

KLARI-EIGHT



FK-probe



KLARI-EIGHT
with diverse probes



BF-probes

DESCRIPTION

The universal multi-channel millivoltmeter **KLARI-EIGHT** has been developed on 19"-rack base to measure in combination with different probe types currents, voltages and temperatures across a wide measuring range.

At the front of the unit there are eight connectors with precision contacts where the measuring adapters in form of special measuring fuses can be connected. Each input is equipped with an ASIC. Little input values can be collected with high precision via an isolated SPI-interface. The results are transmitted via a μ C and diverse interfaces

In addition there are communication cables at the connectors. Therefore it is possible to read configuration data like measuring ranges, compensation values etc. out of the connected measuring adapters. The compensation values are accounted in the measurement calculation. This causes very high measurement precision.

ACCESSORIES

Current probes: To measure current in defined electric circuits we offer diverse adapters. **LI-Probes** without fuse protection, measuring ranges 250 nA...28 A and plug-in-fuses like **MICRO-2**, **FK1...FK3** and **J-CASE** that are placed in vehicle fuse boxes. The measuring circuit is protected in the ranges 5...70 A with the original fuse.

The **high-current probes** cannot be protected by fuse because the measuring range goes up to 4800 A.

We also offer **voltage probes** in the ranges 0...80 V.

Our **temperature probes** have an integrated PT1000 sensor and are available as a standard and acid-resistant variant.

POWER SUPPLY

6 to 50 V DC galvanically isolated.

Examples for probe-types, measuring ranges and resolutions (in lowest measuring range):

Probe-type	Measuring range	Resolution/bit	Resistor
LI-probe 1 Ω	- 0,3...+ 0.72 A	0,25 μ A	1 Ω
LI-probe 25 m Ω	- 12...+ 28,8 A	10 μ A	25 m Ω
FK1 and FK2 10 A	+/- 10 A	21 μ A	12 m Ω
FK2 and FK3 30 A	+/- 30 A	125 μ A	2 m Ω
HI-probe 1 m Ω	- 300...+ 720 A	250 μ A	1 m Ω
HI-probe 200 μ Ohm	- 1500...+ 3600 A	1,25 mA	0,2 m Ω

**Factory calibration with certificate is available on request (subject to an additional fee).

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KLARI-EIGHT

SPECIFICATIONS

Inputs	<ul style="list-style-type: none">• max. 8 channels for voltage measurement, potential-free for :<ul style="list-style-type: none">- I-probes- U-probes and- T-probes (PT100/1000)
Resolution	<ul style="list-style-type: none">• ± 15 bit/measuring range• 5 measuring ranges<ul style="list-style-type: none">- $\pm 0 \dots \pm 7,5$ mV resolution: 250 nV/bit- $\pm 0 \dots \pm 15$ mV resolution: 500 nV/bit- $\pm 0 \dots \pm 30$ mV resolution: 1 μV/bit- $\pm 0 \dots \pm 120$ mV resolution: 4 μV/bit- $-300 \dots + 720$ mV resolution: 24 μV/bit
Sampling rates	<ul style="list-style-type: none">• 1 channel max. 8000S/sec.• 1 - 2 channels max. a. 4000S/sec.• 3 - 4 channels max. a. 2000S/sec.• 5 - 8 channels max. a. 1000S/sec• 8 channels parallel asynchron
Additional functions	<ul style="list-style-type: none">• time synchronization of several KLARI-EIGHT units via master/slave selection (CAN oder USB-2.0 interface)
Outputs	<ul style="list-style-type: none">• isolated high-speed CAN up to 1 MBaud/ board• terminating resistor can be switched• and/or USB-2.0
Time base	<ul style="list-style-type: none">• 32.768 Hz resonator• ~ 30 μs resolution
Housing (LxHxW)	<ul style="list-style-type: none">• Europe format 6TE, 160x100x30 mm
Power supply	<ul style="list-style-type: none">• 6,0...50 V DC
Power consumption	<ul style="list-style-type: none">• approx. 250 mA at 12 V DC
Configuration	<ul style="list-style-type: none">• USB-2.0 interface , using supplied PC software KoWin or rather KLARI-TOOLBOX
Operating modes	<ul style="list-style-type: none">• 8-channel parallel operation<ul style="list-style-type: none">- Autorange over all measuring ranges (defeatable)
Temperature range	<ul style="list-style-type: none">• KLARI-EIGHT: $-40 \dots 85^{\circ}\text{C}$, probes: $-40 \dots +130^{\circ}\text{C}$
Isolation	<ul style="list-style-type: none">• 80 V DC
Protection class	<ul style="list-style-type: none">• IP 40

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