



HV ADMM 2LI+



Product description

CSM's HV ADMM 2LI+ measurement module has been designed for the acquisition of analog signals in high-voltage environments. With two analog measurement inputs with galvanically isolated sensor excitation, the HV ADMM 2LI+ is suitable for a wide range of applications.

Due to the galvanically isolated sensor excitation, **standard sensors**, which are normally used in conventional low-voltage applications, can be used in high-voltage environments as well if they are combined with specific, high-voltage safe sensor cables. Apart from analog voltage measurements, HV ADMM 2LI+ measurement modules are thus also suitable for the measurement of pressure and humidity in high-voltage environments.

Shipping content

- ▶ Measurement module HV ADMM 2LI+
- ▶ Configuration software CSMconfig
- ▶ Documentation
- ▶ Calibration certificate in accordance with DIN EN ISO/IEC 17025
- ▶ HV isolation test certificate

Key features



- ▶ 2 analog inputs with reinforced insulation
- ▶ Measurement data rate up to 20 kHz via CAN
- ▶ Galvanically isolated sensor excitation with reinforced insulation
- ▶ Use of standard sensors in high-voltage environments
- ▶ Type approval test according to safety standard EN 61010 by an accredited test laboratory
- ▶ Routine test according to safety standard EN 61010


Maintenance

- ▶ HV isolation test according to EN 61010 at least every 12 months
- ▶ Calibration every 12 months recommended

Accessories

- ▶ See datasheet "CAN Accessories"

Technical data

Type designation	HV ADMM 2LI+
	
Measurement inputs	2 analog inputs
Measurement ranges	$\pm 1, \pm 2, \pm 5, \pm 10, \pm 20$ V
Internal resolution	16 bit
Internal sampling rate per ch.	80 kHz
Measurement data rate per ch. ¹⁾	1, 2, 5, 10, 20, 50, 100, 200, 500 Hz, 1, 2, 5, 10, 20 kHz
HW input filter	4th order Butterworth filter (threshold frequency approx. 5 kHz)
SW input filter ²⁾	6th order Butterworth filter
Channel-specific comments	free text consisting of up to 100 characters per channel
Measurement uncertainty	
Gain error at 25 °C	max. ± 0.04 % of measured value
Offset and scaling error	max. ± 0.02 % of final value
Gain drift	max. ± 10 ppm/K of measured value
Zero drift	max. ± 10 ppm/K of final value
Sensor excitation	unipolar, galvanically isolated, switchable and adjustable per channel
Voltage	10, 12, 15 V DC
Power output ³⁾	typ. 200 mW per channel
Tolerance	max. ± 5 %
Fields of application ⁴⁾	for measurements in HV environments ⁵⁾ for details see document: "Technical Information: Fields of Application for CSM HV Measurement Modules"
Measurement voltages (unipolar & bipolar)	up to 20 V peak for working voltages ⁵⁾ up to 846 V DC
Isolation test ⁴⁾	
Type approval test	by external accredited test laboratory ⁵⁾
Routine test	test voltage ⁵⁾ 3,100 V DC, isolation test is to be performed at least every 12 months
Reinforced insulation ^{4), 5), 6)}	
Channel / channel	846 V
Channel / CAN	846 V
Channel / power supply	846 V
Functional insulation	
CAN / power supply	designed for supply voltages 12 V and 24 V

Type designation	HV ADMM 2LI+
CAN interface	CAN 2.0B (active), High Speed (ISO 11898-2:2016), 125 kbit/s to 1 Mbit/s, up to 2 Mbit/s with CSMcan interface, data transfer rate free running
Configuration	via CAN bus with CSMconfig, settings and configurations stored in the device
Power supply	
Minimum	6 V DC (-10 %)
Maximum	30 V DC (+10 %)
Power consumption	typ. 1.1 W (without sensor excitation)
LED indicator	power (green), status (red)
Housing ⁷⁾	
	aluminium with HV designation on the front-side (RAL 2003)
Protection class	IP67
Ground connection	M6 threaded hole
Weight	approx. 350 g
Dimensions (w × h × d)	approx. 130 × 33 × 75 mm / approx. 130 × 38 × 75 mm (Slide Case)
Connectors	
CAN / power supply ⁷⁾	LEMO 0B, 5-pole, code G
Signal inputs	LEMO Redel 2P, 8-pole, code C (black)
Operating and storage conditions	
Operating temperature range	-40 °C to +100 °C
Relative humidity	5 % to 95 % (non-condensing)
Operating altitude	max. 5,000 m above sea level
Pollution degree	4
Storage temperature	-40 °C to +100 °C
Conformity	CE
Device safety	EN 61010-1:2010

¹ 5 kHz: @ 500 kbit/s CAN; 10 kHz: @ 1 Mbit/s CAN, 20 kHz: @ 2 Mbit/s CAN

² Selectable per channel; threshold frequency is automatically adjusted to measurement data rate.

³ Specified typ. power output valid as of hardware revision A001. At operating temperatures above +85 °C and with older hardware revisions, a max. power output of 150 mW is possible.

⁴ Please also read the CSM document "Safety Instructions HV ADMM"

⁵ According to EN 61010-1:2010

⁶ One channel consists of one measurement input plus sensor excitation.

⁷ Optionally available in other variants.



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