

# Data sheet

**IMB - ai1 / 2 / 4 / 8**

Doc.-No. : D2MF122 041

Rev. : 07/10

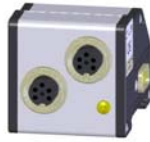


Messtechnik GmbH & Co. KG



**IMB - ai1**

Art. Nr.: F122 041



**IMB - ai2**

Art. Nr.: F122 042



**IMB - ai4**

Art. Nr.: F122 044



**IMB - ai8**

Art. Nr.: F122 048

The IMBus modules *IMB-ai1/2/4/8* serve to measure analogue voltages and currents. The modules can be read synchronously for dynamic measurements with mixed inputs. In addition the *IMB-ai1* module features a linearisation possibility for compensation of linearity errors.

The width of the modules is 37.5 mm ( ai1 ), 50 mm ( ai2 ), 87.5 mm ( ai4 ) and 162.5 mm ( ai8 ). The modules can optionally be mounted to a rail mount ( NS35 / 7,5 EN60715 ).

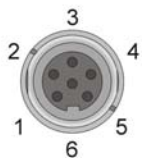
## Technical data

### Electrical characteristics

Resolution	16 Bit ( 0.5 mV at $\pm 10$ V, 100 $\mu$ V at $\pm 2$ V )
Standard voltage measuring range	$\pm 10$ V ( $R_i = 220$ k $\Omega$ )
Standard current measuring range	$\pm 20$ mA
Measuring rate	max. 2500 values / sec. ( complete values )
Operation temperature range	0 ... 45 °C
Storage temperature range	-20 ... 80 °C
IMBus current consumption	< 20 mA ( ai1 ); < 25 mA ( ai2 ) < 35 mA ( ai4 ); < 45 mA ( ai8 )

*Typical values at an ambient temperature of 25°C*

### Wiring diagram



DIN 45322, Female connector

#### Pin assignment :

- 1 - Earth ( GND )
- 2 - Voltage input  $\pm 10$  V,  $R_i = 220$  k $\Omega$
- 3 - Current input  $\pm 20$  mA
- 4 - Measuring range selection
- 5 - Reference voltage ( 4096 mV,  $I_L = \text{max. } 1$  mA )
- 6 - VCC - output ( 5 V,  $I_L = \text{max. } 20$  mA )

Matching connector plug :  
Circular plug-in connector with screwable mechanical lock according to IEC 60130-9, pin arrangement according to DIN 45322, 6-pins

#### Connection plan for Voltage input ( $\pm 10$ V )



#### Connection plan for Current input ( 20 mA )

