

INTERBUS PT

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The INTERBUS function module is used to interface the frequency inverter directly with the remote bus. The DRIVE-COM profile 20 is supported for this connection. DIP switches are used to set the process data volume, PCP communication and the last physical bus device. Plug-in spring-clamp terminals enable cable cross-sections of up to

1.5 mm² to be connected quickly and easily without the need for ferrules.

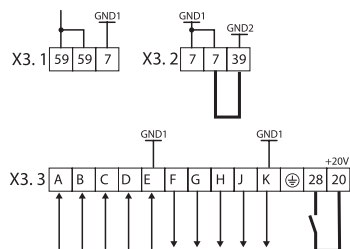
Due to the plugged-on spring-clamp terminal strip, the function module juts approx. 15 mm of the front panel of the frequency inverter. The module is also available in a basic version without plug-in terminal.

Terminal assignment

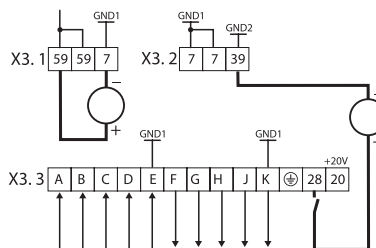
X3.1/	Name	Function
59		External DC supply for function module (+ 24 V DC ± 10%, looping through of external supply for function module possible)
7	GND1	Reference potential for X3.3/20
X3.2/		
7	GND1	Reference potential for X3.3/20
39	GND2	Reference potential for controller inhibit (CINH) at X3.3/28
X3.3/		
A	/DO1	RS485 data cable (incoming)
B	DO1	
C	/DI1	
D	/DI1	

X3.3/	Name	Function
E	GND3	Reference potential for incoming data cable
F	/DO2	RS485 data cable (outgoing)
G	DO2	
H	/DI2	
J	DI2	
K	GND1	Reference potential for outgoing data cable
y	PES	Additional HF shield termination
28	CINH	Controller inhibit <ul style="list-style-type: none"> • Start = HIGH (+12 V ... +30 V) • Stop = LOW (0 ... +3 V)
20		DC voltage source for internal +20 V (reference: GND1)

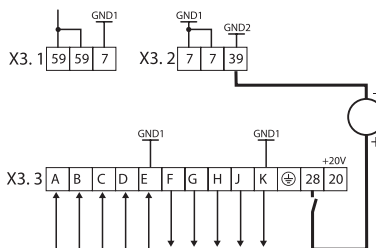
Supply: Controller inhibit terminal (X3/28) via internal voltage supply X3/20



Supply: Function module and terminal "controller inhibit" (X3/28) via external voltage



Supply for terminal controller inhibit (CINH) via external voltage source







— Minimum wiring required for operation



INTERBUS PT

General data and application conditions

Communication medium	RS485
Drive profile	DRIVECOM profile "Drive Technology 20" or Lenze device control
Baud rate [kBit/s]	500
INTERBUS device	Slave
Network topology	Ring (go and return lines in the same bus cable)
Process data words (PCD) (16 bits)	1 Word ... 6 words
Parameter data words (PCP) (16 bits)	0/1 word
INTERBUS code (ID code)	Decimal: 227 or 3 (without PCP); hex: E3 or 3 (without PCP)
Max. PDU length	64 bytes
Supported PCP services	Initiate, Abort, Status, Identify, Get-OV-Long, Read, Write
Number of devices	Depends on the host system (I/O range), max. 63
Max. distance between 2 devices	400 m
Communication time	<ul style="list-style-type: none"> • Sum of scan time and processing time in the fieldbus devices. The times are independent of one another. • Processing time in the controller: <ul style="list-style-type: none"> – Parameter data and process data are independent of each other – Parameter data (PCP): approx. 30 ms +20 ms tolerance – Process data: approx. 3 ms +2 ms tolerance
Electrical connection	Push-on terminal strip with spring-clamp connection
Connection options	 Rigid: 1.5 mm ² (AWG 16) Flexible:  1.5 mm ² (AWG 16) without ferrules  1.5 mm ² (AWG 16) with ferrules without plastic sleeve  0.5 mm ² (AWG 20) with ferrules with plastic sleeve
DC supply for function module	<ul style="list-style-type: none"> • Internal • External, <ul style="list-style-type: none"> – only required if the communication ring must not be interrupted by a bus device being switched off or failing – supply via separate mains supply – +24 V DC ± 10%, max. 90 mA per function module – X3/59 can be loaded with a maximum of 3A when the supply voltage is looped through to other bus devices
Insulation voltage to reference earth/PE	50 V AC
Ambient temperature	Operation: –20 ... +60°C Transport: –25 ... +70°C Storage: –25 ... +60°C
Climatic conditions	Class 3K3 to EN 50178 (without condensation, average relative humidity 85%)

Note:

Two LEDs are located on the function module to indicate the communication status.

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 (see connection diagrams above).