



# Whitecliffe Electrical Distribution limited

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## WTPN DISTRIBUTION BOARD INSTALLATION AND USAGE GUIDE

### WARNING

**ELECTRICITY IS DANGEROUS IF IN ANY DOUBT PLEASE SEEK QUALIFIED ADVICE**

**This distribution board must be installed and tested by a qualified electrician in accordance with IET Wiring Regulations BS7671**

TABLE1	
Device	Standard
WTPN Distribution Board	BS EN 61439-3, IEC61439-3
Main Switch	BS EN 60947-3, IEC60947-3
MCB	BS EN 60898-1, IEC 60898-1
RCD	BS EN 61008-1, IEC 61008-1
RCBO	BS EN 61009-1, IEC61009-1
SPD	BS EN 61643-11, IEC61643-11

Busbar Current Rating	125A
Busbar Type	Fully shrouded copper
Busbar Rating	25kA Conditional
Main Switch	125A 4Pole (Factory fitted)
Surge protection	Type 2
Visual Indication of Surge protection	Green=Good, Red=Replace
Outgoing Ways	4, 6, 8, 12, 16, 24 Triple pole outgoing ways
Voltage Rating in AC	230 / 415V
IP Protection	IP3X to BS EN 60529
Enclosure Body Type	Steel
Mounting	Keyhole fixings in all corners
Gland Plate	Top and bottom removable
Lock	Standard coin slot

Table 2		
Recommended Torque Settings		
Device	Maximum cable capacity	Recommended Torque
Main Switch	50mm <sup>2</sup>	2.5Nm
MCB	16mm <sup>2</sup>	2.5Nm
RCD	35mm <sup>2</sup>	2.5Nm
RCBO	16mm <sup>2</sup>	2.5Nm
SPD	16mm <sup>2</sup>	2.5Nm
Earth/Neutral Terminal	25mm <sup>2</sup>	2.5Nm

## 1. General information

1.1 WTPN distribution board must be installed and tested by a qualified electrician in accordance with the current IET Wiring Regulations Bs7671.

1.2 Total load must not exceed the rating of the incoming isolator or any additional limitation.

1.3 The total sum of the individual MCBs/RCBOs may exceed this value where there is appropriate diversity in the installation.

1.4 The distribution board and associated components have been manufactured to the following specifications (table 1).

1.5 Ambient Temperature: MCBs are calibrated at 30°C according to the calibration temperature requirements of EN60898. At other temperatures the following rating factors should be used:

**At 60°C 0.85 At 20°C 1.0 At 0°C 1.15**

If Adjacent thermal-magnetic MCBs should not be continuously loaded at their nominal rated currents when mounted in enclosures. We recommend a 60% de-rating factor is applied to the MCBs nominal rated current where it is intended to load the MCBs continuously.

## 2. Enclosure Mounting

2.1 Remove front cover and door assembly (4x screws).

2.2 Gland plates are fitted top and bottom and should be removed if drilling holes to prevent swarf inside the enclosure. In order to maintain the IP rating and fire containment of the enclosure we recommend glands are used.

2.3 Fix base to wall using 4 screws and rawl plugs as appropriate and remove any debris from inside the Distribution Board.

2.4 Adjust to the square.

2.5 Route incoming cables to desired positions.

## 3. Connection of Tails

3.1 Cut and dress the main incoming cables and earth conductor.

3.2 Connect into the appropriate terminals on Main Switch and earth terminal bar and torque (TABLE 2).

## 4. Connections

4.1 Cut, dress and connect circuit conductors to appropriate MCBs neutral and earth terminals.

4.2 ALL CONNECTIONS (including factory made connections) MUST BE TORQUED (TABLE 2)

## 5. Circuit Identification

5.1 All circuits must be clearly labelled on the front cover.

## 6. Operation of the TEST Button on RCD/RCBOS

6.1 When newly fitted systems do not trip on the TEST button of the RCD/RCBO or using the RCD tester the problem is normally caused by an earth to neutral fault on the circuit (PME supply).

## 7. Testing

7.1 After completion of the installation, it must be tested in accordance with the latest edition of the IET Wiring Regulations for Electrical Installations (BS 7671).

## 8. Operating Instructions

8.1 In normal use all toggles should be in the upward position indicated by **I** or **ON**.

8.2 To isolate the supply to all the circuits, switch the toggle on the main isolating switch.

8.3 To isolate the individual circuits, switch OFF the MCB or RCBO controlling that particular circuit.

**CAUTION** this only isolates one circuit the remainder of the circuits are still live.

8.4 Should any MCB trip, reset the MCB by pushing toggle upwards. Should it trip again, the circuit may require attention. Leave the MCB in the OFF position and seek qualified advice.

**Before fitting the front cover, check all connections including factory made connections are TORQUED (table 2).**

**Loose connections can cause fires!**



### IMPORTANT

This installation or part of it, is protected by a device which automatically switches off the supply. If an earth fault develops. Test quarterly by pressing the button marked "T" or "TEST". The device should switch off the supply and should then be switched on to restore the supply. If the device does not switch off the supply when the button is pressed, seek expert advice.



### IMPORTANT

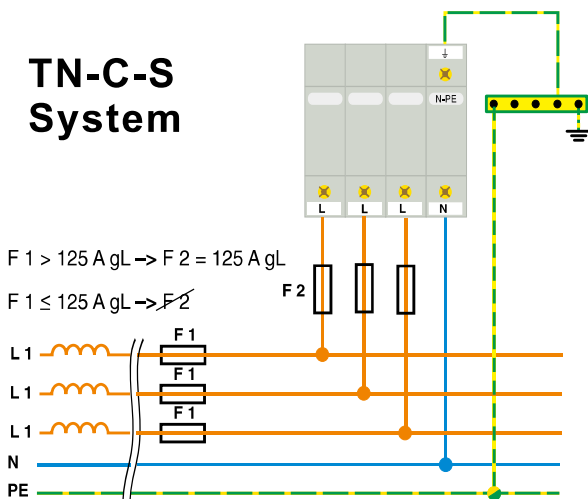
This installation should be periodically inspected and tested and a report on its condition obtained, as prescribed in the IET Wiring Regulations BS7671 Requirements for Electrical Installations.

Date of last inspection \_\_\_\_\_

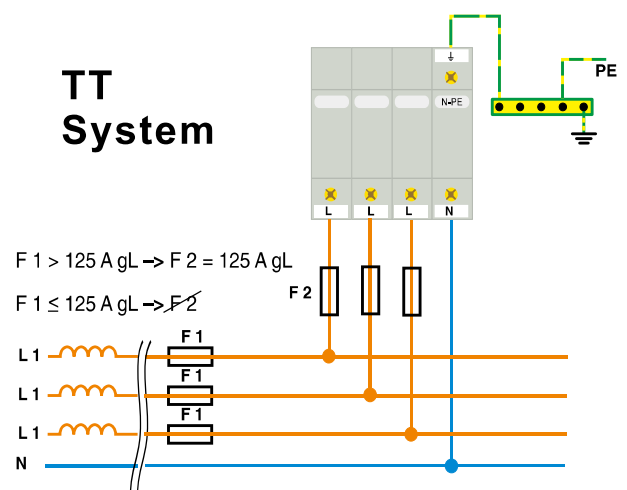
Recommended date of next inspection \_\_\_\_\_

## 9 WSPD440 Surge Protection Device

### TN-C-S System



### TT System



### CAUTION

WHEN CONDUCTING INSULATION RESISTANCE TESTING WITH SPD FITTED IT IS RECOMMENDED EITHER **THE EARTH CONNECTION OR THE PLUG IN CARTRIDGES ARE REMOVED.**

IF YOU DO NOT WISH TO REMOVE THE CARTRIDGES OR EARTH CONNECTION, THEN TESTING MUST BE AT A **MAXIMUM OF 250V DC.** Before powering up the installation check all connections are TORQUED 2.5Nm. Loose connections cause fires!

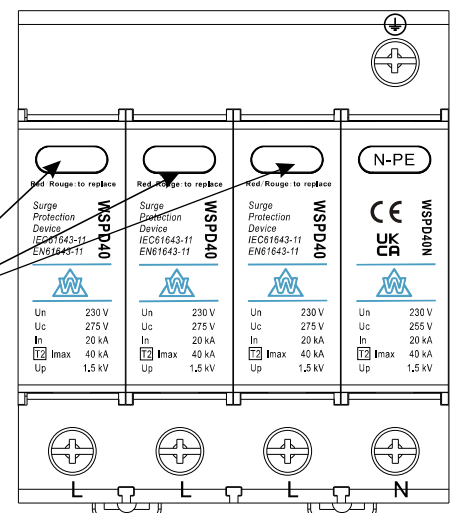
### Flag Indicator Status

- 1) Please ensure the SPD flag indicator status is checked regularly
- 2) Should the indicator change to RED the module should be replaced ASAP to continue to provide surge protection
- 3) The SPD is in parallel to the supply so in no way affects the power to final circuits if activated ( RED)

Flag Indicator

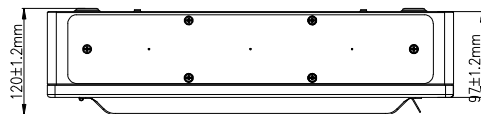
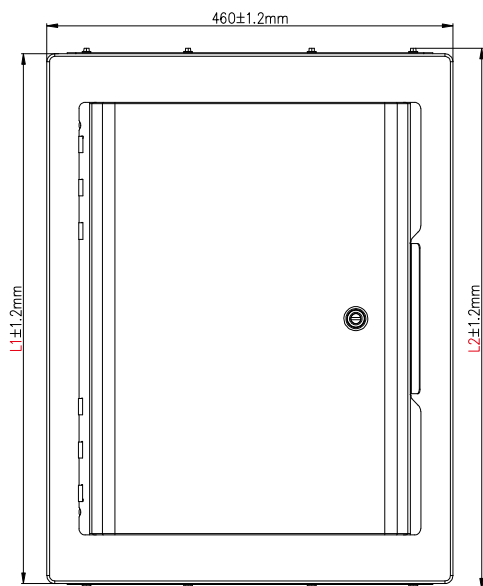
**Green=GOOD**

**RED= REPLACE**

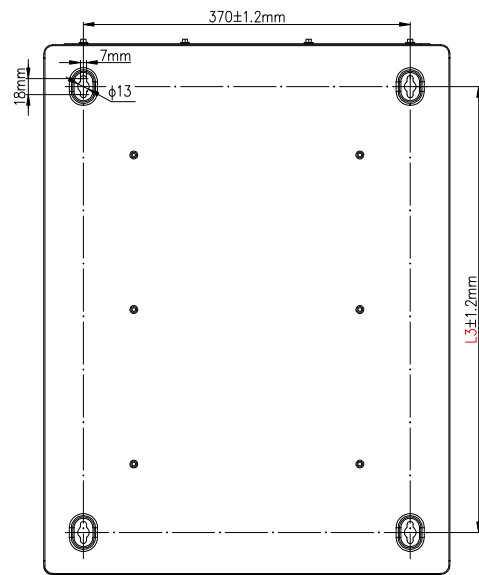


**WSPD440 Surge Protection Device**

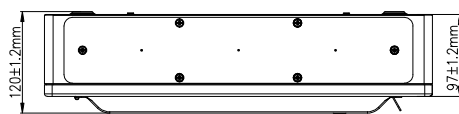
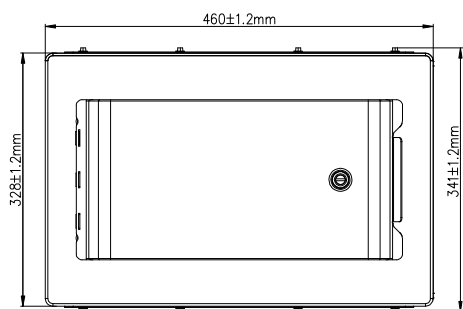
Technology	MOV+GSG
Type	Type2
Network	230/400 V3-phase+N
System	TN-C-S, TN-S, TT
Max. AC operating voltage $U_c$	275V (L-N), 255V (N-PE)
Temporary Over Voltage (TOV) Characteristics - 5 sec. $U_T$	335 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn $U_T$	440 Vac disconnection
Nominal discharge current $I_n$	20 kA
Max. discharge current $I_{max}$	40kA
Total Maximum discharge current $I_{max\ total}$	40kA
Withstand on Combination waveform IEC 61643-11 $U_{oc}$	6kV
Protection level $U_p$	1.5kV
Protection level N/PE at 5 kA	0.7 kV
Residual voltage L/PE at 5 kA	0.7 kV
Admissible short-circuit current	25kA
Connection to Network	By screw terminals: 2.5-25 mm <sup>2</sup>
Mounting	Symmetrical rail 35 mm (DIN 60715)
Operating temperature	-40 / +85°C
Protection rating	IP20
Failsafe mode	Disconnection from AC network
Disconnection indicator	1 mechanical indicator by pole - Red/Green
Fuses	50 A mini. - 125 A max. - Fuses Type gG
Standards compliance	IEC 61643-11 / EN 61643-11



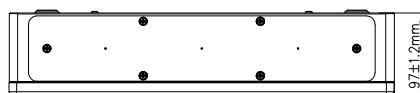
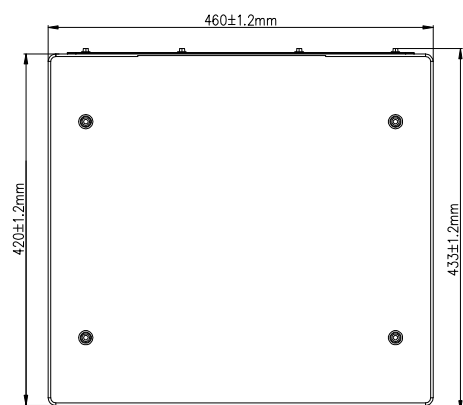
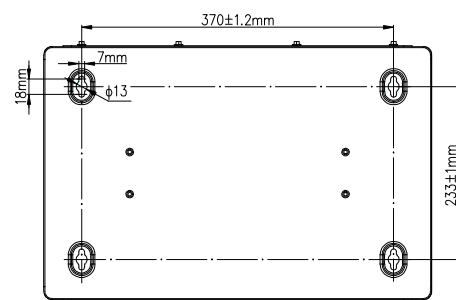
**WTPN**



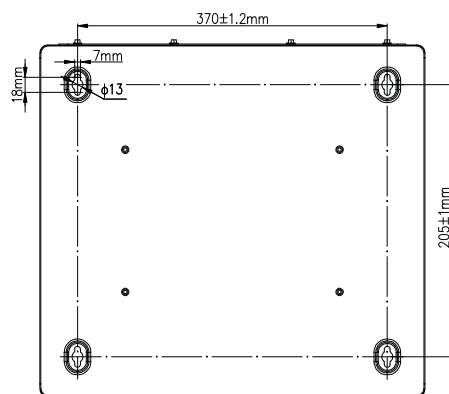
Part No.	L1	L2	L3
WTPN04-125SP	492	505	397
WTPN06-125SP	546	559	451
WTPN08-125SP	600	613	505
WTPN12-125SP	708	721	613
WTPN16-125SP	816	829	721
WTPN24-125SP	1032	1045	829



**WTPNEB14**



**WTPNSB**



Part No.	Description
WTPN04-125SP	4 Way with 3 Phase Distribution Board c/w 4 Pole 125A Main Switch & Tpye2 Surge Protection Device & 3P 32A MCB
WTPN06-125SP	6 Way with 3 Phase Distribution Board c/w 4 Pole 125A Main Switch & Tpye2 Surge Protection Device & 3P 32A MCB
WTPN08-125SP	8 Way with 3 Phase Distribution Board c/w 4 Pole 125A Main Switch & Tpye2 Surge Protection Device & 3P 32A MCB
WTPN12-125SP	12 Way with 3 Phase Distribution Board c/w 4 Pole 125A Main Switch & Tpye2 Surge Protection Device & 3P 32A MCB
WTPN16-125SP	16 Way with 3 Phase Distribution Board c/w 4 Pole 125A Main Switch & Tpye2 Surge Protection Device & 3P 32A MCB
WTPN24-125SP	24 Way with 3 Phase Distribution Board c/w 4 Pole 125A Main Switch & Tpye2 Surge Protection Device & 3P 32A MCB
WTPNEB14	TPN Extension board 14Mod
WTPNSB	TPN Spreader box

### 10kA RCBOs

WRT106B-030	A Type Single Module 1P+N 6Amp B Curve 30mA High Immunity 10kA RCBO
WRT110B-030	A Type Single Module 1P+N 10Amps B Curve 30mA High Immunity 10kA RCBO
WRT116B-030	A Type Single Module 1P+N 16Amps B Curve 30mA High Immunity 10kA RCBO
WRT120B-030	A Type Single Module 1P+N 20Amps B Curve 30mA High Immunity 10kA RCBO
WRT125B-030	A Type Single Module 1P+N 25Amps B Curve 30mA High Immunity 10kA RCBO
WRT132B-030	A Type Single Module 1P+N 32Amps B Curve 30mA High Immunity 10kA RCBO
WRT140B-030	A Type Single Module 1P+N 40Amps B Curve 30mA High Immunity 10kA RCBO
WRT106C-030	A Type Single Module 1P+N 6Amp C Curve 30mA High Immunity 10kA RCBO
WRT110C-030	A Type Single Module 1P+N 10Amps C Curve 30mA High Immunity 10kA RCBO
WRT116C-030	A Type Single Module 1P+N 16Amps C Curve 30mA High Immunity 10kA RCBO
WRT120C-030	A Type Single Module 1P+N 20Amps C Curve 30mA High Immunity 10kA RCBO
WRT125C-030	A Type Single Module 1P+N 25Amps C Curve 30mA High Immunity 10kA RCBO
WRT132C-030	A Type Single Module 1P+N 32Amps C Curve 30mA High Immunity 10kA RCBO
WRT140C-030	A Type Single Module 1P+N 40Amps C Curve 30mA High Immunity 10kA RCBO

### 10kA MCB

WKC1**B	1 Pole 10kA MCB 6A-63A B curve
WKC2**B	2 Pole 10kA MCB 6A-63A B curve
WKC3**B	3 Pole 10kA MCB 6A-63A B curve
WKC4**B	4 Pole 10kA MCB 6A-63A B curve
WKC1**C	1 Pole 10kA MCB 6A-63A C curve
WKC2**C	2 Pole 10kA MCB 6A-63A C curve
WKC3**C	3 Pole 10kA MCB 6A-63A C curve
WKC4**C	4 Pole 10kA MCB 6A-63A C curve
WKC1**D	1 Pole 10kA MCB 6A-63A D curve
WKC2**D	2 Pole 10kA MCB 6A-63A D curve
WKC3**D	3 Pole 10kA MCB 6A-63A D curve
WKC4**D	4 Pole 10kA MCB 6A-63A D curve