

## 8-2 CMM-PD02 -- Communication card, Profibus DP

### 8-2-1 Product Profile

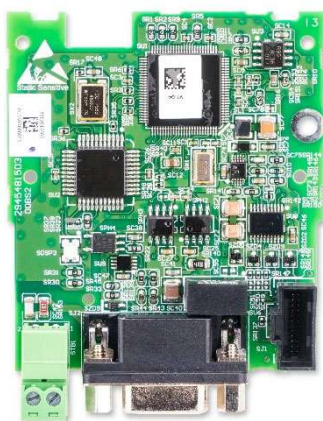


Figure 8-30

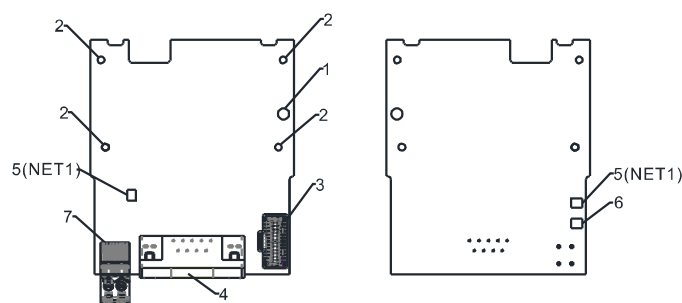


Figure 8-31

1. Screw fixing hole
2. Positioning hole
3. AC motor drive connection port
4. Communication port
5. Indicator NET1
6. POWER indicator
7. Ground terminal block

Wire gauge: 0.25–0.5 mm<sup>2</sup> / (24–20 AWG)  
 Stripping length: 7–8 mm  
 Screw torque: 2 kg-cm / (1.7 lb-in.) / (0.2 Nm)

### 8-2-2 Features

1. Supports PZD control data exchange.
2. Supports PKW access AC motor drive parameters.
3. Supports user diagnosis function.
4. Auto-detects baud rates; supports a maximum of 12 Mbps.

### 8-2-3 Specifications

#### PROFIBUS DP Connector

Interface	DB9 connector
Transmission Method	High-speed RS-485
Transmission Cable	Shielded twisted-pair cable
Electrical Isolation	500 V <sub>DC</sub>

Table 8-5

#### Communication

Message Type	Cyclic data exchange
Module Name	CMM-PD02
GSD Document	DELA08DB.GSD
Product ID	08DB (HEX)
Serial Transmission Speed Supported (Auto-Detection)	9.6 Kbps; 19.2 Kbps; 93.75 Kbps; 187.5 Kbps; 500 Kbps; 1.5 Mbps; 3 Mbps; 6 Mbps; 12 Mbps (bits per second)

Table 8-6

#### Electrical Specifications

Power Supply Voltage	15 V <sub>DC</sub> (supplied by the AC motor drive)
Insulation Voltage	500 V <sub>DC</sub>
Power Consumption	1 W
Weight	28 g

Table 8-7

Environmental Conditions

Noise Immunity	ESD (IEC 61800-5-1, IEC 6100-4-2) EFT (IEC 61800-5-1, IEC 6100-4-4) Surge Test (IEC 61800-5-1, IEC 6100-4-5) Conducted Susceptibility Test (IEC 61800-5-1, IEC 6100-4-6)
Operation / Storage	Operation: -10–50°C (temperature), 90% (humidity) Storage: -25–70°C (temperature), 95% (humidity)
Shock / Vibration Resistance	International standards: IEC 61131-2, IEC 68-2-6 (TEST Fc) / IEC 61131-2 & IEC 68-2-27 (TEST Ea)

Table 8-8

8-2-4 Installation

PROFIBUS DP Connector

PIN	Signal	Definition
1	-	Not defined
2	-	Not defined
3	Rxd / Txd-P	Sending / receiving data P(B)
4	-	Not defined
5	DGND	Data reference ground
6	VP	Power voltage – positive
7	-	Not defined
8	Rxd / Txd-N	Sending / receiving data N(A)
9	-	Not defined

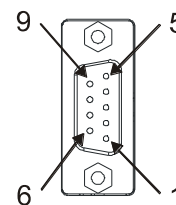


Figure 8-32

Table 8-9

8-2-5 LED Indicator & Troubleshooting

There are two LED indicators on the CMM-PD02: POWER LED and NET LED. POWER LED displays the status of the working power. NET LED displays the connection status of the communication.

POWER LED

LED Status	Indication	Corrective Action
Green light ON	Power supply in normal status.	No action is required.
OFF	No power	Check if the connection between the CMM-PD02 and the AC motor drive is normal.

Table 8-10

NET LED

LED Status	Indication	Corrective Action
Green light ON	Normal status	No action is required.
Red light ON	The CMM-PD02 is not connected to PROFIBUS DP bus.	Connect the CMM-PD02 to the PROFIBUS DP bus.
Red light flashes	Invalid PROFIBUS communication address	Set the PROFIBUS address of the CMM-PD02 between 1–125 (decimal).
Orange light flashes	The CMM-PD02 fails to communicate with the AC motor drive.	Switch off the power and check whether the CMM-PD02 is correctly installed and normally connected to the AC motor drive.

Table 8-11