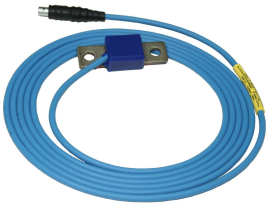
KLARI-DISPLAY



I-PROBE

U-PROBE

Features

- 1-channel measuring module with 1 ASIC, 1 microcontroller and 1 socket for connecting various PROBES
- galvanic isolation of 80 V DC between data output and measuring channel.

- **PROBE-variants:**
  - current-, voltage- or temperature (PT1000) -PROBE,

- **Individual configuration of measuring channels:**
  - DC-measurement
  - data output via CAN 2.0 A/B
  - max 8.000 frames/s can be measured as single or averaged values

Version

- Bopla housing approx. 130/85/35 mm (l/w/h)
- **measuring module also without display available,**
- protection class IP65,
- temperature range -20...+70°C with display
- temperature range -40...+85°C without display
- supply 6..50 V DC, current consumption approx. 50…70 mA (at 12 V supply)

A detailed technical description is contained in our user manual.

Delivery

- order PROBES separately please
- 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 with supply and CAN

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TECHNICAL DATA

<table>
<tr><td>Input</td><td>• 1 measuring channel with 1 ASIC
1 x Lemo-socket for various PROBES (voltage, current or temperature)</td></tr>
<tr><td>Resolution</td><td>• 5 measuring ranges with selectable autorange-function for the PROBE-connection
• ± 15 bit/measuring range
<table>
<tr><th>Gain</th><th>Range Lemo</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°C without display
• valid for temperature range of - 20 .. + 70°C with</td></tr>
<tr><td>Sample rate</td><td>• single channel mode: max. 8.000 frames/s</td></tr>
<tr><td>Features</td><td>• selectable data output channel (CAN2.0B and/or USB-2.0 interface)
• data output configurable via CAN (Baudrate, Identifier etc.)
• internal CAN-termination, detachable via software
• automatic PROBE-identification with calibration value processing</td></tr>
<tr><td>Output</td><td>• 1 x CAN 2.0 A/B, (High-Speed CAN, ISO 11898) from 125 kbit/s up to max. 1 Mbit/s
• USB-2.0 interface</td></tr>
<tr><td>Timestamp</td><td>• 30 µs resolution (is included in CAN frame)</td></tr>
<tr><td>Housing
- Protection
- Weight
- Dimension</td><td>• Bopla housing
• IP65
• 350 g
• 130/85/35 (l/w/h)</td></tr>
<tr><td>Supply</td><td>• 6,0…50 V DC</td></tr>
<tr><td>Current consumption</td><td>• approx. 70 mA at 12 V DC</td></tr>
<tr><td>Configuration</td><td>• via PC using CAN or USB-2.0 interface. Configurations could be created, archived and loaded into the module
• speed CAN: 125 kbit/s…1 Mbit/s
• measurement type, measuring speed, channel</td></tr>
<tr><td>Modes</td><td>• autorange function for the channel across all measuring ranges
• selectable sample speed for the channel</td></tr>
<tr><td>Temperature range</td><td>• - 40…+ 85°C for the module without display, - 20…+ 70°C with display
• - 40…+ 130°C for the shunt</td></tr>
<tr><td>Isolation</td><td>• 80 V DC permanent isolation input <> output</td></tr>
</table>

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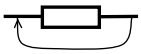
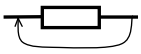
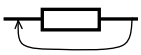
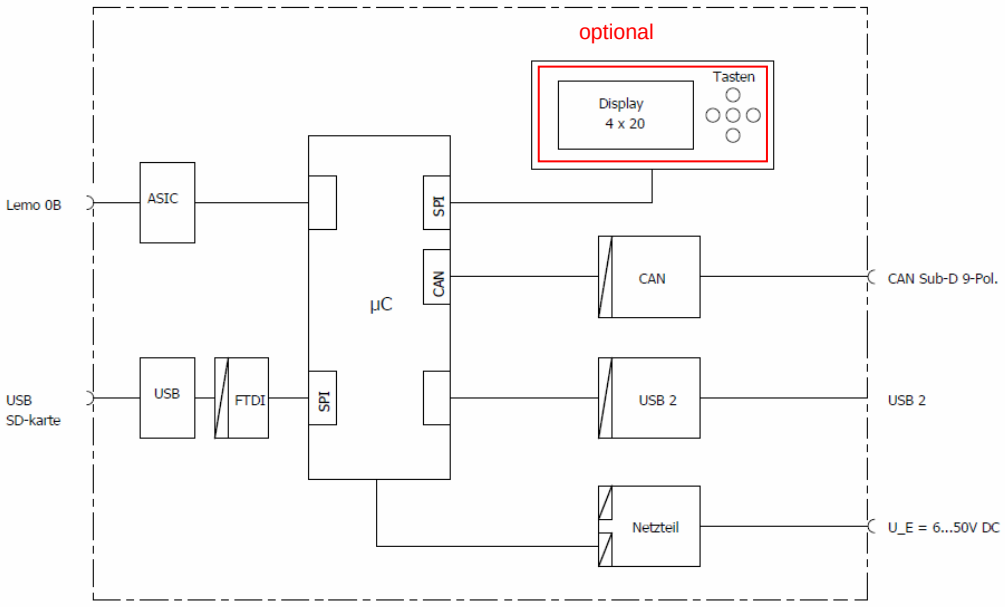
Measurement options using Lemo-plug:

channel 1: current I  or voltage U  or temperature 

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		

Prinicple



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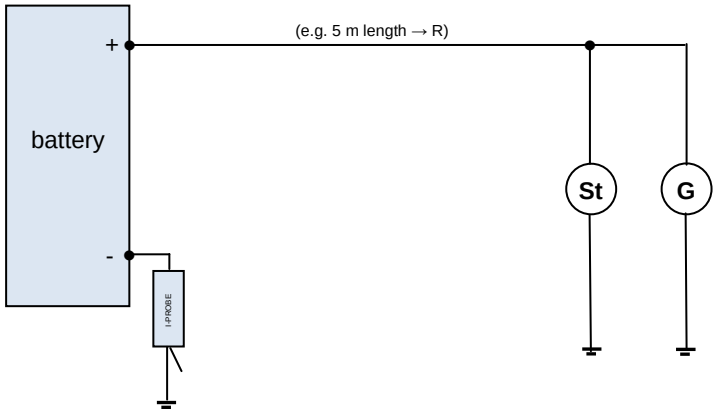
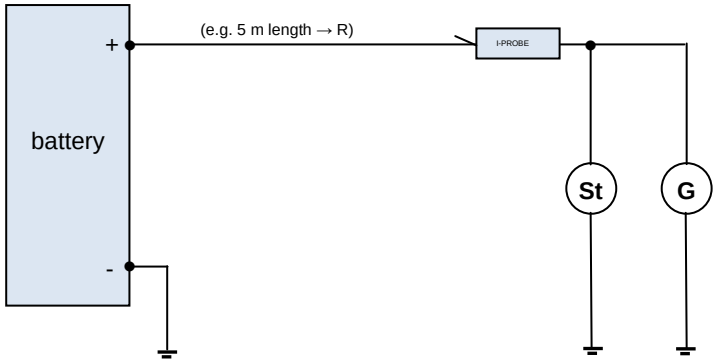
Application

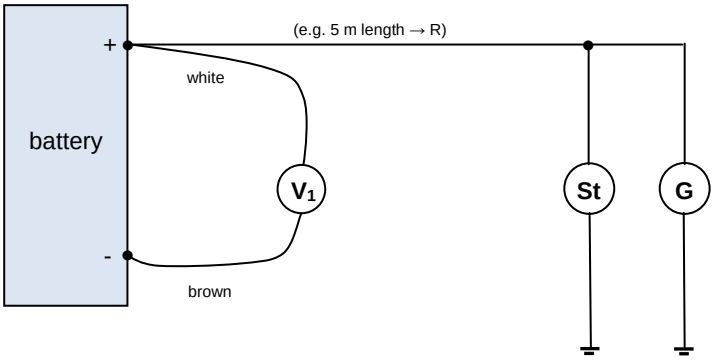
Measuring total current:



Measuring generator power:



Measuring voltage:



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