

OFFICIAL MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

6ES7141-1BF40-0AB0

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Configuring a PROFIBUS-DP network

The principles and rules for configuring a PROFIBUS-DP network are described in the manual for the DP master.

2.1 Brief overview of the different basic modules

Table 2-1 Brief overview of the different basic modules

Common features	• Operation as a DPV0 slave • Operation as a DPV1 slave • Operation as a S7 slave • Diagnostic interrupt • Hardware interrupt • Direct communication • IP 67
BM 141 DI 8 × DC 24V (6ES7 141-1BF12-0XB0)	• 8 digital inputs • Connectors for the supply and PROFIBUS-DP (copper conductors) • DDB file for DPV1: SI03803D.GSG (as of version 1 of the basic module)
BM 141 DI 8 × DC 24V ECOFAST (6ES7 141-1BF01-0AB0)	• 8 digital inputs • ECOFAST connectors for the supply and PROFIBUS-DP (copper conductors) • DDB file for DPV1: SI0380D2.GSG (as of version 1 of the basic module)
BM 141 DI 8 × DC 24V ECOFAST DIAG (6ES7 141-1BF40-0AB0)	• 8 digital inputs • ECOFAST connectors for the supply and PROFIBUS-DP (copper conductors) • Diagnostic interrupt for short circuit and wire break for each channel • Hardware interrupt at rising and falling edge for each channel • DDB file for DPV1: SI0380D3.GSG (as of version 2 of the basic module)
BM 142 DO 4 × DC 24V/2A (6ES7 142-1BD22-0XB0)	• 4 digital outputs (2A per output) • Connectors for the supply and PROFIBUS-DP (copper conductors) • DDB file for DPV1: SI03803C.GSG (as of version 3 of the basic module)
BM 143-DESINA FO (6ES7 143-1BF00-0XB0)	• 8 digital inputs or outputs (separately parameterizable as an input or output), diagnostic input for each channel • ECOFAST connectors for the supply and PROFIBUS-DP (fiber-optic cables) • DDB file for DPV1: SI03809A.GSG as of version 5 of the basic module
BM 143-DESINA RS485 (6ES7 143-1BF00-0AB0)	• 8 digital inputs or outputs (separately parameterizable as an input or output), diagnostic input for each channel • ECOFAST connectors for the supply and PROFIBUS-DP (fiber-optic cables) • DDB file for DPV1: SI03809A.GSG (as of version 2 of the basic module)

Function: Direct communication between basic modules

In *STEP 7* V5.0 and later, you can configure direct communication for PROFIBUS nodes. The following basic modules can participate in direct communication as the sender (publisher):

- BM 141 DI 8 × DC 24V, 6ES7 141-1BF01-0XB0, from product version 08
6ES7 141-1BF11-0XB0, from product version 01
6ES7 141-1BF12-0XB0, from product version 01
- BM 141 DI 8 × DC 24V ECOFAST, 6ES7 141-1BF00-0AB0, from product version 01
6ES7 141-1BF01-0AB0, from product version 01
- BM 141 DI 8 × DC 24V ECOFAST DIAG, 6ES7 141-1BF40-0AB0, from product version 01
- BM 142 DO 4 × DC 24V/2A, 6ES7 142-1BD11-0XB0, from product version 08
6ES7 142-1BD21-0XB0, from product version 01
6ES7 142-1BD22-0XB0, from product version 01
- BM 143-DESINA FO, 6ES7 143-1BF00-0XB0, from product version 01
- BM 143-DESINA RS485, 6ES7 143-1BF00-0AB0, from product version 01

You will find a detailed description of direct communication in the *STEP 7* Online Help.

Requirements for commissioning

Table 5-5 Requirements for commissioning the DP slave

Presumed activity	See ...
1. DP slave installed	Section 3.1
2. PROFIBUS address set on DP slave	Section 3.3
3. If the bus signals are transferred using copper conductors and the DP slave is at the end of the segment, the terminating resistor must be activated on the DP slave: – In the case of the BM 141, BM 142 and BM 147/CPU by bringing it into the circuit – In the case of the BM 141-ECOFASST and BM 143-DESINA RS485 by mounting the terminating resistor on the right-hand DESINA connector	Section 3.4
4. DP slave wired	Section 4.4
5. DP slave configured	Online Help/configuration software manual
6. Supply voltage turned on for DP master	Manual for DP master
7. DP master set to RUN mode	Manual for DP master