

RCM14-03 SYSTEM - RESIDUAL CURRENT MONITOR

The RCM14-03 System is a Residual Current Monitor intended for the detection of DC and AC Residual currents in Mode 2 and Mode 3 EV Charging Systems where such currents may flow under a fault condition.

The RCM14-03 System may be used to detect 6mA DC and 30mA AC Residual Currents in DC, single phase or 3 phase installations, and is the equivalent of RCM14-03. See “Product Options” below.

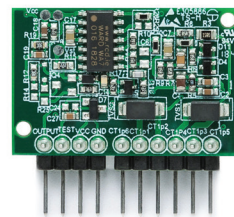
The RCM14-03 System comprises of a CT with 14mm aperture, and a Sensor PCB intended to be mounted directly onto a printed circuit board by OEMs.

The RCM14-03 System is especially suited for use in Mode 3 Electric Vehicle Charging Stations to disconnect the supply to the Electrical Vehicle under an AC or DC residual fault current condition.

This product is fully compliant with IEC62752. It is also used for IEC62955 applications where 30mA AC fault detection is required.

MAIN FEATURES

- Operates from a 12-24V DC Supply
- External Test Facility
- “Fault” signal output
- Frequency Response DC and 50 & 60Hz
- ROHS compliant
- Complies with the DC and AC protection requirements of IEC62752 or IEC62955
- 3000A Surge Current Withstand



SEE ALSO

RCM14-01 SYSTEM	6mA DC Detection to IEC62955, 14mm CT Aperture
RCM14-03	6mA DC/30mA AC Detection to IEC 62752, 14mm CT Aperture
RCM14-04 SYSTEM	56mA DC/20mA AC Detection to UL2231, 14mm CT Aperture
RCM01-02	6mA DC/30mA AC Detection to IEC 62752, 9mm CT Aperture

Supply Conditions

The RCM14-03 System is intended for operation with a supply voltage of 12-24V DC. Performance may be compromised if the supply voltage is outside these limits.

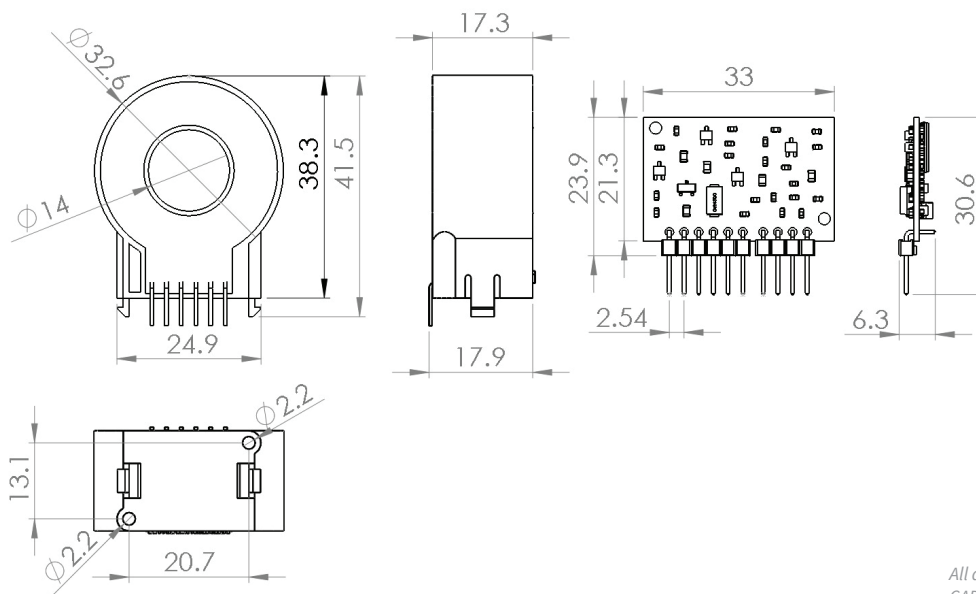
Fault Operation & Auto Reset

When a Residual Fault Current that exceeds the rated AC or DC level is detected, the RCM14-03 System Output pin will switch to the “Fault” state within the specified response times. The Output pin will Auto-Reset when the Fault is removed.

PIN OUT	
1	CT 1
2	CT 2
3	CT 3
4	CT 4
5	CT 5
6	CT 6
7	GND
8	VCC
9	Test
10	Output

See Application Sheet WA-AS-032 for Connection Diagram

TECHNICAL DATA	
Relevant Product Standard	IEC62955
Rated Residual Operating Current - (I Δ n)	6mA DC / 30mA AC
Rated Non-operating Residual Current Limits - (I Δ no)	3mA DC / 15mA AC
Response Time to residual current fault (time between appearance of fault to Output going high)	According to IEC 62752
DC Supply Voltage (Vcc): Supply Current	12-24V DC nominal. (11V Min, 26V Max)
Test Current Limit on Test Function for 12 – 24V externally applied to Test Pin	0.8mA DC Min
Fault Signal Output Drain Current Pull up Voltage	Active High Open Drain 100mA Maximum +24V DC Maximum
Environmental Operating Conditions Absolute Temperature	85°C to -40°C (derated below -25°C)
Weight	35g



All dimensions in mm
CAD model available on request



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Datasheet: RCM14-03 System
WA-DS-032-Rev A