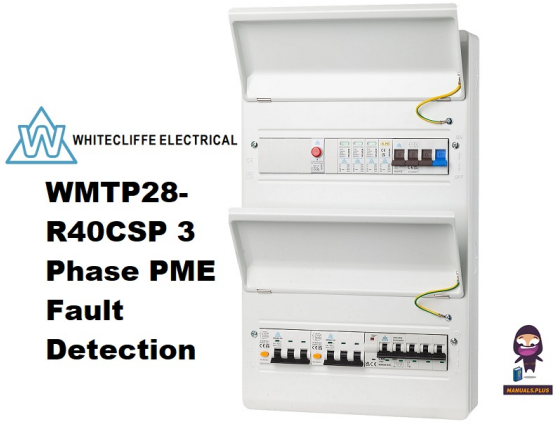

WHITECLIFFE ELECTRICAL WMTP28-R40CSP 3 Phase PME Fault Detection Unit Instructions

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WHITECLIFFE ELECTRICAL

WHITECLIFFE ELECTRICAL WMTP28-R40CSP 3 Phase PME Fault Detection

Product Information

Specifications:

- **Product Name:** WMTP28-R40CSP 3 Phase PME Fault Detection metal consumer unit
- **Manufacturer:** Whitecliffe Electrical
- **Email:** sales@wced.co.uk
- **Telephone:** 0161 723 1451
- **Rated Voltage Operation:** 400V 207V-253V (4 Seconds) each phase
- **Rated Current of Main Switch:** 100A
- **Standard Number of Modules:** 28

Product Usage Instructions

Installation:
This product must be installed by a qualified electrician following IET Wiring Regulations BS 7671 and current Building Regulations. Disconnect the electrical supply before installation or removing the cover of the unit. Ensure proper ventilation for the unit.

Connection:

1. Cut and dress the main incoming cables.
2. Connect them into the appropriate terminals.
3. Tighten the main incoming terminals securely with a recommended torque of 2.5Nm.

RCBO Testing:
The RCBO must be tested according to IEC 61009-1 specifications using a calibrated test meter. The RCBO should trip within specific time frames based on the rated current.

Main Operation:
After installation, with the incoming main switch isolator closed, the unit will monitor the incoming supply. The PME fault detection device will activate if any phase is out of limits. If all phases are within limits, live, neutral, and earth connections are allowed to the vehicle.

Resetting:
If an over-voltage isolation occurs, press the RED REST button to reset the device. If a PEN fault condition is tripped due to low voltage on any phase, live, neutral, and earth connections are removed from the vehicle.

FAQ

Q: Do I need an earth rod when using this distribution board?
A: No, there is no need for an earth rod if this distribution board is used as it disconnects all phases and earth if a PME fault is detected.

Q: What should I do if the PME fault detection device is activated?
A: To clear the fault, the supply must return within normal operating limits and may also require a power off/on cycle if the cause was an over-voltage condition.

DESCRIPTION

The WMTP28-R40CSP is an 3 phase 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.

MAIN FUNCTION

1. Automatically monitors the supply voltage on 400V
2. Completed with one 5 Pole circuit breaker with a built-in PME fault detection,
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 RED “REST” button of WP9 to rest the device.

WARNING
This product must be installed by a by a qualified electrician in accordance with IET Wiring Regulations BS 7671(18th edition or later) and current Building Regulations.
Ensure the electrical supply is disconnected before installation or removing the cover of the Unit. Once installed, the unit has a Live Main Supply (400v or Higher) within the enclosure. The cover must not be removed until the supply to the unit has been isolated or disconnected.

SAFETY ADVICE

The unit must be installed in a dry ventilated location; it must never be covered or have restricted ventilation.
Before powering up the circuit check all connections are TORQUED

Loose connections cause fires!!!

CONNECTION OF MAIN INCOMING DEVICE

1. Cut and dress the main incoming cables and connect them into the appropriate terminals.
2. Tighten the main incoming terminals securely.Recommended Torque: 2.5Nm for Isolator, MCB,SPD & RCBO

RCBO TEST

THE WFD IS MANUFACTURED IN ACCORDANCE WITH IEC 61009-1 AND MUST BE TESTED TO THIS SPECIFICATION USING A CALIBRATED TEST METER.

0.5IΔn	**RCBO will not trip**
1Δn	**RCBO must trip within 300ms**
5IΔn	**RCBO must trip within 40ms**

Main Technical Data

Standard	BS EN 61439-3, BS7671
Number of modules	28
Rated Voltage	400V
Operation	207V-253V(4 Seconds) each phase
Rated current of Main Switch	100A
Rated curent of RCBO	40A
Frequency	50Hz
Cable entry	Selection of knockouts
terninal type	Cage clamp
IP Rating	IP40
Surge protection	Type2
Visual indication of surge protection	**Green=Good**, **Red=Replace**
Device mounting	35mm din rail
Ambient temperature	-25°C +55°C

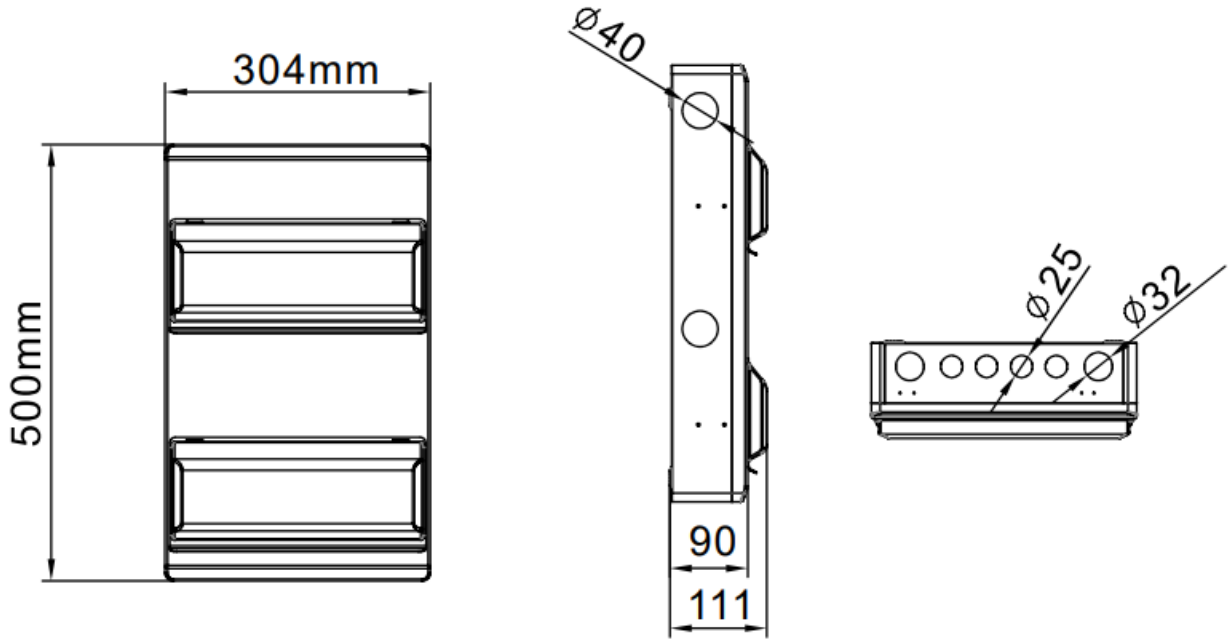
OPERATION INSTRUCTION

- With the incoming main switch isolator closed the unit will monitor the incoming supply. After the incoming main switch isolator is closed, the WARB breaker with built-inPME Fault detection device detect the supply voltage for 5 seconds and determines if the voltage is within normal operating limits.(No differentiation is necessary between 400Vac or 415Vac supply

- If any phase out of limits a PME fault detection device is activated. To clear, the supply must return within normal operating limits, and Nmay also require a power off/on cycle should the cause have been an over-voltage condition.
- If all phase are 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 of any phase 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 of any phase rises above 253Vac and does not return for up to 5seconds, 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 heath 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.

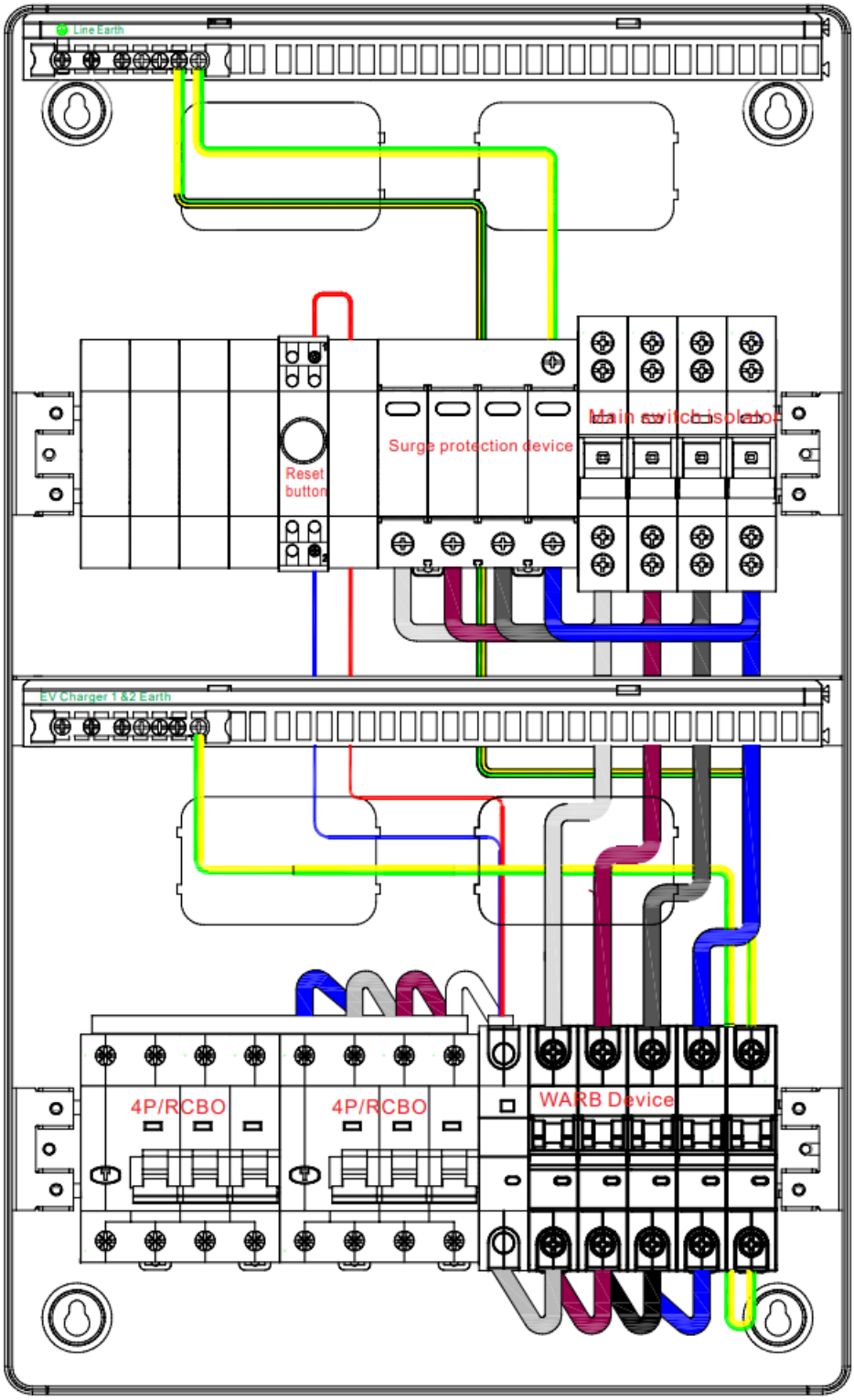
In summary Functions

- Automatically monitors the supply voltage on both 400 & 415V supplies without the need for any manual dip switch settings. Within 5 seconds in the event of an under-voltage of any phase less than 207V or an over-voltage of any phase more than 253V Live, Neutral & Earth will be isolated.
- Following 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. Press the Red button of WP9 to reset.

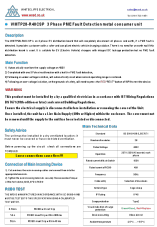


Wiring Layout

WMTP28-R40CSP wiring layout



Documents / Resources

	WHITECLIFFE ELECTRICAL WMTP28-R40CSP 3 Phase PME Fault Detection Unit [pdf] Instructions WMTP28-R40CSP, WMTP28-R40CSP 3 Phase PME Fault Detection Unit, WMTP28-R40CSP, 3 Phase PME Fault Detection Unit, PME Fault Detection Unit, Fault Detection Unit, Detection Unit, Unit

References

- **User Manual**