

F&eIT Series
Reed Relay junction Output Module
RRY-4(FIT)GY



* Specifications, color and design of the products are subject to change without notice.

Features

Capable of providing up to four independent channels of common reed relay contact output

High-capacity output rating designed to be a maximum of 125 VAC/30 VDC, 2 A per channel

A rotary switch allows you to set device IDs, making it easy to keep track of device numbers.

Like other F&eIT series products, the module has a 35mm DIN rail mounting mechanism as standard. A connection to a controller module can be effected on a lateral, stack basis in a unique configuration, which permits a simple, smart system configuration without the need for a backplane board.

Packing List

- Module [RRY-4(FIT)GY] ...1
- First Step Guide ... 1
- Disk *1 [F&eIT Series Setup Disk] ...1
- Interface connector plug ...1
- Warranty Certificate ...1
- Serial number Label ...1

*1 The bundled disk contains various software and User's Manual.

This product is an expansion module (device module) to add a reed relay contact output interface to a variety of controllers. Congratulations on your recent purchase of an Isolated Analog Input Module.

The RRY-4(FIT)GY can be connected to the F&eIT series of controller modules (such as the

CPU-CAxx(FIT)GY and CPU-SBxx(FIT)GY) to construct a system.

The RRY-4(FIT)GY can perform a maximum of 4 points of relay output per module.

*1 This module is available in different product models. "x" in each model number represents a blank or one alphanumeric character. This is applicable to the rest of this document.

Specifications

Specifications

| Item | Specifications | |
|--|---|--|
| Output section | | |
| Number of output signal points | 4 points | |
| Output format | Reed relay contact (1 make output) output | |
| Relay contact specifications | Maximum allowable voltage | 125VAC, 30VDC (Max) |
| | Maximum switching current | 2A (Max) |
| | Contact resistance | 30mΩ or less |
| | Response time | 7msec or less |
| | Mechanical life | 20 million times or more (switching frequency: 180 times/minute) |
| | Electrical life | 100,000 times or more (switching frequency: 20 times/minute) |
| Relays used | PA1a-5V | |
| Common section | | |
| Internal power consumption | 5VDC (±5%) 150mA (Max) *1 | |
| Allowable distance of signal extension | Approx. 50m (depending on wiring environment) | |
| Physical dimensions (mm) | 25.2(W) x 64.7(D) x 94.0(H) (exclusive of protrusions) | |
| Weight (module itself) | 100g | |
| Module connection method | Stack connection by means of a connection mechanism standard with the system. | |
| Module installation method | One-touch connection to 35mm DIN rails (standard connection mechanism provided in the system) | |
| Applicable wire | AWG 28 - 16 | |
| Applicable plug | FRONT-MC 1,5/12-STF-3,81 (made by Phoenix Contact Corp.) | |
| Standard | VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA | |

*1 The stack connector accepts currents of up to 3.0A (Max).

Installation Environment Requirements

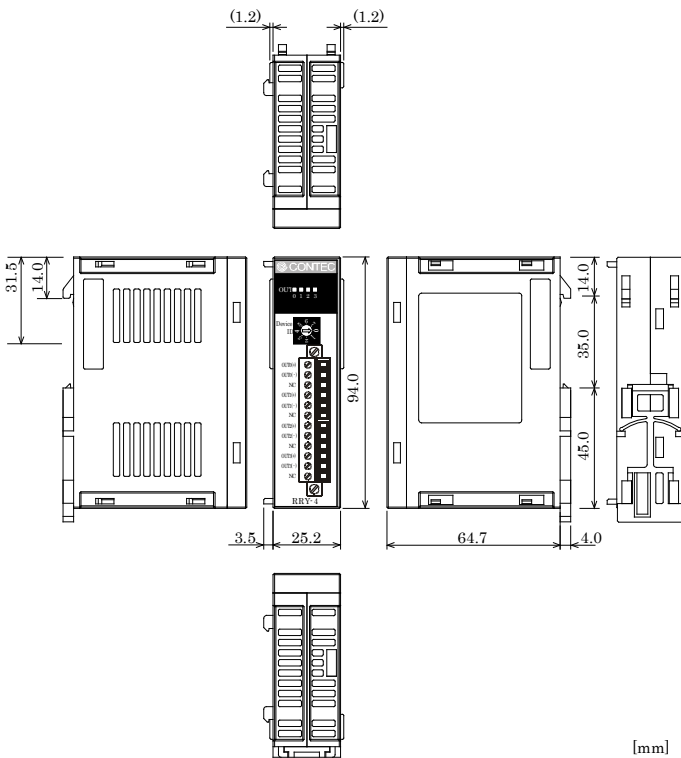
| Parameter | Requirement description | |
|-------------------------|-------------------------------|--|
| Operating temperature | 0 - 50°C | |
| Storage temperature | -10 - 60°C | |
| Operating humidity | 10 - 90%RH (No condensation) | |
| Floating dust particles | Not to be excessive | |
| Corrosive gases | None | |
| Line-Noise resistance | Line-noise *1 | AC line/2kV, Signal line/1kV (IEC1000-4-4Level 3, EN61000-4-4Level 3) |
| | Static electricity resistance | Contact discharge/4kV (IEC1000-4-2Level 2, EN61000-4-2Level 2) Atmospheric discharge/8kV (IEC1000-4-2Level 3, EN61000-4-2Level 3) |
| Vibration resistance | Sweep resistance | 10 - 57Hz/semi-amplitude 0.15mm, 57 - 150Hz/2.0G 80minutes each in X, Y, and Z directions (JIS C0040-compliant, IEC68-2-6-compliant) |
| Impact resistance | | 15G, half-sine shock for 11ms in X, Y, and Z directions (JIS C004-compliant, IEC68-2-27-compliant) |

*1 In POW-AD22GY use.

CAUTION

When connecting one of the modules to a controller module, the internal power consumption should be taken into account. If the total current exceeds the capacity of the power supply unit, the integrity of the operation cannot be guaranteed. For further details, please see the Controller Module manual.

Physical Dimensions



[mm]

Functions and control method by controller connected

The RRY-4(FIT)GY can be connected to a variety of controllers.

Supported controllers

| | |
|------------------------------------|-----------------|
| Microcontroller Unit : | CPU-SBxx(FIT)GY |
| I/O Controller Module : | CPU-CAxx(FIT)GY |
| Monitoring & Control Server Unit : | SVR-MMF2(FIT) |

Check each controller to which the module can be connected as well as the method of controlling the module when connected to that controller.

Connections to controllers

| | CPU-SBxx(FIT)GY | CPU-CAxx(FIT)GY | SVR-MMF2(FIT) | SVR-MMF(FIT)GY |
|----------------------------------|-----------------|-----------------|---------------|----------------|
| O: Permitted x: Not permitted | | | | |
| RRY-4(FIT)GY | O | O | O | x |
| Device ID setting range | 0 - 7 | 0 - 7 | 0 - 7 | 0 - 7 |

Control method by controller connected

| | CPU-SBxx(FIT)GY | CPU-CAxx(FIT)GY | SVR-MMF2(FIT) | SVR-MMF(FIT)GY |
|--|-----------------|-----------------|---------------|----------------|
| Control using the I/O address map | O | | | |
| Control using the memory address map | | O | | |
| Control via the Windows driver * | FIT Protocol | | O | |
| | API-CAP(W32) | | O | |
| | API-SBP(W32) | O | | |
| Control over the web (as set from within the browser) | | | O | |

* The API-SBP(W32) is included in the development kit [DTK-SBxx(FIT)GY]; the other drivers are bundled with each controller.

Control using the I/O address map

When connected to the CPU-SBxx(FIT)GY, the RRY-4(FIT)GY can receive I/O instructions directly from the controller module. For details, see Chapter 4 "Using the I/O Address Map".

Control using the memory address map

When connected to the CPU-CAxx(FIT)GY, the RRY-4(FIT)GY can be accessed from the host computer over the network. The RRY-4(FIT)GY is assigned with its device ID in the memory managed by the controller module. The application running on the host computer controls the module by reading/writing the memory managed by the controller module. For details, see Chapter 5 "Using the Memory Address Map".

Control via the Windows driver

For the functions and settings available when using the Windows driver, refer to the reference manual and online help for each module.

Control over the web

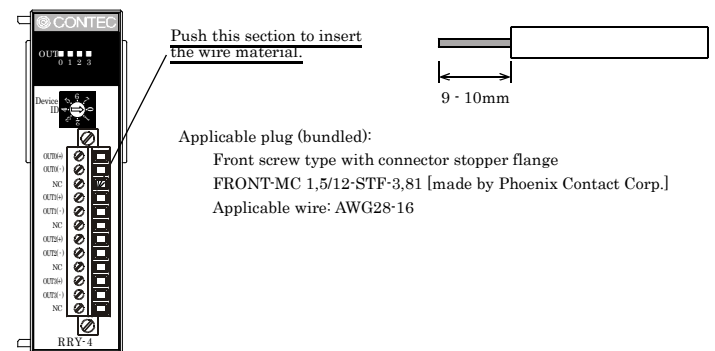
You can monitor collected data and manage the log over the web. You can use your familiar browser to easily make various settings. For details, refer to the reference manual for the SVR-MMF2(FIT).

Interface Connector

How to Connect an Interface Connector

When connecting the Module to an external device, you can use the supplied connector plug.

To wire each terminal, strip the wire about 9 - 10 mm from the end and insert it into the opening. After inserting the wire, tighten the screw to fasten it. Compatible wires are AWG 28 - 16. Tightening torque of wires is 0.22Nm.



CAUTION

Removing the connector plug by grasping the cable can break the wire.

Signal Layout on the Interface Connector

The Module can be connected to an external device using a 12-pin connector that is provided on the Module face.

