

CONPROSYS Series
Digital Output Module
CPS-DO-16L (16ch Sink Type)
CPS-DO-16RL (16ch Source Type)



*The photograph is a CPS-DO-16L
* Specifications, color and design of the products are subject to change without notice.

Features

Opto-coupler isolated output

CPS-DO-16L has the opto-coupler isolated open-collector output 16 channels (supporting current sink output) whose response speed is 200μsec or less.

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

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.

Packing List

- Product (One of the followings)
[CPS-DO-16L, CPS-DO-16RL] ...1
- Product Guide ... 1
- Warranty Certificate ...1
- Serial Number Label ...1
- 10-pin Connector...2

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

CPS-DO-16L has the opto-coupler isolated open-collector output 16 channels (supporting current sink output) whose response speed is 200μsec or less.

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

* 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-DO-16L	CPS-DO-16RL	
Output	Output type	Opto-coupler isolation output (Compatible with current sink output) (negative logic) *1	Opto-coupler isolation output (Compatible with current source output) (positive logic) *2	
	Isolation		Opto-coupler isolation	
	Voltage resistance		1000V	
	Output rating	Output Voltage	35VDC (Max)	
		Output Current	100mA (Max)	
	Residual Voltage with Output ON		0.5V or less (Output current ≤ 50mA), 1.0V or less (Output current ≤ 100mA)	-
	Maximum voltage drop at ON		-	1.5V or less
	Response time		Within 200μsec	
	Number of output signal channels		16 (There is one common for every 8 output signals)	
	LED		DO00 - DO07 (Green), DO10 - DO17 (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%) *3		
Built-in power supply		None *4		
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 Data 1 corresponds to High level and Data 0 corresponds to Low level.
*3 The fuse for overcurrent prevention is provided in the digital output circuit. Use a power supply that can supply a current of 2A and greater per common.
*4 An external power supply is additionally required to drive DO 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-DO-16L	CPS-DO-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)
Vibration resistance	Sweep resistance	10 - 57Hz *5 /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	

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

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

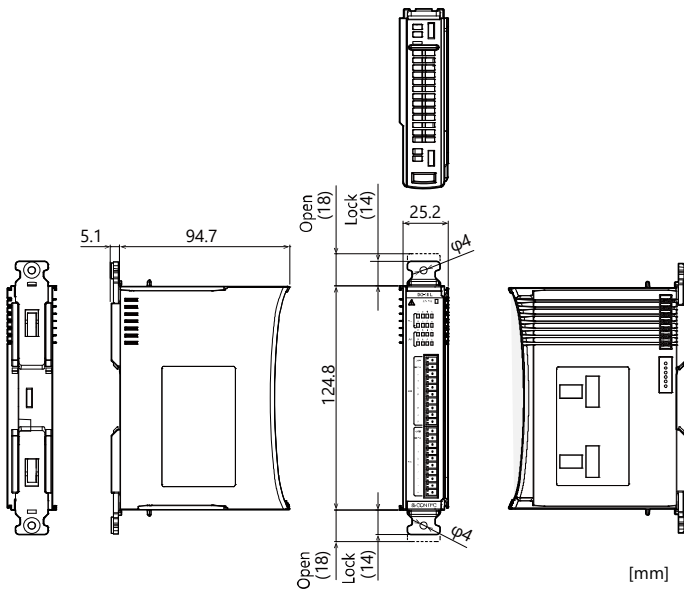
DIN rail mounting power supply

- 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)

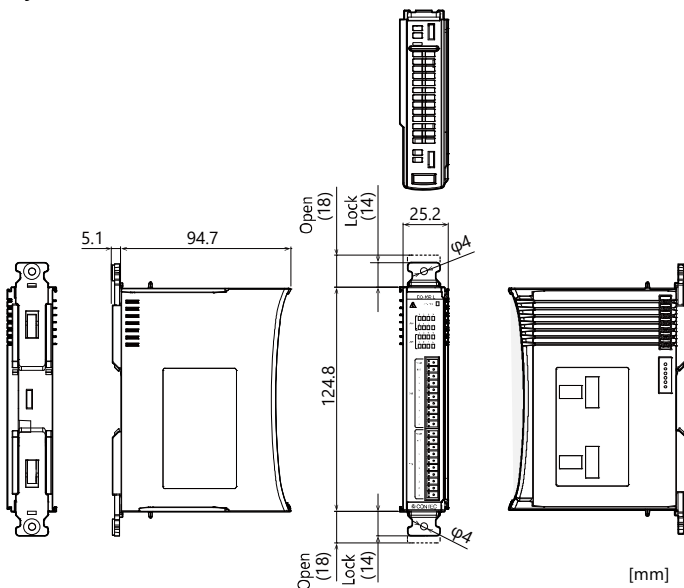
* Information about the option products, see the Contec's website.

Physical Dimensions

Physical dimension <CPS-DO-16L >

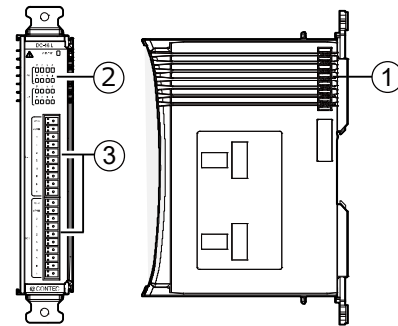


Physical dimension <CPS-DO-16RL >

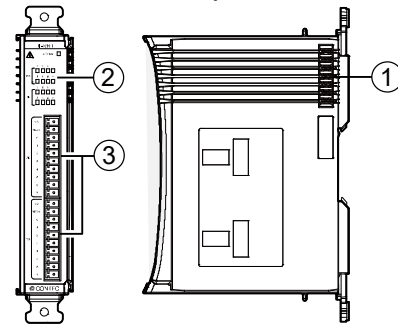


Component Name

CPS-DO-16L Nomenclature of components



CPS-DO-16RL Nomenclature of components



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 Output	This is a connector for digital output. (Use the 10-pin connector, included in the package)