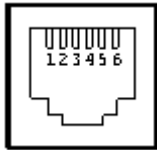


Application Note

Using the serial port of the devolo G3-PLC modem 500k

Version 3 06.12.2017

1 Pin assignment of the serial port



View of the inside of the RJ12 socket

| Device version: | MT:2814 | MT:2746 | MT:2638 |
|-----------------|---|-----------------------------|----------------------|
| Pin1 | RS485_D- | RS485_D+ | RS485_D+ / RS232_RxD |
| Pin2 | +12Vdc (default out) (Output, max. 3W) | +12Vdc (Output, max. 3W) | nc |
| Pin3 | GND | GND | GND |
| Pin4 | RS232_TxD | RS232_TxD | nc |
| Pin5 | RS232_RxD | RS232_RxD | nc |
| Pin6 | RS485_D+ | RS485_D- | RS485_D- / RS232_TxD |

2 parameter configuration options

The following parameter configuration options are available, corresponding to the type of port:

2.1 RS-485 interface

Framing (MT:2638 & MT:2746)

- 8N1, 7E1, 7O1

Framing (MT:2814)

- Number of data: 5/6/7/8 bits
- Stop bits: 1 or 2 stop bits
- Parity bits: no/odd/even parity

Supported data rates (MT:2638 & MT:2746)

- 4.800; 9.600; 19.200; 38.400; 57.600; 115.200; 230.400; 460.800; 921.600 bps

Supported data rates (MT:2814)

- 300; 2.400; 4.800; 9.600; 19.200; 38.400; 57.600; 115.200; 230.400; 460.800 bps

Caution: The RS-485 ports on devolo G3-PLC modems are intended as the end point for the RS-485 bus and terminate the bus with a 120 Ω terminating resistor (exception: MT:2638 - no termination). The RS-485 drivers in use each have a failsafe function that prevents an undefined state from being set internally when the bus is not being operated.

For RS-485 drivers without this function, an inoperative bus leads to an undefined state on its receiver side. A potential consequence of this is that the removed device has unpredictable behaviour and can no longer be operated properly.

If devolo G3-PLC modems equipped with failsafe are operated in a bus with RS-485 communication partners that lack a failsafe (e.g. power meters with older designs), and if the bus is not operated actively (bus biasing), then the previously described unpredictable behaviour of the RS-485 communication partner may occur as a result.

2.2 RS-232 interface

Framing (MT:2746 & MT:2814)

- Number of data bits: 5/6/7/8 bits
- Stop bits: 1 oder 2 stop bits
- Parity bits: no/odd/even parity

Framing (MT:2638)

- 8N1, 7E1, 7O1

Supported data rates (MT:2638 & MT:2746)

- 4.800; 9.600; 19.200; 38.400; 57.600; 115.200; 230.400; 460.800 bps
MT:2638: additional: 921.600 bps
MT:2746 & MT:2814: additional: 300; 2.400 bps

Limitation: No hardware handshake is available

Caution: The RS-232 interface driver of the MT:2746 has an automatic power-down mode and does not work if there is no voltage present at the RxD pin. If two of these devices are connected together, no communication is possible!