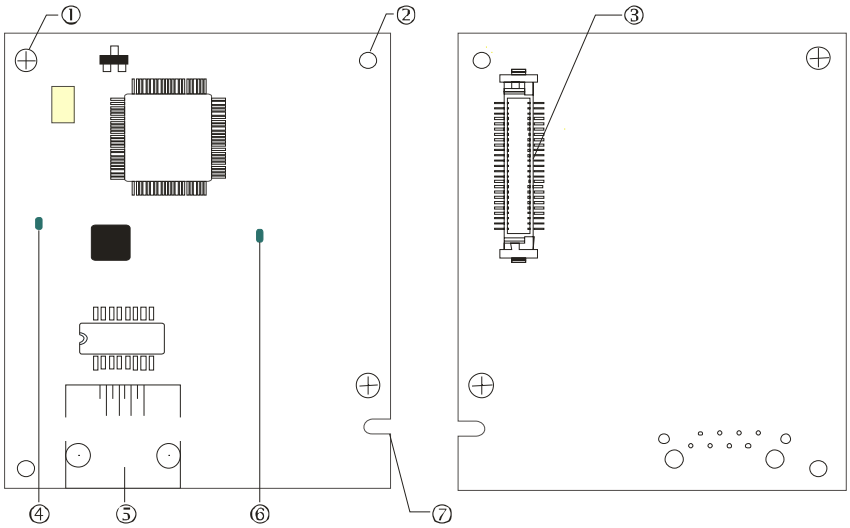
8-15 CMC-EIP01 -- Communication card, EtherNet/IP

8-15-1 Features

1. Supports Modbus TCP and Ethernet/IP protocol
2. User-defined corresponding parameters (use with EIP V.1.06)
3. IP filter simple firewall function
4. MDI/MDI-X auto-detect
5. Baud rate: 10/100Mbps auto-detect

8-15-2 Product Profile



1. Screw fixing hole
2. Positioning hole
3. AC motor drive connection port
4. LINK indicator
5. RJ45 connection port
6. POWER indicator
7. Alignment groove

8-15-3 Specifications

Network Interface

Interface	RJ45 with Auto MDI/MDIX
Number of ports	1 Port
Transmission method	IEEE 802.3, IEEE 802.3u
Transmission cable	Category 5e shielding 100M
Transmission speed	10/100 Mbps Auto-Detect
Network protocol	ICMP, IP, TCP, UDP, DHCP, HTTP, SMTP, Modbus over TCP/IP, EtherNet/IP, Delta Configuration

Electrical Specification

Weight	25g
Insulation voltage	500V_{DC}
Power consumption	0.8W
Power supply voltage	5V_{DC} (provided by VFD-C2000 Plus)

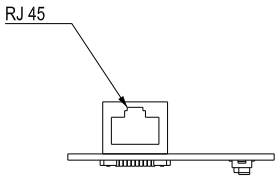
Environment

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 / storage	Operation: -10°C–50°C (temperature), 90% (humidity) Storage: -25°C–70°C (temperature), 95% (humidity)
Vibration / shock immunity	International standards: IEC 61800-5-1, IEC 60068-2-6/IEC 61800-5-1, IEC 60068-2-27

8-15-4 Installation

Connecting CMC-EIP01 to Network

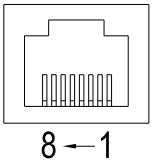
1. Turn OFF the power of the drive.
2. Open the cover of the AC motor drive.
3. Connect a CAT-5e network cable to the RJ45 port on the CMC-EIP01 (See the figure on the right-hand side).



RJ45 PIN Definition

PIN	Signal	Definition
1	Tx+	Positive pole for data transmission
2	Tx-	Negative pole for data transmission
3	Rx+	Positive pole for data reception
4	--	N/C

PIN	Signal	Definition
5	--	N/C
6	Rx-	Negative pole for data reception
7	--	N/C
8	--	N/C



8-15-5 C2000 Plus Communication Parameter Settings for Connecting to Ethernet

When the C2000 Plus is connected to an Ethernet network, please set up the communication parameters for it according to the table below. The Ethernet master is only able to reads and writes the frequency words and control word of C2000 Plus after the communication parameters are set.

Parameters	Functions	Current Setting Value	Descriptions
00-20	Master frequency command setting	8	The frequency command is controlled by communication card.
00-21	Source of operation command setting	5	The operation command is controlled by communication card.
09-30	Communication decoding method	0	The decoding method for Delta AC motor drive
09-75	IP configuration	0	0: Static IP 1: Dynamic IP (DHCP)
09-76	IP address -1	192	IP address 192.168.1.5

Parameters	Functions	Current Setting Value	Descriptions
09-77	IP address -2	168	IP address 192.168.1.5
09-78	IP address -3	1	IP address 192.168.1.5
09-79	IP address -4	5	IP address 192.168.1.5
09-80	Netmask -1	255	Netmask 255.255.255.0
09-81	Netmask -2	255	Netmask 255.255.255.0
09-82	Netmask -3	255	Netmask 255.255.255.0
09-83	Netmask -4	0	Netmask 255.255.255.0
09-84	Default gateway -1	192	Default gateway 192.168.1.1
09-85	Default gateway -2	168	Default gateway 192.168.1.1
09-86	Default gateway -3	1	Default gateway 192.168.1.1
09-87	Default gateway -4	1	Default gateway 192.168.1.1

8-15-6 LED Indicator & Troubleshooting

There are two LED indicators on the CMC-EIP01. The POWER LED displays the status of power supply, and the LINK LED displays the connection status of the communication.

LED Indicators

LED	Status		Indication	Corrective Action
POWER	Green	ON	Power supply in normal status	--
		OFF	No power supply	Check the power supply.
LINK	Green	ON	Network connection in normal status	--
		Flashes	Network in operation	--
		OFF	Network not connected	Check if the network cable is connected.

Troubleshooting

Abnormality	Cause	Corrective Action
POWER LED OFF	The AC motor drive not powered	Check the power of the AC motor drive, and see if the power supply is normal.
	The CMC-EIP01 not connected to the AC motor drive	Ensure that CMC-EIP01 is connected to the AC motor drive.
LINK LED OFF	The CMC-EIP01 not connected to network	Ensure that the network cable is correctly connected to network.
	Poor contact to RJ45 connector	Ensure that RJ45 connector is connected to Ethernet port.
Cannot find communication card	The CMC-EIP01 not connected to network	Ensure that CMC-EIP01 is connected to network.
	The PC and CMC-EIP01 in different networks and blocked by network firewall.	Search by IP or set up relevant settings by the AC motor drive keypad.
Cannot open CMC-EIP01 setup page	The CMC-EIP01 not connected to network	Ensure that CMC-EIP01 is connected to the network.
	Incorrect communication setting in DCISoft	Ensure that the communication setting in DCISoft is set to Ethernet.

Abnormality	Cause	Corrective Action
	The PC and CMC-EIP01 in different networks and blocked by network firewall.	Set up with the AC motor drive keypad.
The CMC-EIP01 setup page opens successfully but webpage monitoring is unavailable	Incorrect network setting in CMC-EIP01	Check if the network setting for CMC-EIP01 is correct. For the Intranet setting in your company, please consult your IT staff. For the Internet setting in your home, please refer to the network setting instruction provided by your ISP.
Cannot send e-mails	Incorrect network setting in CMC-EIP01	Check if the network setting for CMC-EIP01 is correct.
	Incorrect mail server setting	Please confirm the IP address for SMTP-Server.