

MULTI-SCALE ROGOWSKI COIL INTEGRATOR

MODEL RPS50

DESCRIPTION

The RPS50 is a multi-scale signal conditioner designed to operate with the MFC150 series of Rogowski coils. Frequency equalization and 90° phase shift correction allow the use of Rogowski coils over a wide frequency range as well as with power and energy meters. Each unit provides a 0-3Vac output signal proportional to the instantaneous measured current. An optional dc output signal proportional to the RMS value of measured current is also available. Three DIP-switch-selectable ranges allow measurement of a wide range of current values with a single Rogowski coil.

FEATURES

- 90° phase shift correction allows Rogowski coils to be used with power and energy meters.
- Frequency equalization allows Rogowski coils to be used over a wide range of frequencies.
- DIP-switch-selectable ranges allow the same Rogowski coil to measure a wide range of current values.
- Compact and convenient DIN-Rail enclosure.
- Powered by any std. power mains Voltage from 85-250Vac or 110-250Vdc.

APPLICATIONS

- Measuring devices, lab instrumentation
- Power monitoring and control systems
- Harmonic and transient monitoring
- DC ripple measurement
- Welding machine control
- High current measurement

**5 YEAR
WARRANTY**



MODEL SELECTION

RPS50 - ☐ - ☐

FULL-SCALE INPUT		OUTPUT 2 (Optional, RMS)	
10K	10kAac	(blank)	(none)
50K	50kAac	D	0-10Vdc
250K	250kAac	N	0-20mAdc
		E	4-20mAdc

NOTE: All models are designed for use with any separately-supplied 100mV/1kA, MFC150 series Rogowski coil.

SPECIFICATIONS

INPUT (From MFC150 series Rogowski coil)

Standard 100mV/1kA@50Hz

DIP-Switch-Selectable Ranges:

F.S. = 10kA 0.5kA, 2.5kA, 10kA

F.S. = 50kA 2.5kA, 10kA, 50kA

F.S. = 250kA 10kA, 50kA, 250kA

Frequency Range (See Note 1) 8Hz-100kHz@-3dB

OUTPUT 1 (Proportional to the instantaneous measured current)

Scaling 0-F.S. Range = 0-3Vac Output

Loading >10kΩ

OUTPUT 2 (Optional) (Proportional to RMS measured current)

Scaling

Option D 0-F.S. Range = 0-10Vdc Output

Option E 0-F.S. Range = 4-20mAdc Output

Option N 0-F.S. Range = 0-20mAdc Output

Loading

Option D >100kΩ

Option E <300Ω

Option N <300Ω

ACCURACY (See Note 2)

Accuracy ±1.0% of F.S.

INSTRUMENT POWER

Rated Voltage (std.) ... 85-250Vac, 50/60Hz or 110-250Vdc

Consumption 1.5VA max.

ENVIRONMENTAL

Operating Temperature Range -10°C to +50°C

Storage Temperature Range -25°C to +70°C

Relative Humidity 80% non-condensing

MECHANICAL

Material Plastic enclosure

Protection IP20

Size (approximate) 4.5in. x 3.9in. x 0.9in.

Net Weight (approximate) 4.1oz

DIN-Rail Format EN50022

NOTES:

1. The low limit is approximate and is determined by signal-to-noise ratio.
2. The RPS50 is delivered with the specified accuracy. The calibration of each scale is adjustable by the user to achieve the maximum accuracy in conjunction with the coil being used.

STANDARDS COMPLIANCE

SAFETY 73/23/EEC and 93/68/EEC directives, EN61010.1 safety standard

EMC 89/366/EEC directive with following modifications:
93/31/EEC and 93/68/EEC, EN50081-2,
EN50082-2, EN61326/A1

CONNECTIONS

Refer to User's Manual for installation instructions.



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