

# 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

## TECHNICAL DATA

<b>Input</b>	<ul style="list-style-type: none"> <li>1 measuring channel with one ASIC</li> <li>single channel measurement of current, voltage, current/voltage or temperature (I-, U-, I/U- or thermocouple type K PROBE)</li> </ul>																		
<b>Resolution</b>	<ul style="list-style-type: none"> <li>5 measurement ranges with selectable autorange function</li> <li>± 15 bit/range</li> </ul> <table border="1"> <thead> <tr> <th>Gain</th> <th>Range</th> <th>Resolution</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>+/- 7,5 mV</td> <td>0,250 µV/bit</td> </tr> <tr> <td>50</td> <td>+/- 15 mV</td> <td>0,500 µV/bit</td> </tr> <tr> <td>24</td> <td>+/- 30 mV</td> <td>1 µV/bit</td> </tr> <tr> <td>6</td> <td>+/- 120 mV</td> <td>4 µV/bit</td> </tr> <tr> <td>1</td> <td>+ 720 / - 300 mV</td> <td>24 µV/bit</td> </tr> </tbody> </table>	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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<b>Accuracy</b>	<ul style="list-style-type: none"> <li>± 1% of measuring value ± 3 bit of range</li> <li>valid for temperature range of - 40 .. + 85°C</li> </ul>																		
<b>Sample rate</b>	<ul style="list-style-type: none"> <li>single channel operation: max. 16000 samples/s (analogue output)</li> <li>using AC-measurement: Sample rate adjustable in static or dynamic mode</li> </ul>																		
<b>Features</b>	<ul style="list-style-type: none"> <li>selectable data output channel (CAN2.0B and/or USB-2.0 interface)</li> <li>data output via CAN or USB configurable (Baudrate, Identifier etc.)</li> <li>internal CAN-termination selectable</li> <li>automatic PROBE-identification with calibration value processing</li> </ul>																		
<b>Output</b>	<ul style="list-style-type: none"> <li>2 x CAN 2.0 A/B, (High-Speed CAN, ISO 11898) from 125 kbit/s up to max. 1 Mbit/s</li> <li>USB-2.0 interface</li> </ul>																		
<b>Timestamp</b>	<ul style="list-style-type: none"> <li>30 µs resolution (is included in CAN frame)</li> </ul>																		
<b>Housing</b>	<ul style="list-style-type: none"> <li>potted housing</li> </ul> <table> <tr> <td>- Protection</td> <td>IP65</td> </tr> <tr> <td>- Weight</td> <td>ca. 200 g</td> </tr> <tr> <td>- Dimension</td> <td>78/64/46 (L/W/H), standard-version, 78/78/46 (L/W/H), analogue-version</td> </tr> </table>	- Protection	IP65	- Weight	ca. 200 g	- Dimension	78/64/46 (L/W/H), standard-version, 78/78/46 (L/W/H), analogue-version												
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<b>Supply</b>	<ul style="list-style-type: none"> <li>6,0...50 V DC</li> </ul>																		
<b>Current consumption</b>	<ul style="list-style-type: none"> <li>ca. 250 mA at 12 V DC</li> </ul>																		
<b>Configuration</b>	<ul style="list-style-type: none"> <li>via PC using CAN or USB-2.0 interface. Configurations could be created, archived and loaded into the module.</li> <li>speed CAN: 125 kB...1 MB</li> <li>measurement type, measuring speed, channels</li> </ul>																		
<b>Modes</b>	<ul style="list-style-type: none"> <li>autorange function for all channels across all measuring ranges</li> <li>selectable sample speed for each channel</li> <li>rms-value calculation for AC signals</li> </ul>																		
<b>Temperature range</b>	<ul style="list-style-type: none"> <li>- 40...+ 85°C for the measurement module</li> <li>- 40...+ 130°C for the shunt</li> </ul>																		
<b>Isolation</b>	<ul style="list-style-type: none"> <li>1000 V DC permanent isolation input &lt;&gt; output</li> </ul>																		

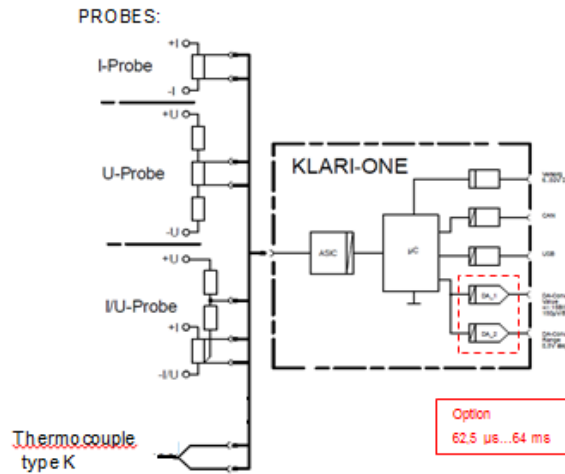
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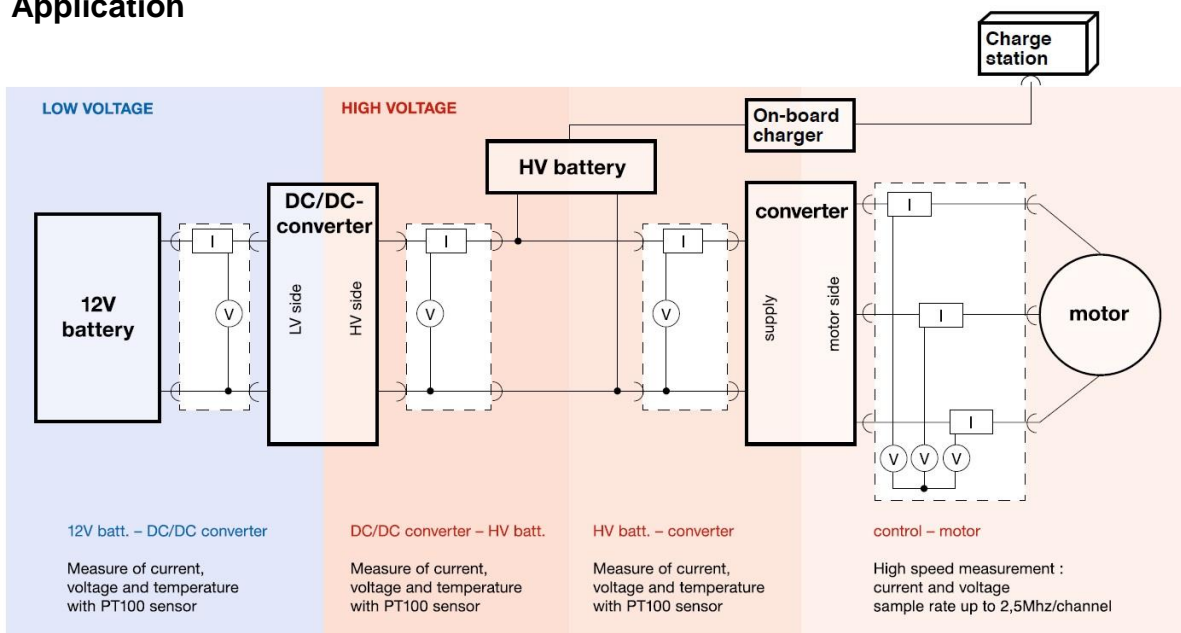
## Measurement ranges and resolutions for I- and U-PROBES (examples)

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

## Principle



## Application



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