



## High Voltage Thermocouple Measurement Module

### Features

- 4 channel measuring Module with Ethernet and 2 x CAN Interface
- galvanic isolation up to 1500 V DC between each input and data output
- dynamic sample rate to reduce amount of data during non-productive periods
- cold junction compensation for each channel
- broken wire detection
- **measurement capabilities:**
  - use in laboratory as well as in vehicle:
    - measuring temperatures with Thermocouples on live connections
  - test bench version datasheet on request
  - data output via:
    - 2 x CAN 2.0 A/B, resp. 8000 frames/s
    - 100 Mbit/s Ethernet
    - USB

### Version

- protection class IP67
- temperature range -40...+85°
- supply 6..60 V DC
- a detailed technical description is contained in our catalogue or technical data sheet

### Delivery

- measurement module
- PC Software for configuration via CAN or USB-2.0 interface
- CAN Database and documentation on CD ROM
- USB 2.0 connection cable

### Accessories

- cable harness IP67

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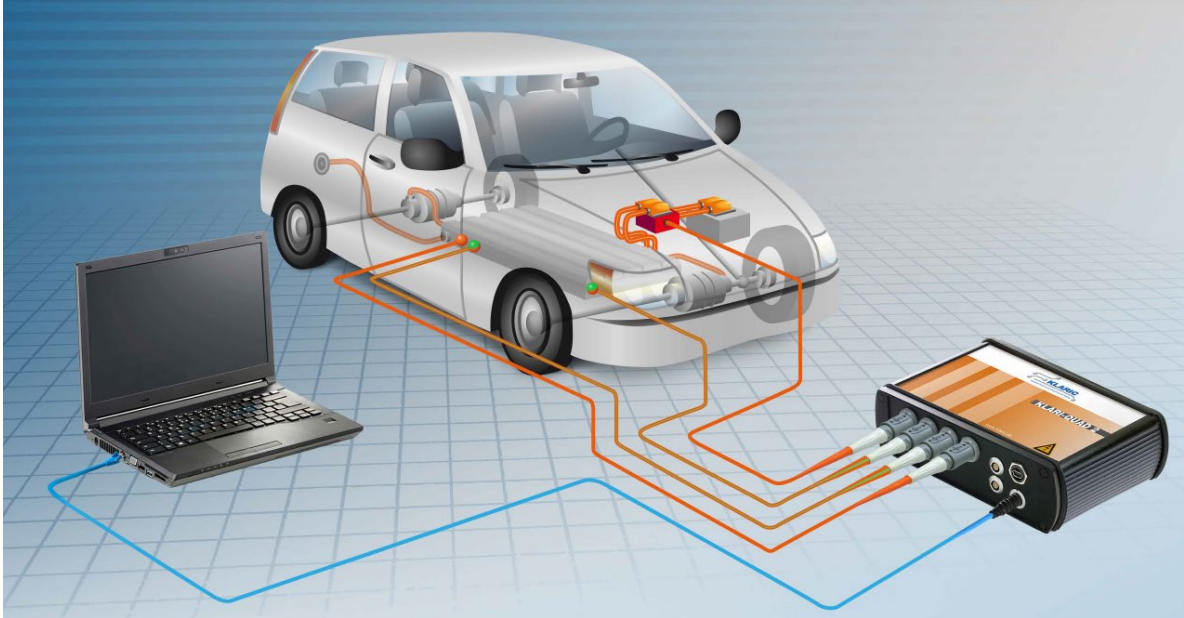
# KLARI-THERM

## TECHNICAL DATA

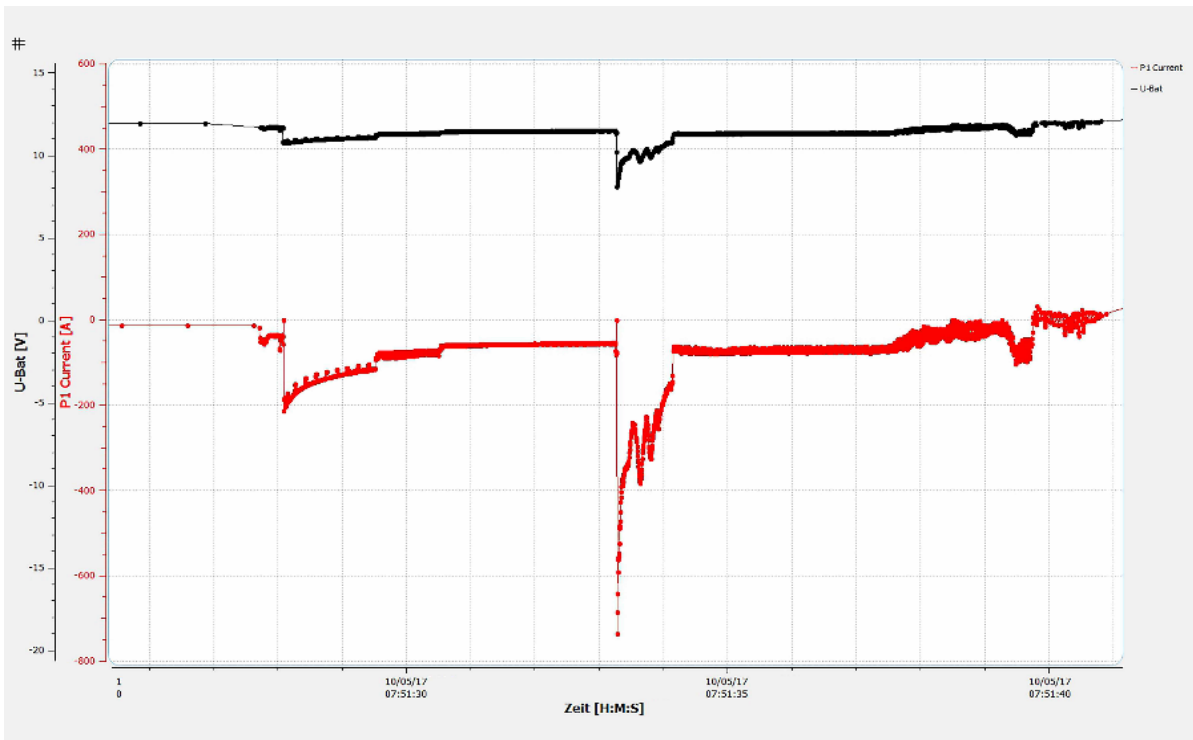
<b>Input</b>	<ul style="list-style-type: none"> <li>4 channel Thermocouple Module for HV Systems</li> </ul>																		
<b>Resolution</b>	<ul style="list-style-type: none"> <li>5 measuring ranges with selectable auto-range function</li> <li>16-bit measuring range</li> </ul> <table border="1"> <thead> <tr> <th>Gain</th> <th>Range</th> <th>Resolution</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>+/- 9 mV</td> <td>0,3 µV/Bit</td> </tr> <tr> <td>40</td> <td>+/- 27 mV</td> <td>0,9 µV/Bit</td> </tr> <tr> <td>25</td> <td>+/- 42 mV</td> <td>1,4 µV/Bit</td> </tr> <tr> <td>5</td> <td>+/- 210 mV</td> <td>7 µV/Bit</td> </tr> <tr> <td>1</td> <td>+ 1050 / - 240 mV</td> <td>35 µV/Bit</td> </tr> </tbody> </table>	Gain	Range	Resolution	100	+/- 9 mV	0,3 µV/Bit	40	+/- 27 mV	0,9 µV/Bit	25	+/- 42 mV	1,4 µV/Bit	5	+/- 210 mV	7 µV/Bit	1	+ 1050 / - 240 mV	35 µV/Bit
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<b>Accuracy</b>	<ul style="list-style-type: none"> <li>± 0.1% of measurement value</li> <li>valid for temperature range of - 40...+ 85°C</li> </ul>																		
<b>Sample rate</b>	<ul style="list-style-type: none"> <li>maximum 8 kHz per channel</li> </ul>																		
<b>Features</b>	<ul style="list-style-type: none"> <li>selectable data output CAN 2.0B</li> <li>selectable Filter</li> <li>XCP-on-Ethernet or free Klaric-Server Software</li> <li>CAN data export - parameter driven (baudrate, identifier etc.)</li> <li>integrated CAN-termination, switchable via software</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 kBaud up to max. 1 MBaud</li> <li>100 Mbit/s Ethernet interface with XCP-on-Ethernet or free Klaric-Server Software</li> <li>USB 2.0 interface</li> </ul>																		
<b>Timestamp</b>	<ul style="list-style-type: none"> <li>~ 2.5 µs resolution (is included in CAN frame)</li> </ul>																		
<b>Housing</b>	<ul style="list-style-type: none"> <li>potted casing</li> <li>- Protection</li> <li>- Weight</li> <li>- Dimension</li> </ul>																		
	<ul style="list-style-type: none"> <li>IP67</li> <li>approx. 350 g</li> <li>150/60/40 (l/w/h)</li> </ul>																		
<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. 100 mA at 12 V DC</li> </ul>																		
<b>Configuration</b>	<ul style="list-style-type: none"> <li>PC using CAN or USB-2.0 interface. Configurations can be created, managed and loaded via Klari-Toolbox into the module.</li> <li>High-Speed CAN: 125 kB...1 MB</li> <li>measurement type, measuring speed, channels</li> <li>Ethernet</li> </ul>																		
<b>Modes</b>	<ul style="list-style-type: none"> <li>autorange function for all channels in all ranges individual</li> <li>adjustable sample speed for each channel</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 PROBES</li> </ul>																		
<b>Isolation</b>	<ul style="list-style-type: none"> <li>1500 V DC permanent isolation: Input &lt;&gt; Output and Input &lt;&gt; Input</li> </ul>																		

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## Application Example



## Dynamic Samplerate



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