## LECOM-B PT (RS485)

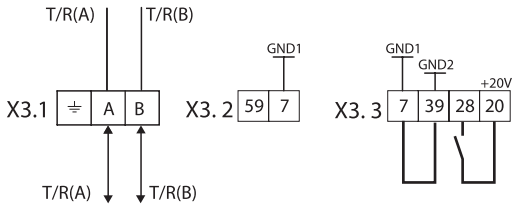
| LECOM-B PT (RS485) | Order ref. | E82ZAFLC010 |
|---|---|---|
| LECOM-B (RS485) | Order ref. | E82ZAFLC |

Communication via the function module LECOM-B (RS485) uses the Lenze protocol LECOM. This protocol is open to the user. Components which support this protocol area available for various systems (e.g. Simatic S5). Plug-in spring-clamp terminals enable cable cross-sections of up to 1.5 mm$^2$ to be connected quickly and easily without the need for ferrules. Due to the plugged-on spring-clamp terminal strip, the function module juts out 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

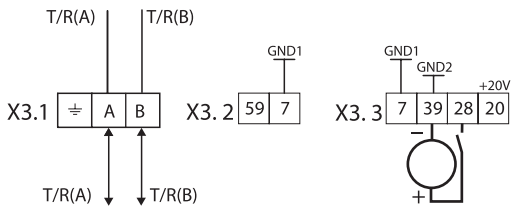
| X3.1/ | Name | Function |
|---|---|---|
| y | PES | Additional HF screen termination |
| A | T/R(A) | RS485 data cable A |
| B | T/R(B) | RS485 data cable B |
| **X3.2/** | | |
| 7 | GND1 | Reference potential for X3.3/20 |
| 59 | | External DC supply for function module<br>U(ext.) = +24 V DC ±10% (reference: GND1) |
| **X3.3/** | | |
| 7 | GND1 | Reference potential for X3.3/20 |
| 39 | GND2 | Reference potential for controller inhibit (CINH) at X3.3/28 |
| 28 | CINH | Controller inhibit • Start = HIGH (+12 V … +30 V)<br>• Stop = LOW (0 … +3 V) |
| 20 | | DC voltage source for internal supply<br>for controller inhibit (CINH) +20 V (reference: GND1) |

**Supply: Controller inhibit terminal (X3/28) via internal voltage source X3/20 (+20 V DC)**

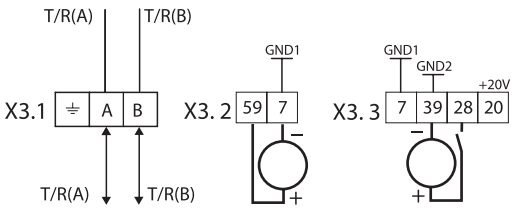




**Supply: Controller inhibit terminal (X3/28) via external +24 V supply**




**Supply: Function module and terminal Controller inhibit (CINH) via external voltage source**




Minimum wiring required for operation

## LECOM-B PT RS485)

### General data and application conditions

| | |
|---|---|
| **Communication medium** | RS485 (LECOM-B) |
| **Communication protocol** | LECOM A/B V2.0 |
| **Transfer character format** | 7E1: 7-bit ASCII, 1 stop bit, 1 start bit, 1 parity bit (even) |
| **Baud rate [bit/s]** | 1200, 2400, 4800, 9600, 19200, 38400, 57600 |
| **LECOM-B device** | Slave |
| **Network topology** | Without repeater: line<br>With repeaters: line or tree |
| **Process data words (PCD) (16 bits)** | 2 words |
| **Max. number of devices** | 32 (= 1 bus segment) including host system<br>With repeaters: 90 slaves |
| **Max. cable length per bus segment** | 1000 m (depending on baud rate and cable type used) |
| **Electrical connection** | Screw terminals |
| **Connection options** |  Rigid: 1.5 mm² (AWG 16) |
| | Flexible:<br>  1.5 mm² (AWG 16) without ferrules<br>  1.5 mm² (AWG 16) with ferrules without plastic sleeve<br>  0.5 mm² (AWG 20) with ferrules with plastic sleeve [1]<br>1.5 mm² (AWG 16) with ferrules with plastic sleeve [2] |
| **DC supply for function module** | • Internal<br>• External, only required for<br>– bus devices which are to be disconnected from the mains, but communication with the master is to be maintained<br>– bus devices with activated bus terminating resistor, which are to be disconnected from the mains, but the bus system is to remain active<br>– supply via separate mains supply<br>– +24 V DC ± 10%, max. 70 mA per function module |
| **Insulation voltage to reference earth/PE** | 50 V AC |
| **Ambient temperature** | Operation: –20 ... +60°C<br>Transport: –25 ... +70°C<br>Storage: –25 ... +60°C |
| **Climatic conditions** | Class 3K3 to EN 50178<br>(without condensation, average relative humidity 85%) |

[1] Spring-clamp connection
[2] Dual screw connection

**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.
The connection diagrams above indicate the internal DC supply to the function module as an alternative option.