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APPLICATIONS

Voltage and current measurement of electrical generators and power distribution systems (using external voltage and current transformers)

General-purpose measurement of AC voltages.

SC30 RMS-to-digital Signal Conditioner



Converts the RMS value of an AC signal to a DC voltage

FEATURES

- Two-channel-per-card packaging
- Up to 16 SC30 Conditioners can be inserted in a V710 Signal Conditioning Chassis
- Provides software-selectable input ranges of 20 mV, 200 mV, 2 V and 20 V
- Protected up to 300 V common-mode and normal-mode voltage
- Provides 10 V full-scale DC output
- Can be used with the V241 high-level mux module
- Supports software-selected calibration
- Optional 50/60 Hz band-pass filter



GENERAL DESCRIPTION

The SC30 is packaged in a 3U (5.25") high, 220 mm (8.7") deep, module. Up to 16 SC30 conditioners can be inserted into a single KineticSystems Model V710 active termination panel. The V710 has sixteen positions for 220 mm deep KineticSystems SC-series signal conditioning cards, one 220 mm deep position reserved for the SC15 Serial Controller and two 160 mm deep positions for Model SC10 and SC11 power supplies. In addition, analog output signals from the SC30 modules are routed via the V710 backplane to an analog interface card that is mounted to the rear of the V710 termination panel.

The SC30 is a two channel true RMS-to-DC converter with four software-selectable input amplitude ranges: 20mV, 200mV, 2V and 20V rms. The DC output for all ranges is 0 to 10 Volts. It provides a maximum error of ±0.5% of full-scale range with 50/60 Hz sine-wave inputs. In addition, the SC30 has input protection to ±300V common-mode or differential-mode and an input frequency range of 20 Hz to 10 kHz. An optional band-pass filter is available with software selectable center frequencies of 50 or 60 Hz.

Setup and control of the SC30 are accomplished via a standard serial port connected to the Model SC15 Serial Controller. End-to-end channel calibration is accomplished in software by configuring the input relays on the SC30 to receive a user-supplied external reference via the calibration bus on the V710 backplane.

DC analog output signals from the SC30 modules are routed via the V710 termination panel backplane to an analog interface card that is mounted on the rear of the V710. Analog interface cards are used adapt the output signals to a pinout configuration that matches the type of multiplexer or ADC to be used. The SC17-S001 interface card routes the analog output signals to one 68-position SCSI 2 receptacle that has a pinout matching the input connector(s) on the V241 multiplexer module.

There is one 9-contact subminiature "D" RMS input connector mounted on the SC30 front panel. This connector serves both RMS channels. A 5856-.Fxyz Cable can be used to connect each SC30 module to a V765-ZF11 Termination Panel. This panel, shown below, supports 16 RMS channels (8 SC30s).

RELATED PRODUCTS

- Model V710 Active Termination Panel
- Model 5856-Fxyz Cable—HDP-20 9P Subminiature D to 9S Subminiature D (for use with the V765 panel)
- Model V765-ZF11 Termination Panel (supports 16 channels and 8 SC30s)
- Model SC15-AA11 Serial Controller
- Model SC 17-S001 Connector Adapter for V241 with Calibration Connector
- Model SC26-AA11 V710 Load Module (Required to maintain power supply regulation whenever 13 or less SC30 signal conditioning modules are installed in the V710 Active Termination Panel.)
- Model SC30-0001 50/60 Hz band-pass filter mezzanine card

Specifications subject to change without notice

ORDERING INFORMATION

MODEL	DESCRIPTION
SC30-AA11	RMS-to-DC Signal Conditioner

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