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RESEARCH & DEVELOPMENT

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RCM14-01 DC RESIDUAL CURRENT MONITOR

The RCM14-01 is a residual current monitor intended for the detection of DC residual currents in 50Hz/60Hz AC installations.

The RCM14-01 is primarily intended for use in Mode 3 Electric Vehicle charging stations to disconnect the supply to the Electric Vehicle under a DC residual fault current condition.

The RCM14-01 may also be used to detect DC residual currents in DC, single phase or multiphase installations.

The RCM14-01 is a compact solution designed to be panel mounted. It has a JST connector for easy installation.

This product is fully compliant with IEC62955.

MAIN FEATURES

- Operates from a 12V DC supply
- External Test Facility
- JST XH 2.5mm Pitch Connector JST:B4B-XH-A (LF)(SN)
- "Fault" signal output.
- LED Indication for "On" and "Fault"
- For use with single or 3 phase loads
- ROHS compliant
- Complies with the DC protection requirements of IEC62955 (Mode 3)
- 3000A Surge Current Withstand
- 14mm Aperture

SEE ALSO

RCM01-02	*Residual Current Monitor, 9mm Aperture, 6mA DC / 30mA AC (IEC62752)*
RCM14-03	*Residual Current Monitor, 14mm Aperture, 6mA DC / 30mA AC (IEC62955)*
RCM14-04	*Residual Current Monitor, 14mm Aperture, 56mA DC / 20mA AC (UL2231)*
RCM20	*Residual Current Monitor, 19mm Aperture, 6mA DC / 30mA AC (IEC62955)*
RCM Mode 2 System	*Residual Current Monitor, Sensor Board + PCB Mountable Current Transformer*

Supply Conditions

The RCM14-01 is intended for operation with a supply voltage of 12V DC +/- 10%.
Performance may be compromised if the supply voltage is outside these limits.

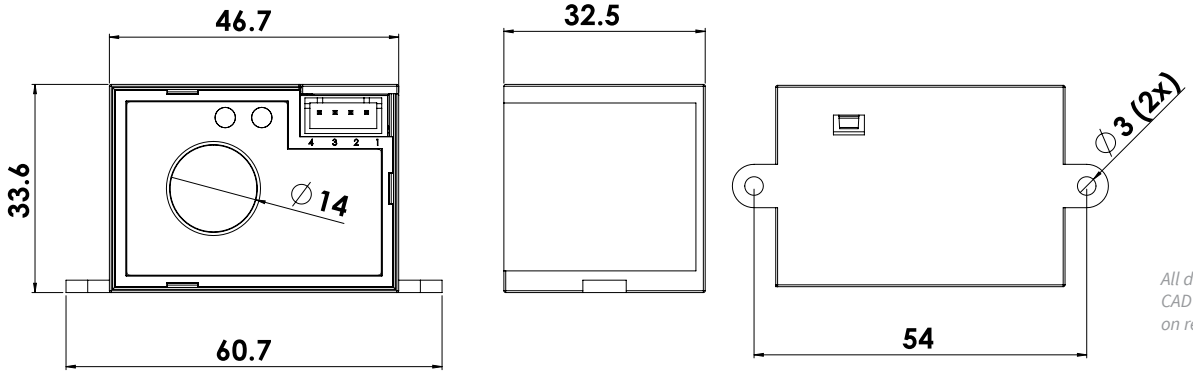
Fault Operation & Auto Reset

When a residual fault current that exceeds the rated DC level is detected, the RCM14-01 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	
Pin 1	0V DC
Pin 2	+12V DC
Pin 3	External Test Facility
Pin 4	Fault Signal Output (Active High Open Drain)

See Application Sheet WA-AS-014 for Connection Diagram

TECHNICAL DATA	
Relevant Product Standard	IEC 62955
Rated Residual Operating Current - (IΔn)	6mA DC
Rated Non-operating Residual Current - (IΔno)	3mA DC
Response Time to residual current fault (time between appearance of fault to output going high)	According to IEC 62955
DC Supply Voltage (Vcc): Power Consumption	12V DC ± 10% 60mW maximum
Rated Load Current - Amps The RCM14 modules can accommodate single phase loads up to 100A or three phase loads up to 40A	100A Single Phase 40A 3 Phase
Test Function (Externally applied 12V DC) - Test Current Limit	0.8mA DC
Fault Signal Output Drain Current Pull up Voltage	Active High Open Drain 100mA Maximum +12V DC Maximum
Environmental Operating Conditions Absolute Temperature	-40°C to +85°C
Weight	45g



All dimensions in mm
CAD model available on request