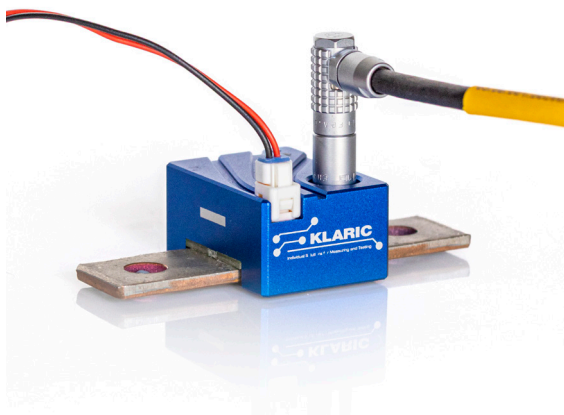


LOW VOLTAGE MODULES WITH CAN

FIX-IV



Dual-channel CAN measurement module for current, voltage and power — sensor and measurement electronics combined on one shunt.

The FIX-IV is a very compact dual-channel measurement module for 12 V, 24 V and 48 V systems. Sensor and Data Processing electronics are permanently mounted on an internal precision shunt with connection lugs for direct installation in the current path — no probe, no adapter, no cable between sensor and module. Very short analogue signal paths and fully digital processing deliver excellent signal quality; the module is factory-calibrated as one unit and starts measuring as soon as power is applied. Fewer connectors significantly shorten installation time.

Features

- 2-channel power measurement module (current and voltage)
- Precision shunt with connection lugs
- Autorange over 5 measurement ranges
- Status LED and CAN TERM LED
- Measurement of quiescent, operating and peak currents
- Calculation of power, energy and charge balance
- Factory-calibrated as one unit
- Autostart on power-up
- CAN 2.0 interface, automatic DBC generation
- Configurable via KlariToolBox

Version

- Compact encapsulated enclosure, approx. 40 × 31.5 × 20 mm without connectors (preliminary)
- Protection class: IP65
- Temperature range -40 °C to +85 °C (optional +120 °C)
- Supply voltage 7 V to 48 V DC (approx. <0.5 W)

Accessories

- CAN cable harness with power supply
- Battery connection cable set (35 mm², 70 mm², 90 mm²)

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Applications

- Dual-channel current and voltage measurement for complete vehicles
- Main current path monitoring in 12/24/48 V systems
- Long-term quiescent current measurement
- Charge and discharge profiles, battery and BMS testing
- Component tests with fixed installation, OEM integration

Scope of delivery

- Measurement module FIX-IV
- Factory calibration certificate (DAkkS optional)
- DBC file and documentation
- KlariToolBox configuration software

Technical data

Inputs	1 input
Connectivity	Current and voltage
Resolution	16 bit ADC with 5 measurement ranges
Sample rate	0.25 Hz to 8 kHz configurable
Shunt type	100 $\mu\Omega$, 200 $\mu\Omega$, 500 $\mu\Omega$, 1 m Ω and 2 m Ω
Measuring chain accuracy	± 0.1 % of measured value, ± 3 LSB of measurement range (at 23 °C ± 5 °C)
CAN	125k, 250k, 500k, 1000k baud configurable; internal CAN termination switchable via software; CAN base ID configurable
Configuration via	CAN (KlariToolBox)
Voltage supply range	7 V – 48 V DC
Power consumption	approx. <0.5 W
Temperature range	-40 °C to +85 °C (optional -40 °C to +120 °C)
Protection class	IP65
Calibration	12 months

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Measuring Ranges Current

Gain	Shunt 100 $\mu\Omega$ Continuous Current 310 A		Shunt 200 $\mu\Omega$ Continuous Current 180 A		Shunt 500 $\mu\Omega$ Continuous Current 130 A	
	Measurement range [A]	Resolution [mA/Bit]	Measurement range [A]	Resolution [mA/Bit]	Measurement range [A]	Resolution [mA/Bit]
100	0...+/-90.00	3.00	0...+/-45.00	1.50	0...+/-18.00	0.60
40	0...+/-270.00	9.00	0...+/-135.00	4.50	0...+/-54.00	1.80
25	0...+/-420.00	14.00	0...+/-210.00	7.00	0...+/-84.00	2.80
5	0...+/-2,100.00	70.00	0...+/-1,050.00	35.00	0...+/-420.00	14.00
1	-2,400 / +10,500	350.00	-1,200 / +5,250	175.00	-480 / +2,100	70.00

Gain	Shunt 1 m Ω Continuous Current 120 A		Shunt 2 m Ω Continuous Current 80 A	
	Measurement range [A]	Resolution [mA/Bit]	Measurement range [A]	Resolution [mA/Bit]
100	0...+/-9.00	0.30	0...+/-4.50	0.15
40	0...+/-27.00	0.90	0...+/-13.50	0.45
25	0...+/-42.00	1.40	0...+/-21.00	0.70
5	0...+/-210.00	7.00	0...+/-105.00	3.50
1	-240/+1,050	35.00	-120/+525	17.50

Please observe continuous current!

Measuring Ranges Voltage

Gain	All shunt variants	
	Measurement range [V]	Resolution [mV/Bit]
100	0...+/-6	0.20
40	0...+/-18	0.60
25	0...+/-28	0.90
5	0...+/-80	5.00