

HV AD8 OW20



Product description

CSM's **HV AD8 OW20** measurement module is designed for the measurement of analog voltages in high-voltage environments. Designed as a slide-in unit for 19-inch racks, this module is excellently suited for test bench applications. **HV AD8 OW20** is also applicable for mobile use in all types of vehicles and can, for example, be mounted in the trunk of a car.

HV AD8 OW20 features eight analog inputs with measurement ranges up to $\pm 90V$ per channel.

Shipping content

- ▶ Measurement module HV AD8 OW20
- ▶ Configuration software CSMconfig
- ▶ Documentation
- ▶ Calibration certificate in accordance with DIN EN ISO/IEC 17025
- ▶ HV isolation test certificate



Keyfeatures

- ▶ 8 analog inputs with reinforced insulation
- ▶ Measurement data rate up to 20 kHz via CAN
- ▶ Type approval test according to safety standard EN 61010 by 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 AD8 OW20 |
| |  |
| Measurement inputs | 8 analog inputs |
| Measurement ranges | ±5, ±10, ±20, ±45, ±90 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 |
| Fields of application³ | for measurements in HV environments ⁴ for details see document: "Technical Information: Fields of Application for CSM HV Measurement Modules" |
| Measurement voltages (unipolar & bipolar) | up to 90 V peak for working voltages ⁴ up to 846 V DC |
| Isolation test³ | |
| Type approval test | by external accredited test laboratory ⁴ |
| Routine test | test voltage ⁴ 3,100 V DC, isolation test is to be performed at least every 12 months |
| Reinforced insulation^{3, 4} | |
| 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 |
| Power supply | |
| Minimum | 6 V DC (-10 %) |
| Maximum | 30 V DC (+10 %) |
| Power consumption | typ. 2.5 W |
| LED indicators | |
| CAN | power/status |
| Measurement channels | configuration/operation |

| | |
|---|---|
| Type designation | HV AD8 OW20 |
| 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 with CSMconfig, settings and configuration date stored in the device |
| Housing | aluminium with HV designation on the front-side (RAL 2003) |
| Protection class | IP65 |
| Ground connection | M6 threaded hole |
| Weight | approx. 540 g |
| Mounting | 19 inch |
| Dimensions (w × h × d) | 12 HP (approx. 61 mm) 3 U (approx. 129 mm) 100 mm (+ 25 mm protective bracket) |
| Connectors | |
| CAN/power supply ⁵ | LEMO 0B, 5-pole, code G |
| Signal inputs | LEMO Redel 2P, 8-pole, code B (black) |
| Operating and storage conditions | |
| Operating temperature range | -40 °C to +85 °C |
| Relative humidity | 5 % to 95 % (non-condensing) |
| Operating altitude | max. 5,000 m above sea level |
| Pollution degree | 3 |
| Storage temperature | -40 °C to +85 °C |
| Conformity | CE |
| Device safety | EN 61010-1:2020 |

¹ 5 kHz: 2 channels @ 500 kbit/s CAN, 4 channels @ 1 Mbit/s CAN, 8 channels @ 2 Mbit/s CAN, 10 kHz: 2 channels @ 1 Mbit/s, 4 channels @ 2 Mbit/s CAN, 20 kHz: 2 channels @ 2 Mbit/s CAN

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

³ Please also read the CSM document "Safety Instructions HV AD-TBM"

⁴ According to EN 61010-1:2010

⁵ Optionally available in other variants.



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