

CONPROSYS Series
Digital Input Module
CPS-DI-16L (16ch Sink Type)
CPS-DI-16RL (16ch Source Type)



*The photograph is a CPS-DI-16L

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

Features

Opto-coupler isolated input

CPS-DI-16L has the opto-coupler isolated input 16 channels (supporting current sink output) whose response speed is 200µsec or less. CPS-DI-16RL has the opto-coupler isolated input 16 channels (supporting current source output) whose response speed is 200µsec or less.

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.

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.

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

CPS-DI-16L has the opto-coupler isolated input 16 channels (supporting current sink output) whose response speed is 200µsec or less. All of the input signals are usable as interrupt events.

CPS-DI-16RL has the opto-coupler isolated input 16 channels (supporting current source output) whose response speed is 200µsec or less. All of the input signals are usable as interrupt events.

- * 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.

Specifications

Function specifications

Item		CPS-DI-16L	CPS-DI-16RL
Input	Input type	Opto-coupler isolation input (Compatible with current sink output) (negative logic) *1	Opto-coupler isolation input (Compatible with current source output) (positive logic) *2
	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	
LED	Number of input signal channels	16 (There is one common for every 8 input signals)	
	LED	DI00 - DI07 (Green), DI10 - DI17 (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 *3	
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" and "1" correspond to the High and Low levels, respectively.

*2 Data "0" and "1" correspond to the Low and High levels, respectively.

*3 An external power supply is additionally required to drive DI circuits.

Caution

The maximum number of stacking modules operating along with the stack type controller is 16 and the total current consumption of the modules should be less than 3.3A.

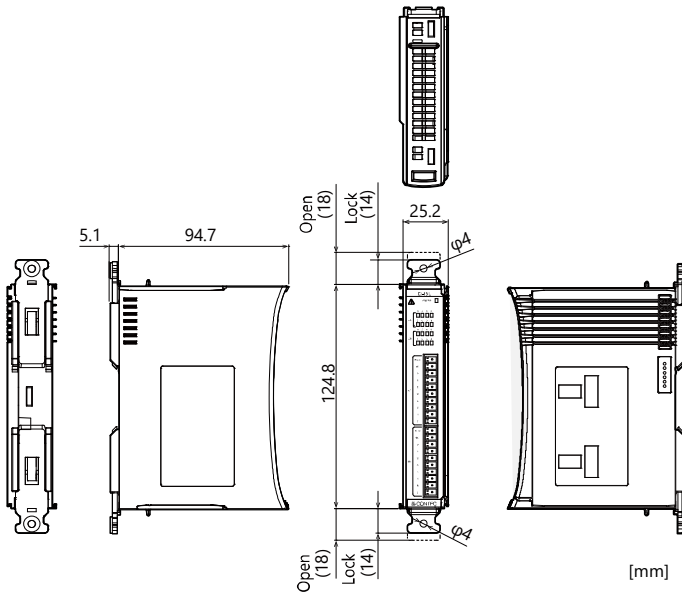
Installation Environment Requirements

Item	CPS-DI-16L	CPS-DI-16RL
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)
	Sweep resistance	10 - 57Hz *4 /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	

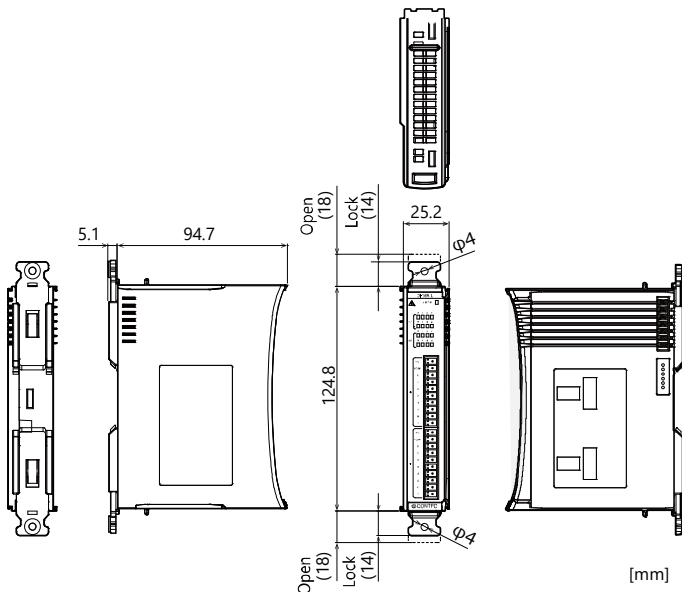
*4 When you use an optional power product: 10 - 55Hz (See the manual of optional power product for details)

Physical Dimensions

CPS-DI-16L



CPS-DI-16RL



Packing List

- Product (One of the followings) ...1
[CPS-DI-16L, CPS-DI-16RL]
- Product Guide ... 1
- Warranty Certificate ...1
- Serial Number Label ...1
- 10pin 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 WAN
- CPS-MCS341Q-DS1-131 Configurable Type CPU module +920MHz LAN
- CPS-ECS341-1-011 Ether CAT Slave Module

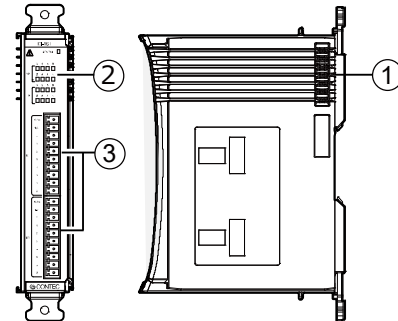
DIN rail mounting power supply

- 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)

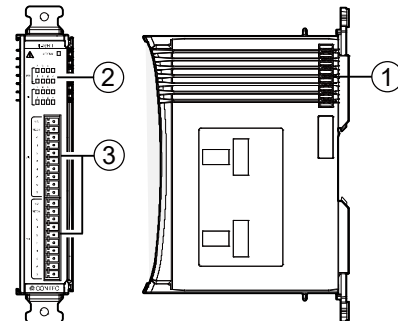
* Visit the Contec website regarding information on the optional products

Component Name

CPS-DI-16L



CPS-DI-16RL



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)