



## ● PME fault detection-Load Management with kWh meter

### Description

The **PME** range consumer unit is perfect for EV Chargers that do not have integral PME protection & earth leakage protection & overload protection & require load management. This board also includes a Kilowatt hour meter.

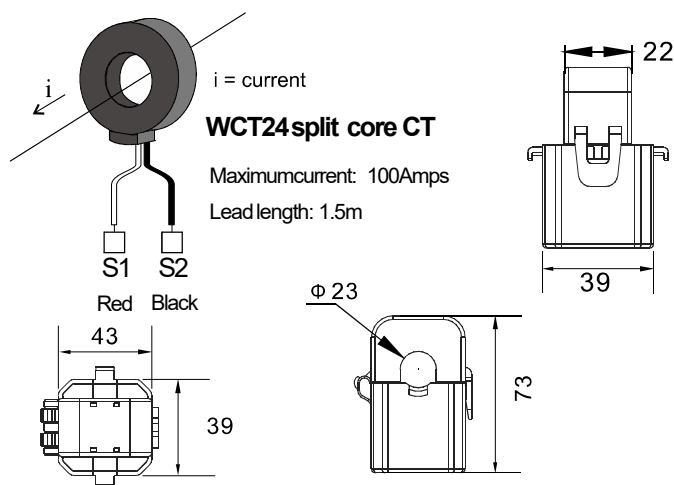
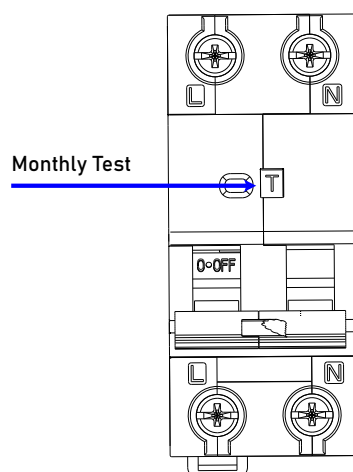
### PME Protection

- 1) Automatically monitors the supply voltage on both 230V & 240V
- 2) Within 5 seconds in the event of an under-voltage of less than 207V or an over-voltage of more than 253V Live, Neutral & Earth will be isolated.
- 3) Following an under-voltage isolation, will automatically reset when normal operating range is restored.
- 4) Following an over-voltage isolation, on the grounds of safety, will need to press the "RESET" button of WVP32 to reset the device.

### Technical Data

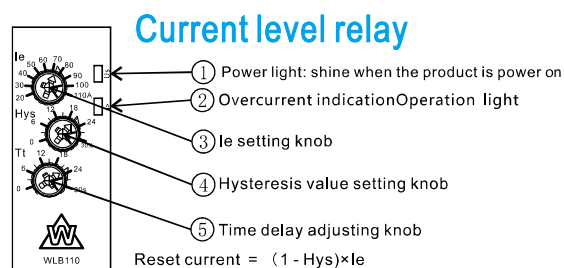
Standard	BSEN61439-3, BS 7671
Rated current	40A
Rated voltage	230V AC
Frequency	50/60Hz
Short circuit rating	16kA
Operation	207V-253V(4 Seconds)
Load Management Current	10 - 110 Amps
IP Rating	IP40
No. of modules	12
Incomer Device	40A RCBO Type A
Ambient temperature(°C)	-25... +55
Storage temperature(°C)	-35... +55

Available in either IP40 metal or IP65 plastic enclosure.  
RCBO or MCB variants ( if using RCBO version test monthly using test button)



### Load management

Installing a current transformer on the incoming supply (Main cable) protects against the car charger overloading the installation. This feature is useful for properties with existing high current electric appliances, e.g. induction hobs, electric showers and heating.





The PME is an EV distribution board that will completely disconnect all phases and earth if a PME fault is detected. It provides customers with a safer and compliant electric vehicle charging solution. There is no need for an earth rod if this distribution board is used. It is suitable for EV (Electric Vehicle) chargers with integral DC leakage protection but no PME fault detection.

Following power on, our PME Fault detection device the supply voltage for 5 seconds and determines if the voltage is within normal operating limits. (No differentiation is necessary between 230Vac or 240Vac supply)

If out of limits a PME fault detection device is activated. To clear, the supply must return within normal operating limits, and may also require a power off/on cycle should the cause have been an over-voltage condition.

If within limits, PME fault detection device allows connection of live, neutral and earth to the vehicle, and continues to monitor the supply. If the voltage drops below 207Vac and does not return for up to 5 seconds, a PEN fault condition is tripped and live, neutral and earth connections are removed from the vehicle.

However, a voltage dip could also cause the same fault condition. Therefore, PME fault detection device continuously monitors the supply health and if it returns to within normal operating range, automatically allows re-connection of live, neutral and earth to the vehicle.

If the voltage rises above 253Vac and does not return for up to 5 seconds, a PEN fault condition is tripped and live, neutral and earth connections are removed from the vehicle.

PME fault detection device continues to monitor the supply health but if it returns to within normal operating limits the fault condition is not cleared without manual intervention to power cycle.

Under this condition the EV driver is made aware of the high-voltage applied to the vehicle and can then perform safety checks before driving the vehicle.

#### In summary Functions

Automatically monitors the supply voltage on both 230V & 240V supplies without the need for any manual dip switch settings. Within 5 seconds in the event of an under-voltage of less than 207V or an over-voltage of more than 253V Live, Neutral & Earth will be isolated.

Following an under-voltage isolation, will automatically reset when normal operating range is restored.

Following an over-voltage isolation, on the grounds of safety, will require a manual reset.

