9.2.5 Extension DP Card (MD38DP2)

■ Overview

MD38DP2, complying with the international PROFIBUS field bus standard, is designed to connect the MD500 drive to PROFIBUS-DP bus. This card can improve the communication efficiency and implement AC drive networking function. It enables the MD500 to be a slave in the bus, controller by the master.

Besides the PROFIBUS-DP communication, the MD38DP2 provides the CANlink communication interface.

■ Physical Appearance

■ Mechanical Installation

The MD38DP2 has the same installation mode as the MD38IO1 does.

■ Description of Terminals and Jumpers

The following table describes the terminals of the MD38IO1.

Type	Terminal	Terminal Name	Function Description
PROFIBUS communication terminal (J2)	**1, 2, 7, 9**	NC	Vacant internally
	3	Data line B	Data line positive
	4	RTS	Request of sending signal
	5	GND	Isolation 5 V power ground
	6	+5V	Isolation 5 V power supply
	8	Data line A	Data line negative
CANlink communication **terminals (J3, J9)**	+5V	Power supply	Isolation 5 V power supply
	CANH	CAN positive input	Data line positive
	CANL	CAN negative input	Data line negative
	GND	Power ground	Isolation 5 V power ground
Program write-in	SW1	Program write-in	It is the commissioning interface. Never use it.
Jumper	J6 (The white dot is pin 1.)	CANlink terminal resistor matching selection	1 and 2 shorted: matching the terminal resistor 2 and 3 shorted: not matching the terminal resistor

Type	Terminal	Terminal Name	Function Description
Indicators	D4 in red	Power supply indicator	ON: indicates that the drive is powered on. OFF: indicates that the drive is not powered on or the DP card is installed improperly.
	D3 in yellow	DP card and master communication indicator	ON: indicates normal communication between the DP card and the master. OFF: indicates no communication between the DP card and the master (check the PROFIBUS cable connection and station No. setting). Flashing: indicates that the master does not operate or wrong communication between the DP card and the master.
	D2 in green	DP card and drive communication indicator	ON: indicates normal communication between the DP card and the drive. OFF: indicates that communication between the DP card and the drive fails (check the baud rate setting). Flashing: indicates that interference exists on the communication between the DP card and the drive or the extension card address is not within the rang of 1 to 125.

The following table describes the jumpers of the MD38DP2.

Jumper	Description	Meaning	Setting
J6	CANlink terminal resistor matching selection	Matching the terminal resistor	
		Not matching the terminal resistor	

Description of DIP Switch and Address Setting

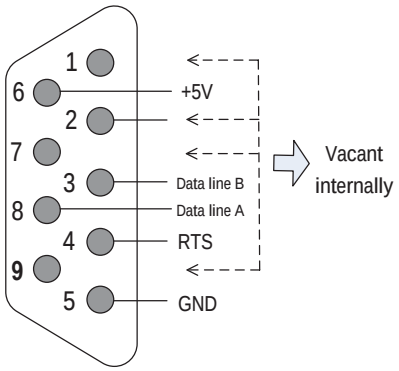
DIP Switch Bit	Function	Description
1 to 8	The PROFIBUS-DP communication slave address	The 8-bit binary DIP switch can set state addresses of 0 to 125. For example: Address DIP switch setting 0 00000000 7 00000111 20 00010100 125 01111101

Note

The setting of the jumpers takes the top view with the main terminals at the bottom of the card as the visual angle. The jumpers are silk-screened on the card.

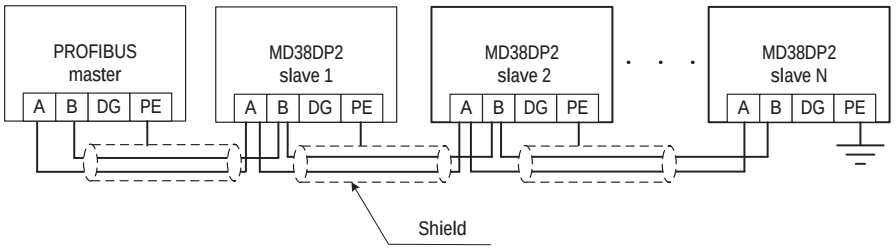
■ Description of PROFIBUS 9-Pin Port

The MD38DP2 card connects to the PROFIBUS-DP master with the DB9 connector. The connector defines the pin signals according to the Siemens DB9 connector standard, as shown in the following figure.



■ Terminal Wiring

Connection of the MD38DP2 and the PROFIBUS-DP master is shown in the following figure.



It is necessary to connect a matching terminal resistor to the end of the PROFIBUS bus and set the DIP switch properly. The PEs of the system must be reliably grounded.

The length of the communication cable between MD38DP2 and the PROFIBUS-DP master varies with different setting of the baud **rate of the master. Restrict the communication cable lead length strictly according to the Siemens DB9 standard. The following** table describes the requirements on the baud rate and the communication cable lead length.

Baud Rate (Kbps)	Max. Length of Lead A (m)	Max. Length of Lead B (m)
9.6	1200	1200
19.2	1200	1200
187.5	600	600
500	200	200
1500	100	70
3000	100	Not supported
6000	100	
12000	100	

If you purchase the MD38DP2 card, the related user manual will be delivered together with the product. See the user manual for details.