

FCA3000

Three channel Rogowski coil converter

- Three Rogowski coils input channels
- Three true RMS DC outputs
- One DC output for channels sum
- 0÷20 mA, 4÷20 mA or 0÷10 VDC output
- Response time selectable by jumpers
- Suitable for three-phase systems
- 3000 A standard full scale value
- Customizable full scale up to hundreds kA
- Compact 9 DIN modules size



» General description

FCA3000 is a three-channel current converter with DC outputs. It converts the values measured by a Rogowski coil into true RMS value.

FCA3000 can be used with any model or size of MFC150 Rogowski coils, according to the application. The coils can be connected directly to FCA3000 without any adapter, as FCA3000 integrates the input signal, shifting it by 90°. FCA3000 has three independent inputs channels, suitable for three transducers, and four DC outputs. The standard input value is 100 mV/kA with a full scale of 3000 A. The first three outputs correspond to each transducer, the fourth gives the sum of the three current channels.

FCA3000 enclosure is a 9 module DIN rail for fast installation. FCA3000 can be used as current measurement interface with industrial devices such as PLC, SCADA systems, protection systems, control systems, metering equipments etc.

Due to its specific features, flexible Rogowski coil is an extremely comfortable solution for current measurement and can be used in a number of cases where traditional current transducers are not the adequate solution.

» Benefits

- The fourth output corresponds to the sum of the three current channels; in three phase systems it represents the system value.
- The equalisation of the Rogowski coil signal guarantees the same output value at different electrical network frequencies.
- FCA3000 allows to select by jumper different output response time values. That makes it suitable to a large number of applications.
- The combination of three current channels and the power supply unit in the same box make it very compact and simplifies the connections, allowing time and space saving.
- The DIN rail case offers an easy and quick installation

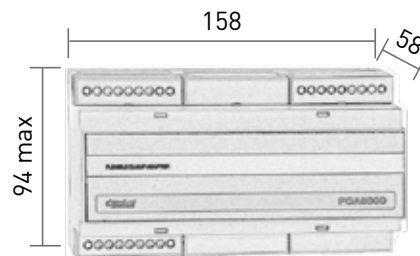
» Applications

- True RMS current measurement
- PLC interface
- Power monitoring and control systems
- Individual machine loading
- SCADA systems
- Very high current measurement

» Related Products

- MFC150

» Technical Drawing



» Specifications

POWER SUPPLY	
Rated voltage:	80±260 V _{AC} (45-65 Hz)
Consumption:	3 VA max
MEASURING INPUTS	
No.:	3
Type:	for Rogowski coil with signal equalization
Sensitivity:	100 mV/kA standard value
Full scale:	3000 A @ 100 mV/kA standard value from 300 A to 300 kA on request
ANALOG OUTPUTS	
No.:	4
Type:	0÷20mA standard value 4÷20mA or 0÷10 VDC on request
Response time:	150 ms default value - selectable by jumpers from 50 to 150 ms approx.
Typical accuracy:	± 1% reading ± 0.3% full scale
ENVIRONMENTAL CONDITIONS	
Operating temperature:	from -10°C to +50°C
Storage temperature:	from -25°C to +60°C
Relative humidity:	75% max. without condensation
CASE FEATURES	
Material:	plastic enclosure - noryl UL94-V0
Protection degree:	IP51 (front panel); IP20 (terminals)
Terminals:	conductors 2.5 mm ²
Size / weight:	158x94x58 mm / 250 gr approx.
STANDARDS COMPLIANCE	
Safety:	73/23/EEC and 93/68/EEC directives, EN61010.1 safety standard
EMC:	89/336/EEC directive and following modifications 93/31/EEC and 93/68/EEC, EN50081-2, EN50082-2, EN61326/A1

15 DIGIT ORDER CODE

FCA3000

Labelling

A = Algodue
C = Custom

Language

I = Italian
U = English

Aux power supply

B = 80÷260 V_{AC}

Input sensitivity

100 = 100 mV / 1kA @ 50Hz
AAA = According to the combined MFC150 coil

Full scale

Value expressed in A or kA.
Standard value is 3000 A.
E.g.
3000 = 3000 A FS
0300 = 300 A FS
K050 = 50000 A FS
K300 = 300000 A FS

Outputs

0 = 0÷20 mA
4 = 4÷20 mA
1 = 0÷10 V_{DC}



NOTE:

- Subject to change without notice
- The code made up of 15 digits including the X



Innovative Electronic Systems