

Radio Data Modem MOD 02

Order information

Name	Type	Part No.
Radio Data Modem	MOD 02	133 610 02 AX



- **20mA Current Loop / TTY Interface**
- **5V Supply Voltage**
- **FFSK Coding (Fast Frequency Shift Keying)**
- **Indicating LEDs for Transmit and Receive State**
- **Identification Frequencies:**
 - at 2400 Baud: 1200/2400 Hz
 - at 1200 Baud: 1200/1600 Hz
- **Explosion protection category / mode: I M 1 EEx ia I**

Usage and Functionality

The Modem MOD02 serves to convert process data into a serial form transmissible by RF transmitter and receiver. Die process data can be exchanged via a serial interface or via attached ZM51 I/O modules. RF transmitter (HFS..) and RF receiver (HFE..) can be directly snapped onto the modem enclosure and be connected to the modem by an eight core ribbon cable connectors.

The serial interface is built-in according to the specification of the so-called 'Bergbau Betriebsblatt BB22444' part 3 and part 4 as current loop interface (TTY). Optional the data exchange can be made with the RK512 procedure. The modem is controlled by a type 80C31 micro-controller. It's task is to buffer the incoming data stream of the TTY interface or from connected input modules, process the data application dependent and transmit it via the attached RF transmitter.

On the opposite side the data stream received by the RF receiver is passed to the receive input of the modem and passed to the micro-controller. The received data are processed there again and then passed to the TTY interface

(KL3 / KL4) or to connected output modules.

The analogue part of the modem uses the FFSK method (Fast Frequency Shift Keying). By means of this the modem chip only requires a half-wave of the coding frequency to code or detect a symbol (bit).

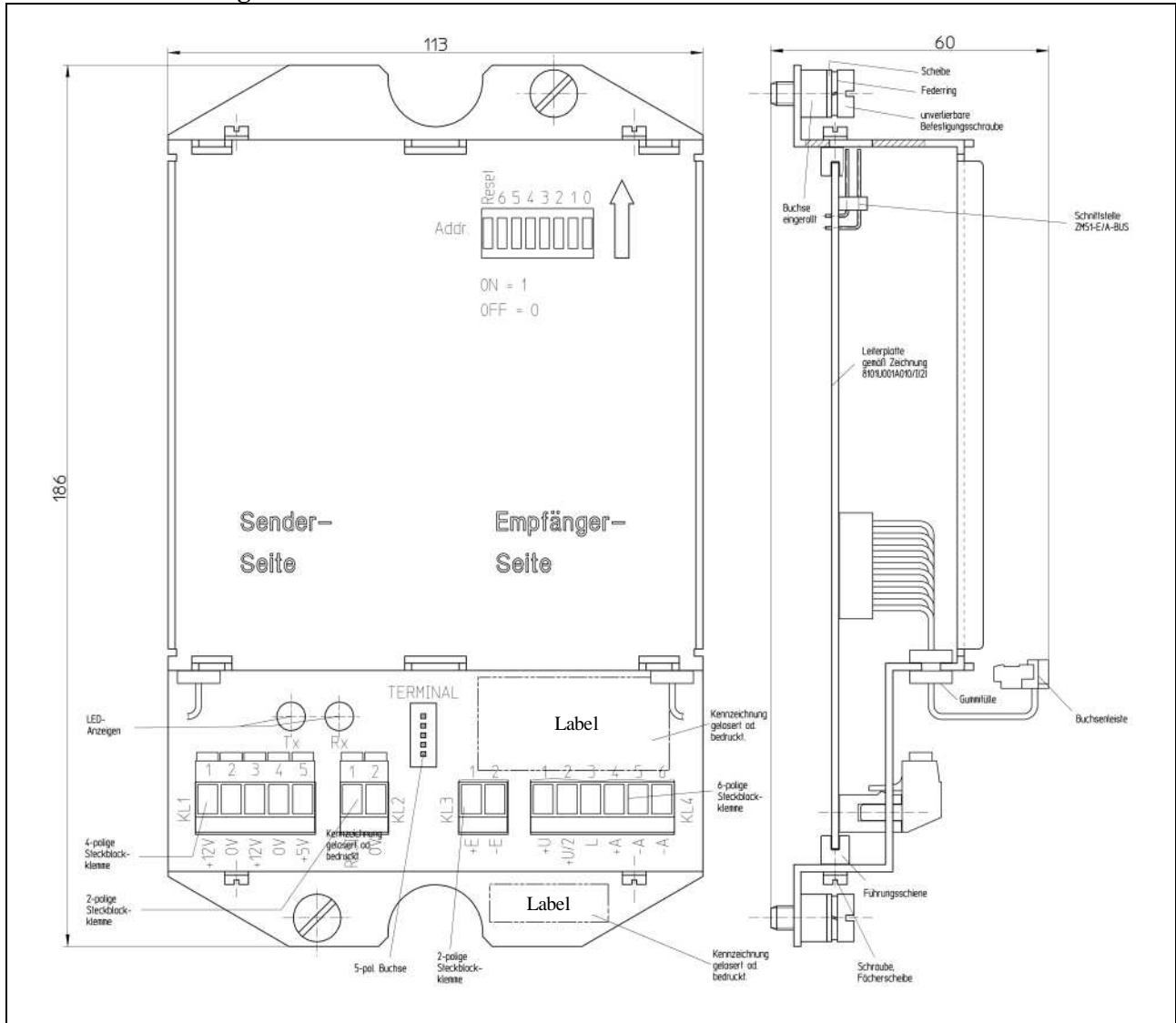
The identification frequencies of the modem are

- at 2400 baud: 1200/2400 Hz
- at 1200 baud: 1200/1600 Hz.

The FFSK transmission signal comes on an eight-pole connector to the RF transmitter with a level of -6 dBm at 600 Ω. In addition the signal to activate/switch-on the RF transmitter (RTS = request to send) is lead also on this connector.

Because the RTS signal, important for special multi-point connections, is not available on a normal interface according to BB22444, the micro-controller generates the signal out of the transmission data of the data terminal equipment (TXD). The RF receiver is connected through an eight-pole connector too. The digital circuits of the radio data modem MOD02 must be supplied with a 5 V system voltage (KL1.4 and KL1.5).

Dimensional drawing MOD02



FHF Bergbautechnik GmbH & Co. KG
 Eintrachtstr. 95
 D-42551 Velbert



Tel: +49 (0) 2051 270 - 0
 Fax: +49 (0) 2051 270-366
 Mail: info@fhf-bt.de
 URL : www.fhf-bt.de