

CONPROSYS Series
Digital I/O Module
CPS-DIO-0808L
CPS-DIO-0808BL (Built-in Power Supply)



*The photograph is a CPS-DIO-0808L.

Features

Opto-coupler isolated input (supporting current sink output) and opto-coupler isolated open-collector output (current sink type)
CPS-DIO-0808L and CPS-DIO-0808BL, with response speed of 200μsec, have the opto-coupler isolated input 8 channels (supporting current sink output) and opto-coupler isolated open-collector output 8 channels (current sink type).

Power for opto-coupler operation (12VDC 30mA) supplied internally [CPS-DIO-0808BL]

The power to run the opto-coupler (12VDC 30mA) is supplied internally. You can decide whether you want to use the internal or external power with the software setting.*1

*1 The internal power supply is fixed to ON when connected to the BXC200 CONPROSYS IoT Edge controller.

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.

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-0808L and CPS-DIO-0808BL have 8 channels of the opto-coupler isolated input, and 8 channels of the opto-coupler isolated open-collector output per module.

Plus, CPS-DIO-0808BL has a built-in power supply (the setting can be performed by software*1).

*1 The internal power supply is fixed to ON when connected to the BXC200 CONPROSYS IoT Edge controller.

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

* 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 December, 2022.

No electrolytic capacitor battery

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

Specifications

Function specifications

Item		CPS-DIO-0808L	CPS-DIO-0808BL	
Input	Input type	Opto-coupler isolation input (Compatible with current sink output) (negative 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	DIO - DI7 (Green)		
Output	Output type	Opto-coupler isolation open collector output (Current sink type) (negative logic) *1		
	Isolation	Opto-coupler Isolation		
	Voltage resistance	1000V		
	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)		
	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	12VDC (setting can be done by software) *3		
Supply Voltage	24VDC ±10%			
Current consumption	0.1A (Max)	0.2A (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.

*3 The internal power supply is fixed to ON when connected to the BXC200 CONPROSYS IoT Edge controller.

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-0808L	CPS-DIO-0808BL
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 C 60068-2-6-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)

Included Items

- Product (One of the followings) ...1
[CPS-DIO-0808L, CPS-DIO-0808BL]
- Please read the following ... 1
10-pin Connector...2

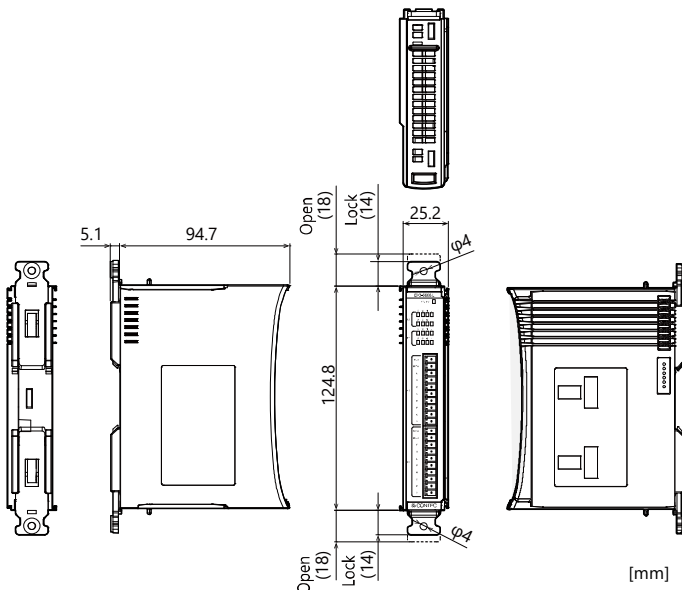
Optional Products

Product Name	Model type	Description
Configurable Type Controller	CPS-MCS341-DS1-111	Configurable Type CPU module
	CPS-MCS341-DS1-131	Configurable Type CPU module + OPC UA server + MTCConnect
	CPS-MCS341GS-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)

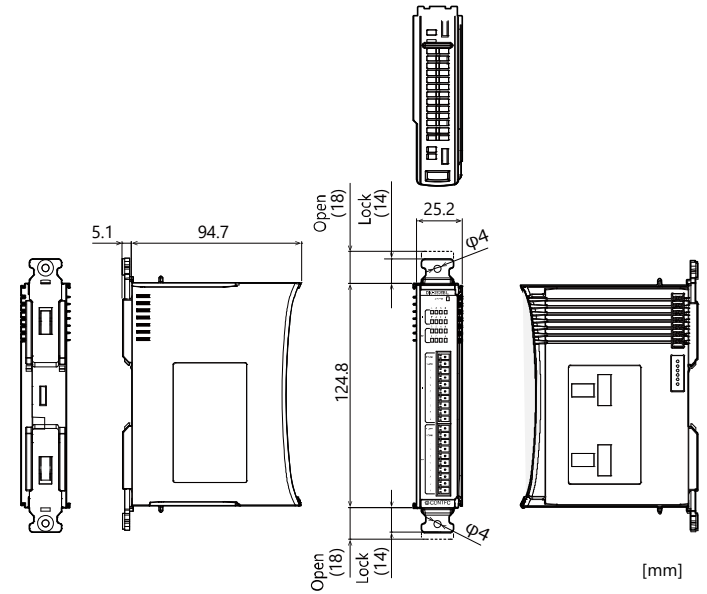
* Visit the Contec website for the latest optional products.

Physical Dimensions

CPS-DIO-0808L

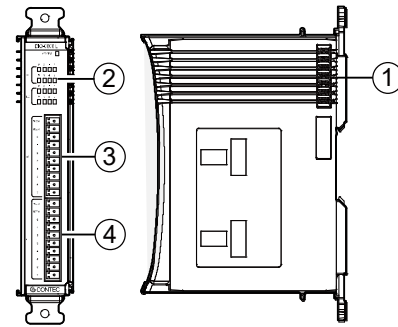


CPS-DIO-0808BL

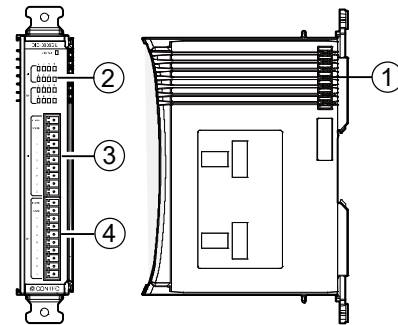


Component Name

CPS-DIO-0808L



CPS-DIO-0808BL



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)