KLARI-ONE 1000V

with: I-PROBE, U-PROBE, I/U-PROBE, , Thermocouple type K -PROBE

also with analogue output

Features

- one channel measuring module for current, voltage or combination current/voltage (Combi-PROBE I/U) and temperature measurement
- galvanic isolation of 1000 V DC between measuring channel and data output
- **PROBE variants:**
  - current measurement — HV-I-PROBE
  - voltage measurement — HV-U-PROBE
  - Combi-PROBE for current- and voltage measurement — HV-I/U-PROBE
  - thermocouple type-K — HV-T-PROBE
- **Configuration of measurement channels:**
  - DC- and AC-measurement, internal sample rate up to 16 kHz
  - AC measurement provides the opportunity of calculating RMS-value for one period automatically and transmitting it as a single value via CAN-interface
  - additionally the frequency of the period can be issued
  - following values can be calculated internal and transmitted via CAN-interface:
    U_eff
    I_eff

Version

- potted housing: 78/64/46 (l/w/h), standard-version
  78/78/46 (l/w/h), analogue-version
- protection class IP65,
- temperature range -40...+85 °C
- supply 6..50 V DC

A detailed technical description is contained in our user manual.

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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TECHNICAL DATA

Input	• 1 measuring channel with one ASIC • single channel measurement of current, voltage, current/voltage or temperature (I-, U-, I/U- or thermocouple type K PROBE)
Resolution	• 5 measurement ranges with selectable autorange function • ± 15 bit/range
Accuracy	• ± 1% of measuring value ± 3 bit of range • valid for temperature range of - 40 .. + 85°C
Sample rate	• single channel operation: max. 16000 samples/s (analogue output) • using AC-measurement: Sample rate adjustable in static or dynamic mode
Features	• selectable data output channel (CAN2.0B and/or USB-2.0 interface) • data output via CAN or USB configurable (Baudrate, Identifier etc.) • internal CAN-termination selectable • automatic PROBE-identification with calibration value processing
Output	• 2 x CAN 2.0 A/B, (High-Speed CAN, ISO 11898) from 125 kbit/s up to max. 1 Mbit/s • USB-2.0 interface
Timestamp	• 30 µs resolution (is included in CAN frame)
Housing - Protection - Weight - Dimension	• potted housing • IP65 • ca. 200 g • 78/64/46 (L/W/H), standard-version, 78/78/46 (L/W/H), analogue-version
Supply	• 6,0…50 V DC
Current consumption	• ca. 250 mA at 12 V DC
Configuration	• via PC using CAN or USB-2.0 interface. Configurations could be created, archived and loaded into the module. • speed CAN: 125 kB…1 MB • measurement type, measuring speed, channels
Modes	• autorange function for all channels across all measuring ranges • selectable sample speed for each channel • rms-value calculation for AC signals
Temperature range	• - 40…+ 85°C for the measurement module • - 40…+ 130°C for the shunt
Isolation	• 1000 V DC permanent isolation input <> output

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

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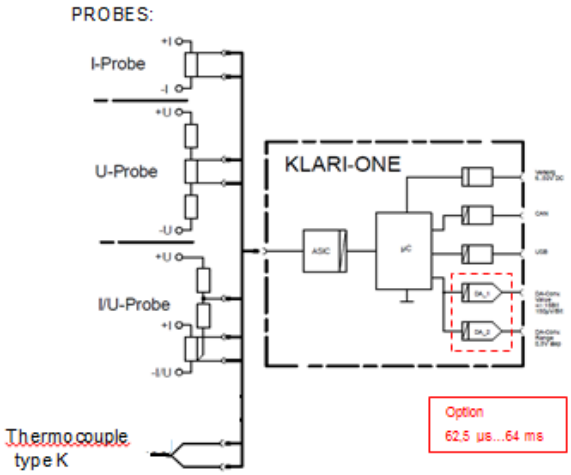
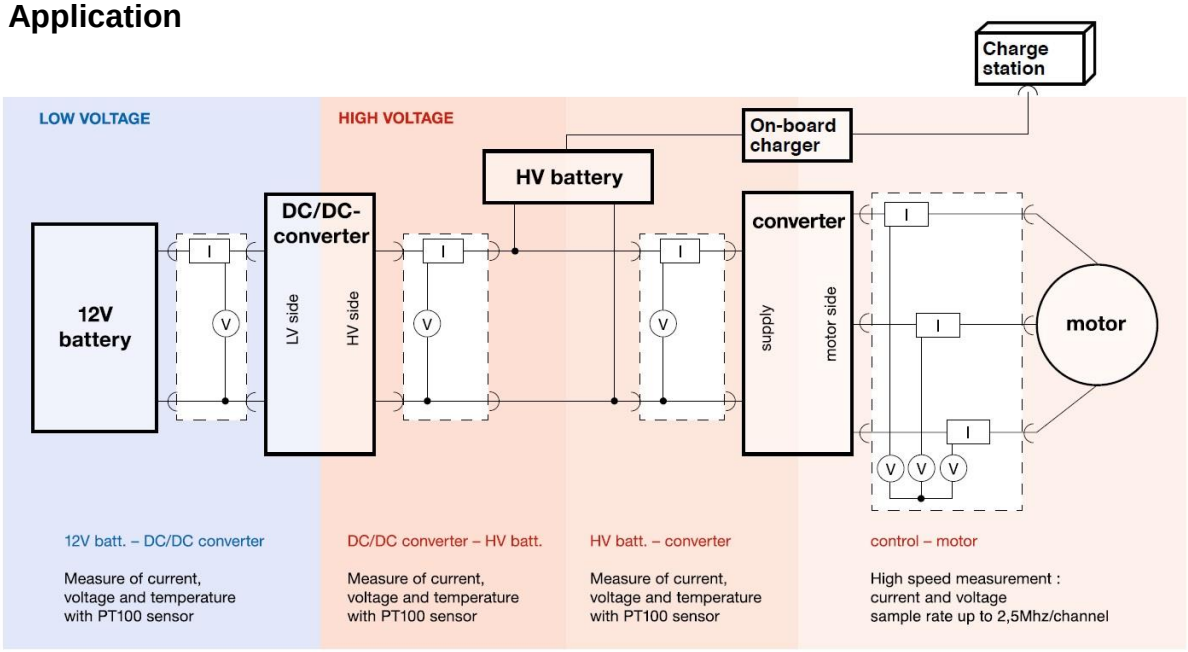
Measurement ranges and resoluations for I- and U-PROBES (examples)

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	- 300/+ 720	24	- 1500/+3600	120	0...+/- 200	16,320	0...+/- 1000	120

Principle



Application



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