Product Information

FHF FUNKE+HUSTER+FERNSIG
FHF Bergbautechnik GmbH & Co. KG

Profibus controller of type Z51-PBC01

Ordering data

Designation	Type	Item no.
Profibus controller	Z51-PBC01	150 900 01 AX

- **Process data acquisition through input modules of the station and data storage**

- **Data output through output modules**

- **Data processing for serial data transmission according to "Profibus DP" standard**

- **Communication through "Profibus DP" fieldbus connection with "Profibus DP" master**

- **Type of protection I M1 Ex ia I**

Application and functioning

The Profibus controller Z51-PBC01 is the central, intelligent control unit of a ZM51 station configured as a Profibus DP slave and provides it with the functionality of an "intelligent terminal strip" ("remote I/O", "decentral periphery").

The basic functions of this microcontroller controlled module are:
- acquisition of process data through the input modules of the station and storage of these data,
- output of data to the process through the output modules,
- processing of data for the serial data transmission according to "Profibus DP" standard,
- communication through Profibus DP fieldbus connection with a "Profibus DP" master,
- I M1 Ex ia I.

The Profibus controller Z51-PBC01 contains:
- one powerful 16-bit microcontroller
- with one internal program memory (max. 512k Flash-EPROM) with the operating system for data acquisition, data output, data transmission
- with internal data memory (max. 32k RAM) for the data to be acquired and output
- one non-volatile memory (8k Ferroelectric RAM) for the retentive storage of transmission data and parameter data of the operating system
- one 3-pin plug-in terminal (top section) to connect a laptop for configuration purposes (RS232)
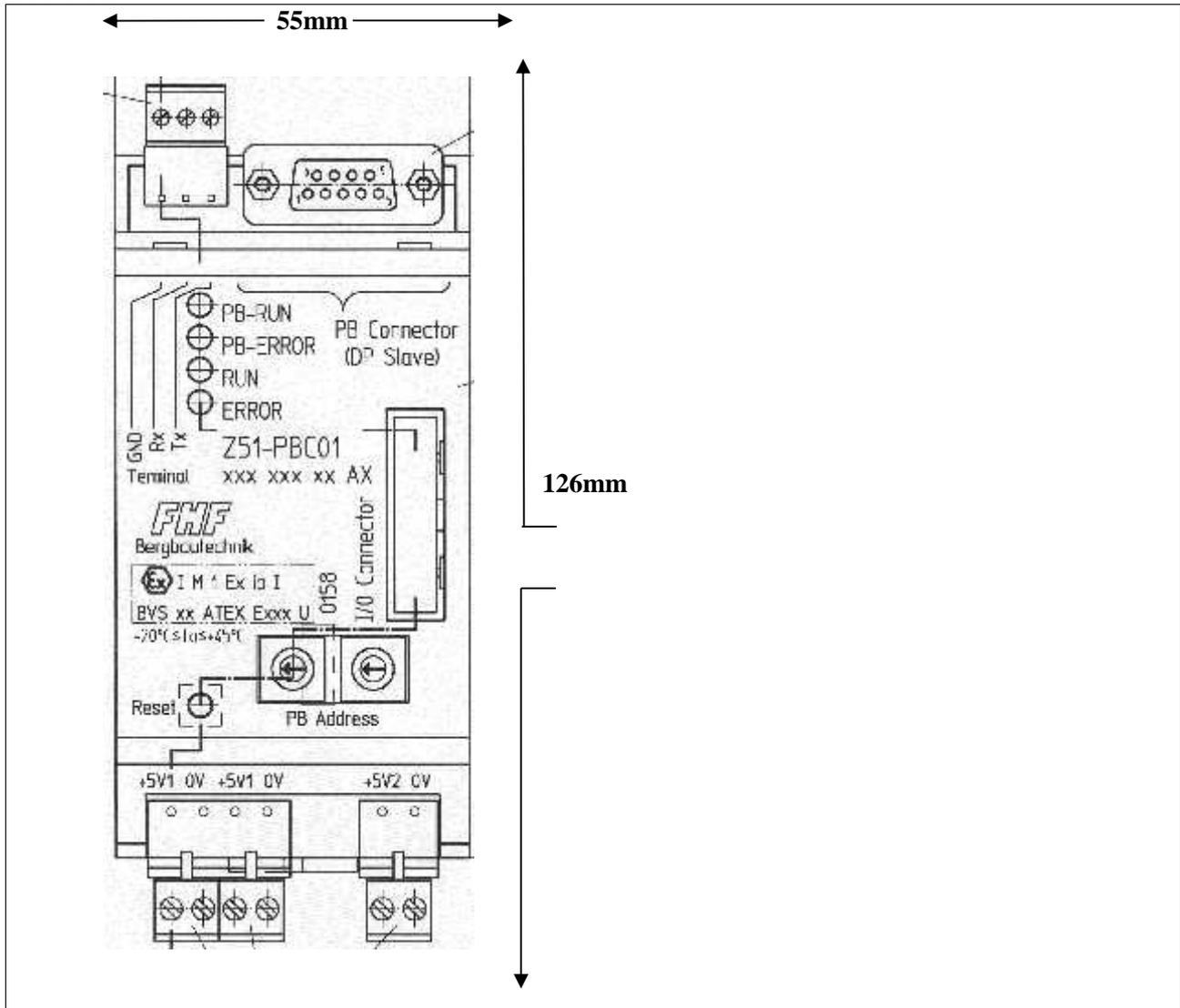- one 9-pin Sub-D socket (RS485) (top section) to connect a Profibus modem (e.g. PBM01)

- plug-in terminal connections (bottom section) for 5V supply of CPU and I/O modules
- one plug connection (RH side) for the ZM51 station bus, i.e. for the flat ribbon cable connector which starts at the Profibus controller and is connected to all I/O modules
- two miniature rotary switches to set the Profibus slave address
- Reset button
- Diagnostics indications:

- RUN (green: Z51-PBC01 in operating condition)
- ERROR (red: Z51-PBC01 in error condition)
- PB RUN (green: communication on Profibus DP)
- PB ERROR (red: no communication connection on Profibus DP).

On the occasion of the initial commissioning and in case of each change to the configuration of the I/O modules, it must be taken over by the Profibus controller Z51-PBC01 (learnt) to ensure that the process data mirror and the Profibus DP telegram are configured correspondingly. This is initialised locally by pressing the Reset button for more than 5s or remotely, by setting bit 8 in byte 16 (rising edge) in the Profibus DP telegram (or the process image).

The data transmission rates (up to 1.5Mbit/s) are set automatically.

Overview