

# 02

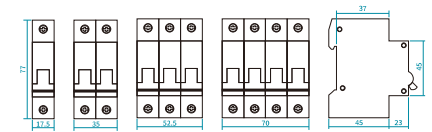
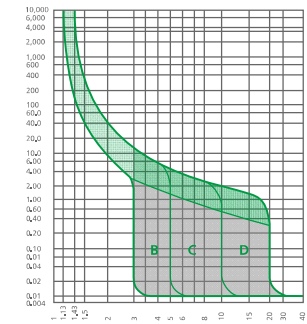
## MCB RCD RCBO AND MAIN SWITCH



## WCC Miniature Circuit Breakers

### Design Features

- Rated current  $I_n$  (A) : 6,10,16,20,25,32,40,50,63
- Poles: 1P,2P,3P,4P
- Rated voltage  $U_e$ (AC): 230/400V
- Rated frequency: 50/60Hz
- Insulation voltage  $U_i$ : 500V
- Rated breaking capacity(A): 3kA
- Rated impulse withstand voltage(1.2/50)  $U_{imp}$  (V): 4000
- Dielectric test voltage at ind. Frq for 1 min (KV) : 2
- Ambient temperature(with daily average  $\leq 35^\circ\text{C}$  :  $-5\sim+40$ )
- Thermo-magnetic release characteristic: B,C,D
- Electrical life: 8,000
- Contact position degree: IP20
- Storage temperature(  $^\circ\text{C}$ ) :  $-25\sim+70$
- Reference temperature for setting of thermal element (  $^\circ\text{C}$ ) : 30

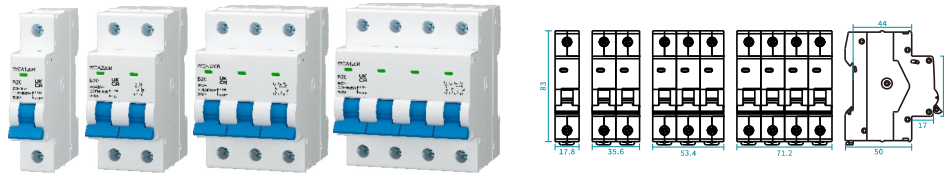
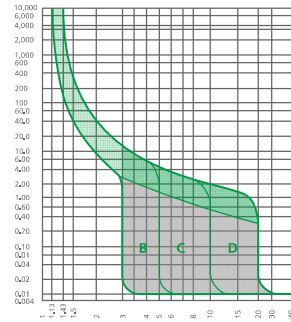


Part No	Description	Box Qty
WCC106B~163B	1Pole 6Amps~63Amps B Curve 3kA MCB	12
WCC206B~263B	2Pole 6Amps~63Amps B Curve 3kA MCB	6
WCC306B~363B	3Pole 6Amps~63Amps B Curve 3kA MCB	4
WCC406B~463B	4Pole 6Amps~63Amps B Curve 3kA MCB	3
WCC106C~163C	1Pole 6Amps~63Amps C Curve 3kA MCB	12
WCC206C~263C	2Pole 6Amps~63Amps C Curve 3kA MCB	6
WCC306C~363C	3Pole 6Amps~63Amps C Curve 3kA MCB	4
WCC406C~463C	4Pole 6Amps~63Amps C Curve 3kA MCB	3
WCC106D~163D	1Pole 6Amps~63Amps D Curve 3kA MCB	12
WCC206D~263D	2Pole 6Amps~63Amps D Curve 3kA MCB	6
WCC306D~363D	3Pole 6Amps~63Amps D Curve 3kA MCB	4
WCC406D~463D	4Pole 6Amps~63Amps D Curve 3kA MCB	3

## WCA Miniature Circuit Breakers

## Design Features

- Rated current  $I_n$  (A) :6,10,16,20,25,32,40,50,63
- Poles: 1P,2P,3P,4P
- Rated voltage  $U_e$ (AC): 230/400V
- Rated frequency: 50/60Hz
- Insulation voltage  $U_i$ : 500V
- Rated breaking capacity(A): 6KA
- Rated impulse withstand voltage(1.2/50)  $U_{imp}$  (V): 4000
- Dielectric test voltage at ind. Frq for 1 min (KV) : 2
- Ambient temperature(with daily average  $\leq 35^\circ\text{C}$  : $-5\sim+40$ )
- Thermo-magnetic release characteristic: B,C,D
- Electrical life: 8,000
- Contact position degree: IP20
- Storage temperature( $^\circ\text{C}$ ) : $-25\sim+70$ )
- Reference temperature for setting of thermal element ( $^\circ\text{C}$ ):30

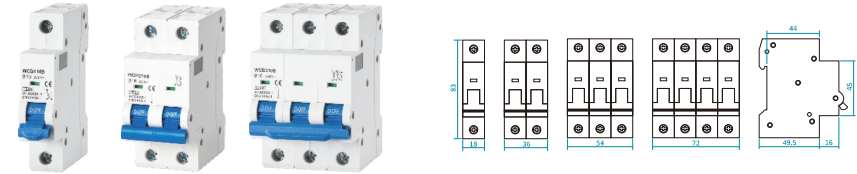
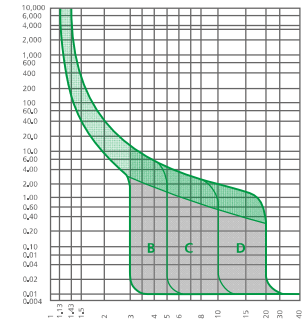


Part No	Description	Box Qty
WCA106B~163B	1Pole 6Amps~63Amps B Curve 6kA MCB	12
WCA206B~263B	2Pole 6Amps~63Amps B Curve 6kA MCB	6
WCA306B~363B	3Pole 6Amps~63Amps B Curve 6kA MCB	4
WCA406B~463B	4Pole 6Amps~63Amps B Curve 6kA MCB	3
WCA106C~163C	1Pole 6Amps~63Amps C Curve 6kA MCB	12
WCA206C~263C	2Pole 6Amps~63Amps C Curve 6kA MCB	6
WCA306C~363C	3Pole 6Amps~63Amps C Curve 6kA MCB	4
WCA406C~463C	4Pole 6Amps~63Amps C Curve 6kA MCB	3
WCA106D~163D	1Pole 6Amps~63Amps D Curve 6kA MCB	12
WCA206D~263D	2Pole 6Amps~63Amps D Curve 6kA MCB	6
WCA306D~363D	3Pole 6Amps~63Amps D Curve 6kA MCB	4
WCA406D~463D	4Pole 6Amps~63Amps D Curve 6kA MCB	3

## WCB Miniature Circuit Breakers

## Design Features

- Rated current  $I_n$  (A) :6,10,16,20,25,32,40,50,63
- Poles: 1P,2P,3P
- Rated voltage  $U_e$ (AC): 230/400V
- Rated frequency: 50/60Hz
- Insulation voltage  $U_i$ : 500V
- Rated breaking capacity(A): 10KA
- Rated impulse withstand voltage(1.2/50)  $U_{imp}$  (V): 4000
- Dielectric test voltage at ind. Frq for 1 min (KV) : 2
- Thermo-magnetic release characteristic: B,C,D
- Electrical life: 8,000
- Mechanical life: 20,000
- Contact position degree: IP20
- Reference temperature for setting of thermal element ( $^\circ\text{C}$ ):30
- Ambient temperature(with daily average  $\leq 35^\circ\text{C}$  : $-5\sim+40$ )
- Storage temperature( $^\circ\text{C}$ ) : $-25\sim+70$ )

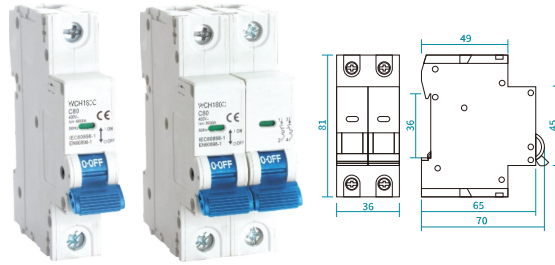


Part No	Description	Box Qty
WCB106B~163B	1Pole 6Amps~63Amps B Curve 10kA MCB	12
WCB206B~263B	2Pole 6Amps~63Amps B Curve 10kA MCB	6
WCB306B~363B	3Pole 6Amps~63Amps B Curve 10kA MCB	4
WCB406B~463B	4Pole 6Amps~63Amps B Curve 10kA MCB	3
WCB106C~163C	1Pole 6Amps~63Amps C Curve 10kA MCB	12
WCB206C~263C	2Pole 6Amps~63Amps C Curve 10kA MCB	6
WCB306C~363C	3Pole 6Amps~63Amps C Curve 10kA MCB	4
WCB406C~463C	4Pole 6Amps~63Amps C Curve 10kA MCB	3
WCB106D~163D	1Pole 6Amps~63Amps D Curve 10kA MCB	12
WCB206D~263D	2Pole 6Amps~63Amps D Curve 10kA MCB	6
WCB306D~363D	3Pole 6Amps~63Amps D Curve 10kA MCB	4
WCB406D~463D	4Pole 6Amps~63Amps D Curve 10kA MCB	3

## WCH Miniature Circuit Breakers

### Design Features

- Rated current In (A) :80, 100
- Rated voltage Ue(AC): 240/415V
- Insulation voltage Ui: 500V
- Thermo-magnetic release characteristic: B,C,D
- Mechanical life: 20,000
- Ambient temperature(with daily average  $\leq 35^{\circ}\text{C}$ -5~+40)
- Storage temperature(°C):-25~+70)
- Poles: 1P,2P,3P
- Rated frequency: 50/60Hz
- Rated breaking capacity(A): 6 kA
- Electrical life: 8,000
- Contact position degree: IP20

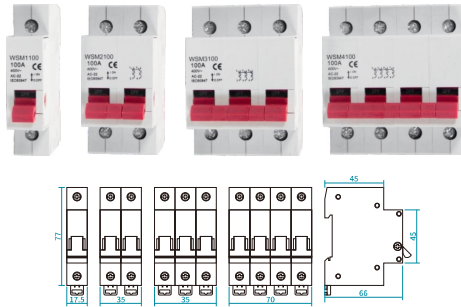


Part No	Description	Box Qty
WCH180C	1 Pole 80Amps C Curve MCB	12
WCH1100C	1 Pole 100Amps C Curve MCB	12
WCH280C	2 Pole 80Amps C Curve MCB	6
WCH2100C	2 Pole 100Amps C Curve MCB	6
WCH380C	3 Pole 80Amps C Curve MCB	4
WCH3100C	3 Pole 100Amps C Curve MCB	4

## WSM-100 Main Switch

### Design Features

- 100A Rated Current
- 230/400V Rated Voltage
- 10,000 Cycles Electrical Life
- 10,000 Operations Mechanical Life
- BS EN60947-3 Compliant

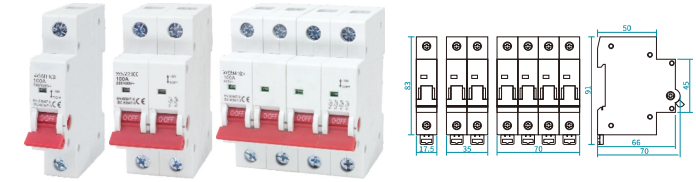


Part No	Description	Box Qty
WSM1100	1 Pole 100A	12
WSM2100	2 Pole 100A	6
WSM3100	3 Pole 100A	4
WSM4100	4 Pole 100A	3

## WSM-125 Main Switch

### Design Features

- 100/125A Rated Current
- 230/400V Rated Voltage
- 10,000 Cycles Electrical Life
- 10,000 Operations Mechanical Life
- BS EN60947-3 Compliant

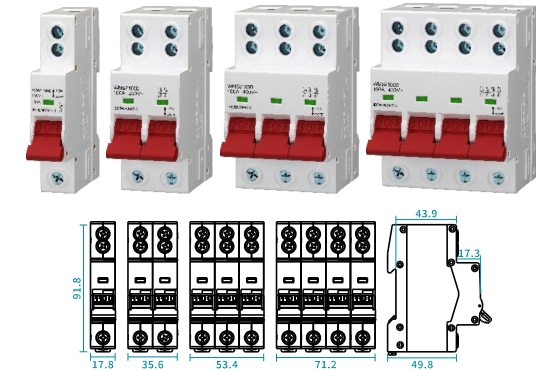


Part No	Description	Box Qty
WSM1100	1 Pole 100A	12
WSM2100	2 Pole 100A	6
WSM3100	3 Pole 100A	4
WSM4100	4 Pole 100A	3
WSM1125	1 Pole 125A	12
WSM2125	2 Pole 125A	6
WSM3125	3 Pole 125A	4
WSM4125	4 Pole 125A	3

## WSM-125D Main Switch

### Design Features

- 100/125A Rated Current
- 230/400V Rated Voltage
- BS IEC/EN 60947-3 Compliant
- Double Wiring Terminal

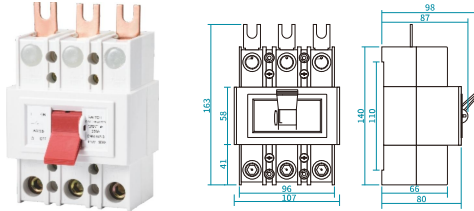


Part No	Description	Box Qty
WSM1100D	1 Pole 100A Double Wiring Terminal	12
WSM2100D	2 Pole 100A Double Wiring Terminal	6
WSM3100D	3 Pole 100A Double Wiring Terminal	4
WSM4100D	4 Pole 100A Double Wiring Terminal	3
WSM1125D	1 Pole 125A Double Wiring Terminal	12
WSM2125D	2 Pole 125A Double Wiring Terminal	6
WSM3125D	3 Pole 125A Double Wiring Terminal	4
WSM4125D	4 Pole 125A Double Wiring Terminal	3

## WSM-250 Main Switch

### Design Features

- 100/125A Rated Current
- 230/400V Rated Voltage
- 10,000 Cycles Electrical Life
- 10,000 Operations Mechanical Life
- BS EN60947-3 Compliant



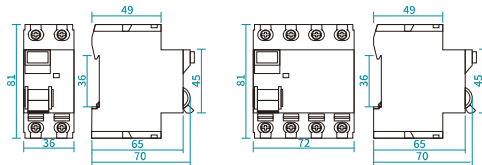
Part No	Description	Box Qty
WSM3250	3 Pole 250A	

## WRD Type A/AC Residual Current Circuit Breaker

### Design Features

LAIWO brand Type A RCDs are designed specifically for individual EV chargers, where the model and make of the vehicle being charged is unknown. They can detect & respond as for type AC, plus pulsating DC components.

- Pole No.: 2, 4
- Rated current(A): 25 40 63 80 100A
- Rated voltage: 240/415V AC
- Rated frequency: 50/60Hz
- Rated residual operating current  $I_{\Delta}$ (mA):30,100
- Rated residual non operating current: 0.5 $I_{\Delta}$ n
- Rated conditional breaking current Inc: 6000A
- Tripping duration Instantaneous tripping  $\leq 0.1s$
- Residual tripping current range:0.5 $I_{\Delta}$ n- $I_{\Delta}$ n
- Electro-mechanical endurance:4000 cycles
- Connection capacity Rigid conductor up to 25mm<sup>2</sup>
- Connection terminal Screw terminal
- Pillar terminal with clamp
- Fastening torque 2.0 Nm
- Installation: On symmetrical DIN rail 35mm
- Panel mounting



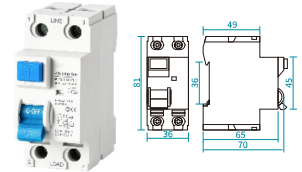
Part No	Description	Box Qty
WRD225~2100/030	2Pole 25Amps~100Amps 30mA high immunity RCD	60
WRD225~2100/100	2Pole 25Amps~100Amps 100mA high immunity RCD	60
WRD225~2100/300	2Pole 25Amps~100Amps 300mA high immunity RCD	60
WRD425~4100/030	4Pole 25Amps~100Amps 30mA high immunity RCD	30
WRD425~4100/100	4Pole 25Amps~100Amps 100mA high immunity RCD	30
WRD425~4100/300	4Pole 25Amps~100Amps 300mA high immunity RCD	30

## WRT Type A/AC Residual Current Circuit Breaker (Time Delay)

### Design Features

Provides protection against earth fault/leakage current and function of isolation; High breaking current withstand capacity; Applicable to terminal and pin type busbar connection; Equipped with finger protected connection terminals; Flame resistant plastic parts endures abnormal heating and strong impact; Automatically disconnect the circuit when earth fault/leakage current occurs and exceeds the rated sensitivity; Independent of power supply and line voltage, and free from external interference, voltage fluctuation.

- Pole No.: 2
- Rated current(A):80 100A
- Rated voltage: 240/415V AC
- Rated frequency: 50/60Hz
- Rated residual operating current  $I_{\Delta}$ (mA):30,100
- Rated residual non operating current: 0.5 $I_{\Delta}$ n
- Rated conditional breaking current Inc: 6000A
- Tripping duration Instantaneous tripping  $\leq 0.1s$
- Residual tripping current range:0.5 $I_{\Delta}$ n- $I_{\Delta}$ n
- Electro-mechanical endurance:4000 cycles
- Connection capacity Rigid conductor up to 35mm<sup>2</sup>
- Connection terminal Screw terminal
- Pillar terminal with clamp
- Fastening torque 2.0 Nm
- Installation: On symmetrical DIN rail 35mm
- Panel mounting



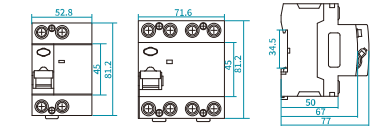
Part No	Description	Box Qty
WRT280-100	2Pole 80Amps 100mA Time Delay RCD	60
WRT2100-100	2Pole 100Amps 100mA Time Delay RCD	60

## WCEV Type B Residual Current Circuit Breaker

### Design Features

Smooth DC residual currents can occur in industrial, commercial and residential applications which contain photovoltaic systems, frequency converters or electronic devices. Our type B RCCB can detect DC fault currents, which can occur in frequency inverter controls, photovoltaic systems as well as through electronics used in households. They can detect residual current faults comprising of pure AC up to 1000 hertz, rectified AC, pure DC and pulsating DC, and increases safety considerably. They comply with IEC/EN 61008-1 and IEC/EN 62423.

- Rated Current: 25A,40A,63A
- Rated tripping current  $I_{\Delta}$ n: 30mA/100mA/300mA
- Sensitivity:AC, pulsating and smooth DC residual currents
- Rated voltage Un:230/400 V AC
- Rated frequency: 50Hz
- Rated insulation voltage  $U_i$ : 440V
- Rated impulse withstand voltage  $U_{imp}$ : 4 kV (1,2/50 $\mu$ s)
- Rated short circuit capacity  $I_{cn}$ : 10kA
- Peak withstand current:3kA
- Endurance electrical:4,000 operating cycles
- Endurance mechanical: 20000 operating cycles
- Operation temperature:-5 °C to +40 °C
- Degree of protection: IP20
- Terminal capacity: 1,5 - 35 mm<sup>2</sup>
- Rated: 6mA Smooth DC

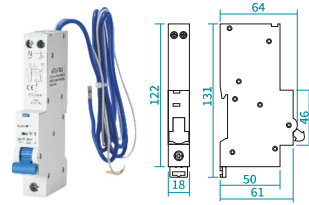


Part No	Description	Box Qty
WCEV225B-030	2 Pole 25Amps 30mA Type B RCCB (3 module)	1
WCEV240B-030	2 Pole 40Amps 30mA Type B RCCB (3 module)	1
WCEV263B-030	2 Pole 63Amps 30mA Type B RCCB (3 module)	1
WCEV425B-030	4 Pole 25Amps 30mA Type B RCCB (4 module)	1
WCEV440B-030	4 Pole 40Amps 30mA Type B RCCB (4 module)	1
WCEV463B-030	4 Pole 63Amps 30mA Type B RCCB (4 module)	1

## WRC Type A/AC Standard RCBO

### Design Features

Provides protection against earth fault/leakage current, short circuit, overload.  
Effectively protects electric equipment against insulating failure.  
Handle can be locked with pad-lock to prevent unwanted operation.



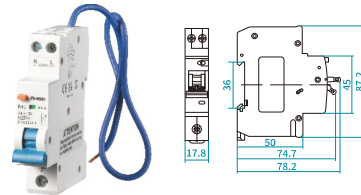
- Rated current(In): 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A.
- Rated voltage(Un) 230V AC.
- Breaking capacity (Icn)6kA, 10kA.
- Rated residual current: 30mA.
- Tripping characteristics: B,C.
- Electrical endurance: 4000 cycles.
- Mechanical endurance: 10000 cycles.
- Complies with BS EN 61009-1.

Part No	Description	Box Qty
WRC106B-163B/030	Single Module 6Amps-63Amps B Curve 30mA	40
WRC106B-163B/100	Single Module 6Amps-63Amps B Curve 100mA	40
WRC106C-163B/030	Single Module 6Amps-63Amps C Curve 30mA	40
WRC106C-163B/100	Single Module 6Amps-63Amps C Curve 100mA	40

## WRS Type A/AC mini RCBO

### Design Features

Switching and isolation.  
Overload and short circuit protection.  
Protection against the effects of sinusoidal alternation earth fault currents.  
Indirect and direct contacts protection.  
Protection against fire hazard caused by insulation faults.



- Rated current (In): 6A, 10A, 16A, 20A, 25A, 32A, 40A.
- Rated voltage (Ue): 230V AC.
- Breaking capacity (Icn): 6kA.
- Rated residual current: 30mA, 100mA.
- Tripping characteristic: B.
- Electrical endurance: 4000 cycles.
- Mechanical endurance: 10000 cycles.
- Complies with BS EN 61009-1.

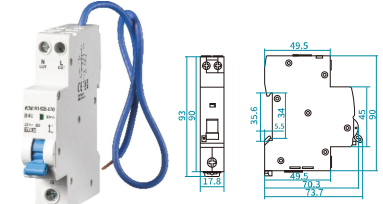
Part No	Description	Box Qty
WRS106B-140B/030	Single Module 6Amps-40Amps B Curve 30mA	50
WRS106B-140B/100	Single Module 6Amps-40Amps B Curve 100mA	50
WRS106C-140B/030	Single Module 6Amps-40Amps C Curve 30mA	50
WRS106C-140B/100	Single Module 6Amps-40Amps C Curve 100mA	50

## WAMR Type A/AC Mini RCBO (Neutral Line Switched)

### Design Features

WAMR is a range of MCB sized RCBOs, apply to circuit of AC50/60Hz. Rated voltage to 230V, and current up to 40 A, bring higher levels of safety to an electrical installation and its users because they include switched neutral as standard, which will guarantee that healthy circuits remain in service and that only a faulty circuit is switched off and bring cost savings by reducing installation and testing times.

- Switching and isolation.
- Overload and short circuit protection.
- Protection against the effects of sinusoidal alternation earth fault currents.
- Indirect and direct contacts protection.
- Protection against fire hazard caused by insulation faults.



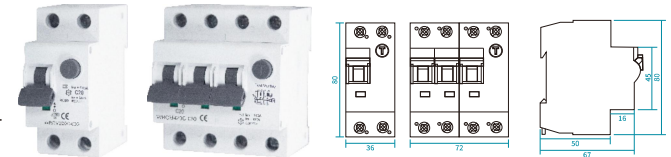
- Rated current (In): 6A, 10A, 16A, 20A, 25A, 32A, 40A.
- Rated voltage (Ue): 230V AC.
- Breaking capacity (Icn): 6kA.
- Rated residual current: 30mA, 100mA.
- 2pole.
- Tripping characteristic: B,C.
- Electrical endurance: 4000 cycles.
- Mechanical endurance: 10000 cycles.
- Complies with BS EN 61009-1.
- Type: AC, A.

Part No	Description	Box Qty
WAMR106B-140B/030	Single Module 6Amps-40Amps B Curve 30mA	60
WAMR106B-140B/100	Single Module 6Amps-40Amps B Curve 100mA	60
WAMR106C-140B/030	Single Module 6Amps-40Amps C Curve 30mA	60
WAMR106C-140B/100	Single Module 6Amps-40Amps C Curve 100mA	60

## WRCM Type A/AC Electromagnetic RCBO

### Design Features

- Rated current In (A) :6,10,16,20,25,32,40.
- Poles: 1P+N,2P,4P.
- Rated voltage Ue: 230/400V.
- Rated frequency: 50Hz.
- Rated breaking capacity(A): 10KA.
- Thermo-magnetic release characteristic: C,D.
- Contact position degree: Ip40.
- Electrical life: Not less than4,000.



Part No	Description	Box Qty
WRCM206B-240B/030	2Pole (2 Modeles) 6Amps-40Amps B Curve 30mA	
WRCM206C-240C/030	2Pole (2 Modeles) 6Amps-40Amps C Curve 30mA	
WRCM206D-240D/030	2Pole (2 Modeles) 6Amps-40Amps D Curve 30mA	
WRCM206B-240B/100	2Pole (2 Modeles) 6Amps-40Amps B Curve 100mA	
WRCM206C-240C/100	2Pole (2 Modeles) 6Amps-40Amps C Curve 100mA	
WRCM206D-240D/100	2Pole (2 Modeles) 6Amps-40Amps D Curve 100mA	

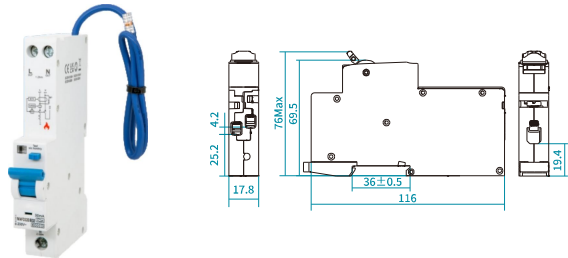
Part No	Description	Box Qty
WRCM406B-440B/030	2Pole (2 Modeles) 6Amps-40Amps B Curve 30mA	
WRCM406C-440C/030	2Pole (2 Modeles) 6Amps-40Amps C Curve 30mA	
WRCM406D-440D/030	2Pole (2 Modeles) 6Amps-40Amps D Curve 30mA	
WRCM406B-440B/100	4Pole (4 Modeles) 6Amps-40Amps B Curve 100mA	
WRCM406C-440C/100	4Pole (4 Modeles) 6Amps-40Amps C Curve 100mA	
WRCM406D-440D/100	4Pole (4 Modeles) 6Amps-40Amps D Curve 100mA	

## WAFD Type A/AC Arc Fault Detection Device With RCBO

### Design Features

The WAFD series arc fault protector combines arc fault detection with RCBO protection. The WAFD series arc fault protector has the functions of short circuit protection, overload protection, leakage protection and arc fault protection. WAFD series arc fault protection devices are designed for use on circuits rated up to 32A and below to protect against arc faults, overloads, short circuits and leakage. When the WAFD series arc fault protection devices detect the presence of arc faults in the line, they will automatically trip and isolate the circuit.

- Rated working voltage (Ue): AC230V.
- Rated operating frequency:  $\pm 50\text{Hz}$  2%.
- Rated insulation voltage (Ui): 400V.
- Rated impulse withstand voltage (Uimp): 4kV.
- Rated current (In): 6A, 10A, 16A, 20A, 25A, 32A, 40A.
- Number of N poles: 1P+N.
- Protection Curve B.
- Operating short-circuit capacity (Ics): 6kA.
- Rated residual operating current  $I_{\Delta n}$ : 30mA.
- RCD Type: AC, A.
- Insulation material group: III a.
- Ambient Temperature range:  $-5\sim 40^{\circ}\text{C}$ .
- Storage Temperature range:  $-25^{\circ}\text{C} \sim +55^{\circ}\text{C}$ .



### Type A mini RCBO Single Module

Part No	Description	Box Qty
WAFD6B	6A Bcurve Arc Detection Device With RCBO	40
WAFD10B	10A Bcurve Arc Detection Device With RCBO	40
WAFD16B	16A Bcurve Arc Detection Device With RCBO	40
WAFD20B	20A Bcurve Arc Detection Device With RCBO	40
WAFD25B	25A Bcurve Arc Detection Device With RCBO	40
WAFD32B	32A Bcurve Arc Detection Device With RCBO	40
WAFD40B	40A Bcurve Arc Detection Device With RCBO	40

# 03

## SURGE PROTECTOR

