CONPROSYS Series Multi-Function Module

CPS-MC341-ADSC1-111 (RS422/485 1ch type) CPS-MC341-ADSC2-111 (RS422/485 2ch type)



#### \*The photograph is a CPS-MC341-ADSC1-111.

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

### Hardware features

#### Compact design

Compact design, 188.0(W)  $\times$  78.0(D)  $\times$  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 +  $60^{\circ}$ 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 (RS-422A/485, digital/counter input)

Electrical isolation between the RS-422A/485 and the CPU, as well as between the digital/counter input and CPU can block electrical noise flow. Moreover, the surge protection elements are used for signal line and on top of that, the RS-422A/485 is protected with the communication IC that can withstand ±70 V input voltage, which reduces malfunctions or damages by surge.

# Decrease malfunctions or damages by bus isolation, inter-channel isolation and surge protection (Analog Input)

Electric isolation is provided between analog input and channel as well as between analog input and CPU. This allows signals with different ground levels to be input to the channels. In addition, the surge protection elements are used for signal lines, 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. This product is a M2M controller with isolated RS-422A/485, isolated digital input/output, isolated counter input, inter-channel isolated analog input, RS-232C, and LAN interface. 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.

With the CONPROSYS series, data can be collected from various types of facilities and managed them all centrally.

All the processes from development to operation can be performed on a web browser. 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 May, 2023

#### 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.

#### With no use of electrolytic capacitor and primary battery

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

### Software features

#### Measurement and upload

CPS-MC341-ADSC1-111 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 RS-232C, the RS-422A/RS-485 or 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.

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## Specifications

### **Function Specifications**

	Item	CPS-MC341-ADSC1- 111	CPS-MC341-ADSC2- 111
CPU		ARM Cortex-A8 600MHz	
Memory		On Board 512MB DDR3 SDRA	М
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	)
RS-422A/485	Transmission scheme	Asynchronous serial transmissio	on (Full Duplex/Half Duplex)
	The number of channels	1	2
	Isolation/Resistance	Bus Isolation/500VDC(when su SG-FG are unimplemented)	rge protected parts between
	Baud Rate	300bps - 115.2kbps	
	Data length	5, 6, 7, 8bit 1, 1.5, 2stopbit	
	Parity check	Even, Odd, Non-parity	
	Connector	2-piece 3.5mm pitch 5-pin terminal (TX+, TX-, RX+, RX-, SG)	
	Applicable wire	AWG28-16	
	LED	Transmission (Yellow), Reception	n (Yellow)
	Switch	DIP Switch (Full Duplex/Half Du	
	Surge protection element		
	each signal - SG	Interactive TVS diode Stand off voltage : ±13V, Peak pulse power : 400W(1msec)	
	Surge protection element SG - FG	Gas discharge tube arrester Discharge voltage : ±300V, imp 2000A(8/20µsec, 10 times)	ulse current tolerance :
USB	Transmission standard	USB2.0 standard follow	
	The number of channels	1	
	Connector	TYPE-A	
SD card slot	Standard	SD standard follow	
	Connector	SD memory card slot	
	LED	Read/Write (Yellow)	
RS-232C	Baud Rate	300bps - 115.2kbps	
	Isolation/Resistance	Non-isolated	
	Data length	5, 6, 7, 8bit 1, 1.5, 2stopbit	
	Parity check	Even, Odd, Non-parity	
	The number of channels	1	
	Connector	9-pin D-SUB connector (Male)	
	LED	Transmission (Yellow), Reception	
Digital input/	Input type	Opto-coupler Isolation Input (C	
Counter input		output and current source outp	out) (negative logic) *1
	Isolation/Resistance	Bus Isolation /500VDC, Opto-co	oupler Isolation/1000V
	Built-in power supply	12VDC	
	Input resistance	5.6kΩ	
	Input ON current	1.6mA or more	
	Input OFF current	0.16mA or less	
	Response time	Within 200µsec *2	
	Interrupt (Digital input)	4 interrupt input signals are arra interrupt signal. An interrupt is of (HIGH-to-LOW transition) or ris transition). (setting can be done	generated at the falling edge ing edge (LOW-to-HIGH
	The number of channels	4 (It is possible to allocate 2char	
	Count type	Up count	
	Max.count	FFFFFFH (binary data)	
	Counter response speed	1kHz (Max), Duty: 50% (Max)	
			innel count match
	Interrupt (Counter input)	One interrupt caused upon cha	
	Timer	None	
	LED Surge protection element	DIO - DI3 (Yellow) Interactive TVS diode	
	each signal to B_COM	Stand off voltage : ±30V, Peak p	buise power : 400W(1msec)
Digital output	Output type	Semiconductor relay output	
	Isolation/Resistance Maximum output voltage /	Semiconductor relay isolation/ 26.4VAC/VDC/100mA	1000V
	current		
	Response time	Within 2msec	
	ON resistance	8Ω or less (at 25°C)	

PFI eakage current         4µA or less (at 25°C)           The number of channels         2           LED         DO0 - DO1 (Vellow)           Sign protection element + to -         Interactive TVS clode \$300 of Wollage : ±300, Peak pulse power : 400W(Imsec)           Digital input / Counter input / Digital or woll         Connector         2-piece 3.5mm pitch 10-pin terminal (DLACOM DI0, DI1, DD1, 3D, DL, BCOM, DO0+, DO0, DD1+, DD1-)           Analog input / Analog input / Maximum input rating         AWC28- 16           Analog input / Counter input / Input range         0-20mA           Input range         0-20mA           Input range         0.20m           Input range         0.20m           Input repedance         2500           The number of channels         Differential Input 2ch           Conversion rate         The sampling interval differs by the software programmed by the user.           Data buffer         None           Resolution         121bt           Non-Linearity error *4         110.58           IED         Alpfacable wire         AlvG28- 16           Vert Corent/Satus 1 (Green)/Satus 2 (Red)         Sature           Switch         Frest Sature         Rest Sature           Switch         Rest Opt Corens/Satus 1 (Green)/Satus 2 (Red)           Switch	Item		CPS-MC341-ADSC1- 111	CPS-MC341-ADSC2- 111
IED         DO0 - DO1 (vellow)           Surge protection element + to -         Interactive TVS diode Stand off voltage : ±30/, Peak pulse power : 400W(1msec)           Digital input/ Digital output         Connector         2-piece 3:smm pitch 10-pin terminal (DLACCM DIO) DID, DID, DID, DID, DID, DID, DID, DID		OFF leakage current	4μA or less (at 25°C)	
Surge protection element is theractive TVS diode stand off voltage : ±30V, Peak pulse power : 400W(1msec)           Digital input/ Digital output         Connector         2-piece 35mm pitch 10-pin terminal (DL ACCM DIO DID, DD DID, DD DD, DD DD, DD DD, DD DD, DD DD, DD DD		The number of channels	2	
i + 10 <sup>-1</sup> Stand off voltage : ± 30V, Peak puke power : 400W(1msec)       Digital input/ Counter input/ Digital output     Connector     2-piece 3.5mm pitch 10-pin terminal (DLACOM DIO, DID, DI2, DI3, DLBCOM, DOO+, DOO, DO1+, DO1-)       Analog input     Input sype     Current Input       Input mage     0-20mA       Maximum input rating     30mA       Input impedance     250Q       The number of channels     Differential Input 2ch       Channel switching rate     3msec/ch (Max) '3       Conversion rate     The sampling interval differs by the software programmed by the user.       Data buffer     None       Resolution     12bit       Non-Linearity error *4     ±10LSB       Isolation/Resistance     Bus lation /500/DC, Inter Channel Isolation /200V       Connector     2-piece 3.5mm pitch 3-pin terminal (Al+, Al-, AG)       Aplicable wire     AVG28 - 16       LED     Alor A11 (Yellow)       LED     Alor A11 (Yellow)       RRC     Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW       Switch     T-2 exit (Greeni) Status 1 (Greeni) Status 2 (Red)       Nomer consumption     12/ 08A (Max), 24/ 04A (Max)       Connector     2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)       Aplicable wire     NORC       Power (Greeni) Statu 1 (Greeni) Status 2 (Red)       Switch <td< td=""><td></td><td>LED</td><td>DO0 - DO1 (Yellow)</td><td></td></td<>		LED	DO0 - DO1 (Yellow)	
Counter input/ Digital outputClarcoM (DIO, DII, DI2, DI3, DLBCOM, DO0+, DO0, DO1+, DO1-)Apolicable wireAWG28-16Analog input Input typeCurrent InputInput type0-20mAMaximum input rating30mAInput impedance0-20MAThe number of channelsDifferential Input 2chThe number of channelsDifferential Input 2chChannel switching rate3msec/ch (Max) '3Channel switching rate3msec/ch (Max) '3Data bufferNoneResolution12bitNon-Linearity error '4±10LSBIsolation/ResistanceBus Isolation/500/DC, Inter Channel Isolation/200VConnector2-piece 3.5mm pitch 3-pin terminal (Al+, Al-, AG)Applicable wireAl0-Al1 (Yellow)LEDAl0-Al1 (Yellow)RTCReset SW, Shut Down SW, Full Duplex/Half Duplex Switching SWRTCReset input voltagePower orsumption12-24/DCInput voltage range18-30/DCNonector2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)Applicable wire8-30/DCNorector2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)Power orsumption12/08A (Max), 24/04A (Max)Connector2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)Applicable wire8-80(W>78.0(D)>30.5(H) (No projection induded)WeightV-V, V FGPhysical dimensior188.0(W>78.0(D)>30.5(H) (No projection induded)Weight250gPhysical dimensiorStand of voltage: ±30M, Pal, Mounting on the val				
Analog input         Input type         Current Input           Input range         0 - 20mA           Maximum input rating         30mA           Input impedance         2500           The number of channels         Differential Input 2ch           Channel switching rate         3msec/ch (Max) '3           Conversion rate         The sampling interval differs by the software programmed by the user.           Data buffer         None           Resolution         12bit           Non-Linearity error *4         ±10LSB           Isolation/Resistance         Bus Isolation /500/DC, Inter Channel Isolation /200/           Connector         2-piece 3.5mm pitch 3-pin terminal (Al+, Al-, AG)           Applicable wire         AWG28 - 16           LED         Alo - Al1 (Vellow)           ED         Alo - Al1 (Vellow)           Switch         V           RTC         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         RTC built-in (battery not equipped)           Power consumption         12- 24/DC           Input voltage range         108- 30/DC           Power consumption         12V 08A (Max), 24V 04A (Max)           Connector         2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)           Applicable wi	Counter input /	Connector	(DI_ACOM, DI0, DI1, DI2, DI3, DI_BCOM, DO0+,	
Input range         0-20mA           Maximum input rating         30mA           Input impedance         250Ω           The number of channels         Differential Input 2ch           Channel switching rate         3msec/ch (Max) *3           Corversion rate         The sampling interval differs by the software programmed by the user.           Data buffer         None           Resolution         12bit           Non-Linearity error *4         ±10LSB           Isolation/Resistance         Bus Isolation /500VDC, Inter Channel Isolation /200V           Connector         2-piece 3.5mm pitch 3-pin terminal (Al+, Al-, AG)           Applicable wire         AVG28 - 16           LED         Al0 - Al1 (Vellow)           LED         Al0 - Al1 (Vellow)           LED         Al0 - Al1 (Vellow)           RTC         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RRIC         RtC built-in (battery not equipped)           Power consumption         12V 0.8A (Max), 24V 0.4A (Max)           Connector         2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)           Applicable wire         AVG24 - 16           Switch         Tred input voltage         12-24/DC           Power consumption         12V 0.8A (Max), 24V 0.4A (Max)		Applicable wire	AWG28 - 16	
Normal         30mA           Input impedance         250Ω           The number of channels         Differential Input 2ch           Channel switching rate         3msec/ch (Max) "3           Conversion rate         The sampling interval differs by the software programmed by the user.           Data buffer         None           Resolution         12bit           Non-Linearity error *4         ±10LSB           Isolation/Resistance         Bus Isolation /500VDC, Inter Channel Isolation /200V           Connector         2-piece 3.5mm pitch 3-pin terminal (Al+, Al-, AG)           Applicable wire         AVG28 - 16           LED         Al0 - Al1 (Yellow)           LED         Al0 - Al1 (Yellow)           LED         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           Ricc         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           Ricc         Ricc Luilt-in (battery not equipped)           Power consumption         12 - 24/DC           Input voltage range         10.8 - 30/DC           Power consumption         12V 0.8A (Max), 24V 0.4A (Max)           Connector         2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)           Applicable wire         AWG24 - 16           Surge protection element V+ - V-, V FG         Inte	Analog input	Input type	Current Input	
Induction protocols         2500           Input impedance         2500           The number of channels         Differential Input 2ch           Channel switching rate         3msec/ch (Max) *3           Conversion rate         The sampling interval differs by the software programmed by the user.           Data buffer         None           Resolution         12bit           Non-Linearity error *4         ±10LSB           Isolation/Resistance         Bus Isolation /500VDC, Inter Channel Isolation /200V           Connector         2-piece 3.5mm pitch 3-pin terminal (Al+, Al-, AG)           Applicable wire         AVG28 - 16           LED         Al0 - Al1 (Yellow)           LED         Power (Green)/Status 1 (Green)/Status 2 (Red)           Switch         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Reset input voltage         12 - 24/DC           Input voltage range         10.8 - 30/DC           Power consumption         12V 0.8A (Max), 24V 0.4A (Max)           Connector         2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)           Applicable wire         AWG24 - 16           Surge protection element V+ + V-, V FG         Stand off voltage: ±30V, Peak pulse power :400W(Insec)           Physical dimensionum         1880(W)×780(D)>30.5(H) (		Input range	0 - 20mA	
Initial input 2ch         The number of channels         Differential input 2ch           Channel switching rate         3msec/ch (Max) '3           Conversion rate         The sampling interval differs by the software programmed by the user.           Data buffer         None           Resolution         12bit           Non-Linearity error *4         ±10LSB           Isolation/Resistance         Bus Isolation /500VDC, Inter Channel Isolation /200V           Connector         2-piece 3.5mm pitch 3-pin terminal (Al+, Al-, AG)           Applicable wire         AWG28-16           LED         A0-A11 (Yellow)           LED         Power (Green)/Status 1 (Green)/Status 2 (Recl)           Switch         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Input voltage         12 -24VDC           Power consumption         12V 0.8A (Max), 24V 0.4A (Max)           Connector         2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)           Applicable wire         AWG24 - 16           Surge protection element V+ - V-, V FG         Stand off voltage : ±30V, Peak pulse power : 400W(1msec)           Physical dimensiorum         1880(W)×780(D)>30.5(H) (No projection included)           Weight         Z50g		Maximum input rating	30mA	
Channel switching rate         3msec/ch (Max) '3           Conversion rate         The sampling interval differs by the software programmed by the user.           Data buffer         None           Resolution         12bit           Non-Linearity error *4         ±10LSB           Isolation/Resistance         Bus Isolation /500VDC, Inter Channel Isolation /200V           Connector         2-piece 3.5mm pitch 3-pin terminal (AI+, AI-, AG)           Applicable wire         AWG28-16           LED         A0 - A11 (Yellow)           LED         Power (Green)/Status 1 (Green)/Status 2 (Recl)           Switch         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Input voltage         12 -24VDC           Input voltage range         128 - 30VDC           Power consumption         12V 0.8A (Max), 24V 0.4A (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 Glode Stand off voltage : ±30V, Peak pulse power : 400W(1msec)           Physical dimensiowum         1880(W)×780(D)>30.5(H) (No projection included)           Weight         250g		Input impedance	250Ω	
Conversion rate         The sampling interval differs by the software programmed by the user.           Data buffer         None           Resolution         12bit           Non-Linearity error "4         ±10LSB           Isolation/Resistance         Bus Isolation/S00VDC, Inter Channel Isolation /200V           Connector         2-piece 3.5mm pitch 3-pin terminal (AI+, AI-, AG)           Applicable wire         AWG28 - 16           LED         A0 - A11 (Yellow)           LED         A0-A11 (Yellow)           Switch         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Rated input voltage         12 - 24VDC           Input voltage range         108 - 30VDC           Power consumption         12 V 0.8A (Max), 24V 0.4A (Max)           Connector         2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)           Applicable wire         AWG24 - 16           Surge protection element V+ - V-, V FG         Stand off voltage : ± 30V, Peak pulse power : 400W(1msec)           Physical dimensio		The number of channels	Differential Input 2ch	
Interactionthe user:Data bufferNoneResolution12bitNon-Linearity error "4±10LSBIsolation/ResistanceBus Isolation /500VDC, Inter Channel Isolation /200VConnector2-piece 3.5mm pitch 3-pin terminal (AI+, AI-, AG)Applicable wireAWG28 - 16LEDA0 - A11 (Yellow)LEDFower (Green)/Status 1 (Green)/Status 2 (Red)SwitchReset SW, Shut Down SW, Full Duplex/Half Duplex Switching SWRTCRted input voltage12 - 24/DCInput voltage range108 - 30/DCPower consumption12/ 0.8A (Max), 24/ 0.4A (Max)Connector2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)Applicable wireAWG24 - 16Surge protection element V+ - V-, V FGInteractive TVS clicde Stand off voltage : ±30V, Peak pulse power :400W(1msec)Physical dimensiorsI88.QW)×78.0(D)×30.5(H) (No projection included)Weight250gInstallation methodQuick mounting on the 35mm DIN rail, Mounting on the wall using the screws "6		Channel switching rate	3msec/ch (Max) *3	
Resolution         12bit           Resolution         12bit           Non-Linearity error *4         ±10LSB           Isolation/Resistance         Bus Isolation /S00VDC, Inter Channel Isolation /200V           Connector         2-piece 3.5mm pitch 3-pin terminal (AI+, AI-, AG)           Applicable wire         AVG28 - 16           LED         AI0 - AI1 (Yellow)           LED         AI0 - AI1 (Yellow)           LED         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         RtC built-in (battery not equipped)           Power supply*5         Read input voltage         12 - 24/DC           Input voltage range         10.8 - 30/DC         Power consumption           12V 0.8A (Max), 24V 0.4A (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 Glode           Physical dimensions/mm         188.0(W)×78.0(D)×30.5(H) (No projection included)         Yeight           Weight         250g         Surge protection relevance ware for the storm of the 35mm DIN rail, Mounting on the wall using the screws *6		Conversion rate	The sampling interval differs by the software programmed by	
Non-Linearity error *4 $\pm$ 10LSBNon-Linearity error *4 $\pm$ 10LSBIsolation/ResistanceBus Isolation /500VDC, Inter Channel Isolation /200VConnector $2$ -piece 3.5mm pitch 3-pin terminal (AI+, AI-, AG)Applicable wireAWG28 - 16LEDA0 - A11 (Yellow)LEDFower (Green)/Status 1 (Green)/Status 2 (Recl)SwitchReset SW, Shut Down SW, Full Duplex/Half Duplex Switching SWRTCRTC built-in (battery not equipped)Power supply * Power consumption12 - 24/DCInput voltage range108 - 30/DCPower consumption12/0.8A (Max), 24/0.4A (Max)Connector2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)Applicable wireAWG24 - 16Surge protection element V+ + -V-, V FGInteractive TVS Glode Stand of fvoltage : $\pm$ 30V, Peak pulse power :400W(1msec)Physical dimensioners188.0W)×78.0(D)×30.5(H) (No projection included)Weight250gInstallation methodQuick mounting on the 35mm DIN rail, Mounting on the wall using the screws *6		Data buffer	None	
Initial data for the set of the		Resolution	12bit	
Connector2-piece 3.5mm pitch 3-pin terminal (AI+, AI-, AG)Applicable wireAWG28 - 16LEDAl0 - Al1 (Yellow)LEDPower (Green)/Status 1 (Green)/Status 2 (Red)SwitchReset SW, Shut Down SW, Full Duplex/Half Duplex Switching SWRTCRtC built-in (battery not equipped)Power supply 5Rated input voltage12 - 24/DCInput voltage range108 - 30/DCPower consumption12/0.8A (Max), 24/0.4A (Max)Connector2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)Applicable wireAWG24 - 16Surge protection element V+ + -V-, V FGInteractive TVS Glode Stand off voltage : ±30V, Peak pulse power :400W(1msec)Physical dimensio:Image: Stand off voltage : ±30V, Peak pulse power :400W(1msec)Weight250gInstallation methodQuick mounting on the 35mm DIN rail, Mounting on the wall using the screws *6		Non-Linearity error *4	±10LSB	
Applicable wire         AWG28 - 16           LED         Al0 - Al1 (Vellow)           LED         Power (Green)/Status 1 (Green)/Status 2 (Red)           Switch         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Rtc built-in (battery not equipped)           Power supply *5         Rated input voltage         12 - 24/DC           Input voltage range         108 - 30/DC         Power consumption           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)         250g           Installation method         Quick mounting on the 35mm DIN rail, Mounting on the wall using the screws *6		Isolation/Resistance	Bus Isolation /500VDC, Inter Channel Isolation /200V	
International constraints         All - All (Vellow)           LED         All - All (Vellow)           Switch         Power (Green)/Status 1 (Green)/Status 2 (Red)           Switch         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching SW           RTC         Rtc built-in (battery not equipped)           Power supply 55         Rated input voltage         12 - 24/DC           Input voltage range         108 - 30/DC         Power consumption           Power consumption         12/ 0.84 (Max), 24/ 0.44 (Max)         Connector           Connector         2-piece 3.5mm pitch 3-pin terminal (V+, V-, FG)         Allocable wire           AWG24 - 16         Surge protection element V+ + -V-, V FG         Interactive TVS diode Stand off voltage : ±30V, Peak pulse power : 400W(1msec)           Physical dimensioners         Image and the strews *6         Stong protection induded)		Connector	2-piece 3.5mm pitch 3-pin terminal (Al+, Al-, AG)	
LED         Power (Green)/Status 1 (Green)/Status 2 (Red)           Switch         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching 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 0.84 (Max), 24V 0.44 (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		Applicable wire	AWG28-16	
Switch         Reset SW, Shut Down SW, Full Duplex/Half Duplex Switching 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 0.8A (Max), 24V 0.4A (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		LED	AIO - AI1 (Yellow)	
SW       RTC     RTC built-in (battery not equipped)       Power supply *5     Rated input voltage     12 - 24VDC       Input voltage range     12 - 24VDC       Power consumption     12 V 08A (Max), 24V 04A (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     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	LED		Power (Green)/Status 1 (Green),	/Status 2 (Red)
Power supply *5         Rated input voltage         12 - 24VDC           Input voltage range         10.8 - 30VDC         Power consumption         12V 0.84 (Max), 24V 0.44 (Max)           Power consumption         12V 0.84 (Max), 24V 0.44 (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           Physical dimensions (mm)         188.0(W)×78.0(D)×30.5(H) (No projection included)         Veight         250g           Installation method         Quick mounting on the 35mm DIN rail, Mounting on the wall using the screws *6         Stand off voltage : ±30V, Pail Mounting on the wall using the screws *6	Switch			Duplex/Half Duplex Switching
Input voltage range         10.8 - 30VDC           Power consumption         12V 0.8A (Max), 24V 0.4A (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	RTC		RTC built-in (battery not equipp	ed)
Power consumption         12V 0.8A (Max), 24V 0.4A (Max)           Power consumption         12V 0.8A (Max), 24V 0.4A (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	Power supply *5	Rated input voltage	12 - 24VDC	
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		Input voltage range	10.8 - 30VDC	
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		Power consumption		
Interactive TVS diode           V+ - V-, V FG         Interactive TVS diode           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		Connector		
V+~V-, V FG         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		Applicable wire		
Weight         250g           Installation method         Quick mounting on the 35mm DIN rail, Mounting on the wall using the screws *6		Surge protection element V+ - V-, V FG		
Installation method Quick mounting on the 35mm DIN rail, Mounting on the wall using the screws *6	Physical dimensions (mm)			
using the screws *6	Weight		250g	
	Installation method			DIN rail, Mounting on the wall
US Linux kernel 3.2	OS		Linux kernel 3.2	

\*1 Data 0 corresponds to High level and Data 1 corresponds to Low level. \*2 Response time of Opto-coupler

\*3 Switching time of Inter Channel

\*1 The non-linearity error means an error of approximately 0.07% 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  $\phi$ 3.5 hole).

Installation Environment Requirements

ltem		CPS-MC341-ADSC1-111, CPS-MG341-ADSC1-111	
Operating ambient temperature		-20 - +60°C *7	
Operating ambien	it humidity	10 - 90%RH (No condensation)	
Non-operating an	nbient temperature	-20 - +60°C	
Non-operating ambient humidity		10 - 90%RH (No condensation)	
Floating dust parti	cles	Not to be excessive	
Corrosive gases		None	
Line-noise resistance	Line noise	AC Line/±2kV *8 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 *9 /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 If you use the USB with bus power, operate the product at between -20 and +55°C.

### Ver.1.13

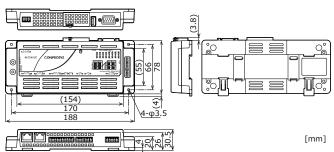
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\*8 When you use the CPS-PWD15AW12-01 (optional product). \*9 When you use an optional power product: 10-55Hz (See the manual of optional power product for details)

### Physical Dimensions

### CPS-MC341-ADSC1-111

CPS-MC341-ADSC2-111

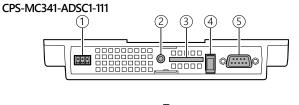


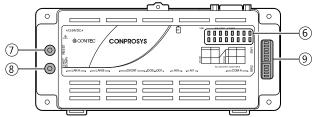
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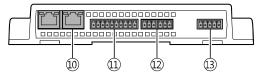
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### Component Name





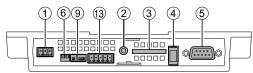


### CPS-MC341-ADSC2-111

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### **Included Items**

Product (One of the followings) ...1 [CPS-MC341-ADSC1-111, CPS-MC341-ADSC2-111] Please read the following ... 1 3-pin Connector (Power/Analog) ...3 5-pin Connector (RS-422A/485) CPS-MC341-ADSC1-111 ...1, CPS-MC341-ADSC2-111 ...2 10-pin Connector (Digital) ...1 Serial Number Label ...1

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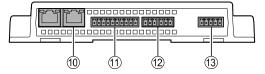
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[CPS-MC341-ADSC1-111 only]

Optional Products				
Product Name	Model type	Description		
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)		

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

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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 a slot for inserting SD card to store data.
4	USB Port	This is a TYPE-A USB port.
5	RS-232C Serial Port	This is a RS-232C serial port. (male)
6	LED Indicator	This indicates status of the product.
7	Reset Switch	This resets the product.
8	Shutdown Switch	This shuts down the product.
9	DIP Switch	This is used for system setup and RS-422A/485 setup.
10	LAN Port	This is a connector for LAN.
11	Digital Input/Counter Input/Digital Output Connector	This is a connector for digital input/counter input/digital output. (Use the 10-pin connector included in the package)
12	Analog Input Connector	This is a connector for analog input. (Use the 3-pin connector included in the package)
13	RS-422A/485 Connector	This is a connector for RS-422A/485 communication. (Use the 5-pin connector included in the package)

CPS-MC341-ADSC1-111, CPS-MC341-ADSC2-111

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