

CM01-01D, CM02-01D, CM10-01D

Current Meter

4.6.2007



Features

- AC or DC current measurement
- Ultra Precision Hall type sensor
- 1A, 20A & 100A meters available
- Openable meterin core (clamp)
- Factory calibrated
- Fully Isolated
- Linet connection

Application

- Current consumption monitoring
- Over current alert
- Main fuse protection
- Energy saving applications
- Electric motor health monitoring

Description

CM01-01D, CM02-01D & CM10-01D modules measure AC and DC current. AC operating frequency is limited to 40-60Hz and accurate with sinusoidal waveform. DC current measurement includes polarization data so the current flow direction can be monitored. This is important feature when creating battery charge and discharge monitor. Current measurement is fully isolated. Calibration is done in the factory.

Instructions

Current wire must be routed trough toroidal core. This is made easy with splitted core design. Open the screws which are holding the core together and place the wire between the core halves. Cutting the wire is not needed. Maximum wire diameter is 8mm.

CAT6 type Linet cable shall be connected to the network connector. After system is powered up the module shall be configured as DATA12 group type. After that the module transmits 12-bit data value relative to the measured current.

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Current measurement data:

All modules output values in the two's complement expression.

Calculation formula for CM01-01D: Data value /100 = current in amperes

Calculation formula for CM02-01D: Data value /100 = current in amperes

Example of CM10-01D output:

Data -1000 (0xC18h) = -100.0 A

-100 (0xF9Ch) = - 10.0 A

10 (0x064h) = 1.0 A

100 (0x3E8) = 10.0 A

Technical specifications

Parameter	CM01	CM02	CM10	Unit
Measurement range DC	+ -10	+ -20	+ -100	Adc
Measurement range AC	7	14	60	Arms
Accuracy	2%	1%	2%	Amperes
Resolution	0,01	0,1	0,1	Amperes
Operating temperature	-20...+40			Celsius
Operating humidity	Non condensing			
Dimensions	90 x 55 x 53			mm
Max wire diameter	8			mm

Ordering

CM01-01D 10A Hall Current Meter

CM02-01D 20A Hall Current Meter

CM10-01D 100A Hall Current Meter