

# Residual Current Device



## Summarize

ZDA13-630F is a type-B residual current device that fully complies with the IEC62752 standard. It has the advantages of low power consumption and strong anti-interference capabilities.

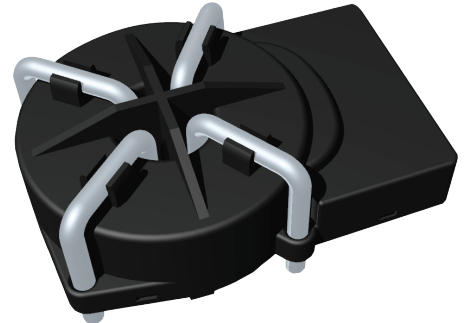
## Product features

- Value optimized;
- Small size;
- Built-in test and calibrate function;
- Wide operating temperature range: -35°C ~ +70°C
- High insulation voltage;
- Suitable for 120V, 250V, 380V power system;
- High cost performance;
- Compatible pin configuration with other type-B residual current devices;
- Static power consumption <18mA;

## Application field

- Galvanic isolated DC and AC leakage current detection;
- Suitable for EV charger IC-CPD applications;
- Suitable for EV charger RDC-DD/PD applications;

Product picture print for reference only, subject to the actual product



Nominal Differential Current	DC 6mA / AC 20mA	DC 6mA / AC 30mA
Max. Primary RMS Current	40A	40A
DC Trip Tolerance	Min.: 3.5mA Typ.: 4.5mA Max.: 5.5mA	Min.: 3.5mA Typ.: 4.5mA Max.: 5.5mA
AC Trip Tolerance	Min.: 12.5mA Typ.: 15mA Max.: 17.5mA	Min.: 18mA Typ.: 22.5mA Max.: 27mA
DC Recovery Current Level	3mA	3mA
AC Recovery Current Level	10mA	15mA
PWMOUT vs DC differential current ratio	3.33%/mA	3.33%/mA
Response Times	According to IEC62752:2016	According to IEC62752:2016
Ambient Operation Temperature	-35 °C to 70 °C	-35 °C to 70 °C
Ambient Storage Temperature	-40 °C to 85 °C	-40 °C to 85 °C
Supply Voltage	Min.: 4.8V Typ.: 5V Max.: 5.2V	Min.: 4.8V Typ.: 5V Max.: 5.2V
Supply Current	Typ.: 16mA	Typ.: 16mA

Pin	Description
Pin 1 – ERROR	When the device is operating normally, this pin is at low-level (GND). If an error is detected, the pin is set to High-Z.
Pin 2 – TEST	Serves as input pin for signal to start the test function. During the test function, system offset is measured and compensated, then a test differential current is applied by the device itself. The device then should trip within the response time limits, indicating it is functioning normally. During the test function, there shall be no differential current other than the test current applied by the device. The test function should be activated whenever possible (e.g. before initiating charging or whenever charging is not ongoing) to ensure good accuracy.
Pin 3 – ACDCTRIP	Serves as output pin for signal indicating an AC or DC trip. When both AC and DC differential currents magnitude are under the threshold values, the pin is at low-level (GND). Otherwise, the pin is set to High-Z.
Pin 4 - ACTRIP	Serves as output pin for signal indicating AC trip. When AC differential current magnitude is under the threshold value, the pin is at low-level (GND). Otherwise, the pin is set to High-Z.
Pin 5 - GND	Ground.
Pin 6 - VCC	Power Supply.
Pin 7 - PWMOUT	Serves as output pin for the PWM signal with f= 8kHz, indicating the DC differential current level. This signal shall only be used for monitoring purposes.

## Dimensions: (in:mm±0.5)

