KBR Energy Management

Operating instructions
Function description

multisio

1D2-4CI

Current measuring module

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1 Function description current measuring module multisio 1D2-4CI

The hardware of the **multisio 1D2-4CI** is equipped with 4 analogous current measuring inputs. Currents of up to 6A can be measured. The device LED displays different device states by flashing or continuous illumination.

The multisio 1D2-4CI digitizes the 4 currents and calculates the frequency, RMS value and harmonics up to the 19th harmonic independently. Since the voltage is not measured, power values cannot be determined. Scanning can be performed at a set frequency or variably (30 to 70Hz).

The module can be accessed by a master device (multisio xD6 (from 5D6-ESBS-5DI6RO1DO) with module bus, multicomp with module bus or via computer with VE via Multigate ES/BS) using the module bus interface. The master device has to configure the module and read out the data acquired by the module for further processing.

The operating voltage is supplied via the module bus interface. The module cannot be used as a stand-alone unit.

Caution!

The multisio 1D2-4CI may only be used with series-connected current transformers!
The transformers may not be grounded secondarily.

Up to the 690V network (phase to phase voltage), the connected current transformers have to be designed for a test voltage of at least 2500VAC for 1 minute.

2 Current measuring module - connection chart

Terminal assignment

Upper terminal row:

Terminal 20: Current input k1
Terminal 21: Current input l1
Terminal 22: Current input k2
Terminal 23: Current input l2

Lower terminal row:

Terminal 24: Current input k3
Terminal 25: Current input l3
Terminal 26: Current input k4
Terminal 27: Current input l4

IN / OUT: Module bus / supply voltage

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Note

Connect the current transformers according to the terminal numbers, i.e. transformer 1 to terminal 20/21, transformer 2 to terminal 22/23 etc.!

The current inputs of the module are not galvanically separated!

3 Current measurement module LED display

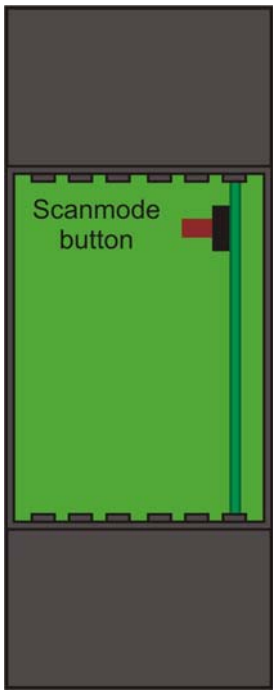
In KBR eBUS scanning mode, the power LED is flashing quickly, in the module detection mode.
In normal operation, the LED is illuminated constantly.

Power LED: Operating voltage

4 Function of scan button

Note

If the scan button is pressed briefly (until all LEDs light up for a short time), the module enters the scanning mode.



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5 Technical data

Power supply:	Via module bus	24VDC / ca. 1.3W
	Connection	Modular connector RJ12:6P6C
Hardware inputs:		
4 current measuring inputs	Measuring range	0 to 6A AC
	Plug terminal 2x 4-pole	Permissible width of connection lines 2.5 mm^2
Measurement current input:	Fuse protection	NONE!!!
		Always short out the current transformer terminals k and l before opening the circuit!
Module bus interface:	Serial port	RS485
	Module bus connection	RJ12 for ready-made KBR system cable, max. length 30 m when placed accordingly
	Transfer rate	38400 Bps
	Bus protocol	KBR module bus
Display:	LED	1x Operation display / status display
Control unit	Button	Scan button (module bus)
Mechanical data:		
Top hat rail device	Housing dimensions	90 x 36 x 61 mm (H x W x D)
	Mounting type	Wall mounting on DIN rail, 7.5 mm deep, in accordance with DIN EN 50022.
	Weight	approx. 100g
Standards and miscellaneous:		
Environmental conditions	Standards	DIN EN 60721-3-3/A2: 1997-07; 3K5+3Z11; (IEC721-3-3; 3K5+3Z11)
	Operating temperature	-5°C ... +55?;
	Humidity	5% ... 95%, non-condensing
	Storage temperature	-25°C ... +70°C;
Electrical safety	Standards	DIN EN 61010-1/A2: 2001 + B1: 2002-11 + B2: 2004-1; (IEC1010-1/A2)
	Protection type	IP20 in accordance with DIN EN 40050 part 9:1993-05
	Electromagnetic compatibility	DIN EN 61000-6-3: 2001 + A11: 2004; (IEC61000-6-3) DIN EN 61000-6-2: 2001 (IEC61000-6-2)

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