D a t a s h e e t

IMB – ism

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The IMB-ism modules allow the reception of measuring values from 1…8 ISM or IBRit-rf1 radio modules.
Each IMB-ism module contains 8 channel numbers and to each channel another address 1...500 of an ISM / IBRit-rf1 radio module can be assigned, which is then received over that channel number by the IMB-ism module.
By the different IMBus connection possibilities measuring values can be transferred wireless over the IMB-ism into :

- **Standard-PCs over USB / RS232**
- **Computer-networks over LAN / Wireless-LAN**
- **PLC-control units over Profibus / Profinet / EtherCAT**
- **C200 column gauges / B200 digital gauges**
- **measuring computers**

Art.-No. F122 121

Technical data

Mechanical characteristics

Case	Aluminium and plastic sides
Dimension W x H x D (without antenna)	25 x 49.25 x 62 mm

Electrical characteristics

Power supply of IMBus	+5V
Power consumption	40mA
Interface	IMBus (RS485)

Measurement data

Transmission frequency	433.926 MHz
Frequency range	± 13 KHz, ± 115.2 kHz
Modulation type	FSK
Output power @400 Ω	+10 dBm
Sensitivity @400 Ω	-105 dBm
Transmission speed	9600 baud, 230400 baud

Environmental conditions

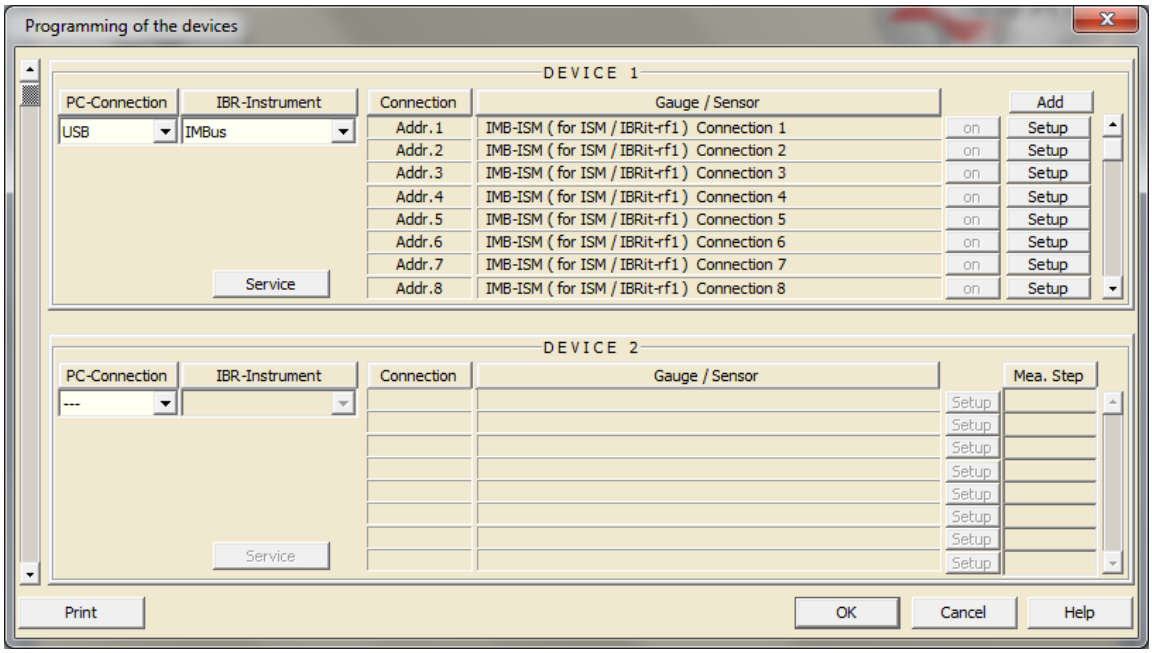
Working temperature range	0...45°C
Storage temperature range	-30...+80°C
Type of protection	IP65 (CEI / IEC 529)

Electromagnetic compatibility (EMC)

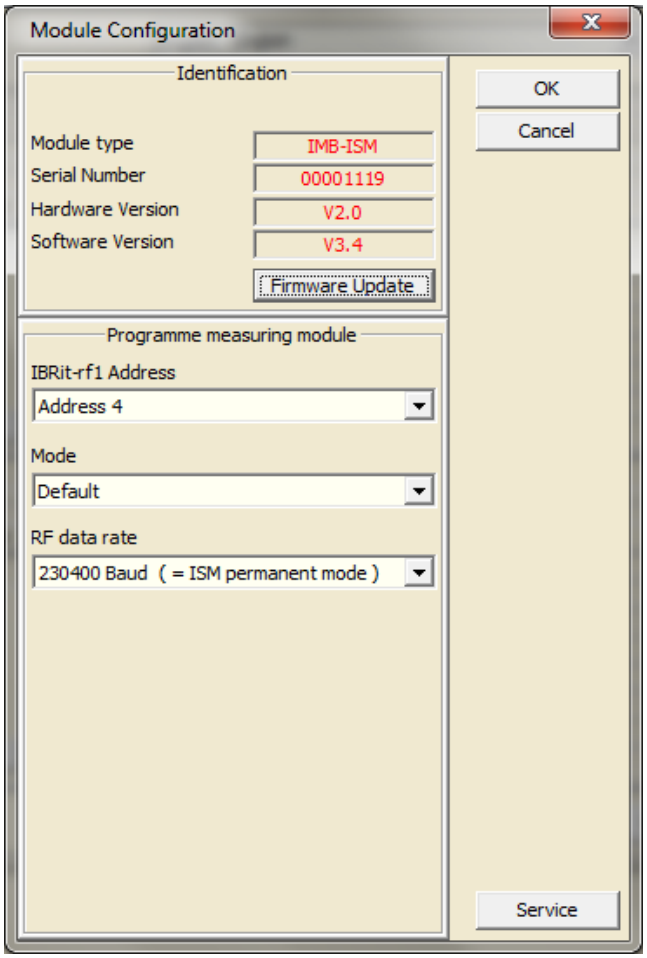
Electromagnetic compatibility (EMC)	Interference emission according to EN50081-2 Interference resistance according to EN50082-2

Programming of the IMB-ism and ISM / IBRit-rf1 modules over a PC :

1. Connect the **IMB-ism** by an IMB-connection cable / module to the PC for programming.
2. Install the Software **IMB_Test.EXE** (at least V2.02) and start this software.
3. After the selection of the "*PC-Connection*" and the "*IBR-Instrument*" = **IMBus** in the Setup-Menu eight addresses are shown for the **IMB-ism** :



4. To the eight channels of the **IMB-ism** modules addresses from 1…500 of **ISM / IBRit-rf1** modules can be assigned by the **Setup**-Buttons :



Additionally, the RF data rate of the IMB-ism can be changed, depending on whether values shall be received from IBRit-rf1 modules or from ISM modules in ISM Permanent mode.

9600 Baud = IBRit-rf1 compatible

230400 Baud = ISM Permanent mode compatible

Advantages of the 230400 Baud data rate :

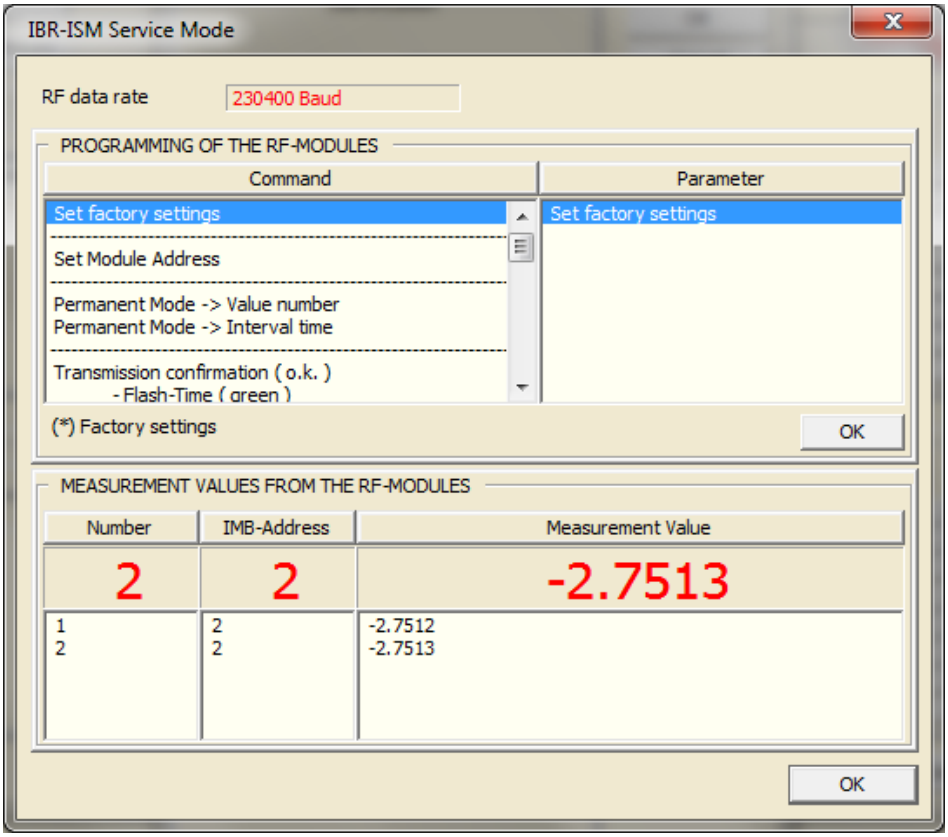
a) approx. 1 million instead of only 200.000 transmissions possible, before the batteries run out
b) ISM Permanent mode can be used

Disadvantages of the 230400 Baud data rate :

a) not IBRit-rf1 compatible
b) only approx. 60% range in comparison with 9600 Baud

5. By the **Service**-Button the window for programming the **ISM / IBRit-rf1** modules opens. This window is described in **ISM-usb** manuals.

Note :
*In this window generally all **ISM / IBRit-rf1** modules can be programmed independent of the addresses assigned to **IMB-ism** module.*
*But on the measuring value transmission only measuring values from the **ISM / IBRit-rf1** modules are displayed, which are assigned to one **IMB-ism** channel. Because of this on the reception of a measuring value the **IMB-ism** channel number (not the **ISM / IBRit-rf1** address) is shown.*



Programming of the IMB-ism and ISM / IBRit-rf1 modules over a C200 column gauge :

1. Connect the **C200** column gauge with built-in **IMB-ism** module to the PC.
2. Install the Software **C200_PC.EXE** (at least V2.21) and start this software.
3. On the call of the menu **C200 / Programming of IMB-Modules** the **C200** column gauge is set into a special mode, which allows the programming of the single IMB-modules over the PC.
   For the programming of the **IMB-ism** modules the window shown on page 2 is opened in the **C200_PC** Software**.**
4. After the programming of the **IMB-ism** module the **C200** column gauge must be switched off and then on, because the special mode can be only left by a RESET.