

HIGH VOLTAGE MODULES WITH ETHERNET AND CAN

KLARI-QUAD 2 1500V



HV measuring module for current, voltage, power and temperature measurements in vehicles or in the laboratory.

Features

- 4 universal inputs
- 8 channel
- 8 kHz sampling rate per channel
- Dynamic sample rate
- Autorange Function
- Automatic Probe identification (similar to TEDS)
- Automatic DBC/A2L generation
- 1.500 V galvanical isolation
- Online calculation of power data for DC and AC measurements
- 100 Mbit/s XCP-on-Ethernet or Klaric-Server
- 2 independent 1 Mbaud CAN-Interfaces

Suitable sensors with automatic identification

Current Measurement

HV-I-Probe (BF1/ BF2/ BF3)
 HV-LI-Probe
 HV-Break-out-Box (HVP800/ HPK/ HVA280/ HVR90/
 1PG.1PG/ 2PG.2PG/ 3PG.3PG/ customerspecific)

Voltage Measurement

U-Probe (200 V / 1000 V)

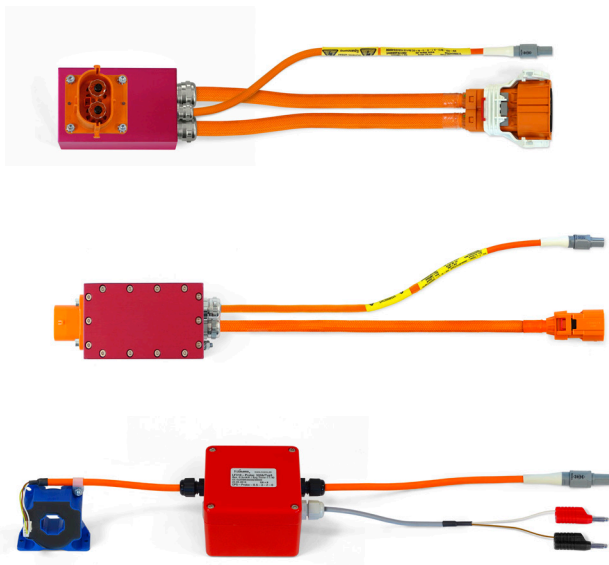
Power Measurement

HV Breakout-Box
 HV-HP-Probe
 HV-LP-Probe

Temperature Measurement

HV-T-Probe (Thermocouple Typ K)

For detailed technical information please refer to the data sheet „KLARI-PROBES“



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Version

- Aluminium housing 96/170/54 mm (L/B/H)
- Protection class IP65
- Temperature Range -40°C to +85°C (-40°F to 185°F)
- Supply Voltage 7 V to 60 V DC

Accessories

- Klaric HV-Measurement Adapter, HV-Break-out-Boxes
- Klaric HV-Probes
- CAN cable harness with power supply
- Ethernet cable harness with/without supply

Applications

- Power measurement of power electronics
- Voltage measurements in the HV electrical systems, HV batteries
- Temperature measurement in HV components or batteries with thermocouples or RTDs

Scope of delivery

- Measuring module KLARI-QUAD 2 1500V
- Factory calibration certificate (DAkkS optional)
- HV test protocol
- A2L/DBC files and documentation

Technical data

Inputs	4 Inputs 8 Channel (2 x ADCs per Input)
Capabilities	Klaric HV-Probes with automatic detection and import of the calibration values Current, Voltage, 2xVoltage, Combi-I/U, HV Thermocouple Type K, HV PT100/1000 Klaric HV-Measurement Adapter
Resolution	16 Bit ADC with 5 Measurement Ranges
Sample Rate	0,25 Hz to 8 kHz per channel configurable, dynamic sampling speed trigger
Measurement Ranges	±9 mV, ±27 mV, ±42 mV, ±210 mV, +1050 / -240 mV 0,3 µV, 0,9 µV, 1,4 µV, 7 µV, 35 µV Resolution
Accuracy	± 0,1 % reading ± 3 Bit of the actual measurement range at 23°C ± 5°C ± 1 % reading ± 3 Bit of the actual measurement range -40°C bis +80°C Measurement Modules + Klari-Probes in a chain
CAN	125k, 250k, 500k, 1000k Baud configurable internal CAN termination via Software swichtable CAN Base ID configurable
Ethernet	100 MBit/s (XCP-on-Ethernet or KlaricServer)
Configuration via	Ethernet, CAN, USB (virtual COM Port)
Voltage Supply Range	7 V to 60 V
Power Consumption	typ. 2 W
Temperature Range	-40°C to +85°C (-40°F to 185°F)
HV insulation check	at least every 12 months

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Measurement Ranges KLARI-QUAD 2 1500V

Gain	Measurement range	Resolution
100	± 9 mV	300 nV/Bit
40	± 27 mV	900 nV/Bit
25	± 42 mV	1,4 µV/Bit
5	± 210 mV	7 µV/Bit
1	+1.050/-240 mV	35 µV/Bit

Klari-Probe Measurement Ranges with KLARI-QUAD 2 1500V

Gain	I-Probe					
	1 mΩ		200µΩ		20µΩ	
	Measurement Range [A]	Resolution [mA/Bit]	Measurement Range [A]	Resolution [mA/Bit]	Measurement Range [A]	Resolution [mA/Bit]
100	± 9	0,3	± 45	1,5	± 450	15
40	± 27	0,9	± 135	4,5	± 1.350	45
25	± 42	1,4	± 210	7	± 2.100	70
5	± 210	7	± 1.050	35	± 10.500	350
1	+ 1.050/-240	35	+ 5.250/-1.200	175	+ 52.500/-12.000	1.750

Gain	U-Probe			
	200 V		1000 V	
	Measurement Range [V]	Resolution [mV/Bit]	Measurement Range [V]	Resolution [mV/Bit]
100	± 6	0,2	± 45	1,5
40	± 18	0,6	± 135	4,5
25	± 28	0,9	± 210	7
5	± 140	5	± 1.000	35
1	-160/+700	24	-	-