

CONPROSYS nano Series
Serial I/O Module RS-422A/485
CPSN-COM-1PD



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

Features

RS-422A/485 serial communication and support maximum of 921,600bps
 This product has one channel of a serial port complied with RS-422A/485. The baud rate can be set from 4 to 921,600bps.

Easy installation and removal

This product can be installed in and removed from the CPU unit without any tools.

Adaptable to a wide range of temperature 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.

Equipped with the LED for an operation check

The product has the LED for an operation check, which helps you visually confirm the communication status of each interface.

No electrolytic capacitor

Without an electrolytic capacitor, which has a limited life, we are creating the product with a longer life.

Packing List

- Product [CPSN-COM-1PD]...1
- 10-pin Connector...1
- Product Guide...1
- Serial Number Label...1

List of Options

- CPU unit
- CPSN-MCB271-S1-041 : Remote I/O CPU unit
- CPSN-MCB271-1-041 : Remote I/O CPU unit LAN 2-channel model
- CPSN-PCB271-S1-041 : CODESYS Modbus Master CPU unit
- DIN rail mounting power supply
- CPS-PWD-30AW24-01 : DIN rail mounting power supply 30[W]
 Input: 100 - 240VAC, output: 24VDC 1.3 A)

* Visit the Contec website regarding information on the optional products.

This product is an expansion I/O module that adds a COM port complied with RS-422A/485 to the CPU unit of the CONPROSYS nano series.

One channel of RS-422A/485 communication port is supplied.

- * 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	CPSN-COM-1PD
Number of channels	1ch
Transmission scheme	Asynchronous Serial Transmission (Full Duplex/Half Duplex)
Interface type	RS-422A/485
Isolation	Bus Isolation
Voltage Resistance	500VAC
Baud Rate	The setting range differs by the software program.
Data length	See the reference manual (Software) for details.*1*2 *3
Parity check	Even, Odd, Non-parity *1
Buffers	It has 64-byte receive and 64-byte transmit FIFO buffers.
Connector	2-piece 3.81mm pitch10-pin terminal
Applicable wire	AWG28 - 16
Switch	6-pole switch(Full Duplex / Half Duplex), 4-pole switch(Terminator (ON/OFF))
Surge protection element each signal - SG	Interactive TVS Diode Stand off voltage : ±13V, Peak pulse power : 400W(1ms)
Surge protection element SG - FG	Gas discharge tube arrester Discharge voltage : ±300V, Impulse current tolerance : 2000A(8/20us, 10 times)
LED	Transmission (Green), Reception (Green)
Electricity consumption	5V 250mA (Max) 3.3V 20mA (Max)
Physical dimensions (mm)	15.6(W)×52.6(D)×84(H) (Not include projection)
Weight	50g

*1 These items can be set by software.

*2 The baud rate range that can be set on this hardware is from 4 to 921,600 bps. The data lengths are *5, 6, 7, 8 bit, 1, 1.5, 2 stop bit*.

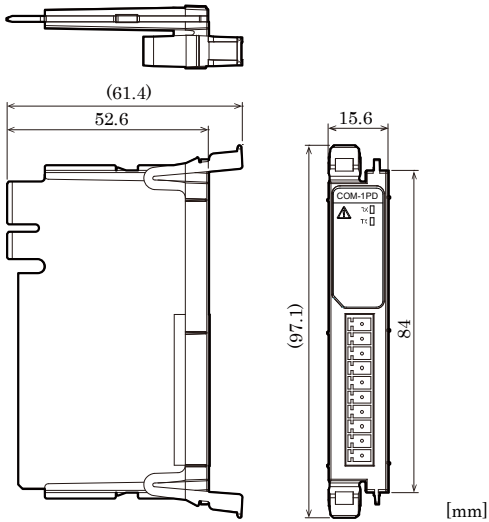
*3 Sending data with high-speed might be effected by the environment such as external devices or cable length.

Installation Environment Requirements

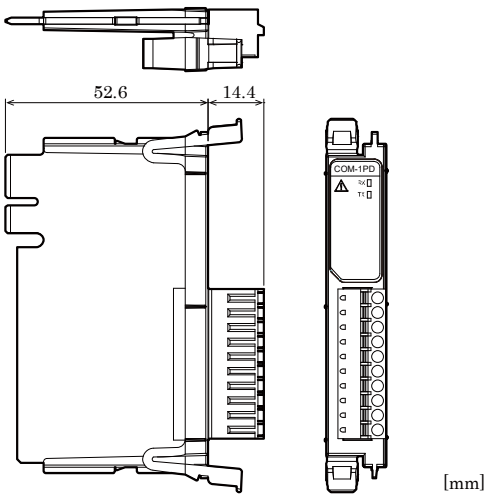
Item	CPSN-COM-1PD	
Operating ambient temperature	-20 - +60°C (Wall installation) -20°C to +55°C with a vertical installation at an angle of 90° to the left/right or with a plane installation	
Operating ambient humidity	10 - 90%RH (No condensation)	
Non-operating ambient temperature	-20 - +60°C	
Non-operating 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*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)
		15G half-sine shock for 11ms in X, Y, and Z directions JIS C60068-2-27-compliant, IEC60068-2-27-compliant)
Shock resistance	VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA	
Standard	VCCI Class A, FCC Class A, CE Marking (EMC Directive Class A, RoHS Directive), UKCA	

*4 With the optional DIN rail fitting power supply: 10-55Hz (for details, see the user's guide of the optional power supply)

Physical Dimensions



With the connector attached



Interface Connector

This Product has 1 channel of RS-422A/485 communication. Use the connector(s) included in this package.

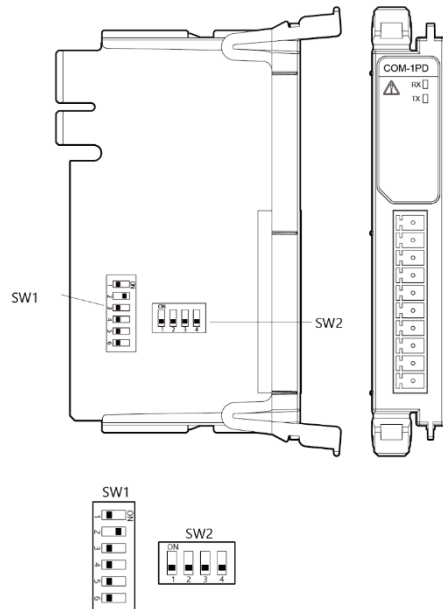
Connector type: DEGSON 15EDGKC-3.81-10P-13-00AH (or equivalent)

Pin No.	Signal Name	Meaning
1	SG	Signal ground
2	RxD +	Received data
3	RxD -	Received data
4	TxD +	Transmitted data
5	TxD -	Transmitted data
6	CTS +	Clear to send
7	CTS -	Clear to send
8	RTS +	Request to send
9	RTS -	Request to send
10	FG	Frame ground

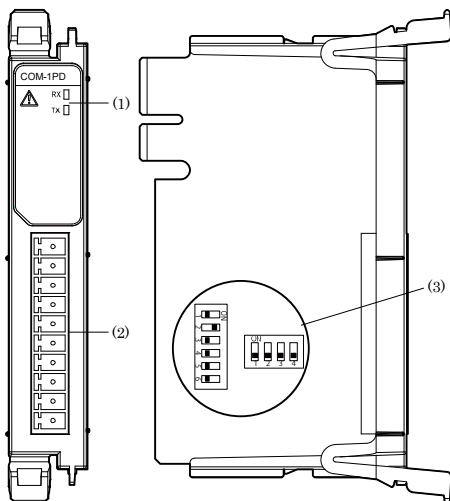
DIP Switch

DIP switch for RS-422A/485 setup. This Product has SW1 and SW2. SW1 is a switch used for data transmission mode. It is used to switch between full duplex and half duplex as well as to switch RTS and CTS in the full duplex.

SW2 is a switch used to set up terminators. Set the terminators in accordance with the devices with which you are communicating.



Name of each parts



- (1) LED: Indicates the status of the product.
- (2) RS-422A/485: Use the 10-pin connector, included in this package.
- (3) DIP Switch: Used for RS-422A/485 setup