

B10000/3000/1000/300

Flexible Current Sensors



General

The B10000/3000/1000/300 flexible current sensor can be used for current measurement in low voltage grids with appropriate instruments. They are designed especially for the F-option of SMV/SMP panel meters and SMP-CA portable analyzers.

The sensors are equipped with signal amplifier with four-position range switch built in the sensor cable. Each sensor has four nominal ranges; assortment of them depends on the sensor model (see the technical specifications table).

The sensor requires external power voltage supplied from connected instrument and is supplied with plastic four pole "Hypertac" connector as standard (other connectors on request).

The sensors are available in two mechanically slightly different versions : „JRF“ and „MFC“.

Operating Instructions



While operating the sensor, connecting to parts under hazardous voltage takes place. The sensor must be operated by a person complying formally with qualifications required for work at low-voltage devices and the person must keep all necessary safety requirements !

1. Connect the sensor to the measuring instrument
2. Set current range switch to desired range
3. Connect the sensor around the conductor; orientation of the sensor is marked with arrow on the sensor coupling and it should correspond with standard current flow direction.
4. Keep the sensor coupling as far as possible (at least 30 mm) from the conductor

Technical Specifications

nominal measurement ranges [A AC] <ul style="list-style-type: none"> • B10000-xxxx • B3000-xxxx • B1000-xxxx • B300-xxxx (linearity up to 105 % of nominal range)	1.5÷300; 5÷1000; 15÷ 3000; 50÷10000 0.5÷100; 1.5÷300; 5÷1000; 15÷ 3000 0.15÷30; 0.5÷100; 1.5÷300; 5÷1000 0.05÷10; 0.15÷30; 0.5÷100; 1.5÷300
bandwidth	10 Hz ÷ 10 kHz
accuracy / phase shift at 50 Hz (sensor coupling at the maximum distance from the measure wire)	1 % of range / 1.5 °
conductor position influence	max. 2 % of reading
external field influence	max. 1.5 % of range
supply voltage / consumption	+/- 3.3 ± 0.3 V DC / ± 1 mA
output nominal voltage	0.5 V AC
output impedance	100 Ω
operating voltage <ul style="list-style-type: none"> • Bxxxx-JRFx • Bxxxx-MFCx 	max. 600 V AC CAT III / 300 V AC CAT IV max. 1000 V AC CAT III / 600 V AC CAT IV
pollution degree, safety	2 in compliance with IEC EN 61010-1, double insulation
operating and storage temperature	-20 to 85°C
operating and storage humidity	< 95% – noncondensation conditions
protection rating	IP 41, indoor use only
mechanical Bxxxx- xxx0/xxx1/ xxx2/xxx3 length Bxxxx-JRFx / MFCx diameter Bxxxx-JRFx / MFCx coupling lock type	25 / 40 / 60 / 100 cm 1.6 / 0.9 cm plastic spring / bayonet
minimum bending diameter	35 mm
cable length	200 cm
connector	DA 4061340, 4-pin, male (1=-8V, 2=+8V, 3=signal, 4=GND)
mass	0.25 kg

Service

If the product has a breakdown, you need to complain to the supplier (see header for address).

The product must be in proper package to prevent damage in transit. Description of the problem or its symptoms must be delivered together with the product. If a warranty repair is claimed, the warranty certificate must be sent in. In case of an out-of-warranty repair you must enclose an order for the repair.

Warranty Certificate

Warranty period of 24 months from the date of purchase is provided for the sensor. Problems in the warranty period, provably because of faulty workmanship, design or inconvenient material, will be repaired free of charge by the manufacturer or an authorized servicing organization.

The warranty ceases even within the warranty period if the user makes unauthorized modifications or changes to the instrument, connects it to out-of-range quantities, if the instrument got damaged in out-of-specs falls or by improper handling or if it has been operated in contradiction with the technical specifications presented.

type of product:

serial number

manufacturer's seal:

date of dispatch:

final quality inspection:

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KMB systems

date of purchase:

supplier's seal: