CONPROSYS Series
Digital I/O Module Source Type
CPS-DIO-0808RL

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

This product is a configurable module to provide digital input and output interface and operates along with the configurable type controller of CONPROSYS series.

CPS-DIO-0808RL has 8 channels of the opto-coupler isolated input (supporting current source output) and 8 channels of the opto-coupler isolated output (current source type).

* 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 July, 2022.

Features

Opto-coupler isolated input and Opto-coupler isolated output
CPS-DIO-0808RL, with response speed of 200µsec, has the opto-coupler isolated input 8channels (supporting current source output) and opto-coupler isolated output 8channels (current source type).

All of the input signals are usable as interrupt events
You can use all of the input signals as interrupt events and also disable or enable the interrupt in bit units and select the interrupt edge.

Digital filter to prevent input signals from carrying noise or a chattering
This product has a digital filter to prevent input signals from carrying noise or a chattering. All input terminals can be added a digital filter, and the setting can be performed by software.

Output circuits include zener diodes for surge voltage protection
Zener diodes are connected to the output circuits to protect against surge voltages.
The rated output is 35VDC, 100mA to the maximum per channel.

Compact design
Compact design, 25.2 (W)×94.7(D)×124.8 (H), features flexibility in installation.

Adaptable to a temperature range between -20 and +60°C
The product is capable of operating in the temperature between -20 and + 60°C. It can be installed in the various environments.

Installation easy with two pieces of terminal support and DIN rail
You can install and remove a terminal connector without a screwdriver so that it can shorten the time of the replacement. As the product can be not only mounted on DIN rail, but also is removable along the side rails, replacing is simple and easy as well.

Equipped with LED for an operation check
The product has LED for an operation check, which helps you visually confirm the communication status of each interface.

No electrolytic capacitor battery
No electrolytic capacitor is used. The Contec is creating the product with a longer life.

Specification

Function specification

Item		CPS-DIO-0808RL
Input	Input type	Opto-coupler isolation input (Compatible with current source output) (positive logic) *1
	Isolation	Opto-coupler isolation
	Voltage resistance	1000V
	Input resistance	4.7kΩ
	Input ON current	2.0mA or more
	Input OFF current	0.16mA or less
	Interrupt	8 interrupt input signals are arranged into a single output of interrupt signal. An interrupt is generated at the falling edge (HIGH-to-LOW transition) or rising edge (LOW-to-HIGH transition). (setting can be done by software)
	Response time	Within 200µsec
	Number of input signal channels	8
	LED	DI0 - DI7 (Green)
Output	Output type	Opto-coupler isolation open collector output (Current source type) (positive logic) *1
	Isolation	Opto-coupler Isolation
	Voltage resistance	1000V
	Rating — Output voltage	35VDC (Max.)
	Rating — Output current	100mA (Max.)
	Maximum voltage drop at ON	1.5V or less
	Response time	Within 200µsec
	Number of output signal channels	8
	LED	DO0 - DO7 (Green)
Connector		2 pieces 3.81mm pitch 10-pin terminal
Applicable wire		AWG28 - 16
Allowable distance of signal extension		Approx. 50m (depending on wiring environment)
LED		Status (Green, Red)
External circuit power supply		12 - 24VDC (±10%)
Built-in power supply		None *2
Supply voltage		24VDC ±10%
Current consumption		0.1A (Max.)
Physical dimensions (mm)		25.2(W)×94.7(D)×124.8(H) (No projection included)
Weight		200g
Installation method		Quick mounting on the 35mm DIN rail

*1 Data 0 corresponds to High level and Data 1 corresponds to Low level.
*2 To drive the digital circuit, external power is required separately.
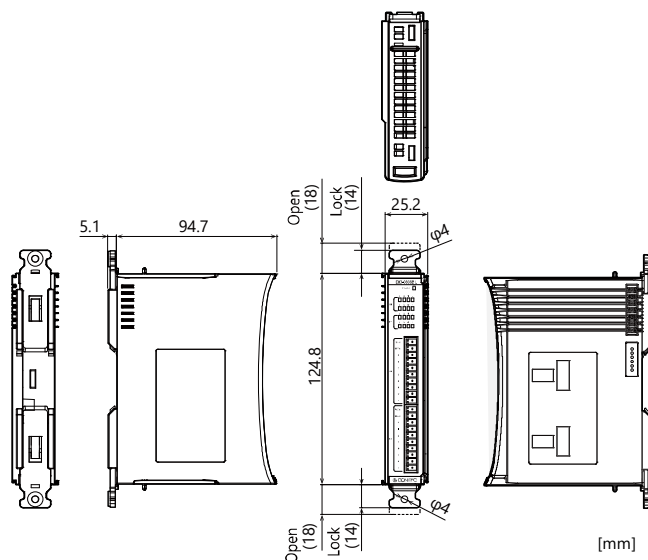
Caution
The maximum number of stacking devices operating along with the stack type controller is 16 and the total current consumption of the devices should be less than 3.3A.

Installation Environment Requirements

Item		CPS- DIO-0808RL
Operating ambient temperature		-20 - +60°C
Operating ambient humidity		10 - 90%RH (No condensation)
Non-operating ambient temperature		-20 - +60°C
Non-operating ambient humidity		10 - 90%RH (No condensation)
Floating dust particles		Not to be excessive
Corrosive gases		None
Line-noise resistance	Line noise	Signal Line /±1kV(IEC61000-4-4 Level 3, EN61000-4-4 Level 3)
	Static electricity resistance	Touch /±4kV(IEC61000-4-2 Level 2, EN61000-4-2 Level 2) Air /±8kV(IEC61000-4-2 Level 3, EN61000-4-2 Level 3)
Vibration resistance	Sweep resistance	10 - 57Hz *3 /semi-amplitude vibration 0.15mm, 57 - 150Hz/2.0G 40minutes each in X, Y, and Z directions (JIS C60068-2-6-compliant, IEC60068-2-6-compliant)
Shock resistance		15G half-sine shock for 11ms in X, Y, and Z directions (JIS C 60068-2-27 –compliant, IEC 60068-2-27 -compliant)
Standard		VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA, UL/c-UL

*3   When you use an optional power product: 10-55Hz (See the manual of optional power product for details)

Physical Dimensions

[mm]

Packing List

Product [CPS-DIO-0808RL] ...1
Product Guide ... 1
Warranty Certificate ...1
Serial Number Label ...1
10-pin Connector ...2
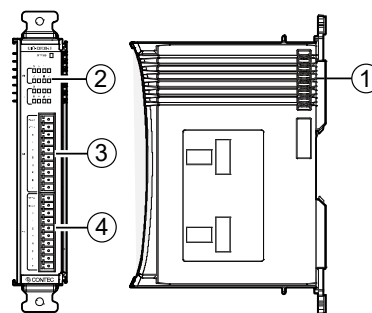
List of Option

Configurable Type Controller

CPS-MCS341-DS1-111	Configurable Type CPU module
CPS-MCS341-DS1-131	Configurable Type CPU module + OPC UA server + MTConnect
CPS-MCS341G5-DS1-130	Configurable Type CPU module +4G LTE
CPS-MCS341Q-DS1-131	Configurable Type CPU module +920MHz LAN
CPS-ECS341-1-011	Ether CAT Slave Module

DIN rail mounting power supply

CPS-PWD-90AW24-01	DIN rail mounting power supply 90[w] (Input: 100 - 240VAC, output: 24VDC 3.8 A)
CPS-PWD-30AW24-01	DIN rail mounting power supply 30[w] Input: 100 - 240VAC, output: 24VDC 1.3 A)

* Visit the Contec website regarding information on the optional products

Component Name

No.	Name	Function
1	Stack Bus	Used for power supply and communication with the configurable type module.
2	LED Indicator	This indicates status of the product.
3	Digital Input	This is a connector for digital input. (Use the 10-pin connector, included in the package)
4	Digital Output	This is a connector for digital output. (Use the 10-pin connector, included in the package)