

KLARI-QUAD 2



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

Features

- 8 channel measuring module with 4 probe connectors
- 2 ADCs for each input
- galvanic isolation up to 1500 V DC between each input and data output
- **PROBE variants:**
 - current measurement
 - voltage measurement
 - parallel measurement of current and voltage with a Combi-PROBE
 - temperature measurements with PT100/PT1000 and Thermocouple
- **measurement capabilities:**
 - use in laboratory as well as in vehicle:
 - measuring current and/or voltage on high potentials
 - measuring temperature on live connections
 - DC-measurements, internal sample rate up to 8 kHz per channel
 - AC-measurements and calculation of effective values, cos phi, power and work
 - data output via:
 - 2 x CAN 2.0 A/B, resp. 8000 frames/s
 - 100 Mbit/s Ethernet
 - USB

Version

- protection class IP65
- 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 (please order PROBES separately)
- 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 IP65

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KLARI-QUAD 2

TECHNICAL DATA

Input	<ul style="list-style-type: none"> 8 channel measuring module with 4 probe connectors each channel can be used to connect either a current-, voltage-, current/voltage-Combi- or temperature PROBE 																		
Resolution	<ul style="list-style-type: none"> 5 measuring ranges with selectable autorange function ± 15-bit measuring range <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
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																	
Accuracy	<ul style="list-style-type: none"> ± 1% of measurement value ± 3 bit of the range valid for temperature range of - 40...+ 85°C 																		
Sample rate	<ul style="list-style-type: none"> 8 kHz per channel 																		
Features	<ul style="list-style-type: none"> selectable data output CAN2.0B XCP-on-Ethernet or free Klaric-Server Software CAN data export - parameter driven (baudrate, identifier etc.) integrated CAN-termination, switchable via software automatic PROBE-identification with calibration value correction 																		
Output	<ul style="list-style-type: none"> 2 x CAN 2.0 A/B, (High-Speed CAN, ISO 11898) from 125 kBaud up to max. 1 MBaud 100 Mbit/s Ethernet interface with XCP-on-Ethernet or free Klaric-Server Software USB 2.0 interface 																		
Timestamp	<ul style="list-style-type: none"> ~ 2.5 µs resolution (is included in CAN frame) 																		
Housing	<ul style="list-style-type: none"> potted casing IP65 approx. 350 g 150/60/40 (l/w/h) 																		
Supply	<ul style="list-style-type: none"> 6,0...50 V DC 																		
Current consumption	<ul style="list-style-type: none"> ca. 150 mA at 12 V DC 																		
Configuration	<ul style="list-style-type: none"> PC using CAN or USB-2.0 interface. Configurations can be created, managed and loaded via Klari-Toolbox into the module. High-Speed CAN: 125 kB...1 MB measurement type, measuring speed, channels Ethernet 																		
Modes	<ul style="list-style-type: none"> autorange function for all channels in all ranges individual adjustable sample speed for each channel 																		
Temperature range	<ul style="list-style-type: none"> - 40...+ 85°C for the measurement module - 40...+ 130°C for the PROBES 																		
Isolation	<ul style="list-style-type: none"> 1500 V DC permanent isolation: Input <> Output and Input <> Input 																		

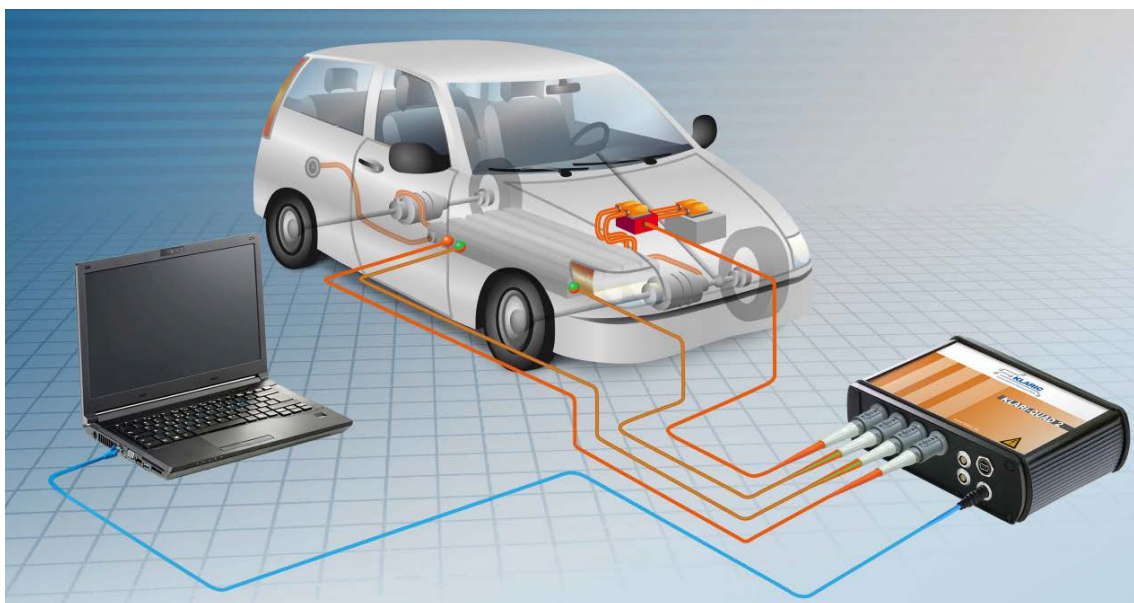
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Measuring ranges and resolutions for HVI- and HVU-PROBES (examples)

Gain	I-PROBE			
	1 mΩ		200μΩ	
	Range [A]	Resolution [mA/Bit]	Range [A]	Resolution [mA/Bit]
100	+/- 9	0,3	+/- 45	1,5
40	+/- 27	0,9	+/- 135	4,5
25	+/- 42	1,4	+/- 210	7
5	+/- 210	7	+/- 1050	35
1	+ 1050/-240	35	+ 5.250/-1.200	175

Gain	U-PROBE			
	200 V		1000 V	
	Range [V DC]	Res. [mV/Bit]	Range [V DC]	Res. [mV/Bit]
100	0...+/- 6	0,2	0...+/- 45	1,5
40	0...+/- 18	0,6	0...+/- 135	4,5
25	0...+/- 28	0,9	0...+/- 210	7
5	0...+/- 140	4,7	0...+/- 1000	35
1	0...+ 700/- 160	23,4	0...+/- 1000	175

Application



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