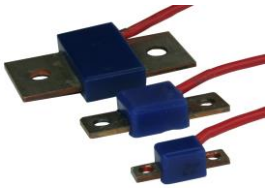
KLARI-FUSE 2

FK-PROBE



BF-PROBES

Features

- 8-channel measuring module with 8 parallel ASICs and 1 shared microcontroller
- all channels are applicable for current-, voltage- or temperature-measurement, using 1 PROBE for each channel
- easy measurement application to various measurement tasks
- galvanic isolation of 80 V DC between both measuring channels and interfaces CAN, USB and supply

- **PROBE variants:**

- current	I-PROBE (LI-, MICRO2-, FK1-…FK3-, J-CASE, HI-PROBES)
- voltage	U-PROBE
- temperature	T-PROBE (PT1000)

A detailed technical description is contained in our user manual “KLARI-PROBES“

- **Measuring features:**
  - application both in lab and in vehicle:
    measurement of current, voltage and temperature at individual appliances
  - data output via 1 x CAN 2.0 A/B with 8000 Frames/s
    and/or USB-2.0-Schnittstelle

Version

- aluminium housing 165/108/42 mm (l/w/h)
- 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

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TECHNICAL DATA

<table>
<tr><td>Input</td><td>• 8 measuring channels with 1 ASIC each for current-, voltage- or temperature-measurement</td></tr>
<tr><td>Resolution</td><td>• 5 measuring ranges with selectable autorange-function
• ± 15 bit/measuring range
<table>
<tr><th>Gain</th><th>Range</th><th>Resolution</th></tr>
<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>
</table></td></tr>
<tr><td>Accuracy</td><td>• ± 1% of measuring value ± 3 bit of range
• valid for temperature range of - 40 .. + 85°</td></tr>
<tr><td>Sample rate</td><td>• 1 channel max. 8000 samples/s
• 1 - 2 channels max. a. 4000 samples/s
• 3 - 4 channels max. a. 2000 samples/s
• 5 - 8 channels max. a. 1000 samples/s
• 8 channels parallel asynchron</td></tr>
<tr><td>Features</td><td>• selectable data output (CAN2.0B and/or Rs232)
• data output configurable via CAN (Baudrate, Identifier etc.)
• internal CAN-termination, detachable via software
• automatic PROBE-identification with calibration value processing
• time synchronisation of several KLARI-FUSES via selection master/slave CAN-or USB-2.0-interface)</td></tr>
<tr><td>Output</td><td>• potential-free High-Speed-CAN up to 1 MBaud
• and / or USB-2.0-interface</td></tr>
<tr><td>Timestamp</td><td>• 32.768 Hz-resonator
• ~30 µs resolution</td></tr>
<tr><td>Housing
- Protection
- Weight
- Dimension</td><td>• aluminium housing
• IP65
• approx. 630 g
• 165x108x42 (l/w/h)</td></tr>
<tr><td>Supply</td><td>• 6,0…50 V DC</td></tr>
<tr><td>Current consumption</td><td>• approx. 250 mA bei 12 V DC</td></tr>
<tr><td>Configuration</td><td>• via PC using CAN or USB-2.0 or a virtual serial interface</td></tr>
<tr><td>Modes</td><td>• common setup (parameters are valid for all channels) of :
measuring speed, external average, autorange on/off, range-mode
• specific setup (parameters can be configured for each channel separately) of:
channel on/off, autorange on/off, measuring range, sample rate, external mean</td></tr>
<tr><td>Temperature range</td><td>• - 40…+ 85°C for the measurement module
• - 40…+ 130°C for the shunt</td></tr>
<tr><td>Isolation</td><td>• 80 V DC</td></tr>
</table>

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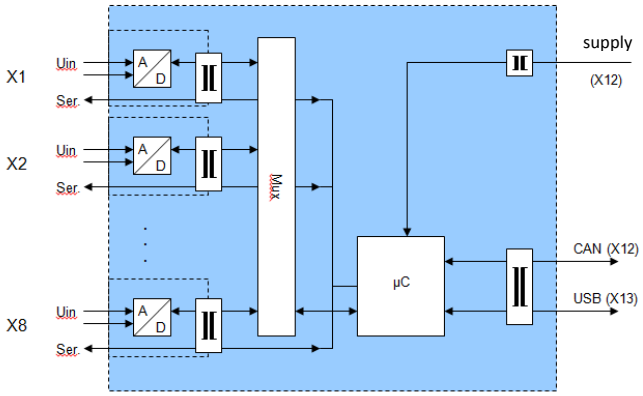
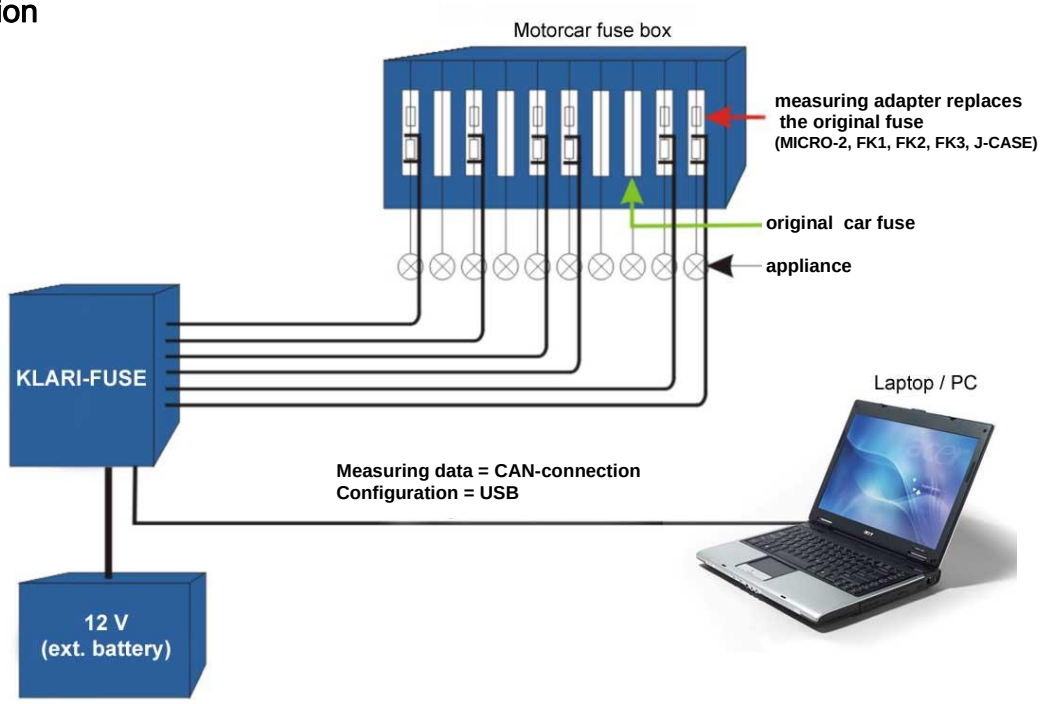
Measuring ranges and resolutions for I- and U-PROBES (examples)

Gain	I-PROBE				U-PROBE	
	1 mΩ		200µΩ		80 V	
	Range [A]	Resolution [mA/Bit]	Range [A]	Resolution [mA/Bit]	Range [V DC]	Resolution [mV/Bit]
100	+/- 7,5	0,25	+/- 37,5	1,25	0...+/- 5	0,170
50	+/- 15	0,5	+/- 75	2,5	0...+/- 10	0,340
24	+/- 30	1	+/- 150	5	0...+/- 20	0,680
6	+/- 120	4	+/- 600	20	0...+/- 80	2,720
1	- 300/+ 720	24	- 1.500/+3.600	120		

Principle



Application



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