

High Voltage Iso DAQ



Four Channel DC-High Voltage Measurement System

- ▶ 4 electrically isolated high voltage inputs supporting 1 kV measuring range
- ▶ 4 external safety dividers (HV Current Limiter)
- ▶ Signal scaling and acquisition rate selectable per channel
- ▶ Safely measure voltage on high voltage DC systems of electric and hybrid vehicles
- ▶ Complete galvanic isolation (signal inputs, CAN, power supply, enclosure)
- ▶ Measurement data output to CAN
- ▶ Configuration and measurement using Windows software IPEmotion

Measuring range	±1000 V (lower ranges on request)
Input voltage (IN+ ↔ IN-)	max. ±1000 V _{DC} / 600 V _{AC}
Channel sample rates	1/ 2/ 5/ 10/ 50/ 100/ 200/ 500/ 1000/ 2000 Hz
Voltage supply	9 V _{DC} to 36 V _{DC} Switch-off for voltage < 6 V
Power consumption, typical	7.5 W
Working temperature range	-20 °C ... +70 °C (-4 °F ... +158 °F) indefinitely
Storage temperature range	-30 °C ... +85 °C (-22 °F ... +185 °F)
IP-Code	IP 54 (ISO 20653 - 2013)
Dimensions	
High Voltage Iso DAQ (W x H x D)	165 mm x 60 mm x 130 mm (6.50 in x 2.36 in x 5.12 in)
High Voltage Current Limiter (L x W x H)	55 mm x 26 mm x 12 mm (2.17 in x 1.02 in x 0.47 in)
Weight	
High Voltage Iso DAQ	1370 g (3.02 lb)
High Voltage Current Limiter + HV cable	135 g (0.30 lb)

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Voltage input	
Measuring range	±1000 V (lower ranges on request)
Number of input channels per module	4 measurement inputs using 4 mm laboratory safety connectors
Galvanic isolation input ↔ module power supply input ↔ CAN input ↔ input	±1000 V ±1000 V ±1000 V
Maximum allowable input voltage Application according to CAT I Application according to CAT II	1000 V _{DC} 600 V _{AC} @ 50 ... 60 Hz (sine wave)
Unallowable applications	CAT III and CAT IV
Input to output test voltage (2 s duration)	3536 V _{AC} @ 50 Hz (sine wave)
Input impedance	21 MΩ // 100 pF (with Current Limiter and HV cable)
Cut-off frequency	2 kHz (max. input cable length of 1 m)
Hardware filter, switchable	150 Hz, filter type 8-pole Butterworth
Aggregate sample rate	max. 8 kHz
CAN output	
Selectable data transfer rate (bit rate)	up to 1 MBit/s according to ISO11898-2
CAN message data format (signal) Resolution (Format) Sign	8 Bit (Byte) and 16 Bit (Word) selectable signed, unsigned
Configuration interface	CAN

Safety instructions



Do not use High Voltage Iso Divider for applications on AC voltages of three-phase current drives in electric and hybrid vehicles, due to extremely high transient voltages and HF currents generated by the drive train systems. An operation without the HV Current Limiter is strictly forbidden!
All users working on High Voltage applications must be trained and approved for this kind of work.