Transducers measure RMS current, voltage

Ohio Semitronics, Inc. (OSI) announced the MVTR and MCTR series of single-phase, RoHS compliant transducers for the measurement of voltage and current in applications requiring a true RMS calculation of the transducer input.

The MVTR units measure true RMS voltage, while the MCTR models measure true RMS current. All MVTR and MCTR models impart a fully isolated 4-20mA output proportional to the related input voltage and current, respectively, for the sinusoidal and non-sinusoidal inputs found commonly among variable frequency applications. Instrument power is supplied via a control industry standard 4-20mA loop power to facilitate easy and low-cost installation.

Model MVTR Specification Highlights include:
- True RMS voltage measurement
- Output scaling 0-F.S. input = 4-20mAdc output
- Three full-scale voltage range inputs supported including 150, 300 and 600Vac
  - Model MVTR-150E2: 0-150 input AC voltage, 4-20mAdc output
  - Model MVTR-300E2: 0-300 input AC voltage, 4-20mAdc output
  - Model MVTR-600E2: 0-600 input AC voltage, 4-20mAdc output, supplied with a potential transformer (PT)
- 200ms response time in 150V and 300V models, 500ms in the 600V model
- 50-400Hz frequency range
- ±0.5% F.S. accuracy at 60Hz, ±1% F.S. accuracy at 400Hz
- -20°C to +60°C operating temperature range

Model MCTR Specification Highlights include:
- True RMS current measurement
- Output scaling 0-F.S. input = 4-20mAdc output
- Four input ranges (0-0.1A, 0-1A, 0-5A and 0.333V)
  - Model MCTR-0.100E2: 0-0.1A input AC current, 4-20mAdc output
  - Model MCTR-001E2: 0-1A input AC current, 4-20mAdc output
  - Model MCTR-005E2: 0-5A input AC current, 4-20mAdc output
  - Model MCTR-0.100E2: 0-0.333V input AC current, 4-20mAdc output, motor requires isolation through the current transformers (CTs)

- 50-400Hz frequency range, 300ms response time
- ±0.5% F.S. accuracy at 60Hz, ±1% F.S. accuracy at 400Hz
- -20°C to +60°C operating temperature range

The Ohio Semitronics
www.ohiosemitronics.com [1]
(614) 777-1005.

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