

Autonics

Slim Remote I/O [Coupler] ARIO-C SERIES

INSTRUCTION MANUAL

Thank you very much for selecting Autonics products.
For your safety, please read the following before using.

■ Safety Considerations

※ Please observe all safety considerations for safe and proper product operation to avoid hazards.

※ ⚠ symbol represents caution due to special circumstances in which hazards may occur.

⚠ Warning Failure to follow these instructions may result in serious injury or death.

⚠ Caution Failure to follow these instructions may result in personal injury or product damage.

⚠ Warning

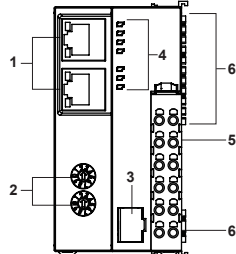
1. Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss. (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)
Failure to follow this instruction may result in personal injury, fire or economic loss.
2. Do not use the unit in the place where flammable/explosive/corrosive gas, high humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.
Failure to follow this instruction may result in explosion or fire.
3. Do not disassemble or modify the unit.
Failure to follow this instruction may result in fire.
4. Do not connect, repair, or inspect the unit while connected to a power source.
Failure to follow this instruction may result in fire.
5. Check 'Connections' before wiring.
Failure to follow this instruction may result in fire.

⚠ Caution

1. Use the unit within the rated specifications.
Failure to follow this instruction may result in fire or shortening the life cycle of the product.
2. Use dry cloth to clean the unit, and do not use water or organic solvent.
Failure to follow this instruction may result in fire or electric shock.
3. When connecting the power input and output, use AWG 22-16 cable and check the connecting method of crimp terminal.
Failure to follow this instruction may result in fire or malfunction due to contact failure.
4. Keep metal chip, dust, and wire residue from flowing into the unit.
Failure to follow this instruction may result in fire or product damage.
5. Do not connect or disconnect connector (terminal) wire or power, when the product is operating.
Failure to follow this instruction may result in fire or malfunction of the product.

■ Unit Descriptions




※ It may be different depending on the coupler model.



1. Communication connector
2. Communication setting switch
3. Setting connector (USB 2.0 type Micro B)
4. Indicators for power and comm. status
5. Power terminal block
6. ABUS comm. connector

- ※ The above specifications are subject to change and some models may be discontinued without notice.
※ Be sure to follow cautions written in the instruction manual, user manual and the technical descriptions (catalog, website).

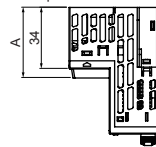
■ Specifications

Model	ARIO-C-EC	ARIO-C-CL	ARIO-C-PN	ARIO-C-PB	ARIO-C-EI	ARIO-C-DN	ARIO-C-MT	ARIO-C-MR	
Coupler type	EtherCAT	CC-Link	ProfiNet	Profibus	Ethernet/IP	DeviceNet	ModbusTCP compatible	ModbusRTU compatible	
Power supply ^{※1}	ABUS(external consump.) 24VDC≒, max. 400mA (max. 9.6W, coupler+module, max. 200mA/CH, 2CH/COM) ABUS(internal supply) 5VDC≒, max. 960mA (max. 4.8W, module) I/O 24VDC≒, max. 4,000mA (max. 96W, max. 2,000mA/CH, 2CH/COM)								
Power consumption	Coupler	24VDC≒ standby/run: 200mA, max. load: 400mA (coupler max. load)							
Comm. speed		100Mbps	10Mbps	100Mbps	12Mbps	10/100Mbps	500kbps	10/100Mbps	115.2kbps
Memory ^{※2}	Input	512 byte	256 byte	512 byte	244 byte	504 byte	255 byte	512 byte	256 byte
	Output	512 byte	256 byte	512 byte	244 byte	504 byte	255 byte	512 byte	256 byte
Max. connections for modules ^{※3}		64 units	32 units	64 units	32 units	64 units	32 units	64 units	32 units
Comm. connector		RJ45 connectors: 2 5-pin PCB connector		RJ45 connectors: 2 8-pin D SUB connector		RJ45 connectors: 2 5-pin PCB connector		RJ45 connectors: 2 5-pin PCB connector	
Installation method		DIN rail mounting							
Setting and monitoring		PC connection with USB 2.0 Micro type connector (comprehensive device management program, DAQMaster)							
Insulation resistance		Over 100MΩ (at 500VDC≒ megger)							
Environment	Ambient temp.	-10 to 55°C, storage: -25 to 70°C							
	Ambient humi.	35 to 85%RH, storage: 35 to 85%RH							
Protection structure ^{※3}		IP20 (IEC standards)							
Material		Terminal: polyamide6, Body: modified polyphenylene oxide, Base: polyamide6, poly oxy methylene							
Approval		  							
Weight ^{※4}		Approx. 265g (approx. 165g)							

- ※1. It is for including power/special modules and excluding coupler/end modules. In case of one coupler module connecting, the ARIO digital module is available to connect up to 8 units and the ARIO analog module is available to connect up to 4 units. For connecting the modules, consider power consumption of the sensors and drivers connected the ARIO coupler.
※2. If it is over the limit size or connected units, system may be error. ※3. Autonics test standard ※4. The weight includes packaging. The weight in parenthesis is for unit only.
※ Environment resistance is rated at no freezing or condensation.

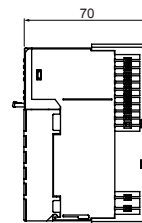
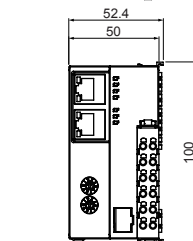
■ Dimensions

• Coupler

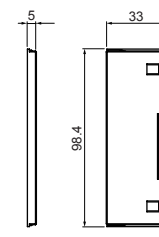


Model	A size
ARIO-C-EC/EI/PN/MT	39
ARIO-C-DN/CL/MR	36.2
ARIO-C-PB	38.2

(unit: mm)



• End module



Terminal Body Base

■ Connecting & Removing Wires

• Connecting

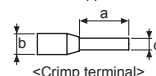
Push the wire connected with the crimp terminal towards direction ① to complete the connection.

• Removing

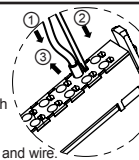
1) Press and hold the catch above the terminal in direction ② with a non-conductive flat head screwdriver (width max. 3mm).

2) Pull and remove the wire towards direction ③.

※ Use the UL certified End Sleeve (Ferrule Terminal) crimp terminals and wire.
Use the copper-conductor wire with the temperature class 60°C.



	a	b	c	Certified spec.
Range	8 to 12mm	Max. 3mm	0.6 to 1.3mm	AWG22-16
Recommended	10mm		1mm	AWG18



■ Manuals

For the detail information and instructions, you must refer to the each manual, and be sure to follow cautions written in the technical descriptions (catalog, website). Visit our website (www.autonics.com) to download manuals.

■ Comprehensive Device Management program [DAQMaster]

DAQMaster is a comprehensive device management software for setting parameters and monitoring processes. DAQMaster can be downloaded from our website at www.autonics.com.

■ Caution during Use

1. Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
2. ABUS power and I/O power should be insulated by the individually insulated power device.
3. Power supply should be insulated and limited voltage/current or Class 2, SELV power supply device.
4. Use the rated standard cables and connectors. Do not apply excessive power when connecting or disconnecting the connectors of the product.
5. Keep away from high voltage lines or power lines to prevent inductive noise. In case installing power line and input signal line closely, use line filter or varistor at power line and shielded wire at input signal line.
For stable operation, use shield wire and ferrite core, when wiring communication wire, power wire, or signal wire. Do not use near the equipment which generates strong magnetic force or high frequency noise.
6. Do not touch the module communication connector part of the base.
7. Do not connect, or remove the base while connected to a power source. For removing the terminal, body or base, do not operate units for a long time without it. This unit may be used in the following environments.
 - ① Indoors
 - ② Altitude max. 2,000m
 - ③ Pollution degree 2
 - ④ Installation category II

■ Major Products

- Photoelectric Sensors
- Fiber Optic Sensors
- Door Sensors
- Door Side Sensors
- Area Sensors
- Proximity Sensors
- Pressure Sensors
- Rotary Encoders
- Connector/Sockets
- Switching Mode Power Supplies
- Control Switches/Lamp/Buttons
- IO Terminal Blocks & Cables
- Stepper Motors/Drivers/Motion Controllers
- Graphic/Logic Panels
- Field Network Devices
- Laser Marking System (Fiber, Co., Nd:Yag)
- Laser Welding/Cutting System
- Temperature Controllers
- Temperature/Humidity Transducers
- SSR/Power Controllers
- Counters
- Timers
- Panel Meters
- Tachometer/Pulse (Rate) Meters
- Display Units
- Sensor Controllers

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