



Dims*:
W. 34mm
H. 20mm
D. 49mm

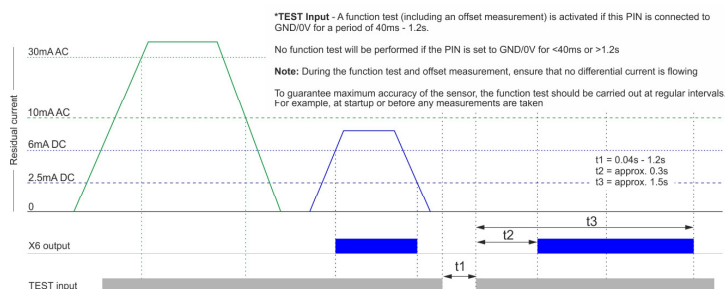
*exc. any pins

- Designed for **Mode 3** Electric Vehicle charging systems (as per IEC 62955)
- Fixed** 6mA DC trip level
- 3000A surge withstand capability
- Suitable for single phase or three phase loads rated up to 32A
- Built-in current sensor with 13.5mm dia. aperture
- Designed for direct mounting to PCB and secured in place using 4 solderable pins
- 2 x 4-way male pin header connector exiting on the underside of housing
- Operates from 5 - 12V DC
- "Test" input
- 2 Open collector outputs – "6mA" and "Error"
- PWM output for monitoring purposes
- Auto-resets when fault removed



ISO 9001:2015
Cert. No. 14125771

FUNCTION DIAGRAM



INSTALLATION



Installation work must be carried out by qualified personnel.

- BEFORE INSTALLATION, ISOLATE ALL SUPPLIES.
- DO NOT install the unit in close proximity to equipment generating high magnetic fields.
- Ensure the conductors that pass through the aperture are straight, and as central as possible. Ensure the conductors do not cause any undue stress on the unit itself.
- The earth connection must not pass through the aperture.

Applying power.

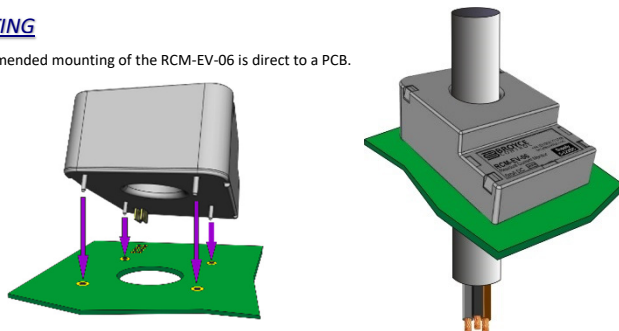
- There are no visual indicators or user adjustments. As soon as power is applied the device will begin monitoring for leakage current.

Troubleshooting.

- If the unit fails to operate correctly check that all wiring and connections are good.

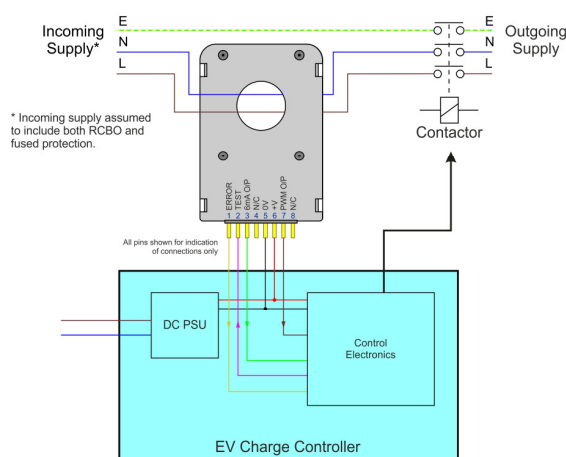
MOUNTING

- The recommended mounting of the RCM-EV-06 is direct to a PCB.



CONNECTION DIAGRAM

Typical connection example for a single phase EV supply



TECHNICAL SPECIFICATION

Auxiliary supply:	
Rated voltage Us (5, 6):	5 - 12V DC (90 - 110% of Us)
Power consumption (max.):	0.6W
Monitored circuit:	
Rated current In:	32A
Rated voltage Un:	230/400V AC
Rated frequency:	50/60Hz
Trip and time delay characteristics:	
Sensitivity/Trip level IΔn:	6mA DC (fixed)
Residual non-operating current:	0.5 x IΔn
Reset level:	2.5mA DC
Unit resets automatically when current drops below this level	
Max. operating time for suddenly applied residual current (as per IEC 62955)	
Smooth DC:	6mA 60mA 0.2A
	10s 0.3s 0.1s
Accuracy:	±10%
Inputs/Outputs:	
Connection type:	2 x 4-way pin header
TEST input (2):	Active low (internally pulled to +V)
Test input pulse width:	0.04 - 1.2s
ERROR output (1):	Open collector
6mA output (3):	(Max. rating 45V DC, 100mA)
PWM output (7):	Internally pulled to 3.3V (10KΩ pull-up)
PWM Function:	Output proportional to smooth DC residual current
PWM Frequency:	8kHz ±200Hz
PWM Duty cycle change:	3.3%/mA i.e. 20% duty cycle @ IΔdc = ±6mA
Environmental/General:	
Ambient temperature:	-40 to +85°C
Storage temperature:	-40 to +85°C
Relative humidity:	Max. 75% @ 40°C
Overvoltage category:	III
Pollution degree:	2
Altitude:	Up to 2000m above sea level
Ingress protection rating:	IP20
Housing:	Grey flame retardant Lexan UL94 V0
Weight:	≈ 40g
Mounting:	See drawing on the left
Approvals:	Conforms to: IEC 62955
	CE, UKCA and RoHS Compliant.

Numbers in brackets refer to pin numbers on the connector

SOLDERING PROCESS

Recommended process:	Wave soldering only
Heating temperature:	260°C
Heating time:	5s max.

These products are not suitable for re-flow soldering

DIMENSIONS & CONNECTOR PIN-OUT

