



# ADMM pro2



## Product description

The measurement module **ADMM 8 pro2** 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 suited for a wide range of active sensors but also for sensors with ground-referenced signal inputs.

## Shipping content

- ▶ Measurement module ADMM 8 pro2
- ▶ 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  $\pm 10$  mV to  $\pm 60$  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

<b>Type designation</b>	<b>ADMM 8 pro2</b>
	
<b>Measurement inputs</b>	8 analog inputs
Measurement ranges	$\pm 10, \pm 20, \pm 50, \pm 100, \pm 200, \pm 500$ mV and $\pm 1, \pm 2, \pm 5, \pm 10, \pm 20, \pm 60$ V
Internal resolution	16 bit
Internal sampling rate per ch.	2 kHz
Measurement data rate per ch.	1, 2, 5, 10, 20, 50, 100, 200, 500 Hz and 1 kHz, 2 kHz
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 <sup>1)</sup>	
Operational safety	$\pm 60$ V permanent
Device safety	$\pm 100$ V permanent, additional ESD protection
LED indicator per channel	sensor excitation on (green) / short-circuit (red)
<b>Gain error</b>	
at 25 °C	max. $\pm 0.05$ % of measured value
Temperature drift	max. $\pm 10$ ppm/K
<b>Sensor excitation</b>	switchable, galvanically isolated and adjustable per channel <sup>2)</sup>
Voltage	$\pm 5, \pm 8, \pm 10, \pm 12, \pm 15$ V DC, therefore also 10, 16, 20, 24, 30 V DC
Current	typ. $\pm 30$ mA per channel
<b>Galvanic isolation <sup>3)</sup></b>	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
<b>CAN interface</b>	CAN 2.0B (active), High Speed (ISO 11898-2:2003) 125 kbit/s to max. 1 Mbit/s, data transfer free running
Configuration	via CAN bus using CSMconfig or CSM INCA AddOn, settings and configurations stored in the module
<b>Power supply</b>	
Minimum	6 V DC (-10 %)
Maximum	45 V DC (+10 %)
Power consumption	typ. 1.8 W (without sensor excitation)
LED indicator	power (green), status (red)

<b>Type designation</b>	<b>ADMM 8 pro2</b>
<b>Housing <sup>4)</sup></b>	aluminium, 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)
<b>Connectors</b>	
CAN / power supply	LEMO 0B, 5-pole, code G
Signal inputs	LEMO 0B, 6-pole, code A
<b>Operating and storage conditions</b>	
Operating temperature range	-40 °C to +125 °C
Relative humidity	5 % to 95 %
Pollution degree	3
Storage temperature	-55 °C to +150 °C
<b>Conformity</b>	<b>CE</b>
<b>Part numbers</b>	
Standard	ART1010705
Slide Case	ART1010704

<sup>1</sup> Observe information regarding the intended use. See CSM document "Safety Instructions MiniModule".

<sup>2</sup> In case of full load (7.2 W) a power supply > 8 V is required, see "Application Note".

<sup>3</sup> 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. Not suitable to be directly connected to systems with higher operating voltages, e.g. high-voltage batteries of hybrid or electric vehicles.

<sup>4</sup> Optionally available in other variants

## additional products

### ADMM pro

The ADMM pro measurement modules cover an extremely wide range of application. They can be used for "simple" voltage measurement, high-precision current measurement (via shunts), measurement of very low voltages (mV level), and the acquisition of higher frequency signals with measurement data rates up to 10 kHz.



### ETHERCAT ADMM 4

The EtherCAT® measurement module ECAT ADMM 4 provides options to perform measurements with up to 10 kHz per channel at a high Ethernet bandwidth. The EtherCAT® mechanisms for time synchronization are fully supported.





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