

Data sheet

IMB - im1 / 2 / 4 / 8

Doc.-No. : D2MF122 061

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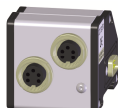


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IMB - im1

Art. No. F122 061



IMB - im2

Art. No. F122 062



IMB - im4

Art. No. F122 064



IMB - im8

Art. No. F122 068

The IMBus modules *IMB-im1/2/4/8* serve to connect inductive measuring probes to the IMBus system. The IMBus modules *IMB-im1/2/4/8* can be individually configured to match virtually any inductive probe specification.

The modules can be read synchronously for dynamic measurements with mixed inputs. In addition the *IMB-im1* module features a linearization possibility for compensation of linearity errors.

The width of the modules is 37.5 mm (im1), 50 mm (im2), 87.5 mm (im4) and 162.5 mm (im8).

The modules can optionally be mounted to a rail mount (NS35 / 7,5 EN60715).

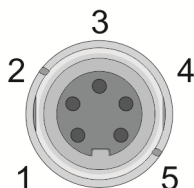
Technical data

Electrical characteristics

Supported inductive probe types	All manufacturers and types Stock standard : Tesa Half bridge and compatible
Frequency, Input impedance, ...	Corresponding to the probe specifications
Resolution	16 Bit
Measuring range	+/- 3.0 mm (on 0.1 μ m measuring step) +/- 30.0 mm (on 1 μ m measuring step)
Measuring rate	max. 2500 values / sec. (complete values)
Temperature drift Gain	< 0.005 % / K
Temperature drift Zeropoint	< 0.002 % / K
Operation temperature range	0 ... 45 °C
Storage temperature range	-20 ... 80 °C
IMBus current consumption	< 20 mA (im1); < 25 mA (im2) < 35 mA (im4); < 45 mA (im8)

Typical values at an ambient temperature of 25°C

Wiring diagram



Pin arrangement according to DIN 45322,
5-pins at 270°, Female connector

Matching connector plug :

Circular plug-in connector with screwable
mechanical lock according to IEC 60130-9,
pin arrangement according to DIN 45322, 5-pins

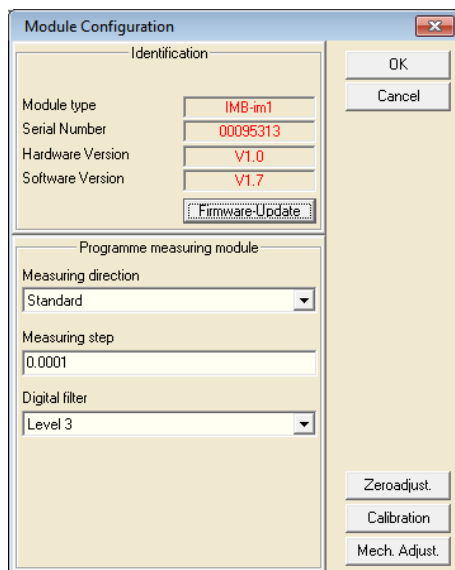
Pin assignment (refers to Tesa HB configuration) :

- 1 - 0° probe drive signal
 - 2 - Ground
 - 3 - Signal input
 - 4 - n. c.
 - 5 - 180° probe drive signal
- Connector casing - shield

Application information

1. Configuration of the IMB-im module via software-setup

- Install and start the IMB_Test software.
- Click on the „**Setup**“ button to open the interface configuration window.
- First select the **PC-Connection** and then the connected **IBR-Instrument**.
The measuring bus is analysed after selection of **IMBus** as **IBR-Instrument** and all IMBus modules connected are displayed.
- The configuration of the IMB-im module can be done via the „**Setup**“ buttons of the particular measuring inputs. The configuration window displayed below is thereby opened.



- The following operating parameters of the IMB-im module can be set :

Measuring direction :

Standard : The measuring value increases if the probe moves in.

Inverse : The measuring value increases if the probe moves out.

Measuring step :

0.0001 : Standard setting of the module (refers to a probe sensitivity of 73.75 mV/V/mm for Tesa HB stock standard configuration).

x.xxxxxx : Setting can be adjusted to adapt to different probe sensitivities.

Digital filter : (For calculating mean values from several single values. Serves for filtering e.g. vibrations)

Off : No mean value is calculated. Every single value is collected unfiltered.

Level 1 : Lowest filter level. The mean value is calculated from 2^1 (= 2) single values.

.....

Level 8 : Highest filter level. The mean value is calculated from 2^8 (= 256) single values.

- In addition you can access the following functions :

Zeroadjust. :

This function allows performing a zero adjustment of the probe on the master or reference piece.

This function should be called only in exceptional cases because the zero adjustment is preferably to be performed by the metrology software used for measurement operation (e.g. ComGage, IBREXDLL, ...).

Calibration :

This function should be called only in exceptional cases because the IMBus modules are already calibrated in the factory. An applied calibration is preferably to be performed by the metrology software used for measurement operation (e.g. ComGage, IBREXDLL, ...).

Mech. Adjust. :

This function allows displaying the raw values of the connected probes.