Precise. Rugged. Universal.

AD-Scan MiniModule pro

- **Universally applicable, extremely compact CAN bus measurement modules**
- **4 or 8 voltage differential inputs, completely electrically isolated**
- **Measurement range adjustable per channel from 10 mV to 60 V**
- **High-precision differential sensor excitation, adjustable per channel**
- **Digital 6th order Butterworth filter**
- **Operating temperature: -40 °C to +125 °C (Automotive Version) -40 °C to +85 °C (Industrial Version)**
- **Robust aluminium housing: IP67 (Automotive), IP50 (Industrial)**
- **LED status indicator per channel**
- **Excellent price-performance ratio**

The *AD-Scan MiniModules pro* from CSM cover a **wide range of applications**. In addition to having all the features of the successful and widely-used AD-Scan MiniModules, the *AD-Scan MiniModule pro* is particularly suited for the measurement of very low (mV level) voltages. An optional ±20 mA measurement range is also available.

mV measurement ranges and high-precision sensor excitation

The *AD-Scan MiniModule pro* has extremely stable, very robust, and high-precision differential sensor excitation over the complete operating temperature range from -40 °C to +125 °C.

The *AD-Scan MiniModule pro* is suited for use with low-cost or OEM level ratiometric sensors, such as motor vehicle production series sensors for challenging measuring problems – such as in the engine compartment. To address these application demands, the sensor excitation is implemented in a distributive way, where the overall available power is distributed according to requirements of the connected sensors as assigned per channel.

To resolve extremely low output voltages of **mV/V sensors**, **piezo-electric sensors** or **strain gauge-bridges**, measurement ranges of **10 mV, 20 mV and 50 mV** have been implemented in addition to the existing 100 mV and 500 mV measurement ranges. These units are designed for an operating temperature up to 125 °C (Automotive Version).

The CSM Config Tool offers the possibility of zero-point and span amplification factor compensation.

4 or 8 channels

The *ADMM 4 pro* is a four-channel unit with featuring smallest possible size.

The *ADMM 8 pro* is an eight-channel unit featuring additional two-color status LED per channel, for indication of error status, sensor short-circuit, etc.

The *ADMM 8 pro* is also available as Industrial Version with limited protection and reduced temperature range.

Accessories

Available accessories include: Cables for CAN and power supply, CAN adapter cable, signal cables for sensor connection, CAN bus termination and mounting angle brackets. For further details please consult the data sheet **"Accessories for CSM MiniModules"**.

Part numbers (standard versions with LEMO 0B 5-pole for CAN/power supply and LEMO 0B 6-pole or BNC for signal inputs):

ADMM 4 pro Automotive:	ART0200800
ADMM 8 pro Automotive:	ART0200801
ADMM 8 pro Industrial:	ART0200802
ADMM8 pro Automotive LEMO 1B:	ART0200803

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Specifications AD-Scan MiniModule pro

Technical Data	ADMM 4 pro	ADMM 8 pro
Inputs	**4 analog inputs**	**8 analog inputs**
Measurement ranges	±10 mV, ±20 mV, ±50 mV, ±100 mV, ±500 mV, ±10 V, ±20 V, ±60 V [1]	
Internal resolution	16 bit	
Internal sampling rate per channel	2000 Hz	
Measurement data rates per channel	1, 2, 5, 10, 50, 100, 500, 1000, 2000 Hz	
Input protection	±100 V permanent, additional ESD protection	
SW Input filter	selectable 6th order Butterworth, range 0,1 Hz to 500 Hz, automatically adjusts to the measurement data rate or threshold frequency adjustable per channel	
HW Input filter	Low-pass filter 3rd order, approx. 500 Hz	
Sensor excitation	±5 V, ±8 V, ±10 V, ±12 V, ±15 V DC typ. ±30 mA, max. ±120 mA[2], selectable and adjustable per channel [3]	
Galvanic Isolation		
Channel / Channel	500 V DC	
CAN / Channel	500 V DC	
CAN / Power Supply	500 V DC	
CAN Interface	CAN2.0B (active), High Speed (ISO 11898) 125 kBit/s to max. 1 MBit/s, data transfer is free running	
Configuration	via CAN-Bus with CSM Config Tool or CSM INCA AddOn all settings and configuration data stored in module alternatively: Configuration and data transfer using CANopen protocol[4]	
LED Power/Status	LED: Power (green) / Status (red)	
LED per input channel	**configuration:** general (green blinking), short-circuit at sensor excitation (red blinking) **Measurement operation:** with sensor excitation (green) / short-circuit (red)	
Power supply	**approx. 5 V to 60 V DC**	
Power consumption	typ. 1,3 W (without sensor excitation)	typ. 1,8 W (without sensor excitation)
Dimensions (W x H x D)	approx. **120 x 30 x 50 mm**	approx. **200 x 35 x 50 mm**
Weight	approx. 300 g	approx. 500 g
Operating temperature / Protection	Automotive Version: **-40 °C to +125 °C / IP67** Industrial Version: -40 °C to +85 °C / IP50 [5]	
Storage temperature	-55 °C to +150 °C	
Relative Humidity	5 % to 95 %	
Connectors CAN / Voltage	**LEMO 0B 5-polig** or Fischer Series 102, 7-pole	
Connectors signal inputs / sensor excitation	**LEMO 0B 6-pole** or LEMO 1B 6-pole IPT compatible or Fischer 6-pole to Fischer 5-pole with MB configuration downwards compatible	
Housing [6]	Aluminium - Automotive Version: gold anodized - Industrial Version: blue anodized	
Conformity	CE	

1) **Optional current measurement ranges: ±20 mA**
2) **Distributive sensor excitation, see Application Note**
3) **In case of full load (7,2 W) a power supply > 8 V is required, see Application Note**
4) **CANopen see separate data sheet**
5) **ADMM 4 pro is not available as Industrial Version**
6) **Also available with slide case for tool-less mounting**

Shipping Content: CAN-Bus MiniModules, CSM ConfigTool, documentation, Calibration certificate according to DIN EN ISO/IEC 17025.
We recommend a calibration interval of 1 year. For further technical information and references please contact technical sales and distribution.