Cable and Torque Settings

Check the tightness of all terminals, including factory made terminations, as follows:

Device	Max Cable Capacity (mm2) Input / Output	Recommended Tightening Torque (Nm)
Main Switch / RCCBs	35/35	2.5
MCBs	25/25	2.5
1 Pole RCBO	25/16	In 2.2 | Out 1.5
Earth and Neutral Terminals	25/25	2.5

Operating Instructions

- In normal use all toggles should be in the upward position indicated by I or ON.
- To isolate the supply to all the circuits, switch the RED toggle on the main isolating switch (if it is a split load board), or the BLUE toggle on the main RCD to the OFF position if this is used as the Main switch.
- On a split load unit the circuits controlled by the RCD or individual RCBO, can be isolated separately by switching the BLUE toggle to OFF.

Caution: ***The circuits not controlled by the RCD will still be live.***

- 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.***

- The RCD which controls several circuits needs to be tested periodically (approx every 3 months) to ensure safe operation.
- The test is performed by pushing the test button marked T. If the RCD trips reset as normal. If it fails to trip seek qualified advice as the unit may require attention.

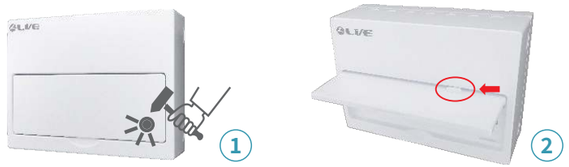
Caution: ***When the RCD trips all circuits connected to it will switch off. If you have any sensitive equipments ie. Computers or electronics. Please disconnect them prior the test.***
The same test should be repeated if rcbos are used to protect any circuits.

- 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.
- If the RCD should trip, reset the switch. If it will not reset, switch OFF all the MCBs connected to the RCD and try to switch RCD back ON. If the RCD remains ON, switch MCBs back on one at a time. If the RCD trips during this procedure the particular circuit controlled by the MCB may require attention. Leave the suspect circuit switched OFF and reset the RCD, then seek qualified advice.

NOTE:

1.Lock available , Users with locks can knock outs this position to install the lock.

2.Standard installation buckle, please remove it promptly after installation.



Warning!

All connections, including factory-made, must be checked for the correct installatiotand tightness, prior to the commissioning of the electrical installation.Electricity is dangerous if in any doubt please seek qualified advice

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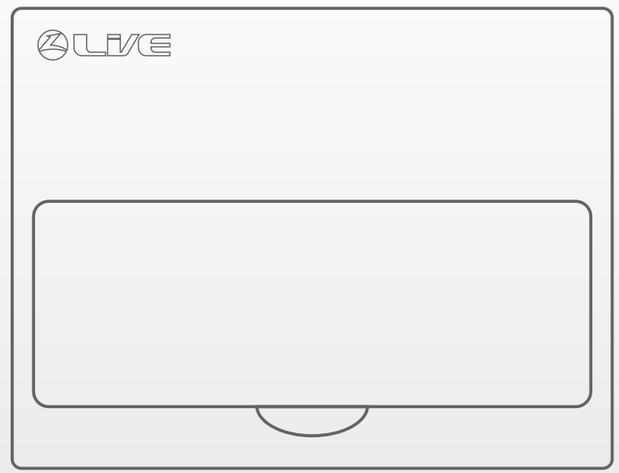


LSMC&FMC

Consumer unit and enclosure
Installation and usage guide

LSMC&FMC Specification

Description

The distribution equipment and circuit protection range of metal consumer units by Live Distribution UK LTD is designed to fully comply with the requirements of BS EN 61439-3 and requirements of the 18th Edition of BS 7671 IET Wiring Regulations. With multiple configurations available, the range offers flexible versatile solutions for installations.

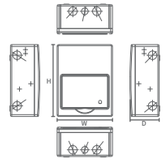
Features & Benefits

- Standard: BSEN61008, BS EN60898, BS EN61439-3
- Operating Voltage: 230/50Hz
- Protection Degree: IP40
- Maximum Load(A): As indicated on incoming device
- Material: manufactured from robust steel
- Fully enclosed metal construction body with drop down metal lid
- Multiple circular cable entry knock-outs (25&32mm) on the top and bottom, 32mm on the sides, and back plus larger rear slots
- Raised key holes for secure easy installation
- Raised Din rail improves cable routing
- Modern style finished in white polyester powder coating to RAL9010
- Large and accessible wiring space, with extra space for RCBOs
- Flexible connection allows for various configurations of protected ways
- This operation guide covers /100, -RC and TR versions

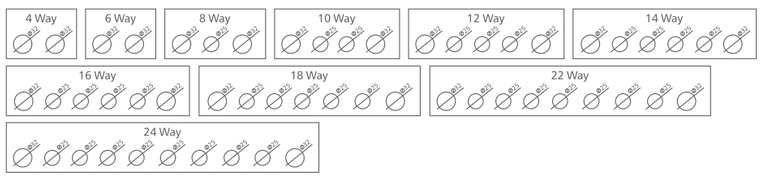
Unit Dimension

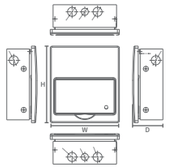
Part No.	Description	Dimensions		
		W	H	D
LSMC04	4 Way Metal clad Consumer Unit Enclosure	136	270	110
LSMC06	6 Way Metal clad Consumer Unit Enclosure	172	270	110
LSMC08	8 Way Metal clad Consumer Unit Enclosure	208	270	110
LSMC10	10 Way Metal clad Consumer Unit Enclosure	244	270	110
LSMC12	12 Way Metal clad Consumer Unit Enclosure	280	270	110
LSMC14	14 Way Metal clad Consumer Unit Enclosure	316	270	110
LSMC16	16 Way Metal clad Consumer Unit Enclosure	352	270	110
LSMC18	18 Way Metal clad Consumer Unit Enclosure	388	270	110
LSMC22	22 Way Metal clad Consumer Unit Enclosure	460	270	110
LSMC24	24 Way Metal clad Consumer Unit Enclosure	496	270	110
FMC04	4 Way Flush Metal clad Consumer Unit Enclosure	172	270	107
FMC06	6 Way Flush Metal clad Consumer Unit Enclosure	208	270	107
FMC08	8 Way Flush Metal clad Consumer Unit Enclosure	244	270	107
FMC10	10 Way Flush Metal clad Consumer Unit Enclosure	280	270	107
FMC12	12 Way Flush Metal clad Consumer Unit Enclosure	316	270	107
FMC14	14 Way Flush Metal clad Consumer Unit Enclosure	352	270	107
FMC16	16 Way Flush Metal clad Consumer Unit Enclosure	388	270	107
FMC20	20 Way Flush Metal clad Consumer Unit Enclosure	460	270	107
FMC22	22 Way Flush Metal clad Consumer Unit Enclosure	496	270	107

Outine Dimensions

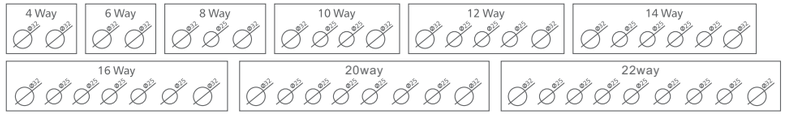


Surface Mounted





Flush Mounted



Notes:

Knockout placements are symmetrical between top and bottom / left and right sides.
Double-tier board has double the number of side knockouts.

Unit Characteristics

Rated and Operational Voltage (Un / Ue)	230V AC at 50HzR
Rated Impulse Withstand Voltage (Uimp)	4kV
Rated Current of Assembly (InA)	100A, 63A, 40A
Rated Frequency (fn)	50Hz
Degree of Protection	IP40
Mechanical Impact Protection	IK05
Note: Rated diversity factor (RDF) only applies to continuously and simultaneously loaded circuits.	

Safety Instructions

- This unit must be installed and tested in accordance with the requirements of all relevant legislation, regulations and accepted practice.
- After completion of the installation draw users attention to the instructions contained inside this booklet and leave with user.
- The total load supplied by this unit must not exceed the rating of the main switch or RCD.
- The total load of the MCBs may exceed this value where appropriate diversity is applied.
- This unit is suitable for indoor use only and is rated at IP40.
- The unit and all its components have been type tested to the following specifications:

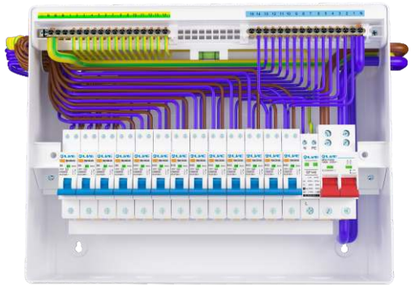
Device	Standard
Consumer Unit	BS EN 61439-3
Main Switch	BS EN 60947-3
RCBO	BS EN 61009-1
MCB	BS EN 60898
RCD	BS EN 61008-1
SPD	BS EN 61643-11

- The MCBs fitted to this unit are calibrated at 30°C in accord with temperature calibration requirements of EN60898.
  At other temperatures the following rating factors should be used.
  60°C 0.85 20°C 1.0 0°C 1.15
- Adjacent Thermal Magnetic MCBs should not be continuously loaded or approach their nominal rated currents when mounted in Enclosures. It is recommended that a 60% diversity factor be applied to the MCBs nominal rated current where it is intended to load the MCB continuously.

Installation

Enclosure Mounting

- Remove lid by turning lid fixing screws until they are free from the base.
- Remove appropriate cable entry holes. If using compression glands, fit them in the appropriate knockout prior to fixing unit to the wall.
- Mount the unit using appropriate screws and fixings.
- Bring all cables in through appropriate cutouts and route to their final location.



Connection of Main Incoming Device

- Cut and dress the main incoming cables and connect them into the appropriate terminals.
- Tighten the main incoming terminals securely.

MCB Connection

- Cut the busbar into the required split configuration if required.
- It is recommended that the largest rating MCBs be fitted closest to the Main Switch.
- To connect High Integrity circuits RCBOs slide RCD next to Main Switch away from Main Switch and fit RCBOs and busbar.
- Tighten terminal screw onto busbar to recommended torque of 2.0Nm
- Cut and dress circuit conductors and connect them to the appropriate MCB,
- RCBO and corresponding Earth and Neutral terminals. Recommended torque 2.0Nm.

Installation of Control Devices

- Control devices such as Timers Modular, Contactors and Transformers can be fitted to this unit. The incoming supply for the device should be fed from an MCB and not direct from the busbar.

Completion of Installation

- Test installation in accordance with relevant regulations.
- Fit any Blanking plates that are required on the front cover, check all factory connections are correct.
- Once all circuits are connected, replace lid.
- Labels are provided and should be used as required.
- Once the above is complete hand this booklet to the end user.

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MAIN SWITCH

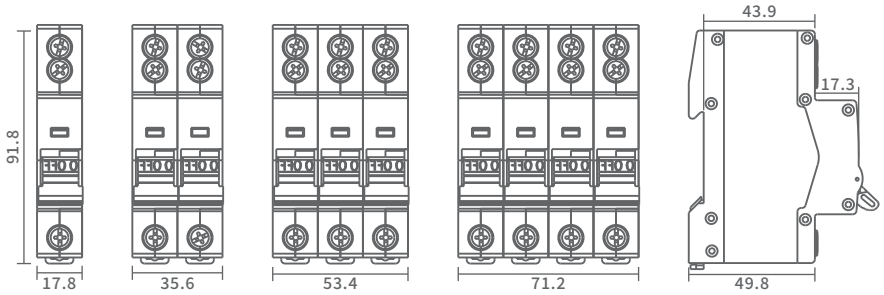
MAIN SWITCH

Design Features

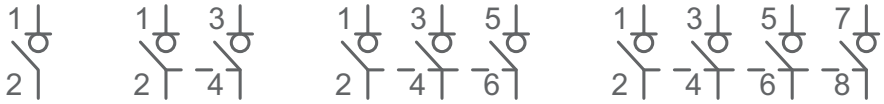
Suitable for AC 50Hz, rated voltage up to 230V or 400V, rated current up to 125A in distribution and control circuits, mainly used as the main switch in terminal combination appliances, can also be used to control various low-power appliances and lighting, and can be widely used in commercial and household places.

- 100/125A Rated Current
- Poles:1,2,3,4P
- 230/400V Rated voltage
- BS IEC/EN 60947-3 Compliant
- Double wiring Terminal

Dimensional Drawing



Wiring diagram



Installation conditions

Under the safety warning conditions, the main switch should generally be installed vertically without obvious shaking, impact, or vibration at the installation site.

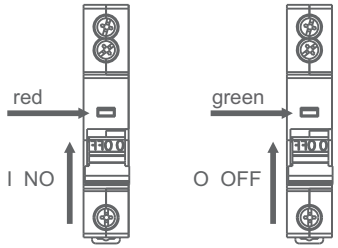
Transportation and storage conditions

The main switch must not fall or be invaded by rainwater or corrosive gases during storage and transportation.

Installation and operation

Before installation and use, check whether the main switch logo matches the working conditions used;

The indication of the closed and open status of the main switch is shown in Figure below



safety warning

1. It is strictly prohibited to install the product in an environment containing flammable and explosive gases, damp condensation, and to operate the product with wet hands.
2. During product operation, it is strictly prohibited to touch the conductive parts of the product.
3. When installing, repairing, and maintaining products, it is necessary to ensure that the circuit is powered off.

The protective characteristics of the 4 products are set by the manufacturer and cannot be opened or adjusted arbitrarily.

5 products must be wired and installed by qualified personnel with professional qualifications, and inspected regularly.

6. Children are strictly prohibited from playing with products or packaging.
7. Foreign objects should be prevented from falling into the product.
8. Do not install in areas where gas media can corrode metals and damage insulation.
9. When installing and using the 9 product, the wiring screws should be tightened, and the wires should not be easily loosened or pulled out. The wires should be selected strictly according to the requirements and connected to the power supply and load that meet the requirements.
10.This product cannot provide protection against personal electric shock, line overload, and equipment leakage

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SP140 1P+N/1 SP140 1P+N/2

SURGE PROTECTION DEVICE

SURGE PROTECTION DEVICE

This unit should be installed by a qualified competent person in accordance with all relevant legislation and regulations Including building regulations and wiring regulations BS7671. If in doubt contact a qualified competent person.

- Turn off all power supplying this equipment before working on or inside the equipment.
- Always use a properly rated volt-sensing device to confirm the power is off.
- Replace all devices, doors and covers before turning on the power to this equipment.

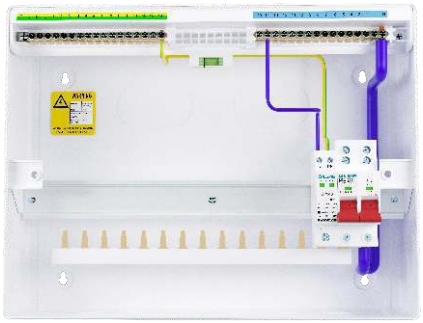
Failure to follow these instructions could result in serious injury or death.

Do Not Use Power Tool Screwdrivers On Electrical Connections.

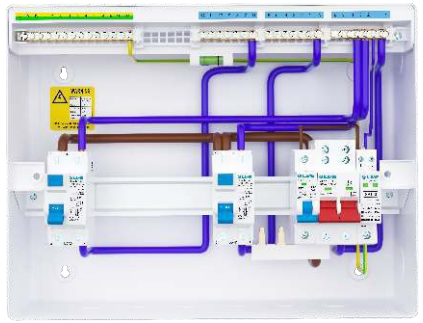
Technical Date

- BSI Standard:BSEN61643-11
- Type Test Class: Type 2
- Uc-Max continuous operating voltage:275 VAC
- Up- Voltage protection level (L-N),(N-PE):1.5 kV
- In -Nominal discharge current for class ll:20 kA
- Imax - Maximum discharge current:40 kA
- Isccr- Short circuit current rating:25 kA
- Degree of protection:IP20

Circuit Diagram for connection within a consumer unit

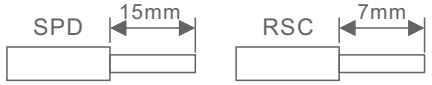


SP140 1P+N/1



SP140 1P+N/2

SPD Cable connection sizes and Tightening Torque Values



SPD140 1P+N/1

Terminal	Min.Cable Size	Max.Cable Size	Tightening Torque
Live	Φ6mm sq*	Φ25mm sq*	2Nm
Neutral/Earth	Φ6mm sq*	Φ10 mm sq*	1.2Nm
RSC	Φ0.14mm sq*	Φ1.5 mm sq*	0.25Nm

SPD140 1P+N/2

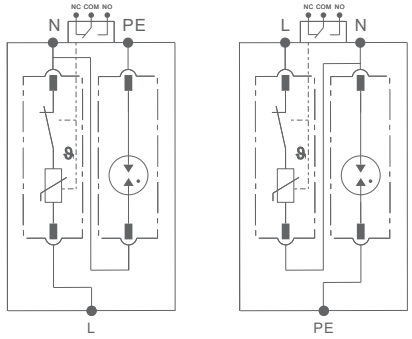
Terminal	Min.Cable Size	Max.Cable Size	Tightening Torque
Earth	Φ6mm sq*	Φ25mm sq*	2Nm
Neutral/Live	Φ6mm sq*	Φ10 mm sq*	1.2Nm
RSC	Φ0.14mm sq*	Φ1.5 mm sq*	0.25Nm

*As per BS7671 the minimum sized cable for a Type 2 SPD isΦ6mm sq. Neutral & Earth cables are supplied with this SPD. Use the crimp supplied on final termination of the prepared Earth cable.

Use No.2 Pozidriv Screwdriver (PZ2) for all terminals.

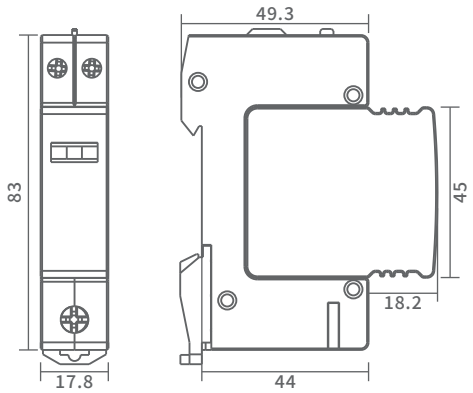
lt is good practice to check the tightness torque of all connections prior to re-fitting the enclosure or consumer unit cover.

SPD Wiring



SP140 1P+N/1 SP140 1P+N/2

Outline Dimensions



Cartridge Indication

A full green window indicates a cartridge in good working order. Any red indication in the window means the cartridge is no longer working and must be replaced at the earliest opportunity.

Replacement Cartridge

The cartridge is fitted with internal overload protection and can take numerous surges before it will need to be replaced. For replacements contact your local wholesaler .

Cartridge Removal and Re-fitting

Remove the enclosure or consumer unit lid, slide the cartridge upwards from the base. Discard used cartridge in accordance with WEEE regulations.

Tips:

Waste electrical products should not be disposed of with household waste.Please recycle where waste disposal facilities exist.

Check with your retailer, wholesaler or local authority for recycling advice.

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TYPE A RESIDUAL CURRENT DEVICES

TYPE A RESIDUAL CURRENT DEVICES

Construction and Feature

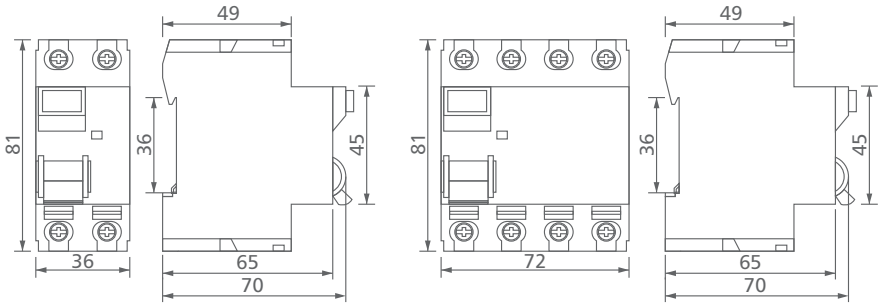
Provides protection against earth fault/leakage current and provides point of isolation; High breaking current withstand capacity Flame resistant plastic parts endures abnormal heating and strong impact; Automatically disconnect the circuit when earth fault/leakage current occurs and exceeds the rated sensitivity; lndependent of power supply and line voltage, and free from external interference, voltage fluctuation.

Technical Data

- Pole No.: 2, 4
- Rated current(A): 25, 40,63, 80, 100A
- Rated voltage: 230/400V AC
- Rated frequency: 50/60Hz
- Rated residual operating current I△(mA):30,100,300
- Rated residual non operating current: 0.5I△n
- Rated conditional breaking current Inc: 6000A
- Tripping duration Instantaneous tripping≤0.1s
- Residual tripping current range:0.5I△n~I△n
- Electro-mechanical endurance:4000 cycles
- Connection capacity Rigid conductor up to 25mm 2
- Connection terminal Screw terminal
- Pillar terminal with clamp
- Fastening torque 2.0 Nm
- Installation: On symmetrical DIN rail 35mm
- Panel mounting
- Bidirectional
- Type A

Wiring Diagram

Product Dimension



Safety Instructions -Important

1.Before using RCD, it is first necessary to ensure that the circuit is powered off and the RCD is correctly installed in the circuit. RCD is usually installed upstream of the circuit.

2.Next, connect the circuit correctly to the associated MCB output terminal. The input terminal of the circuit should be connected to the busbar, while the output terminal of the circuit should be connected to the electrical equipment that needs protection.

The neutral cable for the circuit shall be connected to the neutral bar.

3.After connecting the circuit, it is necessary to test the RCD to ensure its normal operation. The method for testing RCD is as follows:

3.1Press the test button on the RCD and observe if the RCD immediately cuts off the circuit. If the RCD operates normally, the circuit will immediately disconnect.

3.2 If the RCD does not cut off the circuit, it may be due to a malfunction or incorrect connection of the RCD itself. At this point, the wiring and circuit connections of the RCD should be checked to ensure correctness.

3.3 If the RCD still does not function properly after inspection, it is recommended to replace it with a new RCD .

4.After the RCD is functioning properly, the circuit can be energised. When using RCD, the following points need to be noted:

4.1 Before each use of electrical equipment, check whether the RCD is working properly. You can press the test button for testing to ensure that the RCD can cut off the circuit in a timely manner.

4.2 If the RCD cuts off the circuit, it may be due to a malfunction in the electrical equipment or leakage in the circuit. At this point, troubleshoot or repair the circuit, and ensure that the problem is resolved before retesting the RCD. 3. Regularly check the working status of RCD to ensure its normal operation. It is recommended to test the RCD every three months, and if any abnormalities are found, a new RCD should be replaced in a timely manner.

Note:

When using RCD, the following points should also be noted:

1.RCD can only be used in AC circuits and cannot be used in DC circuits.

2.RCD can only protect personal safety and cannot protect the equipment itself. Therefore, when using electrical equipment, it is still necessary to pay attention to the normal working state of the equipment.

Tips:

Waste electrical products should not be disposed of with household waste.Please recycle where waste disposal facilities exist.

Check with your retailer, wholesaler or local authority for recycling advice.

Design Features

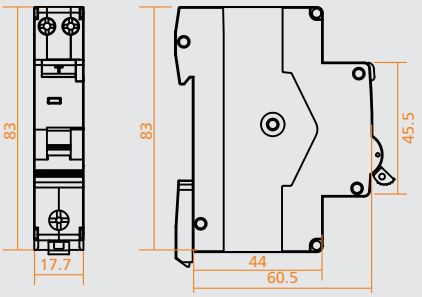
AMR is a range of MCB sized RCBOs, apply to circuit of AC50/60Hz. Rated voltage to 230V, and current up to 40 A, bring higher levels of safety to an electrical installation and its users because they include switched neutral as standard, which will guarantee that healthy circuits remain in service and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

- 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.

Technical Data

- Rated current (In): 6A, 10A, 16A, 20A, 25A, 32A, 40A
- Rated voltage (Ue): 230V AC
- Breaking capacity (Icn): 6kA
- Rated residual current: 30mA,100mA
- 1pole
- Tripping characteristic: B,C
- Electrical endurance: 4000 cycles
- Mechanical endurance: 100000 cycles
- Complies with BS EN 61009-1
- Type: A
- Protection against fire hazard caused by insulation faults.
- Bi-directional

Part No	Description
AMR106B-030	Type A Single Module 6Amps B Curve 30mA RCBO
AMR110B-030	Type A Single Module 10Amps B Curve 30mA RCBO
AMR116B-030	Type A Single Module 16Amps B Curve 30mA RCBO
AMR120B-030	Type A Single Module 20Amps B Curve 30mA RCBO
AMR132B-030	Type A Single Module 32Amps B Curve 30mA RCBO
AMR140B-030	Type A Single Module 40Amps B Curve 30mA RCBO



Type A RCBO with Switched Neutral Line

Type A Mini RCBO Single Module

Product Code - RSA1_ _B

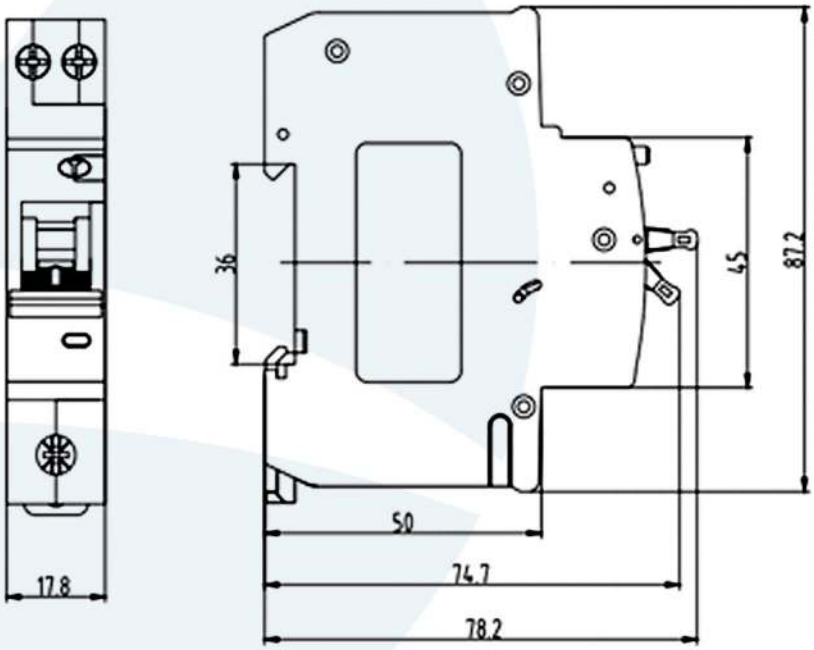
Technical Data

- Rated current (In): 6A, 10A, 16A, 20A, 25A, 32A, 40A
- Rated voltage (Ue): 230V AC
- Breaking capacity (Icn): 6KA
- Rated residual current: 30mA
- Tripping characteristic: B
- Electrical Endurance: 4000 cycles
- Mechanical endurance: 100,000 cycles
- Complies with BS EN1009 - 1

Features

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

Layout Drawing



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