

CONPROSYS Series  
Analog Input / Output Module  
CPS-MC341-A1-111



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

**Hardware Features**

**Bus isolated high precision 8 channels of analog input and 2 channels of output within**

Supplied with analog input (16-bit, 8 channels), and analog output (16-bit, 2 channels).

**Compact design**

Compact design, 188.0(W) × 78.0(D) × 30.5(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.

**Ethernet Hub Function within**

Use the product as Ethernet Hub so that you can connect devices in the daisy-chain.

**A powerful running platform without fan**

The product contains the ARM®Cortex®-A8 processor (600MHz) and the DDR3 512MB system memory.

**Decrease malfunctions or damages by bus isolation and surge protection. (analog input/output)**

Electrical isolation between the analog input/output and CPU can block electrical noise flow. Moreover, the surge protection elements are used for signal line, which reduces malfunctions or damages by surge.

**Capable of adapting a wide-range power (12- 24VDC)**

The product is capable of dealing with a wide range of power in the differing environments.

**Power connector also has a FG terminal.**

Easy installation with screws or on DIN rail

**This product can be installed on the wall with screws or on DIN rail with simple mounting.**

Installation with two pieces of terminal support

The terminal connector can be removed without a screwdriver. Even when a malfunction occurs, this product can be replaced in a short length of time.

**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 or primary battery**

Neither an electrolytic capacitor, which has a limited life, nor a primary battery is used. The Contec is creating the product with a longer life.

This product is a M2M controller with analog input and output. It contains high precision 8 channels of analog input and 2 channels of output with 16-bit solution each.

It is equipped with the ARM®Cortex®-A8 processor (600MHz) and the 512MB DDR3-SDRAM system memory. On-board NOR-FLASH is utilized for a booting device.

You can perform all processes on a web browser from the development to the operation. The functions such as Web monitoring of I/O information, alarm processing by I/O information, task divergence enable you to create a Cloud System at low cost and in a short time.

\* 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, 2022.

**Software Features**

**Measurement and upload**

The product measures data with an external sensor and uploads them to the Cloud server.

**Web Monitoring**

The product contains a Web server. Even with the PC located remotely, I/O information can be monitored and updated through a Web browser.

On the monitoring screen, the standard GUI parts (graphic, slider, button, etc.) can be freely arranged.

All operations including monitoring layout, making relations with I/O information, can be achieved through a Web browser.

**Web Task Script**

By combining icons such as arithmetic operations, conditional branching, data outputting, you can set up the executions or its processes like drawing them in the flowchart. All operations can be completed through a Web browser.

**Message Communication Function**

With the Ethernet device (TCP/UDP), up to 10 links can be set to send or receive messages.

Message communication can be accomplished from Web task script.

**Packing List**

Product [CPS-MC341-A1-111] ...1

Product Guide ... 1

Warranty Certificate ...1

Serial Number Label ...1

3-pin Connector...1

10-pin Connector...2

## Specifications

### Function specifications

Item		CPS-MC341-A1-111	
CPU		ARM Cortex-A8 600MHz	
Memory		On Board 512MB DDR3 SDRAM	
ROM		On-Board 32MB NOR Flash for OS	
LAN	Transmission standard	10BASE-T/100BASE-TX	
	The number of channels	2	
	Connector	RJ-45 Connector	
	LED	Speed (Yellow), Link/Act (Green)	
SD card slot	Standard	SD standard follow	
	Connector	SD memory card slot	
	LED	Read/Write (Yellow)	
Analog input	Input type	Single end input	
	Input range	±10V	
	Maximum input rating	±11V	
	Input impedance	1MΩ and more	
	Number of input channels	8ch	
	Channel switching rate	250μsec/ch (Max)*1	
	Conversion rate	The sampling interval differs by the software programmed by the user.	
	Resolution	16bit	
	Non-Linearity error *2*3	±15LSB(at 25°C)	
	Isolation	Bus isolation	
	Voltage Resistance	500VDC	
	Connector	2-piece 3.5mm pitch 10-pin terminal	
	Applicable wire	AWG28 - 16	
	Digital output	Output type	Voltage output
		Output range	±10V
		Maximum output rating	±1mA
		Output impedance	1Ω or less
Number of output channels		2ch	
Resolution		16bit	
Non-Linearity error *4		±15LSB (at 25°C)	
Settling time		10μsec or less	
Isolation		Bus isolation	
Voltage Resistance		500VDC	
Connector		2- piece 3.5mm pitch 10-pin Terminal	
Applicable wire		AWG28 - 16	
LED		Power (Green)/Status 1 (Green)/Status 2 (Red)	
Switch	Reset SW, Shutdown SW		
RTC	RTC built-in (battery not equipped)		
Power supply *5	Rated input voltage	12 - 24VDC	
	Input voltage range	10.8 - 30VDC	
	Power consumption	12V 0.5A (Max), 24V 0.3A (Max)	
	Connector	2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)	
	Applicable wire	AWG24 - 16	
	Surge protection element V+ - V-, V- - FG	Interactive TVS diode Stand off voltage: ±30V, Peak pulse power: 400W(1msec)	
Physical Dimensions (mm)	188.0(W)×78.0(D)×30.5(H) (No projection included)		
Weight	250g		
Installation method	Quick mounting on the 35mm DIN rail, Mounting on the wall using the screws *6		
OS	Linux kernel 3.2		

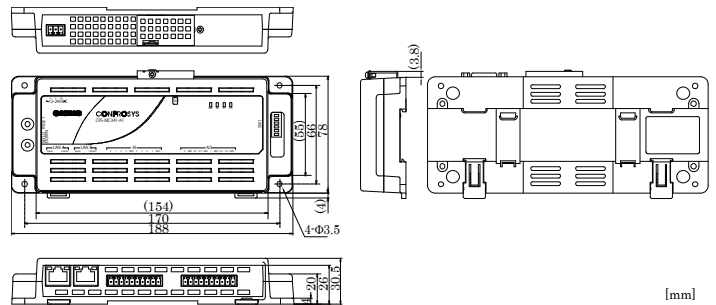
- \*1 Switching time of Inter Channel.
- \*2 The non-linearity error means an error of approximately 0.18% occurs over the maximum range at -20°C and +60°C ambient temperature.
- \*3 At the time of the source use of a signal which built in the high-speed operational amplifier.
- \*4 The non-linearity error means an error of approximately 0.4% occurs over the maximum range at -20°C and +60°C ambient temperature.
- \*5 Use power cable within 3meters.
- \*6 Commercial screws are required. (fit into 3.5 hole)

### Installation Environment Requirements

Item	CPS-MC341-A1-111	
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	AC Line/±2kV*7 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 *8 /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)
Grounding		Class D grounding (previous class 3 grounding), SG-FG/ non-conduction
Standard		VCCI Class A, FCC Class A, CE Marking ( EMC Directive Class A, RoHS Directive), UKCA, UL

- \*7 When you use the CPS-PWD-15AW12-01 (optional product)
- \*8 When you use an optional power product: 10-55Hz (See the manual of optional power product for details)

### Physical Dimensions



### List of Option

#### DIN rail mounting power supply

CPS-PWD-15AW12-01: DIN rail mounting power supply 15[w]  
(Input: 100 - 240VAC, output: 12VDC 1.3 A)

#### SD card

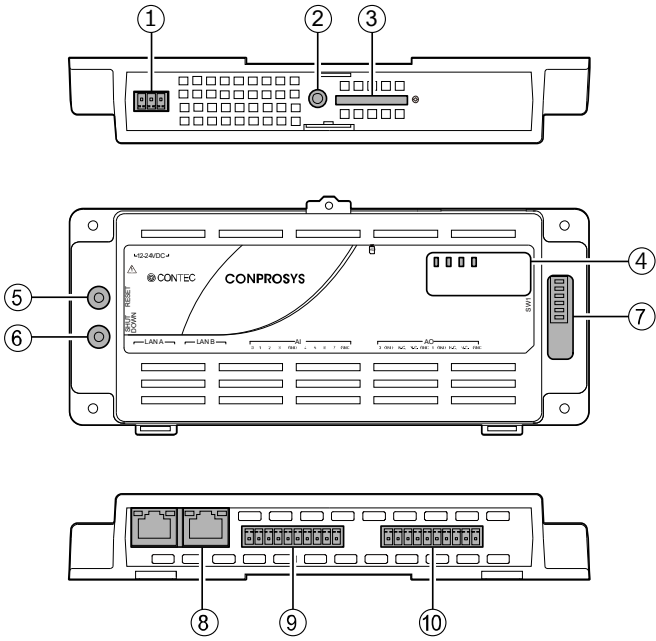
SD-4GB-A: SD card 4GB

#### Magnet

CPS-MAG01-4: Magnets for installation (Four Piece Set)

- \* Visit the Contec website for the latest optional products.

**Component Name**



No.	Name	Function
1	Power Connector	This is a connector for power. Use the 3-pin connector included in the package.
2	Debug Connector	Do not use this.
3	SD Card Slot	This is a slot for inserting SD card to store data.
4	LED Indicator	This indicates status of the product.
5	Reset Switch	This resets the product.
6	Shut-Down Switch	This shuts down the product.
7	DIP Switch	This is used for system setup.
8	LAN Port	This is a connector for LAN.
9	Analog Input	This is a connector for analog input. (Use the 10-pin connector included in the package)
10	Analog Output	This is a connector for analog output. (Use the 10-pin connector included in the package)