



553109B

Residual Current Monitor – 6mA DC (Single Output)
ΔEVA 01-VP / ΔEVA 01-VS

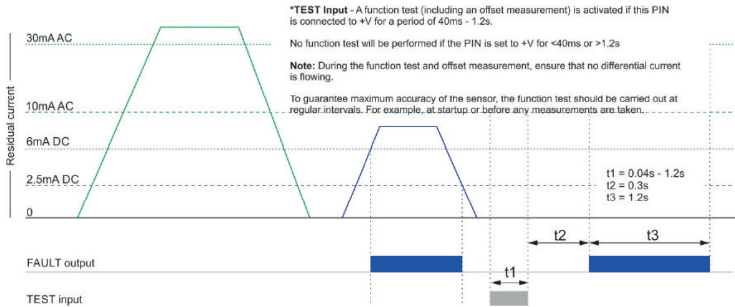


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- Designed for Mode 3 Electric Vehicle charging systems (as per IEC 62955)
- Fixed 6mA DC trip level
- 3000A surge withstand capability
- Suitable for single phase or three phase loads rated up to 32A
- Built-in current sensor with 13.5mm dia. aperture
- Universal mounting/securing options:
 - PCB using fixing screws
 - Attaching to cable using a cable tie and slots provided

- 4-way (2.54mm pitch) connector – with two options available
 - Male pin header exiting at the underside of the housing (product part no. EVA 01-VP)
 - Latching right-angle pin header exiting at the rear of the housing (product part no. EVA 01-VS)
- Operates from 5 - 12V DC
- "Test" input
- "Fault" output - Open collector

FUNCTION DIAGRAM



INSTALLATION

- ⚠ Installation work must be carried out by qualified personnel.**
- BEFORE INSTALLATION, ISOLATE ALL SUPPLIES.
 - Mount the device according to the preferred method of use and equipment design.
 - 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.

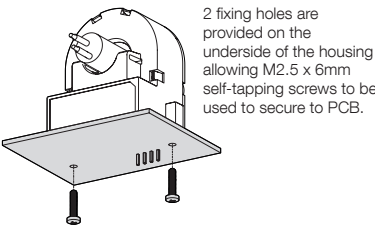
- Applying power.**
- There are no visual indicators or user adjustments. As soon as power is applied the device will begin monitoring for leakage current.

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

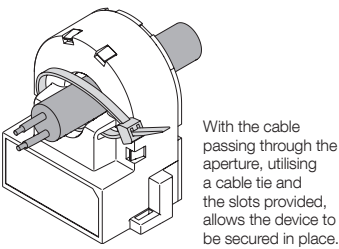
MOUNTING OPTIONS

Depending on model variant, there are two intended methods of mounting:

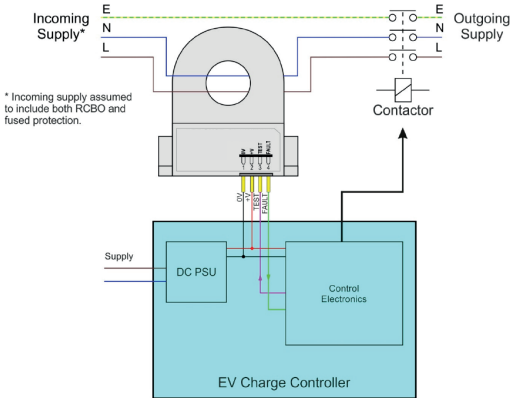
PCB Mounting using ΔEVA 01-VP



Direct to cable using ΔEVA 01-VS



CONNECTION DIAGRAM



TECHNICAL SPECIFICATION

Auxiliary supply				
Rated voltage Us (1, 2)		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 $I\Delta n$		6mA DC (fixed)		
Residual non-operating current		0.5 x $I\Delta n$		
Reset level		2.5mA DC Unit resets automatically when current drops below this level		
Max. operating time (as per IEC 62955) (For suddenly applied residual current)		6mA	30mA	60mA
		10s	-	0.3s
Smooth DC		0.1s		
Sinusoidal AC		No tripping		>0.3s
Accuracy		>0.08s		
Accuracy		±10%		
Inputs/Outputs				
Connection type		ΔEVA 01-VP 4-way pin header, 2.54mm pitch		ΔEVA 01-VS Latching right-angle 4-way pin header, 2.54mm pitch ¹
TEST input (3)		Active high (internally pulled down)		
Input voltage, high level		> 2.5V (Max. rating 12V DC)		
Input voltage, low level		< 0.8V		
Test input pulse width		0.04 – 1.2s		
FAULT output (4)		Open collector (Max. rating 45V DC, 100mA)		
Environmental/Other				
Ambient temperature		-40 to +85°C		
Storage temperature		-40 to +85°C		
Relative humidity		Max. 95% @ 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		≈ 32g		
Mounting options		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.
¹ Recommended mating connector housing - Molex KK 254 series.

SOLDERING PROCESS

Recommended process	Wave soldering only for the ΔEVA 01-VP
Heating temperature	260°C
Heating time	5s max.

These products are not suitable for re-flow soldering.

DIMENSIONS (mm) & CONNECTOR PIN-OUT

