CONPROSYS Series
CODESYS EtherCAT Master BATT

CPS-PC341EC-1-9201



This product is an EtherCAT Master controller equipped with ARM® Cortex®-A8 processor (600MHz) and 512MB DDR3-SDRAM. On-board NOR-FLASH is utilized for a booting device.

This product contains the CODESYS* Soft PLC and Soft Motion.

You can create your own PLC program and run with the CODESYS software.

CODESYS is a device- independent-PLC-programming system that is compliant with the IEC 61131-3 standard and supports all standard programming languages such as ST or LD.

* Specifications, color and design of the products are subject to change without notice.
* CODESYS® is a registered trademark of 3S-Smart Software Solutions GmbH

* 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 August, 2019.

Hardware Features

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.

Compact design
Compact design, 188.0(W) x 78.0(D) x 30.5(H), features flexibility in installation.

A powerful running platform without fan
The product contains the ARM® Cortex®-A8 processor (600MHz) and the DDR3 512MB system memory.

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.

Choice of a battery with a longer life
With a choice of a long-life battery, the Contec is creating longer lasting products.

Software Features

Feature the CODESYS*SoftPLC and SoftMotion
CODESYS is a device-independent-PLC-programming system that is compliant with the IEC 61131-3 standard and supports all standard programming languages such as ST or LD.

Harmonize with EtherCAT Master
EtherCAT is a strong, efficient real-time Ethernet field bus system with an open protocol.

Together with OPC UA Server
OPC UA (Unified Architecture) is an advanced model of OPC specifications, which presents refined capability of communicating with higher-order system in addition to transferring and receiving data of devices or plants. OPC-UA is a platform independent standard based on TCP. This product can be operated with HMI and SCADA software that support OPC UA clients from various makers.

Specifications

Function specifications

Item		CPS-PC341EC-1-9201
CODESYS compatible function	Version	V3.5 SP7 Patch2 or any later version
	Language	LD, SFC, FBD, ST, IL, CFC (IEC61131-3 compliant)
	Field bus	EtherCAT Master, Modbus TCP Slave
	Communication protocol	OPC UA Server
Program size	ROM size	1MB
	The number of maximum steps	250K steps
CPU basic performance	Basic command operation speed (LD)	1.6ns
	Applied command operation speed (ST)	5.8ns
	Scan time	74µs (at 20000 Steps)
EtherCAT performance	Input processing time (LD)	144ns
	Output processing time (ST)	138ns
	Scan time	166µs (64 inputs and 64 outputs)

Hardware specifications

Item		CPS-PC341EC-1-9201
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)
LED		Power (Green)/Status 1 (Green)/Status 2 (Red)
Switch		Reset SW, Shut Down SW,
RTC		RTC built-in (battery life :10 years or longer at 25°C) Lunar inequality: ±15sec (at 25°C)
Power supply *1	Rated input voltage	12 - 24VDC
	Input voltage range	10.8 - 30VDC
	Power consumption	12V 0.3A (Max.), 24V 0.2A (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 *2
OS		Linux kernel 3.2

*1 Use power cable within 3meters.
*2 Commercial screws are required (fit into φ3.5 hole).

Installation Environment Requirements

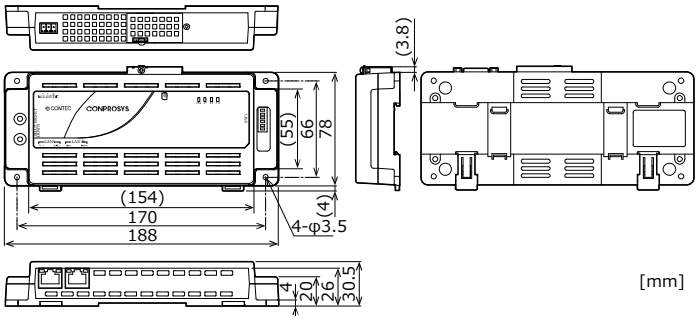
Item		CPS-PC341EC-1-9201
Operating ambient temperature		-20 - +60°C
Operating ambient humidity		10 - 90%RH (No condensation)
Non-operating ambient temperature		-20 - +60°C
Non-operating ambient humidity		10 - 90%RH (No condensation)
Floating dust particles		Not to be excessive
Corrosive gases		None
Line-noise resistance	Line noise	AC Line/±2kV *3 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 *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)
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), UL

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

Packing List

Product [CPS-PC341EC-1-9201]...1
Product Guide... 1
Warranty Certificate...1
Serial Number Label...1
3-pin Connector (Power)...1
CODESYS Runtime license...1 (provided on the bottom face of the product)

Physical Dimensions



[mm]

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

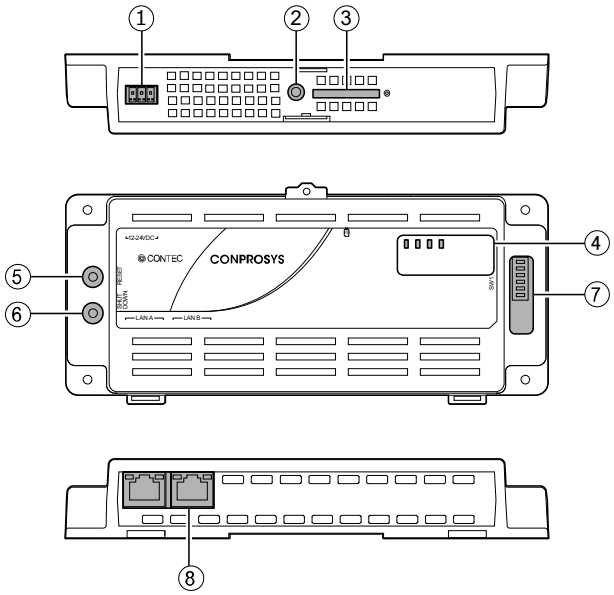
SD-4GB-A SD card 4GB

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 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	Shutdown Switch	This shuts down the product.
7	DIP Switch	This is used for system setup.
8	LAN Port	This is a connector for LAN.