

Digital Output Board with Relay-Isolation for PCI Express RRY-16C-PE



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

Features

16 independent common reed relay contact outputs (with a single make contact)

This product has 16 reed relay outputs with a single make contact. Independent common terminal provided per channel, capable of supporting a different external power supply. High-capacity output rating is designed to be a maximum of 2A 125V (AC), 2A 30V (DC) per channel.

Functions and connectors are compatible with PCI compatible board RRY-16C(PCI)H

The functions same with PCI compatible board RRY-16C(PCI)H are provided. In addition, as there is compatibility in terms of connector shape and pin assignments, it is easy to migrate from the existing system.

Windows/Linux support device driver

Using the device driver API-TOOL makes it possible to create applications of Windows/Linux. In addition, a diagnostic program by which the operations of hardware can be checked is provided.

Packing List

Product...1
Please read the following...1

Support Software

Name	Contents	How to get
Windows Version Digital I/O Driver software API-DIO(WDM)	The Windows device driver is provided as a form of Windows API functions. Various sample programs such as C# and Visual Basic .NET, Visual C++, Python etc. and diagnostic program useful for checking operation is provided.	Download from the CONTEC website *1
Linux Version Digital I/O Driver software API-DIO(LNX)	The Linux device driver is provided as a shared library. The software includes various sample programs such as gcc (C, C++) and Python programs, as well as a configuration tool to configure the device settings.	Download from the CONTEC website *1
Software Development Tool Kits (SDK) and Support Software	In addition to the device drivers, we offer many software programs for using CONTEC devices in an easier manner.	Download from the CONTEC website *2

*1 Download the files from the following URL.

<https://www.contec.com/download/>

*2 For supported software, search the CONTEC website for this product and view the product page.

<https://www.contec.com/>

This product is PCI Express bus-compliant interface board that output signals to reed relay contacts.

The RRY-16C-PE provides up to 16 independent common reed relay contact outputs. Independent common terminal provided per channel, capable of supporting a different external power supply. High-capacity output rating is designed to be a maximum of 2A 125V (AC), 2A 30V (DC) per channel.

Windows/Linux device driver is supported with this product.

- * The contents in this document are subject to change without notice.
- * Visit the CONTEC website to check the latest details in the document.
- * The information in the data sheets is as of October, 2025.

Specifications

Function specification

Item	Specifications
Output Type	Reed Relay (1a, make) Output
Number of Channels	16 channels (independent common)
Relay Contact Spec.	Max. rating capacity
	2A 125V(AC), 2A 30V(DC) (load resistor)
	Max. permitted voltage
	125V (Max) *1, *2
	Max. Carry Current
	2A (Max)
	Contact resistance (Initial state)
	30mΩ or less
	Operating time (At the time of ON)
	Within 7ms
	Recovery time (At the time of OFF)
	Within 6ms
	Mechanical Life Expectancy
	20,000,000 operations min or more Switching times : 180/min
	Electrical lifetime
	100,000 operations min or more Switching times : 20/min
	Relay Type
	PCN-105D3MHZ
I/O address	Any 32-byte boundary
Boards in one system	Maximum of 16 boards can be install in a same system.
Power consumption	3.3VDC 1100mA (Max)
Bus specification	PCI Express Base Specification Rev. 1.0a x1
Dimension (mm)	121.69(L)×110.18(H)
Weight	150g

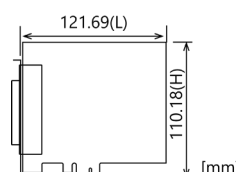
*1 Please exceed neither max. permitted voltage nor max. rating capacity of the use relay when using it by the voltage that exceeds 30VDC. Doing so can cause a malfunction.

*2 The potential difference between channels must not exceed 125V in the maximum. Doing so can cause a malfunction.

Installation Environment Requirements

Item	Specifications
Operating ambient temperature	0 - 50°C
Operating ambient humidity	10 - 90%RH (No condensation)
Floating dust particles	Not to be excessive
Corrosive gases	None
Standard	VCCI Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA

Physical Dimensions



The standard outside dimension (L) is the distance from the end of the card to the outer surface of the slot cover.

Optional Products

Product Name	Model type	Description
Shield Cable with two 37-pin D-type connectors	PCB37PS-0.5P	0.5m
	PCB37PS-1.5P	1.5m
	PCB37PS-3P	3m
	PCB37PS-5P	5m
Flat Cable with 37-Pin D-type Connectors on 2Ends	PCB37P-1.5	1.5m
Shield Cable with One 37pin D-type Connector	PCA37PS-0.5P	0.5m
	PCA37PS-1.5P	1.5m
	PCA37PS-3P	3m
	PCA37PS-5P	5m
Flat Cable with a 37Pin D-type Connectors	PCA37P-1.5	1.5m
	PCA37P-3	3m
Screw Terminal (M3 * 37P)	EPD-37A	*1 *2
Screw Terminal (M3.5 * 37)	EPD-37	*2
General Purpose Terminal	DTP-3C	*2
Screw Terminal	DTP-4C	*2

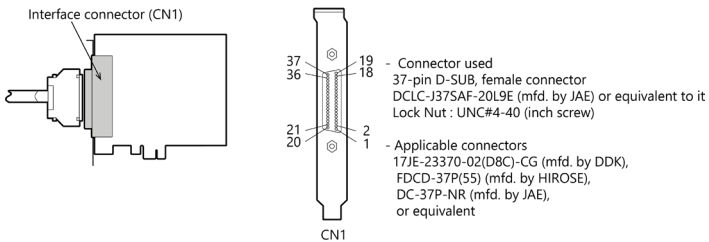
*1 "Spring-up" type terminal is used to prevent terminal screws from falling off.

*2 PCB37P or PCB37PS optional cable is required separately.

Connecting an Interface Connector

Connecting an Interface Connector

To connect an external device to this product, plug the cable from the device into the interface connector (CN1) shown below.



Layout on the Interface Connector(CN1)

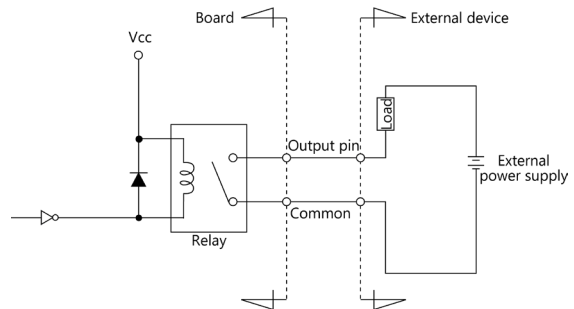
	N.C.	37	19	N.C.	
			18	N.C.	
Common of O-17	N 17	36	17	O-17	+1 port (Output)
Common of O-16	N 16	35	16	O-16	
Common of O-15	N 15	34	15	O-15	
Common of O-14	N 14	33	14	O-14	
Common of O-13	N 13	32	13	O-13	
Common of O-12	N 12	31	12	O-12	
Common of O-11	N 11	30	11	O-11	
Common of O-10	N 10	29	10	O-10	
Common of O-07	N 07	28	9	O-07	+0 port (Output)
Common of O-06	N 06	27	8	O-06	
Common of O-05	N 05	26	7	O-05	
Common of O-04	N 04	25	6	O-04	
Common of O-03	N 03	24	5	O-03	
Common of O-02	N 02	23	4	O-02	
Common of O-01	N 01	22	3	O-01	
Common of O-00	N 00	21	2	O-00	
	N.C.	20	1	N.C.	

Signal name	Description
O-00 - O-17	16 output signal pins. Connect these pins to the input signal pins of the external device.
N00 - N17	Common pin corresponding to each output pin.
N.C.	This pin is left unconnected.

Connecting Output Signals

Output Circuit

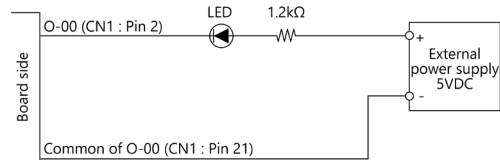
Figure shows the output circuit at the interface section of the board. The signal output section uses a relay contact method to send signals to the external device.



CAUTION

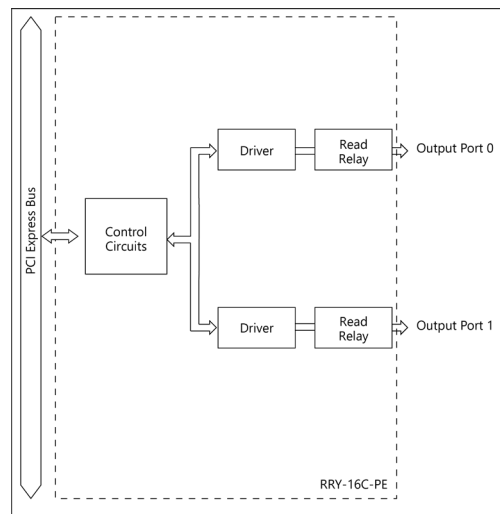
When the PC is turned on, all output are reset to OFF.

Connection to the LED

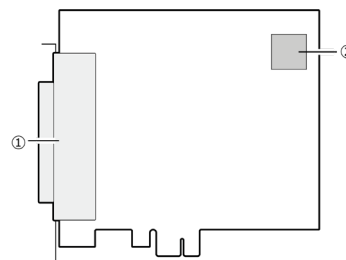


Output a "1" to a bit will light the LED that is connected to the related relay output. On the other hand, output a "0" to the bit will switch the LED off.

Block Diagram



Nomenclature of Product Components



No.	Name
1	Interface Connector
2	Board ID Setting Switch