

RESIDUAL CURRENT MONITOR SERIES 14 - AC & DC RANGE

The RCM14 range of residual current monitors is intended for the detection of DC and/or AC residual currents in 50Hz/60Hz AC or DC installations (see model options below).

These RCMs are ideally suited for use with Electric Vehicle (EV) charging cables (Mode 2 Protection) and EV charging stations (Mode 3 Protection), and for fault current monitoring on AC or DC installations.

PRODUCT OPTIONS

MODELS

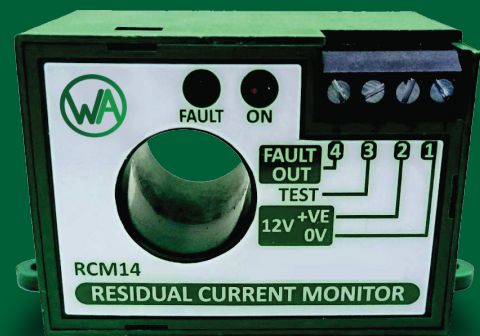
RCM14-01 = 6mA DC only

RCM14-02 = 6mA DC/10mA AC

RCM14-03 = 6mA DC/30mA AC

RCM14-04 UL = 56mA DC/20mA AC

AC only RCM versions for IEC available on request



MAIN FEATURES

- Operates from a 12V DC supply
- External Test Facility
- Self Test and calibration on power up
- Power ON LED
- “Fault” signal output
- For use with 1, 2 or 3 phase loads rated up to 100A/400V
- ROHS compliant
- Complies with the DC protection requirements of IEC62752 (Mode 2), IEC62955 (Mode 3) & UL2231
- 3000A Surge Current Withstand
- 14mm Aperture

Supply Conditions

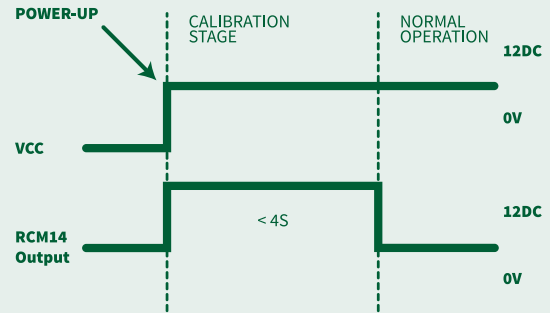
Correct performance of the RCM14 is assured when the supply voltage remains within the specified limits of 12Vdc +/- 10%. Performance may be compromised if the supply voltage exceeds these limits.

Fault Operation & Auto Reset

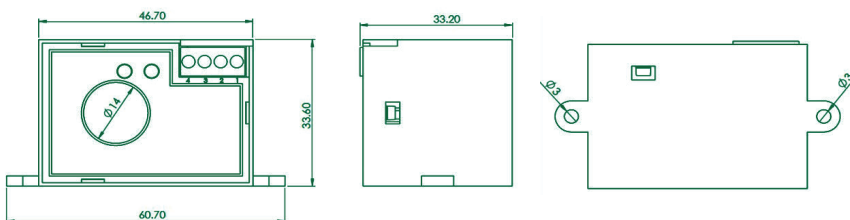
Once a residual fault current which exceeds the rated AC/DC level is detected by the RCM14, the module will go into its fault state within the specified response times. The RCM14 output pin will drop out of this fault state immediately after the residual fault is removed.

Self-Calibration Process

On “power up” the RCM14 will carry out a self-calibration process to ensure that its residual operating current is within the specified limits and has not drifted due to DC shock or aging, etc. During the self-calibration period the RCM14 Output will be set to the “Fault State” to ensure the load cannot be connected during the calibration period. The calibration process takes less than 4 seconds. See calibration timing diagram for typical process operation. The RCM14 range of residual current monitors is intended for the detection of DC and/or AC residual currents in 50Hz/60Hz AC or DC installations (see model options below).



PARAMETER	RCM14 -01	RCM14 -02	RCM14-03	RCM14-04
Operating Residual Current Limits - (IΔn)	6mA DC	6mA DC/10mA AC	6mA DC/30mA AC	56mA DC/20mA AC
Non-operating Residual Current Limits - (IΔno)	3mA DC	3mA DC/5mA AC	3mA DC/15mA AC	15mA AC
Response Time to residual current fault (time between appearance of fault to output going high)	As per Table 2(b) of IEC 62752.	As per Table 2(a), 2(b) & 2(c) of IEC 62752.	As per Table 2(a), 2(b) & 2(c) of IEC 62752.	As per Table 21.3 of UL2231-2
DC Supply Voltage (Vcc):	12Vdc ± 10%			
Power Consumption	<60mW maximum			
Rated Load Current - Amps	100A 1 or 2 Phase 40A 3 Phase			
The RCM modules can accommodate single phase loads up to 100A or three phase loads up to 40A				
Test Function (Externally applied 12V dc) - Current	12mA turns Max			
Fault Signal Output	Active High Open Drain			
Drain Current	100mA Maximum			
Pull up Voltage	+12Vdc Maximum			
Primary Conductors passed through aperture - Aperture ID	14mm dia. maximum			
Environmental Operating Conditions Absolute Temperature	-40°C to +85°C			



Inputs & Outputs

- Pins 1 & 2: DC Supply
- Pin 3: External Test Facility
- Pin 4: FAULT Signal Output. (Open drain—Active high, Drain Current: 100mA maximum)