

Data sheet "Klari-Probes"

(Manufacturer: Stefan Klaric GmbH & Co.KG)



DESCRIPTION

KLARI-PROBES are special measuring adapters for KLARI-FUSE, KLARI-CORD 2, KLARI-MOD MC and KLARI-MOD SC measuring modules. Probes for current measurement are equipped with a special low-resistance shunt, probes for voltage measurement are using a voltage divider. For temperature measurement a PT1000 resistance thermometer is used. KLARI-PROBES are using an internal memory and a communication bus to transmit additional data, e.g. measuring range, calibration values and serial number, to the measuring module. The calibration values are taken into consideration when the measured values are calculated. This results in a very high degree of accuracy.

DESIGN

Current probes: To measure the current in defined electric circuits in vehicle fuse boxes, we offer adapters with FK1, FK2 and FK3 plug-in fuses. These adapters allow the measuring circuit to be protected in the ranges 5 to 70 A by the original fuse. The high-current probes are mounted directly into the measuring circuit. The user has to take care for protection of the measuring circuit. We also offer voltage probes in the ranges 0 to 80 V. For KLARI-MOD SC 1000 modules there are special voltage probes available on request. Our temperature probes have an integrated PT1000 sensor and are available as a standard and acidresistant variant.



I PROBES WITH FUSE-PROTECTED MEASURING CIRCUIT (ORIGINAL FUSE)

For reasons of power loss and to ensure that the measuring circuit is adequately protected, the measuring electronics are integrated in a small housing. This housing contains a measuring shunt used to measure the current, and a fuse holder into which the removed fuse is inserted.
Caution: The following applies to all I probes: continuous current < rated current. See the data sheet.

DETERMINING CABLE LENGTH FOR I PROBES

The cable length is determined in the following way for all FK1, FK2 and FK3 fuses:

- Data cable: 1 m
 - Heat-resistant cable*: 1 m
 - Probe cable: Heat-resistant, highly flexible (see tables for length)
 - Total length: data cable + heat-resistant cable + probe cable
- A 6-contact connector is used for connection to the KLARI-FUSE.

FK1 FUSE**

Measuring fuse
5 A, 10 A, 20 A

Item no.	Range	Resolution/ Bit	Resist.	Probe- cable
IMFIP-A10S3-0000	5 A	14 μ A	18 m Ω	1 m
IMFIP-A10S2-0000				3 m
IMFIP-B10S3-0000	10 A	21 μ A	12 m Ω	1 m
IMFIP-B10S2-0000				3 m
IMFIP-D10S3-0000	20 A	50 μ A	5 m Ω	1 m
IMFIP-D10S2-0000				3 m

* -40...+130°C

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



FK2 FUSE**

Measuring fuse
5 A, 10 A, 20 A

Item no.	Range	Resolution/ Bit	Resist.	Probe- cable
IMFIP-A11S3-0000	5 A	14 μ A	18 m Ω	1 m
IMFIP-A11S2-0000				3 m
IMFIP-B11S3-0000	10 A	21 μ A	12 m Ω	1 m
IMFIP-B11S2-0000				3 m
IMFIP-D11S3-0000	20 A	50 μ A	5 m Ω	1 m
IMFIP-D11S2-0000				3 m

Measuring fuse
30 A, 40 A

Item no.	Range	Resolution/ Bit	Resist.	Probe- cable
IMFIP-E11S3-0000	30 A	125 μ A	2 m Ω	1 m
IMFIP-E11S2-0000				3 m
IMFIP-F11S3-0000	40 A	250 μ A	1 m Ω	1 m
IMFIP-F11S2-0000				3 m

FK3 FUSE **

Measuring fuse
30 A, 50 A, 70 A

Item no.	Range	Resolution/ Bit	Resist.	Probe- cable
IMFIP-E12S3-0000	30 A	125 μ A	2 m Ω	1 m
IMFIP-E12S2-0000				3 m
IMFIP-G12S3-0000	50 A	250 μ A	1 m Ω	1 m
IMFIP-G12S2-0000				3 m
IMFIP-I12S3-0000	70 A	500 μ A	0,5 m Ω	1 m
IMFIP-I12S2-0000				3 m



* -40...+130°C

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

HIGH-CURRENT PROBES WITHOUT FUSE PROTECTION

High-current probes do not provide fuse protection.
 Caution: continuous current < rated current. See the data sheet.
 The measuring range depends on the measuring module.

DETERMINING CABLE LENGTH FOR HIGH-CURRENT PROBES

The cable length is determined in the following way for all high-current probes:

- Data cable: 1 m
- Heat-resistant cable*: 3 m
- Total length: 4 m. Customer specific length available on request.

HIGH-CURRENT PROBES**					
High-current probes 120 A, 240 A, 600 A, 1.200 A					
Type	Item no.	Range	Resolution	Resist.	Contin. current
120	IMFIP-M2602-0000	-300...+720 A	0,25 mA/Bit	1 mΩ	80 A
240	IMFIP-P2602-0000	-800...+1440 A	0,5 mA/Bit	0,5 mΩ	125 A
600	IMFIP-R2602-0000	-1500...+3600 A	1,25 mA/Bit	0,2 mΩ	200 A
1200	IMFIP-U2602-0000	-3000...+7200 A	2,5 mA/Bit	0,1 mΩ	350 A
Maximum shunt dimensions: L x W x H = ca. 84 x 20 x 3 mm, without coating					
High-current probes 2.400 A, 4.800 A					
Type	Item no.	Range	Resolution	Resist.	Contin. current
2400	IMFIP-W2702-0000	-6000...+14400 A	5 mA/Bit	0,05 mΩ	600 A
4800	IMFIP-Y2702-0000	-12000...28800 A	10 mA/Bit	0,025 mΩ	1000 A
Maximum shunt dimensions: L x W x H = ca. 84 x 40 x 3 mm, without coating					
Customized probes, e.g. cable length and extended current rating available on request.					



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

MISCELLANEOUS

T probe (standard)

PT1000 sensor for temperature measurements

Temperature measuring range: -40 to +250°C

Data cable: 1 m

PT1000 sensor cable: 1 m

Total length: 2 m

IMFTP-00001-0000



T probe (acid-resistant)

PT1000 sensor for temperature measurements

Temperature measuring range: -40 to +105°C

Data cable: 1 m

PT1000 sensor cable: 2 m

Total length: 3 m

IMFTP-00002-0000



U probe**

Voltage measuring adapter

Measuring range +/-80 V

Data cable: 1 m

Measuring cable: See below / depends on variant

Total length: data cable + measuring cable

IMFVP-00001-0000 – 0.5 m standard measuring cable

IMFVP-00002-0006 – 3 m heat-resistant measuring

cable*



Extension cable for probes

IMFKB-20001-0000 - 2 m

IMFKB-40001-0000 - 4 m



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Saelig Company Inc.
71 Perinton Parkway, Fairport, NY 14450 USA
Tel: 585-385-1750 Fax: 585-385-1768
info@saelig.com www.saelig.com

