



AD8 pro MD2 (ADMM 8 pro2)



Product description

The **AD8 pro MD2** measurement module is especially designed for the use of ratiometric sensors and sensors with a power supply voltage up to 30 V DC. With its high-precision, galvanically isolated sensor excitation it is not only suitable for a wide range of active sensors but also for sensors with ground-referenced signal inputs.

Shipping content

- ▶ Measurement module AD8 pro MD2
- ▶ Configuration software CSMconfig
- ▶ Documentation
- ▶ Calibration certificate in accordance with DIN EN ISO/IEC 17025

Key features



- ▶ **8 differential voltage inputs, galvanically isolated**
- ▶ **Measurement inputs adjustable per channel from ± 10 mV to ± 60 V**
- ▶ **High-precision bipolar, galvanically isolated sensor excitation, adjustable per channel**
- ▶ **Sensor linearization with axis points**


Maintenance

- ▶ Calibration every 12 months recommended

Accessories

- ▶ See datasheet "CAN Accessories"

Technical data

Type designation	AD8 pro MD2
	
Measurement inputs	8 analog inputs
Measurement ranges	± 10 , ± 20 , ± 50 , ± 100 , ± 200 , ± 500 mV and ± 1 , ± 2 , ± 5 , ± 10 , ± 20 , ± 60 V
Internal resolution	16 bit
Internal sampling rate per ch.	2 kHz
Measurement data rate / sending rate per channel	1, 2, 5, 10, 20, 50, 100, 200, 500 Hz and 1 kHz, 2 kHz adjustable per module or per channel via configurable CAN identifier
HW input filter	low-pass filter 3rd order, approx. 500 Hz
SW input filter	switchable 6th order Butterworth filter, range: 0.1 Hz to 500 Hz, automatically adjusted to measurement data rate, alternatively: threshold frequency adjustable per channel
Axis points	8 tables, each with up to 32 axis points
Input protection ¹⁾	
Operational safety	± 60 V permanent
Device safety	± 100 V permanent, additional ESD protection
Gain error ²⁾	
at 25 °C	max. ± 0.05 % of measured value
Temperature drift	max. ± 10 ppm/K
Sensor excitation	switchable, galvanically isolated and adjustable per channel ³⁾
Voltage	± 5 , ± 8 , ± 10 , ± 12 , ± 15 V DC, therefore also 10, 16, 20, 24, 30 V DC
Current	max. ± 30 mA per channel, max. ± 240 mA per module
Galvanic isolation ⁴⁾	no safety isolation in terms of high-voltage applications
Channel / channel	500 V
CAN / channel	500 V
CAN / power supply	500 V
Power supply / sensor excitation	500 V
CAN interface	CAN 2.0B (active), High Speed (ISO 11898-2:2016), 125 kBit/s to max. 1 MBit/s, up to 2 MBit/s with CSMcan Interface, data transfer free running
Configuration	via CAN bus using CSMconfig or CSM INCA AddOn, settings and configurations stored in the module
Power supply	
Minimum	6 V DC (-10 %)
Maximum	45 V DC (+10 %)
Power consumption	typ. 1.8 W (without sensor excitation)

Type designation	AD8 pro MD2
LED indicators	
CAN	power / status
Measurement channels	configuration / operation / sensor excitation
Housing ⁵⁾	aluminum, gold anodized
Protection class	IP67
Weight	approx. 500 g
Dimensions (w × h × d)	approx. 200 × 35 × 50 mm, approx. 200 × 40 × 50 mm (Slide Case)
Connectors	
CAN / power supply	LEMO 0B, 5-pole, code G
Signal inputs	LEMO 0B, 6-pole, code A
Operating and storage conditions	
Operating temperature range	-40 °C to +125 °C
Relative humidity	5 % to 95 %
Pollution degree	3
Storage temperature	-55 °C to +150 °C
Conformity	CE
Part numbers	
Standard	ART1010705
Slide Case	ART1010704

¹ Observe information regarding the intended use. See CSM document "Safety Instructions MiniModule".

² Further information can be found in the Technical Information document on the subject of "Deviation of Measurement".

³ In case of a typ. load of 4.6 W a power supply > 9 V is required, see "Tech Note".

⁴ These MiniModules are designed for measurements in vehicles with 12 V, 24 V, or 48 V on-board power supply systems. The maximum operating voltage at the measurement inputs is 60 V. Do not connect directly to systems with higher operating voltages, e.g. high-voltage batteries of hybrid or electric vehicles.

⁵ Optionally available in other variants



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