

OSI MULTISCALE ROGOWSKI COIL INTEGRATOR MODEL RPS100

DESCRIPTION

The RPS100 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 0-1Vac output signal which is proportional to the instantaneous measured current. Up to six switch-selectable input ranges enable 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.
- Switch-selectable ranges allow the same Rogowski coil to measure a wide range of current values.
- Powered by standard 115Vac power mains voltage or optional 230Vac.
- Alloy enclosure provides signal shielding for accurate measurements at low current levels.

APPLICATIONS

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



MODEL SELECTION

RPS100 - -

	SWITCH-SELECTABLE INPUT RANGES	INSTRUMENT POWER	
LC	500A, 2kA, 5kA	(blank)	115Vac
HC	10kA, 50kA, 120kA	22	230Vac
U	100A, 500A, 2.5kA, 10kA, 50kA, 250kA		

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

ORDERING INFORMATION

Example: RPS100 with selectable input ranges of 10kA, 50kA, and 120kA, and standard 115Vac instrument power.

RPS100-HC

SPECIFICATIONS

INPUT (From MFC150 series Rogowski coil)

Standard 100mV/1kA@50Hz
Other values available upon request.

Rotary-Switch-Selectable Ranges:

“LC” models 0.5kA, 2kA, 10kA
 “HC” models 10kA, 50kA, 120kA
 “U” models 100A, 500A, 2.5kA, 10kA, 50kA, 250kA
 Frequency Range 8Hz-100kHz@-3dB
 (See Note 1)

OUTPUT

(Proportional to instantaneous value of measured current)
 Scaling 0-F.S. Range = 0-1Vac Output
 Loading >10kΩ

ACCURACY (See Note 2)

Accuracy ±1.0% of F.S.

INSTRUMENT POWER

Rated Voltage, standard 115Vac, ±15%, 50/60Hz
 “-22” option 230Vac, ±15%, 50/60Hz
 Consumption 1.5VA max

MECHANICAL

Material Aluminium alloy enclosure
 Protection degree IP54 (box), IP20 (connectors)
 Size (approximate) 5.9” x 3.2” x 2.0”
 Net Weight (approximate) 1.1 Lb

ENVIRONMENTAL

Operating Temperature Range -10°C to +50°C
 Storage Temperature Range -25°C to +70°C
 Relative Humidity 80% non-condensing

NOTES:

1. The low limit is approximate and is determined by signal-to-noise ratio.
2. The RPS100 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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