-LC2-A

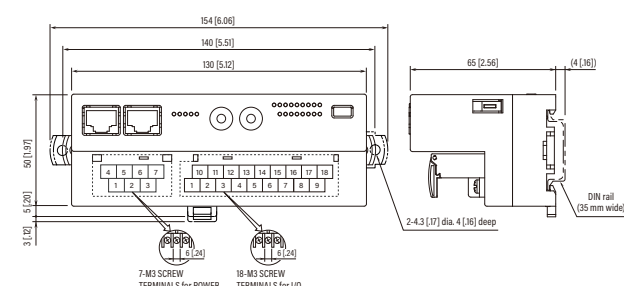
- . R7xxx Configurator Software (Model: R7CFG) and ESI files are downloadable from our website.
- . Use a commercially available USB MINI B cable to connect the device to a PC (prepared by the customer).
- . Junction slave module is available. See Page 59.



R7G4JECT Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R30 Series

R7 Series

Other Series
&
Related Products

EtherNet/IP use R7F4HEIP Series



R7F4HEIP SERIES Tension clamp terminal block

PRODUCT		MODEL
EtherNet/IP I/O MODULE (NPN/PNP discrete input, 16 points)	NEW	R7F4HEIP-DA16-M *1
EtherNet/IP I/O MODULE (NPN discrete input, 16 points)		R7F4HEIP-DA16A-4 *2
EtherNet/IP I/O MODULE (NPN discrete input, 32 points)	NEW	R7F4HEIP-DA32A-4 *2
EtherNet/IP I/O MODULE (PNP discrete input, 32 points)	NEW	R7F4HEIP-DA32B-4 *2
EtherNet/IP I/O MODULE (NPN discrete input, PNP transistor output, 8 points each)		R7F4HEIP-DAC16B-4 *2
EtherNet/IP I/O MODULE (NPN discrete input, NPN transistor output, 8 points each)		R7F4HEIP-DAC16C-4 *2
EtherNet/IP I/O MODULE (PNP discrete input, PNP transistor output, 8 points each)	NEW	R7F4HEIP-DAC16D-4 *2
EtherNet/IP I/O MODULE (NPN transistor output, 16 points)		R7F4HEIP-DC16A-4 *2
EtherNet/IP I/O MODULE (NPN transistor output, 16 points)	NEW	R7F4HEIP-DC16A-M *1
EtherNet/IP I/O MODULE (PNP transistor output, 16 points)		R7F4HEIP-DC16B-4 *2
EtherNet/IP I/O MODULE (PNP transistor output, 16 points)	NEW	R7F4HEIP-DC16B-M *1
EtherNet/IP I/O MODULE (NPN transistor output, 32 points)	NEW	R7F4HEIP-DC32A-4 *2
EtherNet/IP I/O MODULE (PNP transistor output, 32 points)	NEW	R7F4HEIP-DC32B-4 *2

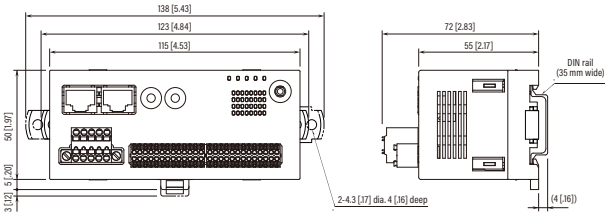
- *1. Terminal block code M (I/O): Tension clamp terminal block (applicable wire size: 0.2 - 1.5 mm²)
*2. Terminal block code 4 (I/O): Tension clamp terminal block (applicable wire size: 0.14 - 0.5 mm²)
· R7xxx Configurator Software (Model: R7CFG) and EDS files are downloadable from our website.
· A dedicated cable is required to connect the device to a PC. For applicable cable models, refer to our website or the instruction manual for PC Configurator Software.



R7F4HEIP external view
· Details vary depending upon models. Refer to the data sheet.

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R8 Series

R80 Series

R3 Series

R30 Series

R7 Series

Other Series
&
Related Products

EtherNet/IP use R7G4HEIP Series



R7G4HEIP SERIES

PRODUCT	MODEL
EtherNet/IP I/O MODULE (NPN/PNP discrete input, 16 points)	R7G4HEIP-6-DA16
EtherNet/IP I/O MODULE (NPN transistor output, 16 points)	R7G4HEIP-6-DC16A
EtherNet/IP I/O MODULE (PNP transistor output, 16 points)	R7G4HEIP-6-DC16B

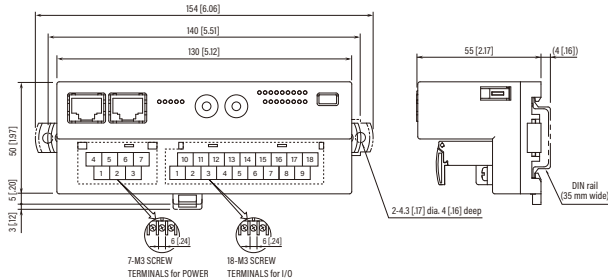
- R7xxx Configurator Software (Model: R7CFG) and EDS files are downloadable from our website.
· Use a commercially available USB MINI B cable to connect the device to a PC (prepared by the customer).



R7G4HEIP Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



R8 Series

R80 Series

R3 Series

R30 Series

R7 Series

Other Series
&
Related Products

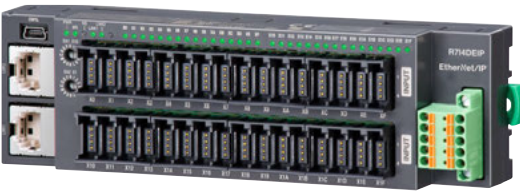
EtherNet/IP use R7I4DEIP Series



R7I4DEIP SERIES e-CON connector

PRODUCT	MODEL
EtherNet/IP I/O MODULE (NPN discrete input, 32 points)	NEW R7I4DEIP-DA32A-1
EtherNet/IP I/O MODULE (NPN discrete input, NPN transistor output, 16 points each)	NEW R7I4DEIP-DAC32C-1
EtherNet/IP I/O MODULE (NPN transistor output, 32 points)	NEW R7I4DEIP-DC32A-1

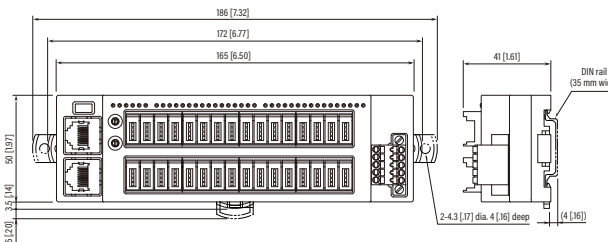
- R7xxx Configurator Software (Model: R7CFG) and EDS files are downloadable from our website.
· Use a commercially available USB MINI B cable to connect the device to a PC (prepared by the customer).



R7I4DEIP Series external view

EXTERNAL DIMENSIONS unit: mm [inch]

Dimensions may be slightly different depending upon models.



Other Remote I/O Series

Plug-in Remote I/O
R10 Series

All new plug-in-type remote I/O

Modbus



Multi-point Remote I/O for AC power monitoring/logging
R9 Series

Compact and economical AC power measurement remote I/O

CC-Link Modbus/TCP LONWORKS
Modbus



Ultra-slim, Scalable Remote I/O
R6 Series

Super-compact combination-type remote I/O

CC-Link DeviceNet PROFIBUS
Modbus Modbus/TCP T-Link



Compact, Scalable Remote I/O
R5 Series

Dual communication network, dual power supply remote I/O

CC-Link DeviceNet PROFIBUS
Modbus Modbus/TCP T-Link



Compact, Multi-point Remote I/O
R1 Series

Desktop operable remote I/O

CC-Link DeviceNet Modbus



Related Products

**BA8NS Series Remote I/O
SPE Converter**

If you want to transmit Ethernet signals over 100 meters (109 yards), fiber optics cables are usually used. By using a pair of SPE Converters, expensive fiber optics cables and fiber media converters including installation work costs can be eliminated for a great total cost reduction.

- LAN cables can be substituted by twisted-pair cables.
- Transmitting max. 1000 meters (0.62 mile) in 10 Mbps data rate
- Existing spare twisted-pair cable may be used.



**JC Series Remote I/O
Hub Module, Junction Slave Module**

The HUB module is used to branch the communication cable or extend its total length. Modules for HLS and CUnet are available. The junction module can provide EtherCAT flexible wiring with a combination of daisy chain connections and branching connections.

HLS Hi-speed Link System CUnet EtherCAT



Hub Module for HLS JC-HL (7 ports)

**JC Series Remote I/O
I/O Connection Module**

I/O mapping uses I/O Connection Module network communication via an IP (Internet Protocol) network such as LAN/WAN or VPN (Virtual Private Network), and is a function that allows for input signals and output signals to be freely connected to a remote I/O or other module on the network.

This allows the construction of an IP telemeter system that performs centralized monitoring of remotely installed field signals via the I/O Connection Module. LAN cables can be substituted by twisted-pair cables.

- Supports Modbus/TCP clients and SLMP clients
- Input values can be viewed and output values can be operated using a web browser.

Modbus/TCP



**MP Series Remote I/O
HLS Master Module**

This optional module can be installed on YASKAWA Electric MP2200, MP2300, or MP3300 Series machine controllers. It operates as a master module connecting analog input and output or discrete signal input and output using HLS (High-speed Link System).

- With the MP3200, this module can be used by installing the MP2000 optional base module.



HLS Master Module MPHLS

YASKAWA Machine Controller MP2200 / MP2300 / MP3300 Series



**FAM Series Remote I/O
CC-Link Master Module**

This is a CC-Link master module that connects to the Yokogawa Electric FA-M3V PLC. Slave devices from various manufacturers supporting CC-Link can be connected, and CSP+* is also supported. A wide range of remote I/O from our company can be connected.

- * CSP+: CC-Link family system profile
- PC Configurator Software (model: FAMCLCFG) can be downloaded from our website.
- In order to use FAMCLCFG, the Yokogawa Electric WideField3 (R.3.02 or later) FA-M3 program development tool is required.
- This module is connected to the PC via the FA-M3V CPU module.

