KLARI-QUAD 1000V

with I-PROBE, U-PROBE, I/U-PROBE and Thermocouple

Features

- 4-channel measuring module with 1 ASIC for each channel and 1 microcontroller for all channels
- glvanic isolation up to 1000 V DC between each measuring channel and data output and between all measuring channels
- **PROBE-variants:**
  - current measurement
  - voltage measurement
  - parallel measurement of current and voltage with a Combi-PROBE
  - thermocouple type-K
- **measurement capabilities:**
  - use in laboratory as well as in vehicle:
    - measuring current and/or voltage on high potentials
    - measuring temperature on live connections
  - DC-measurement, internal sample rate up to 16 kHz
  - data output via 1 x CAN 2.0 A/B, resp. 8000 frames/s

Version

- potted housing approx. 130/120/48 mm (l/w/h)
- protection class IP65
- temperature range -40...+85°
- supply 6..50 V DC
- a detailed technical description is contained in our catalogue or technical data sheet

Delivery

- measurement module (please order PROBES separately)
- PC Software for configuration via CAN or USB-2.0 interface
- CAN Database and documentation on CD ROM

Accessories

- cable harness IP65 without RS-232
- USB 2.0 connection cable

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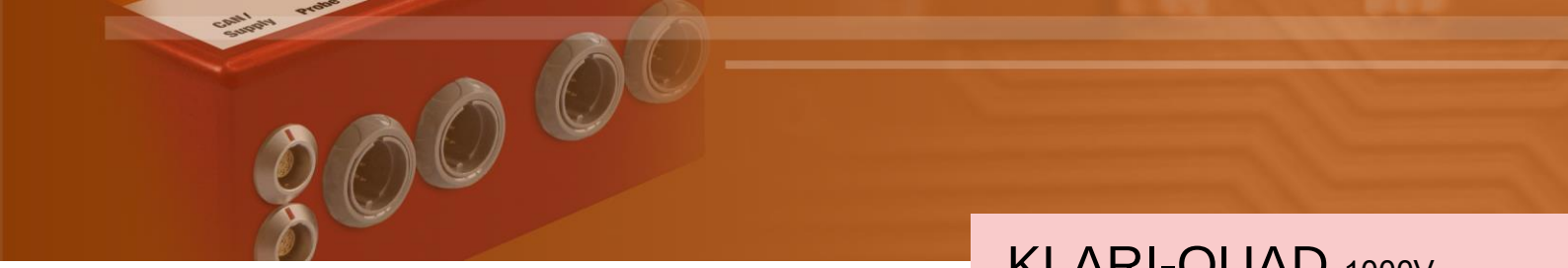

KLARI-QUAD 1000V

TECHNICAL DATA

Input	• 4 measuring channels with an ASIC each • each channel can be used to connect either a current-, voltage-, current/voltage-Combi- or temperature-PROBE
Resolution	• 5 measurement ranges with selectable autorange function • ± 15 bit/range
Accuracy	• ± 1% of measurement value ± 3 bit of the range • valid for temperature range of - 40...+ 85°C
Sample rate	• dual channel operation: max. 8000 samples/s • max. 2 kHz using a Combi-PROBE (I/U)
Features	• selectable data output (CAN2.0B and/or USB-2.0 interface) • CAN data export - parameter driven (baudrate, identifier etc.) • integrated CAN-termination, switchable via software • automatic PROBE-identification with calibration value correction
Output	• 1 x CAN 2.0 A/B, (High-Speed CAN, ISO 11898) from 125 kBaud up to max. 1 MBaud • USB-2.0 interface
Timestamp	• ~ 10 µs resolution (is included in CAN frame)
Housing - Protection - Weight - Dimension	• potted casing • IP65 • approx. 830 g • 130/120/48 (l/w/h)
Supply	• 6,0…50 V DC
Current consumption	• ca. 250 mA at 12 V DC
Configuration	• PC using CAN oder USB-2.0 interface. Configurations can be created, managed and loaded via Klari-Toolbox into the module. • speed CAN: 125 kB…1 MB • measurement type, measuring speed, channels
Modes	• autorange function for all channels in all ranges switchable on/off • adjustable sample speed for each channel
Temperature range	• - 40…+ 85°C for the measurement module • - 40…+ 130°C für die shunts
Isolation	• 1000 V DC permanent isolation: Input <> Output and Input <> Input

Gain	Range	Resolution
100	+/- 7,5 mV	0,250 µV/bit
50	+/- 15 mV	0,500 µVbit
24	+/- 30 mV	1 µV/bit
6	+/- 120	4 µV/bit
1	+ 720 / - 300 mV	24 µV/bit

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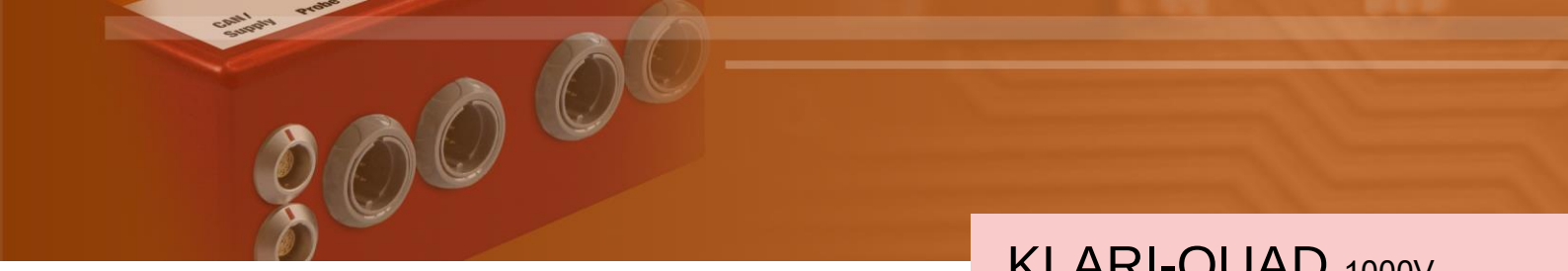
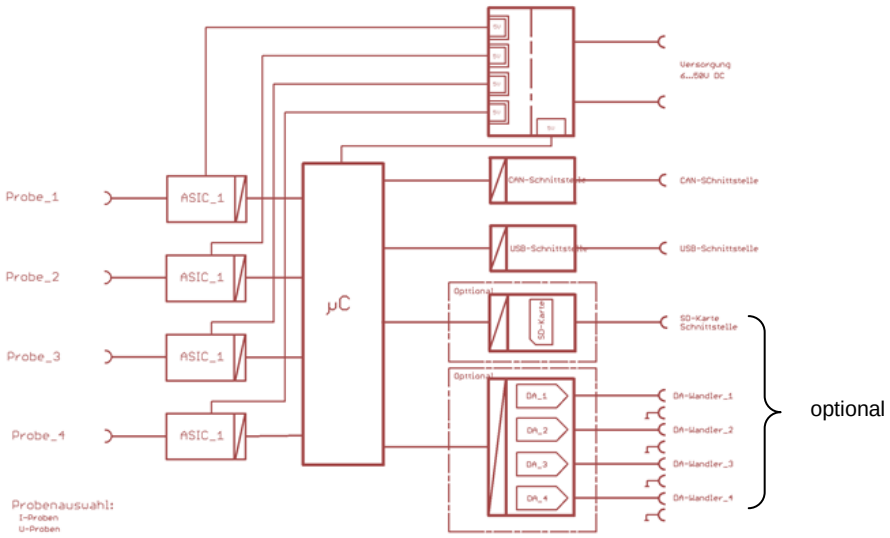


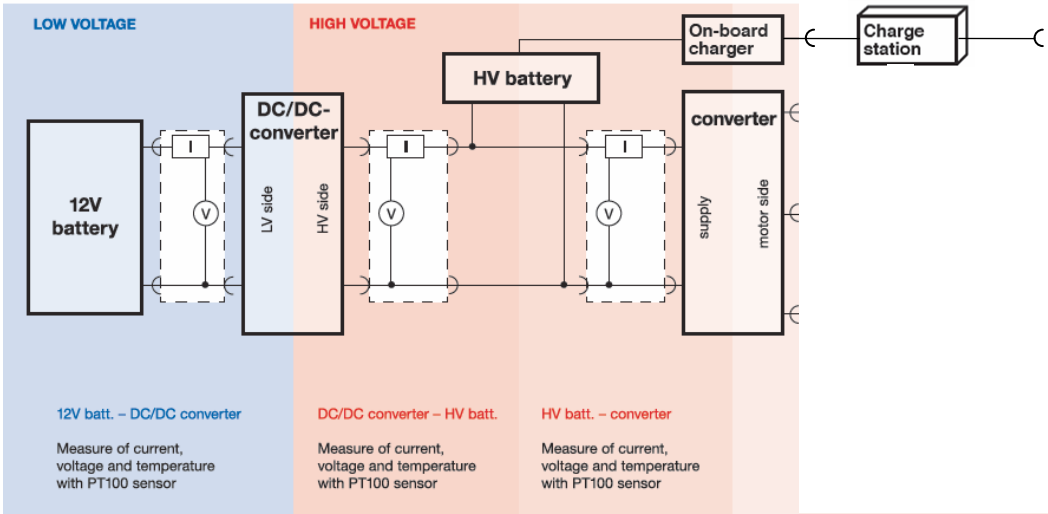
Measuring ranges and resolutions for I- and U-PROBES (examples)

Gain	I-PROBE				U-PROBE			
	1 mΩ		200µΩ		200 V		1000 V	
	Range [A]	Res. [mA/Bit]	Range [A]	Res. [mA/Bit]	Range [V DC]	Res. [mV/Bit]	Range [V DC]	Res. [mV/Bit]
100	+/- 7,5	0,25	+/- 37,5	1,25	0...+/- 5	0,170	0...+/- 37,5	1,25
50	+/- 15	0,5	+/- 75	2,5	0...+/- 10	0,340	0...+/- 75	2,5
24	+/- 30	1	+/- 150	5	0...+/- 20	0,680	0...+/- 150	5
6	+/- 120	4	+/- 600	20	0...+/- 80	2,720	0...+/- 600	20
1	+ 720/- 300	24	+ 3600/- 1500	120	0...+/- 200	16,320	0...+/- 1000	120

Principle



Application



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