

### PROFIBUS-DP PT

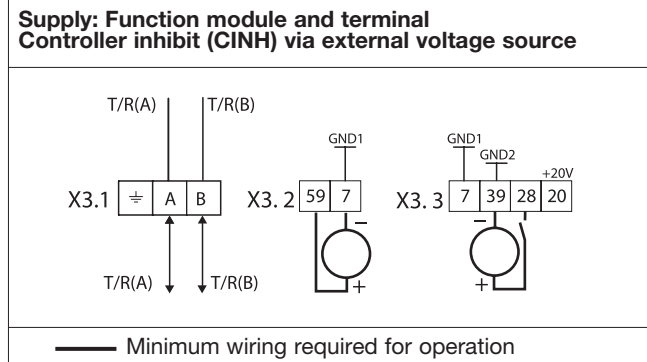
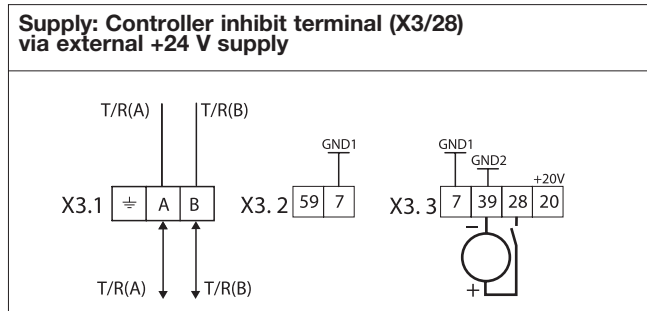
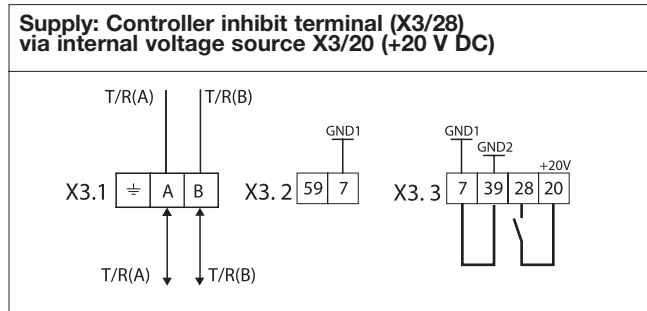
<b>PROFIBUS-DP PT</b>	<b>Order ref.</b>	<b>E82ZAFPC010</b>
PROFIBUS-DP	Order ref.	E82ZAFPC

The PROFIBUS-DP function module is a slave connection module with the PROFIBUS-DP communication profile. It is used for networking between the host and the frequency inverter. Plug-in spring-clamp terminals enable cable cross-sections of up to 1.5 mm<sup>2</sup> to be connected quickly and easily without the need for ferrules. Due to the plugged-on spring-clamp terminal strip, the

function module juts approx. 15 mm of the front panel of the frequency inverter. For the purposes of simple diagnostics, dual screw terminals can be used to interrupt communication with the frequency inverter without affecting the bus operation of other devices. The module is also available in a basic version without plug-in terminal.






#### Terminal assignment

X3.1/	Name	Function
y	PES	Additional HF screen termination
A	T/R(A)	RS485 data cable A
B	T/R(B)	RS485 data cable B
<b>X3.2/</b>		
7	GND1	Reference potential for X3.3/20
59		External DC supply for function module U(ext.) = +24 V DC ±10% (reference: GND1)
<b>X3.3/</b>		
7	GND1	Reference potential for X3.3/20
39	GND2	Reference potential for controller inhibit (CINH) at X3.3/28
28	CINH	Controller inhibit <ul style="list-style-type: none"> <li>• Start = HIGH (+12 V ... +30 V)</li> <li>• Stop = LOW (0 ... +3 V)</li> </ul>
20		DC voltage source for internal supply for controller inhibit (CINH) +20 V (reference: GND1)
<b>DIP switch</b>	DIP switch = ON	Integrated bus terminating resistor active
	DIP switch = OFF	Integrated bus terminating resistor inactive



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#### General data and application conditions

<b>Communication medium</b>	RS485
<b>Communication profile</b>	PROFIBUS-DP (DIN 19245 Part 1 and Part 3)
<b>Drive profile</b>	DRIVECOM profile "Drive Technology 20" or Lenze device control
<b>Baud rate [kBit/s]</b>	9.6... 12000 (automatic detection)
<b>PROFIBUS-DP device</b>	Slave
<b>Network topology</b>	Without repeater: line With repeaters: line or tree
<b>Process data words (PCD) (16 bits)</b>	1 word ... 10 words
<b>DP user data length</b>	Parameter channel (4 words) + process data words
<b>Number of devices</b>	Standard: 32 (= 1 bus segment) including host system With repeaters: 128 including host system and repeaters
<b>Max. cable length per bus segment</b>	1000 m (depending on baud rate and cable type used)
<b>Communication time</b>	<ul style="list-style-type: none"> <li>Sum of scan time and processing time in the fieldbus devices. The times are independent of one another.</li> <li>Processing time in the controller: <ul style="list-style-type: none"> <li>Parameter data and process data are independent of each other</li> <li>Parameter data: approx. 30 ms +20 ms tolerance</li> <li>Process data: approx. 3 ms +2 ms tolerance</li> </ul> </li> </ul>
<b>Electrical connection</b>	Push-on terminal strips with spring-clamp connection and dual screw connection
<b>Connection options</b>	 Rigid: 1.5 mm <sup>2</sup> (AWG 16) Flexible:  1.5 mm <sup>2</sup> (AWG 16) without ferrules  1.5 mm <sup>2</sup> (AWG 16) with ferrules without plastic sleeve  0.5 mm <sup>2</sup> (AWG 20) with ferrules with plastic sleeve <sup>1)</sup>  1.5 mm <sup>2</sup> (AWG 16) with ferrules with plastic sleeve <sup>2)</sup>
<b>DC supply for function module</b>	<ul style="list-style-type: none"> <li>Internal</li> <li>External, only required for <ul style="list-style-type: none"> <li>bus devices which are to be disconnected from the mains, but communication with the master is to be maintained</li> <li>bus devices with activated bus terminating resistor, which are to be disconnected from the mains, but the bus system is to remain active</li> <li>supply via separate mains supply</li> <li>+24 V DC ± 10%, max. 80 mA per function module</li> </ul> </li> </ul>
<b>Insulation voltage to reference earth/PE</b>	50 V AC
<b>Ambient temperature</b>	Operation:       -20 ... +60°C Transport:       -25 ... +70°C Storage:         -25 ... +60°C
<b>Climatic conditions</b>	Class 3K3 to EN 50178 (without condensation, average relative humidity 85%)

<sup>1)</sup> Spring-clamp connection

<sup>2)</sup> Dual screw connection

#### Note:

- Two LEDs are located on the function module to indicate the communication status.
- A configuration diskette for PROFIBUS-DP containing the description files for the devices (EDS files) is included in the scope of supply.

#### Important:

The internal or external DC supply to the controller inhibit terminal (X3/28) is provided **independently** of the internal or external DC supply to the function module.

#### Tip:

The external DC supply to the function module is provided via terminals X3/59 and X3/7. The connection diagrams above indicate the internal DC supply to the function module as an alternative option.