

8-14 CMC-PN01 – Communication card, PROFINET

8-14-1 Features

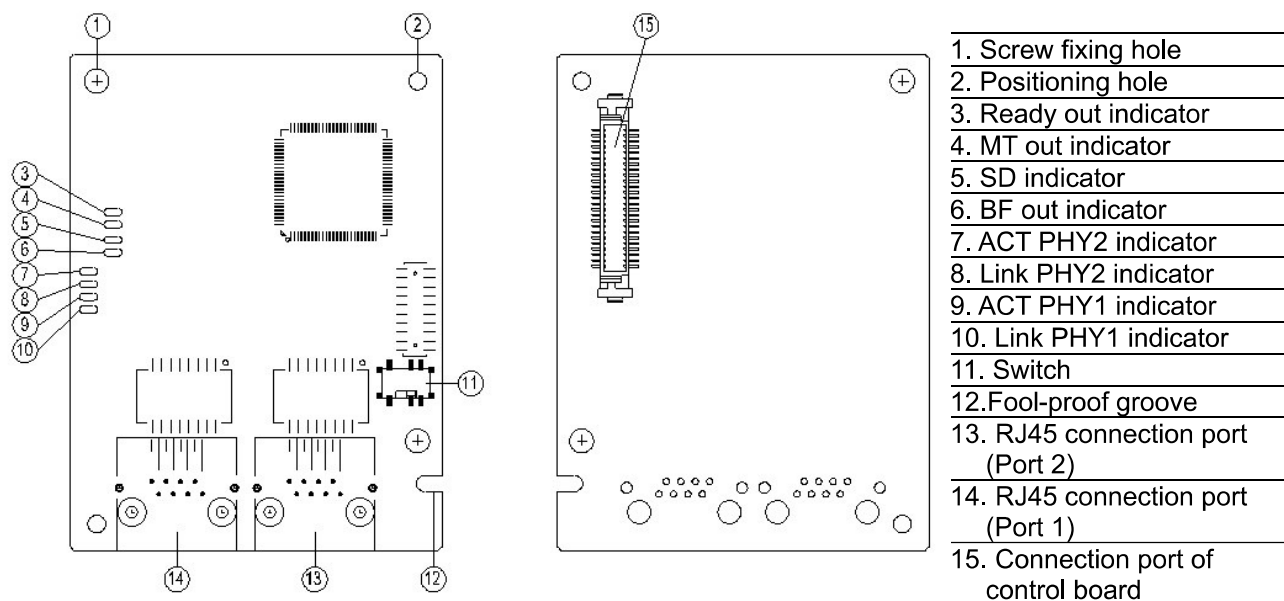
CMC-PN01 connects C2000-HS to PROFINET to exchange data with the host controller easily. This simple network solution saves cost and time for connection and installation of factory automation.

Moreover, its components are compatible with suppliers'.

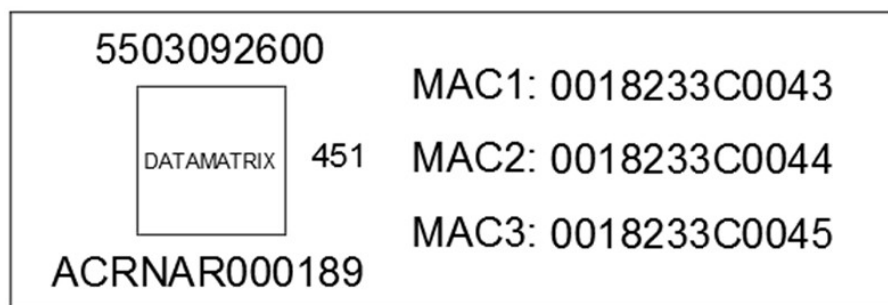
Connect CMC-PN01 to C2000-HS via PROFINET device:

1. Control the AC motor drive through PROFINET
2. Change the drive's parameters through PROFINET
3. Monitor the drive's status through PROFINET

8-14-2 Product Profile



Label with MAC address



Def.	Explanation
MAC1	Port 1 MAC Address
MAC2	Port 2 MAC Address
MAC3	Interface MAC Address

8-14-3 Specifications

Network Interface

Interface	RJ45
Number of Ports	2 ports
Transmission Method	IEEE 802.3
Transmission Cable	Category 5e shielding 100 M
Transmission Speed	10/100 Mbps auto-negotiate
Network Protocol	PROFINET

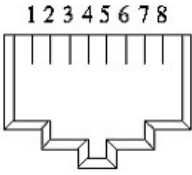
Electrical Specification

Power Supply Voltage	5 V _{DC}
Power Consumption	0.8 W
Insulation Voltage	500 V _{DC}
Weight (G)	27

Environment

Noise Immunity	ESD (IEC 61800-5-1, IEC 61000-4-2) EFT (IEC 61800-5-1, IEC 61000-4-4) Surge Test (IEC 61800-5-1, IEC 61000-4-5) Conducted Susceptibility Test (IEC 61800-5-1, IEC 61000-4-6)
Operation	-10°C–50°C (temperature), 90% (humidity)
Storage	-25°C–70°C (temperature), 95% (humidity)
Vibration / Shock Immunity	International standard: IEC 61800-5-1, IEC 60068-2-6 / IEC 61800-5-1, IEC 60068-2-27

8-14-4 RJ45 PIN Definition

RJ45	PIN No.	Signal	Definition
	1	Tx+	Positive pole for data transmission
	2	Tx-	Negative pole for data transmission
	3	Rx+	Positive pole for data receiving
	4	--	N/C
	5	--	N/C
	6	Rx-	Negative pole for data receiving
	7	--	N/C
	8	--	N/C

8-14-5 Communication Parameters for C2000-HS Connected to PROFINET

When you operate C2000-HS through CMC-PN01, set up the communication card as the source of C2000-HS controls and settings. You need to use the keypad to configure the following parameter addresses to the corresponding values:

Parameter	Set value (Dec)	Explanation
Pr.00-20	8	The frequency command is controlled by communication card.
Pr.00-21	5	The operation command is controlled by communication card.
Pr.09-30	1	Use decoding method (60xx or 20xx).
Pr.09-60	12	Communication card identification: when CMC-PN01 communication card is connected, the value of this parameter displays 12.

8-14-6 LED Indicator

LED	Status		Indication
Ready out	Yellow	ON	PN Stack starts normally
		Flashing	PN Stack starts normally, and waiting for syncing with MCU
		OFF	PN Stack failed to start
MT out	Green	-	-
SD	Red	-	-
BF out	Red	ON	Connection with PROFINET Controller is interrupted
		Flashes	Connection is normal, but an error occurs to the communication with PROFINET Controller
		OFF	Connection with PROFINET Controller is normal
ACT PHY1	Orange	ON	Online, exchanging data with the master
		Flashes	Off line, but handshaking data with the master
		OFF	Initial status
LINK PHY1	Green	ON	Network connection is normal
		OFF	Network is not connected
ACT PHY2	Orange	ON	On line, exchanging data with the master
		Flashes	Off line, but handshaking data with the master
		OFF	Initial status
LINK PHY2	Green	ON	Network connection is normal
		OFF	Network is not connected

8-14-7 Network Connection

The wiring of CMC-PN01 shows as follows:



When the hardware is installed and power on, the current set value of Pr.09-60 will be 12, and shows “PROFINET” on the display. If the above information does not show on the display, check the version of C2000-HS and the connection of the card.

