

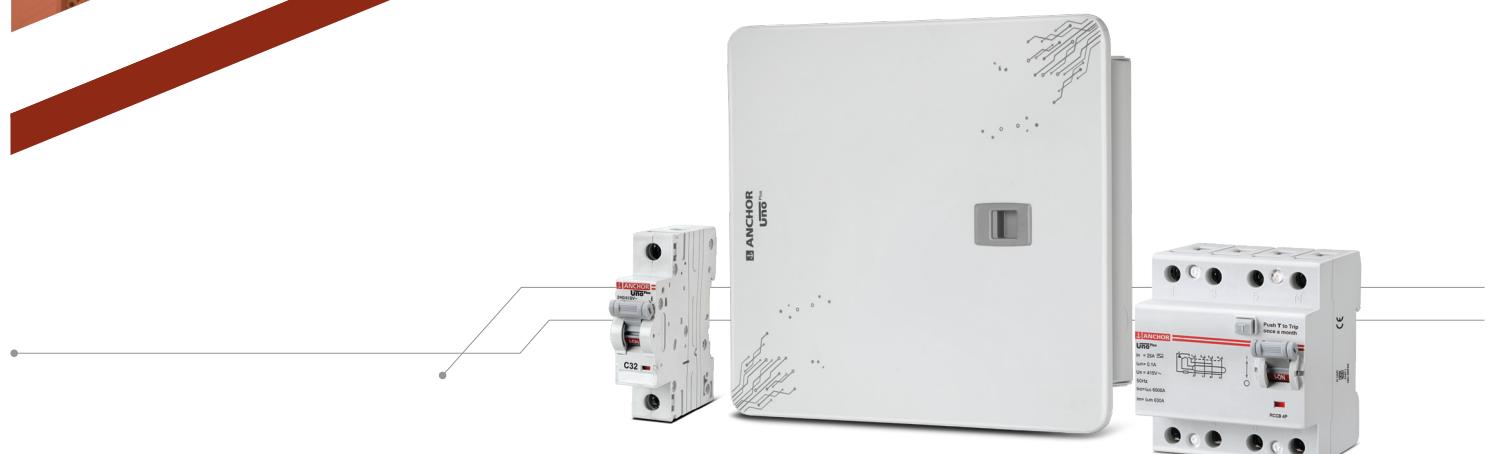


**Uno** Plus



## ADDED SECURITY, PLUS QUALITY

Range of Protection Devices



MCB | RCCB | Distribution Board

IS/IEC 60898-1  
 CM/L - 8300110294

ISO  
9001:2015  
CERTIFIED COMPANY



RoHS

Product Catalogue 2022

# Uno Plus

Raising the Paradigms of Sustainable and Innovative Switchgear

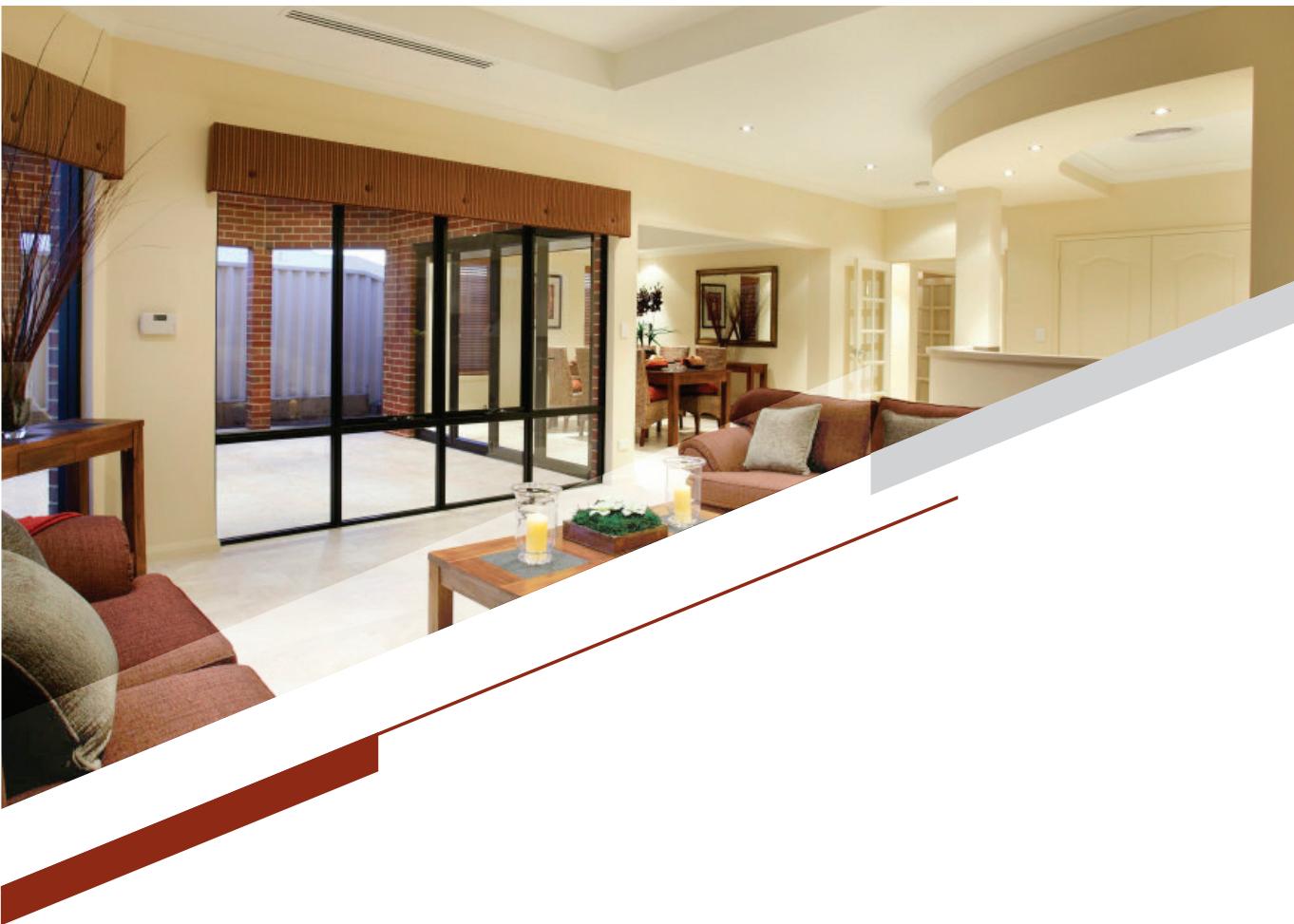


**ANCHOR**  
**UNO**  
Plus



A sustainable and unique offering from Anchor, the UNO Plus Switchgear rings in a new dimension of security for modern spaces due to its best-in-class manufacturing processes, use of superior raw-materials and stringent quality control adding to the comfort and safety of millions of people.





**Uno** Plus

## Miniature Circuit Breaker (MCB)

Engineered to deliver optimum security to the heavy electrical appliances of your home and office, the Anchor UNO Plus MCB range becomes a cherished partner of the premise. Powered by Panasonic technology, this range is designed by the finest brains of India and Japan.

These Circuit breakers secure the premise from electrical fire caused due to short circuits. Manufactured with superior fire-resistant plastic parts, which prevent abnormal heating and offer resistance against strong impacts. The breaker offers high short circuit breaking capacity of 10000A (10kA).



## Key Features

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### STATE OF THE ART DESIGN

UNO Plus MCB has state of the art design. The MCB is elegant and has ergonomically designed knob for better grip.



### 10kA BREAKING CAPACITY

High speed current breaking at short circuits with energy limiting class of 3 fulfils the requirement of safety & protection from high currents in small time, milliseconds.



### LINE LOAD REVERSIBILITY

The connections to the Line/Load supply can be made from either Top terminals / bottom terminal. The design of MCB doesn't differentiate between feeding of line current from either side.



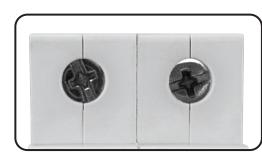
### UNIVERSAL TERMINALS

Connections to the MCB can be made by either cables or bus bars. Dual termination capacity provides flexibility for mounting MCB in DB.



### NO FALL OUT OF SCREWS

Captive screws enable them to be held with the terminals, and they arrest the fall of them in MCB out of the product.



### VENTILATION CHANNELS

Channels are designed at the side covers of MCB, to enhance the flow of air between adjacent poles of MCB, making it running cool and thus low watt loss.



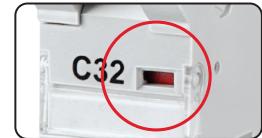
### KNOB PAD LOCKING

MCB can be locked either in ON or OFF position of MCB to prevent unwanted operation of the product.



### ON-OFF CONTACT INDICATION

GREEN indication on the position contact indicator, ensures physical opening of the contacts. RED indication shows the circuit is ON.



### EASY REMOVAL FROM DIN CHANNEL

MCB can be snap fit easily on DIN channel of width 35mm. Removal of MCB from a channel of MCBs can be done conveniently without disturbing other installed devices.



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#### **ENERGY-EFFICIENT**

UNO Plus MCB has lower watt loss values compared to the specification of Indian standards. Thus, it runs at a cool temperature. Due to lower wattage loss, it can effectively be termed an energy efficient.



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#### **TERMINATION CAPABILITY**

Maximum termination capacity of connecting terminals is 35sq.mm at both Top and Bottom terminals; enabling use of aluminium conductors in DB.



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#### **IP20 PROTECTION**

UNO Plus believes in safety first. Finger-proof terminals eliminate chances of accidental contact with live parts as all of them are shrouded/inaccessible, ensuring safety of installers.



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#### **SAFETY SLIDING SHUTTERS**

Insulating shutters ensures safety to personnel and guides the cables for termination.



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#### **LOAD IDENTIFICATION LABEL**

Labelling of the circuit at front panel for display of load.



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#### **GREEN PRODUCT**

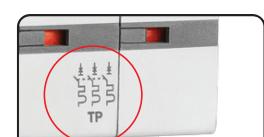
The plastic material used is High performance engineering plastics, which meets a glow wire test of 960°C. UNO Plus MCB uses RoHS compliant environmentally friendly components. MCBs can now be recycled without creating environment pollution.



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#### **SUITABLE FOR ISOLATION**

UNO Plus MCB guarantees complete electrical isolation of the downstream circuit when switched off, thus enhancing safety for users.



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#### **CERTIFICATES**

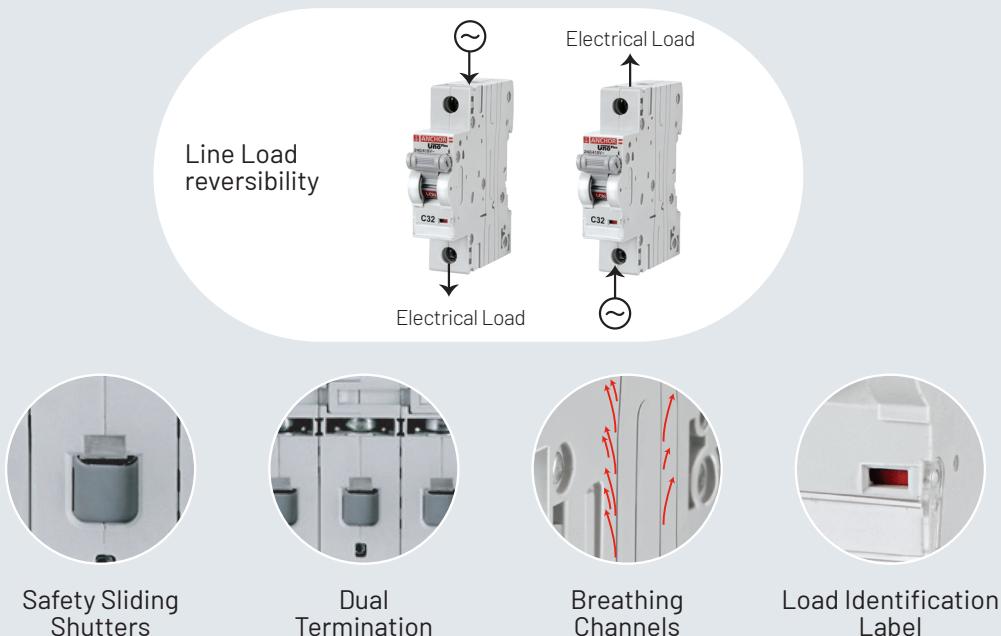
UNO Plus MCB is ISI marked as per IS/IEC 60898-1: 2015. This product has CE certification. A design registration patent is also registered.



## Technical Specifications

FEATURES	UNO PLUS MCB
Applicable Standard	IS/IEC 60898-1:2015
Rated Current (In)	0.5A to 63A
No. of Poles	SP, SP+N, DP, TP, TP+N, FP
Tripping Characteristics	B* and C
Rated Short Circuit Breaking Capacity (Icn)	10kA
Rated Voltage (Ue)	240V AC, 415V AC
Rated Frequency(f)	50 Hz
Rated Insulation Voltage(Ui)	660V
Rated Impulse Voltage (Uiimp)	4 kV
Dielectric Strength	2.5 kV
Terminal Capacity	35 mm <sup>2</sup> at both Line & Load
Protection Class	IP20
Switching Mechanism	Manual & Trip-free mechanism
Tripping Mechanism	Thermal-magnetic
Termination	Bi-connect (Bus bar /cable) at both Line & Load
Contact Position Indication (ON-OFF)	Yes
Knob Pad Locking	Yes
Safety Shutters	Yes
Line Load Reversible	Yes
Label Holder	Yes
RoHS Compliant	Yes

## Special Key Features



## Working Principle of MCB

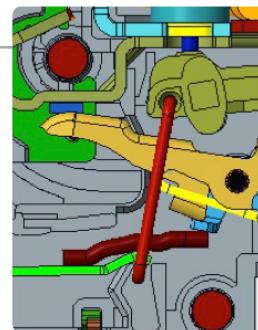
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MCB (Miniature Circuit Breaker) is an electromechanical device which protects an electrical circuit from Over-currents.

Over currents can be • Over load • Short- circuit

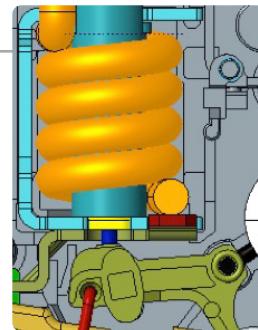
### Thermal Tripping (Over Load Protection)

The Over Load Protection is achieved with a thermal Bi-Metal Strip made from a combination of different materials with each material having a different linear expansion coefficient. The composite products are rolled into a strip under the high pressure. The change in temperature produces a change of curvature. One side of the Bi-Metal supports are fixed & uneven expansion of Bi-Metal causes bending of the strip. The bending strip hits the slider pin and pulls the mechanism to open and hence the MCB Trips. The overload protection works only upto the level where magnetic tripping starts.



### Magnetic Tripping (Short-Circuit Protection)

Magnetic Tripping is based on the electromagnetic principle. When short circuit, measured generally in (kA) comes through the solenoid, electromagnetic force is induced in the plunger that strikes on the latch ensuring immediate release of the tripping mechanism causing the contacts to open. Fast mechanism design enables fastest tripping of the UNO Plus MCB. On opening of contacts, arc (Column of ionized gases) is generated at the point of contacts matching. The components are designed so that the arc moves into the arch chutes and arc is quenched inside the arc chutes under the principle of the arc splitting.



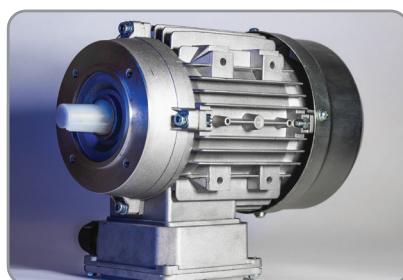
### Tripping Characteristics & Applications

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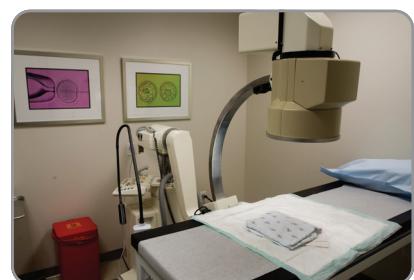
**B - Type:** Resistive Load: Tripping current setting of 3 to 5 times the rated current ( $I_{n}$ ).

Applications: Application in resistive loads. Suitable for residential and light commercial installation. e.g. Lighting circuit, heater etc.



**C - Type:** Inductive Load: Tripping current setting of 5 to 10 times the rated current ( $I_{n}$ ).

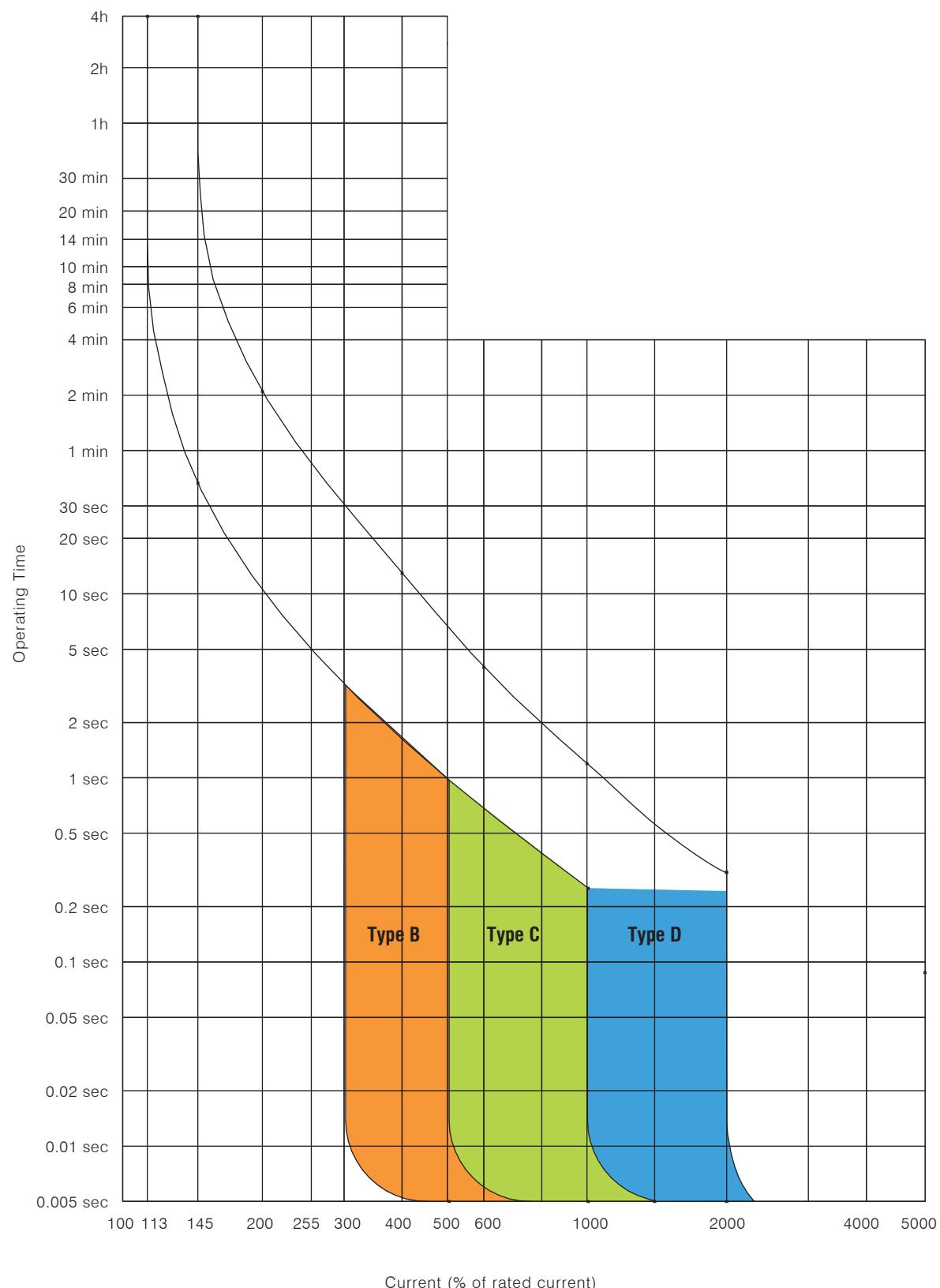
Applications: Application in inductive/motor loads. Suitable for commercial and industrial installations. e.g. Air conditioners, washing machines, refrigerators, compressors etc.



**D - Type:** Short circuit release is set to 10-20 times for protecting circuits that cause heavy surge currents.

Applications: Application in highly inductive loads. Suitable for special industrial and commercial applications. e.g. Transformers, Welding sets, X-ray machines etc.

## Tripping Characteristics - Curve Type B, C & D



## Tripping Characteristics - Curve Type B, C & D

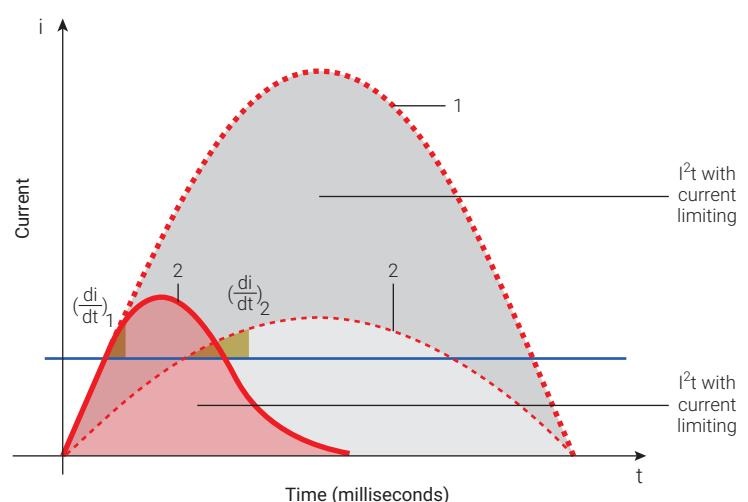
Sr. No.	Thermal Tripping			Magnetic Tripping		
Tripping Curve	Non-Tripping Current(A)	Tripping Current(A)	Tripping time $I_n \leq 63A$	Hold Current	Trip Current	MCB Tripping Time(t)
B	1.13 $I_n$		> 1 hour	3 $I_n$	-	$t \geq 0.1s$
		1.45 $I_n$	< 1 hour	-	5 $I_n$	$t \leq 0.1s$
C	1.13 $I_n$		> 1 hour	5 $I_n$	-	$t \geq 0.1s$
		1.45 $I_n$	< 1 hour	-	10 $I_n$	$t \leq 0.1s$
D	1.13 $I_n$		> 1 hour	10 $I_n$	-	$t \geq 0.1s$
		1.45 $I_n$	< 1 hour	-	20 $I_n$	$t \leq 0.1s$



## Theory of Current Limiting

Current limiting when referred to a circuit breaker describes its ability to prevent passage of the maximum prospective fault current through it and permitting a limited amount to flow.

Current limitation has many benefits for electrical installations. It reduces significantly electrodynamic (mechanical) and thermal stresses on conductors, prolonging their life, and it allows for a variety of device coordination techniques to enhance the performance of downstream switchgears.



## Permission $I^2t$ (let-through) values for circuit breakers Type C with rated current up to and including 63A

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Type C					
Rate Short-circuit	Class 1	Class 3			
Capacity (A)	$\leq 63A$	$\leq 16A$	20A, 25A, 32A	40A	50A, 63A
3000	No limits specified	17000	20000	24000	30000
4500		28000	37000	45000	55000
6000		40000	52000	63000	75000
10000		80000	100000	120000	145000

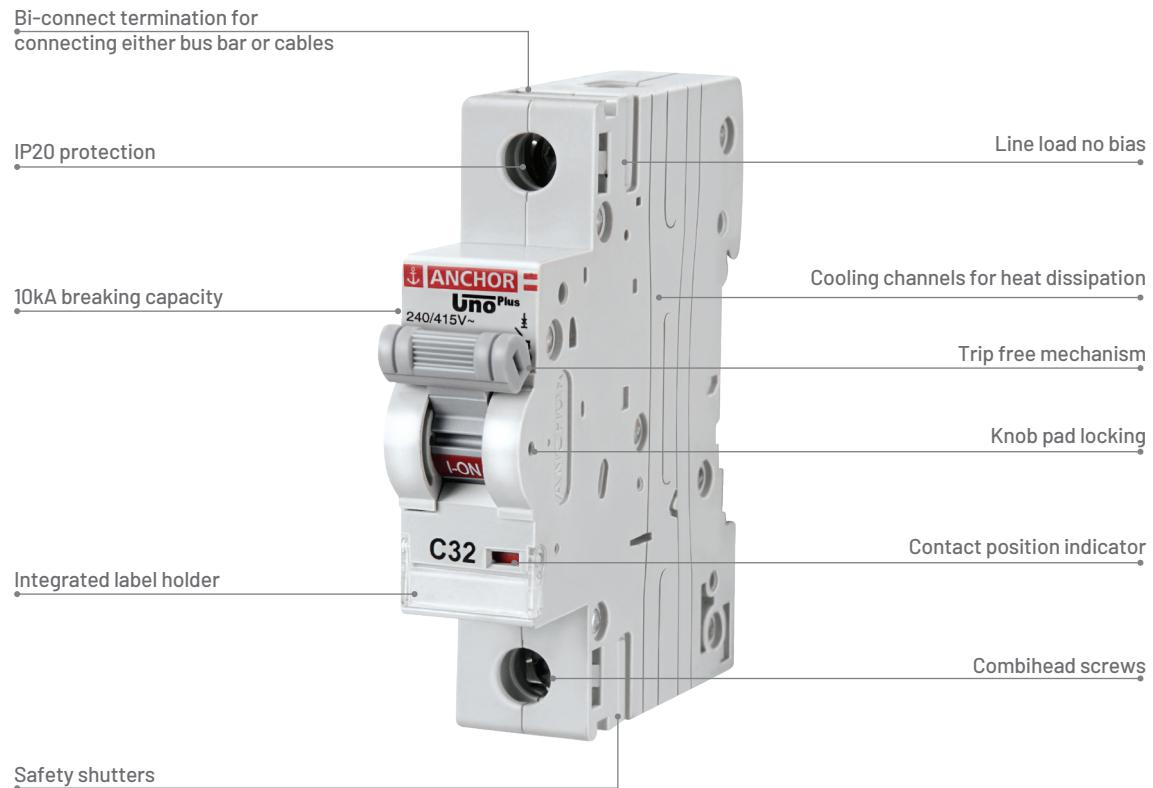
## Power Loss in Watt per Pole

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Current Rating (Amp.)	IS/IEC 60898-1 (Watt)	Watt Loss per Pole at $I_n$ (Watt)
0.5	3.0	1.3
5	3.0	1.6
6	3.0	0.8
10	3.0	1.4
16	3.5	2.4
20	4.5	2.2
25	4.5	2.5
32	6.0	3.2
40	7.5	3.4
63	13.0	6.1

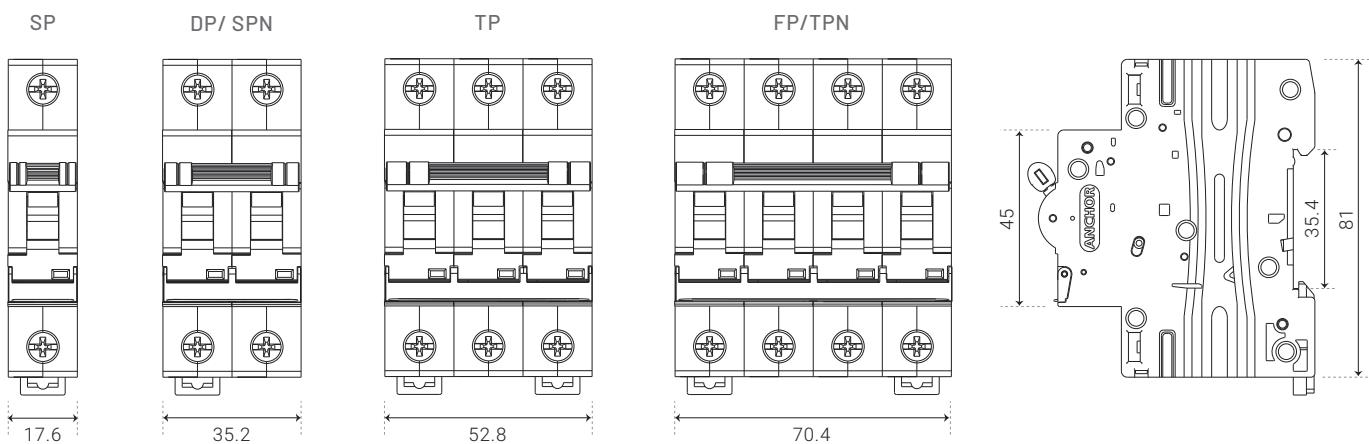
## MCB Nomenclature

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## UNO Plus MCB Drawings Dimensions (in mm)

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CODE	ITEM DESCRIPTION	CODE	ITEM DESCRIPTION
<b>SINGLE POLE "C" CURVE</b>		<b>THREE POLE "C" CURVE</b>	
98801	0.5A SP C UNO PLUS MCB	98843	0.5A TP C UNO PLUS MCB
98802	1A SP C UNO PLUS MCB	98844	1A TP C UNO PLUS MCB
98803	2A SP C UNO PLUS MCB	98845	2A TP C UNO PLUS MCB
98804	3A SP C UNO PLUS MCB	98846	3A TP C UNO PLUS MCB
98805	4A SP C UNO PLUS MCB	98847	4A TP C UNO PLUS MCB
98806	5A SP C UNO PLUS MCB	98848	5A TP C UNO PLUS MCB
98807	6A SP C UNO PLUS MCB	98849	6A TP C UNO PLUS MCB
98808	10A SP C UNO PLUS MCB	98850	10A TP C UNO PLUS MCB
98809	16A SP C UNO PLUS MCB	98851	16A TP C UNO PLUS MCB
98810	20A SP C UNO PLUS MCB	98852	20A TP C UNO PLUS MCB
98811	25A SP C UNO PLUS MCB	98853	25A TP C UNO PLUS MCB
98812	32A SP C UNO PLUS MCB	98854	32A TP C UNO PLUS MCB
98813	40A SP C UNO PLUS MCB	98855	40A TP C UNO PLUS MCB
98814	63A SP C UNO PLUS MCB	98856	63A TP C UNO PLUS MCB
<b>SINGLE POLE NEUTRAL "C" CURVE</b>		<b>THREE POLE NEUTRAL "C" CURVE</b>	
98815	0.5A SPN C UNO PLUS MCB	98857	0.5A TPN C UNO PLUS MCB
98816	1A SPN C UNO PLUS MCB	98858	1A TPN C UNO PLUS MCB
98817	2A SPN C UNO PLUS MCB	98859	2A TPN C UNO PLUS MCB
98818	3A SPN C UNO PLUS MCB	98860	3A TPN C UNO PLUS MCB
98819	4A SPN C UNO PLUS MCB	98861	4A TPN C UNO PLUS MCB
98820	5A SPN C UNO PLUS MCB	98862	5A TPN C UNO PLUS MCB
98821	6A SPN C UNO PLUS MCB	98863	6A TPN C UNO PLUS MCB
98822	10A SPN C UNO PLUS MCB	98864	10A TPN C UNO PLUS MCB
98823	16A SPN C UNO PLUS MCB	98865	16A TPN C UNO PLUS MCB
98824	20A SPN C UNO PLUS MCB	98866	20A TPN C UNO PLUS MCB
98825	25A SPN C UNO PLUS MCB	98867	25A TPN C UNO PLUS MCB
98826	32A SPN C UNO PLUS MCB	98868	32A TPN C UNO PLUS MCB
98827	40A SPN C UNO PLUS MCB	98869	40A TPN C UNO PLUS MCB
98828	63A SPN C UNO PLUS MCB	98870	63A TPN C UNO PLUS MCB
<b>DOUBLE POLE "C" CURVE</b>		<b>FOUR POLE "C" CURVE</b>	
98829	0.5A DP C UNO PLUS MCB	98871	0.5A FP C UNO PLUS MCB
98830	1A DP C UNO PLUS MCB	98872	1A FP C UNO PLUS MCB
98831	2A DP C UNO PLUS MCB	98873	2A FP C UNO PLUS MCB
98832	3A DP C UNO PLUS MCB	98874	3A FP C UNO PLUS MCB
98833	4A DP C UNO PLUS MCB	98875	4A FP C UNO PLUS MCB
98834	5A DP C UNO PLUS MCB	98876	5A FP C UNO PLUS MCB
98835	6A DP C UNO PLUS MCB	98877	6A FP C UNO PLUS MCB
98836	10A DP C UNO PLUS MCB	98878	10A FP C UNO PLUS MCB
98837	16A DP C UNO PLUS MCB	98879	16A FP C UNO PLUS MCB
98838	20A DP C UNO PLUS MCB	98880	20A FP C UNO PLUS MCB
98839	25A DP C UNO PLUS MCB	98881	25A FP C UNO PLUS MCB
98840	32A DP C UNO PLUS MCB	98882	32A FP C UNO PLUS MCB
98841	40A DP C UNO PLUS MCB	98883	40A FP C UNO PLUS MCB
98842	63A DP C UNO PLUS MCB	98884	63A FP C UNO PLUS MCB

\* B Type MCBs are available as on special request.  
50A of All Poles are also available on request.



**Uno** Plus

## RESIDUAL CURRENT OPERATED CIRCUIT BREAKER (RCCB)

RCCB is a device designed to disconnect the load from the supply mains, when the residual current ( $I_{\Delta n}$ ) flowing in the circuit is more than the rated residual current of a RCCB.

The leakage of currents can be due to direct contact or Indirect contact of Human beings or livestock.

The other causes of leakage current can be due to failure in insulation, cables bitten by rats. It can also be due to aged installed appliances.



## Key Features

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- Position indicator
- Advanced neutral allows making of Neutral first and breaking of Neutral last; ensuring complete discharge of the circuit
- Bi-connect terminals for bus bar as well as cable connections
- No nuisance tripping
- IP 20 protection - finger touch proof connection terminals
- Large terminal size 35 sq mm
- Truly current operated
- Manufactured in accordance with IS 12640 Part I
- Flame retardant body and cover

Residual current operated circuit-breakers functionally independent of line voltage finds application for household and similar uses, not incorporating over-current protection (hereafter referred to as RCCBs), for rated voltages not exceeding 440V a.c. and rated currents not exceeding 125A, intended principally for protection against shock-hazard.

These devices are intended to protect persons against indirect contact, the exposed conductive parts of the installation being connected to an appropriate earth electrode. They may be used to provide protection against fire hazards due to a persistent earth fault current, without the operation of the over-current protective device.

## Operating Principle

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RCCB works on the principle of Kirchhoff's current law which states that the "total current or charge entering a junction or node is exactly equal to the charge leaving the node as it has no other place to go except to leave, as no charge is lost within the node". In other words the algebraic sum of ALL the currents entering and leaving a node must be equal to zero,  $I_{(\text{exiting})} + I_{(\text{entering})} = 0$ .

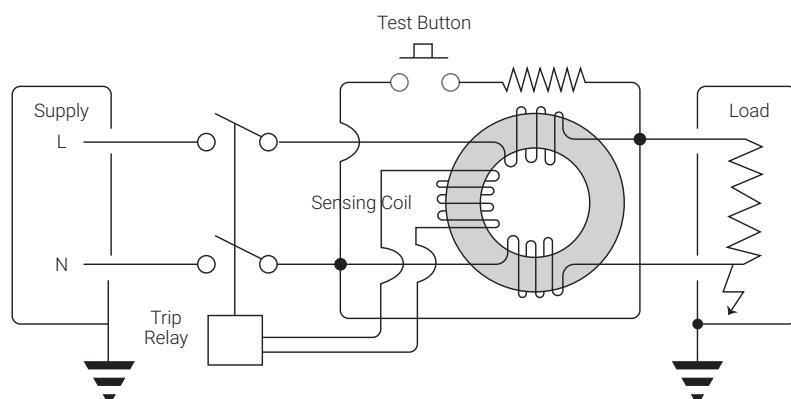
In simple words; Incoming current must be equal to the outgoing current in the circuit.

RCCB construction is made up of a core balance transformer, a sensitive relay and a trip release.

RCCB constantly monitors the vector sum of currents passing through all the conductors.

In normal condition, the vectorial sum of currents is zero ( $I_1 + I_2 = 0$ ). But during abnormal condition/ earth fault, the vectorial sum is not equal to zero. ( $|I_1 + I_2| = \delta$ ). This, thus actuate the relay and hence release the contacts and opens/ trips the RCCB.

UNO Plus RCCB is a True current operated device and is independent of line voltage. In this type of RCCB, the secondary coil of core balance transformer (CBCT) operates sensing relay and thus opening the mechanism, independent of line voltage.





## Risks Involved

The flow of current while using electricity always involves risk. Poorly insulated apparatus, faulty wires or incorrect use of an electrical device may cause the current to flow through the wrong path.

The above mentioned current is also known as Leakage Current.

**The two major risks associated with it are:** • Fire Hazards • Electrocution

### FIRE HAZARDS

A 100/300 mA RCCB is recommended for protection against fire

A poorly insulated wire or a loose connection is enough to create a fire hazard. A portion of the current that normally flows in the conductor may find a way back to the earth through these leakages and through materials with varying degrees of conductivity such as metal frames, wet dust, etc. These materials though are not used intentionally to conduct current and hence are at the risk of heating up to such a degree that they would heat up whatever they are in direct contact with insulation, saw dust etc. This phenomenon may ignite a spark, resulting in subsequent fire.

### FIRE PROTECTION

The RCCBs having sensitivity of 300 mA can be used to provide effective protection against fire caused by earth leakage faults. With residual currents 300mA, the electrical energy released at the location of the earth fault is not sufficient to ignite normal building materials. With large residual currents, the RCCB switches off the current in less than 200mA and thus limits the amount of energy release to harmless level.

The majority of fires which occur as a result of faulty wiring are started by current flowing to the earth. Fire can be started by fault current of less than 1 Amp.

The normal domestic overload protection such as a fuse or MCB will not detect such a small current. A correctly chosen RCCB will detect this fault current and interrupt the supply, thus reducing the risk of a fire outbreak.

### ELECTROCUTION

Electrocution involves direct contact of the human body with an electric current and may be fatal to its vital functions such as:

- Breathing • Heartbeat

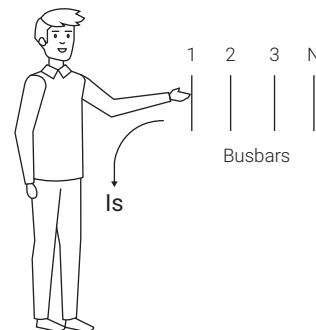
A correctly chosen RCCB can detect small currents flowing to earth and reduces the risk of electrocution. Effects of electric current passing through the human body have been well researched and following chart summarizes the results.

## Protection Against Direct & Indirect Current

### Protection Against Direct Contact

Accidental contact with live parts of electric appliances cause earth leakage current to flow through the human body resulting in shocks that may be fatal. RCCB trips immediately under these circumstances and saves human lives. For e.g. when someone makes contact with a live electrical component of a device, touches a live bus bar in distribution panel or unprotected test cables or when a person sticks a metal object into a power socket or touches a live cable.

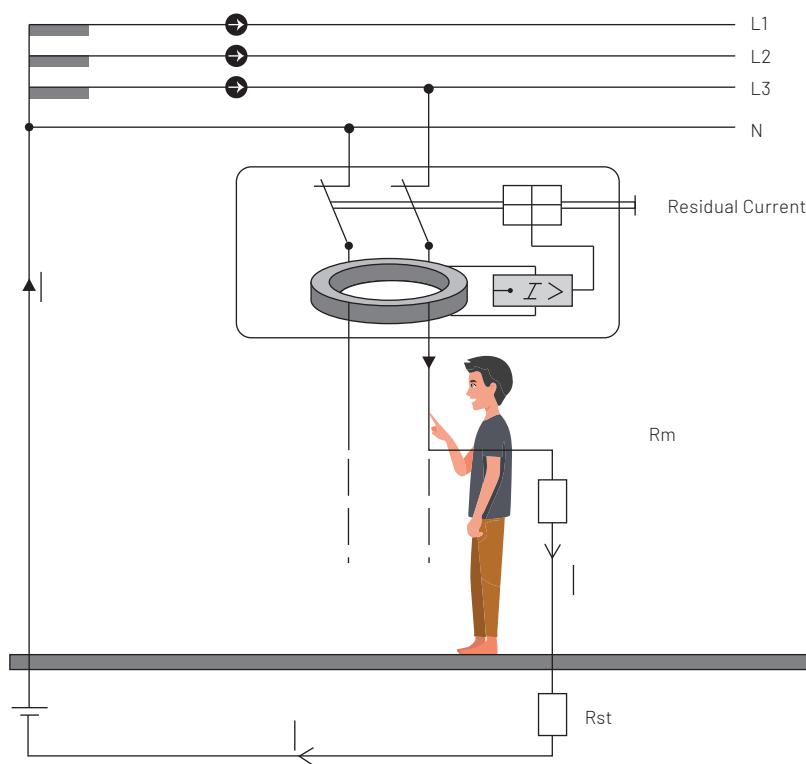
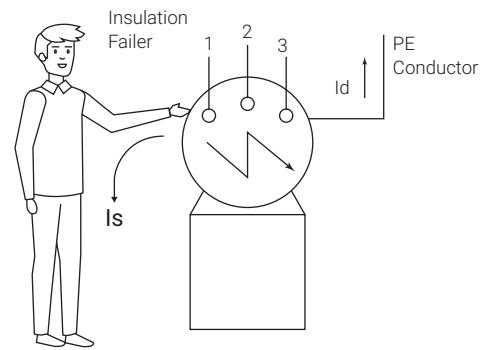
#### Direct Contact



### Protection Against Indirect Contact

The metal enclosures of electric appliances can become live and cause electric shock to unwary persons touching them during an internal fault or insulation failure. RCCB trips instantaneously and thus removes the possible risk from dangerous indirect contact. Indirect contacts are independent of humans, such as a person touching an electric metal frame. This is when a person makes contact with a metal earthed part which has accidentally been powered up following an insulation fault. These type of contacts are very dangerous.

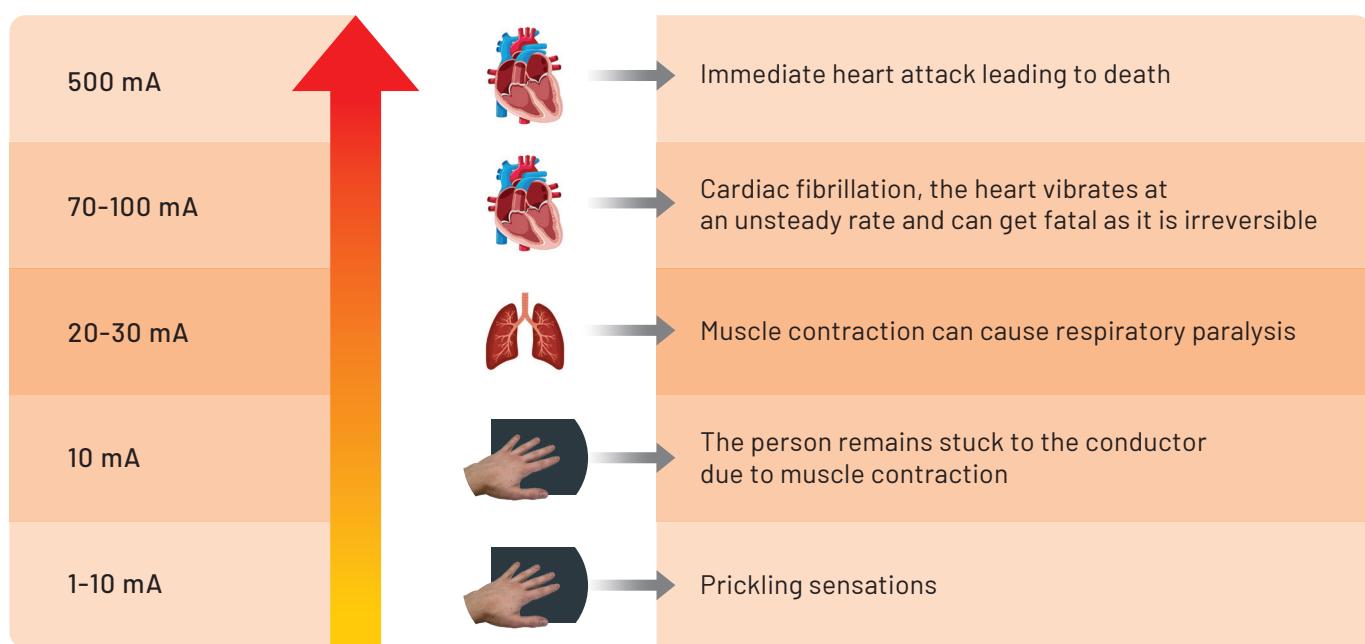
#### Indirect Contact



Is : Touch Current

Id : Insulation Fault Current

## Effects Of Electric Current Through Human Body



Electrocution should not be viewed in terms of "Current" alone, but in terms of "contact voltage". A person gets electrocuted by coming in contact with an object that has a different potential from his/her own. The difference in potential causes the current to flow through the body.

The amount of current through the human body for a given voltage depends on the resistance of the body. The interior of the human body is a good conductor due to abundance of iron in the body fluids. The main barrier to current flow is the skin. The resistance of the skin decreases significantly when it is wet.





#### The Human Body has known Limits

- Under Normal Dry Conditions, Voltage Limit = 50V AC
- Under Damp Surrounding, Voltage Limit = 25V AC

#### RCCB selection

	RCCB	APPLICATION
SENSITIVITY	30mA	Protection against Direct Current contact with human body/livestock
SELECTION	100mA	Protection against Direct and Indirect Current contact with human body/livestock
CRITERIA	300mA	Preventing Building Fire Hazards and Direct Contact with human body/livestock

#### UNO Plus RCCB Trip Band on Different Current Value

Rating (mA)	Not Trip Band (mA)	Trip Band (mA)	UNO Plus RCCB Trip Band (mA)
30	15	30	18 - 27
100	50	100	60 - 90
300	150	300	180 - 270

## Fault finding when RCCB trips

Identifying earth leakage fault with this RCCB as an incomer or sub-incomer is very simple. First, switch off all the Switches/MCBs, switch the RCCB ON and simultaneously switch on the remaining switches one after the other. One would find that while a particular circuit is being switched ON, the RCCB trips time and again. This is the quickest way to identify a faulty circuit/appliance. One can then isolate that faulty circuit, rectify the fault and switch ON the RCCB.

- **Test button (T)**

This is provided to verify whether RCCB is functioning properly or not. The test button working can be checked only if it is connected with supply, RCCB shall trip when test button is pressed. "RCCB should ideally be tested once in a month."

- **Neutral Advance Mechanism**

The neutral makes first and breaks last before the phase terminals get ON. This helps in discharging of current in case of capacitive current. Vice versa in case the RCCB is OFF.

- **Voltage Independent**

UNO Plus RCCB is not voltage dependent and it's a purely current operated circuit breaker. It does not trip if voltage drops, thus providing protection against leakage current at reduced voltage too.

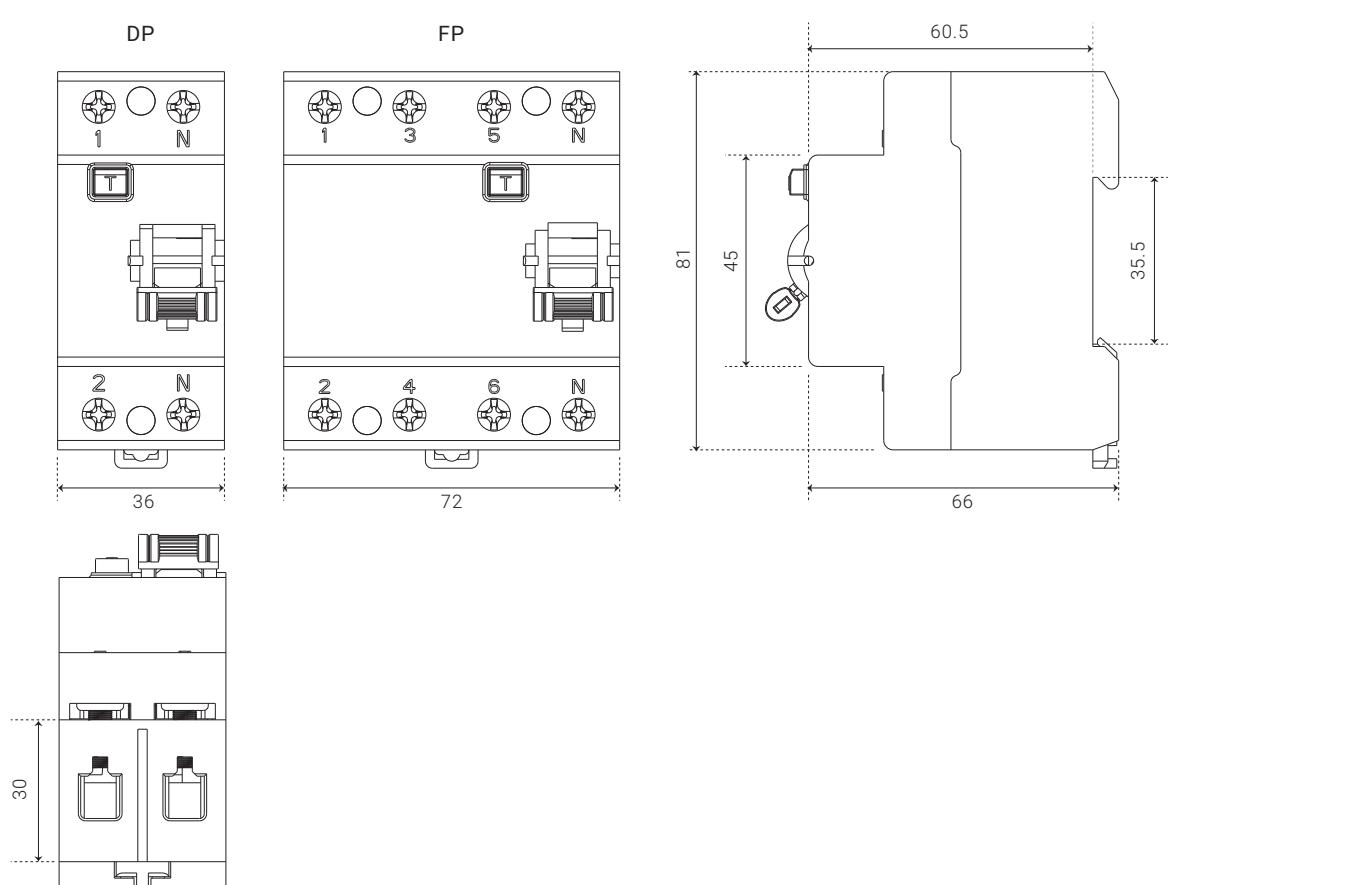
## Installation

To ensure correct functioning of the RCCB, the neutral conductor on the load side must not be connected to earth, otherwise unwanted nuisance tripping may occur. Care must be taken to ensure that the earth loop impedance as given is not exceeded so that the maximum permissible touch voltage of 50/25V is not exceeded.

## Protection from Nuisance Tripping

UNO Plus RCCB is truly current operated and operates independent of voltage. It prevents the risk of nuisance tripping due to transient voltage created by lighting, line disturbance (from other equipments) and transient currents (from high capacitive circuits).

## UNO Plus RCCB Drawings Dimensions (in mm)



## Technical Specifications

FEATURES	UNO PLUS RCCB
Standard	IS 12640-1:2016 / IEC 61008-1:2012
Rated Current	25,32,40,63A
Poles	DP, FP
Rated Voltage	DP: AC 240V, FP: AC 240/415V
Rated Frequency	50Hz
Sensitivity	30, 100, 300mA
Rated Insulation Voltage	440Vac
Dielectric Strength	2500V
Rated Conditional Short Circuit (Icn)	10kA for DP and 6kA for FP
Contact Position Indicator	Yes
Bi-connect Termination	Yes
Type	AC
Terminal Capacity	35mm <sup>2</sup>
Protection	IP20
Dimensions (W x H x D) - 2P	36 x 81 x 66 (mm)
Dimensions (W x H x D) - 4P	72 x 81 x 66 (mm)

CODE	ITEM DESCRIPTION	CODE	ITEM DESCRIPTION
<b>DOUBLE POLE RCCB</b>			<b>FOUR POLE RCCB</b>
98901	25A DP 30mA UNO PLUS RCCB	98913	25A FP 30mA UNO PLUS RCCB
98902	25A DP 100mA UNO PLUS RCCB	98914	25A FP 100mA UNO PLUS RCCB
98903	25A DP 300mA UNO PLUS RCCB	98915	25A FP 300mA UNO PLUS RCCB
98904	32A DP 30mA UNO PLUS RCCB	98916	32A FP 30mA UNO PLUS RCCB
98905	32A DP 100mA UNO PLUS RCCB	98917	32A FP 100mA UNO PLUS RCCB
98906	32A DP 300mA UNO PLUS RCCB	98918	32A FP 300mA UNO PLUS RCCB
98907	40A DP 30mA UNO PLUS RCCB	98919	40A FP 30mA UNO PLUS RCCB
98908	40A DP 100mA UNO PLUS RCCB	98920	40A FP 100mA UNO PLUS RCCB
98909	40A DP 300mA UNO PLUS RCCB	98921	40A FP 300mA UNO PLUS RCCB
98910	63A DP 30mA UNO PLUS RCCB	98922	63A FP 30mA UNO PLUS RCCB
98911	63A DP 100mA UNO PLUS RCCB	98923	63A FP 100mA UNO PLUS RCCB
98912	63A DP 300mA UNO PLUS RCCB	98924	63A FP 300mA UNO PLUS RCCB



**Uno** Plus

## DISTRIBUTION BOARDS (DB)

UNO Plus Distribution Boards have designed to provide a new dimension of protection in Homes, Offices and Industries. It is equipped with stylish color, elegant curves and distinctive finish that blend with all kinds of interior décor.

UNO Plus Distribution Boards thus offer dual benefits of Flexibility and Safety, enabling safe and efficient distribution of electrical power.

These boards undergo a seven-tank phosphate pre-treatment process to ensure anti-rust conditioning, superior finish and lasting strength. Post this process, premium quality powder coating is applied using the state-of-the-art techniques. These boards are also equipped with top and bottom removable gland plates with a number of knockouts. One can thus install them either flush or wall mounted.



## Key Features

- Reversible Door
- Integrated Frame Design
- Removable Front Door
- RAL 9003 Texture
- Door Earthing
- Cement Spill Protector
- IP43 & IP54 Protection
- Detachable Gland Plates
- Front Plate Studs
- IK 09 Protection

## Salient Features - Unique Design Feature



### Pan Assembly

This concept facilitates detaching of the Chassis from the DB and the required wiring for the circuit protection device can be done at a comfortable location.

#### Benefits:

- Easy and comfortable installation of the internal wiring.
- Reduces the installation time and cost.



### Reversible Door

By simply shifting the hinge assembly from left to right the opening of the door can be interchanged depending on the location of the installation.

#### Benefits:

- Unique flexibility as per customer convenience at the time of installation.



### Cement Spill Protector

The Cement Spill protector prevents entry of dust or cement particles inside the DB during the construction period at site.

#### Benefits:

- The Cement Spill protector ensures zero infiltration of dust or cement particles inside the DB.
- The portable damage of the door is avoided.



### Protected Neutral Bar on Pan Assembly

- Neutral bar is covered with shroud for safety.
- Neutral bar placed on pan assembly for ease of wiring.

### Door Earthing

Door earthing makes the DB totally shock proof.

#### Benefits:

- Highly shock-proof.

### Integrated Frame Design

UNO Plus DB has a unique feature of the frame integrated into the BOX.

#### Benefits:

- Decrease in number of sub-assemblies, additional space for cables.

### Detachable Gland Plates

With Bigger knockouts Gland Plates at top & bottom are removable.

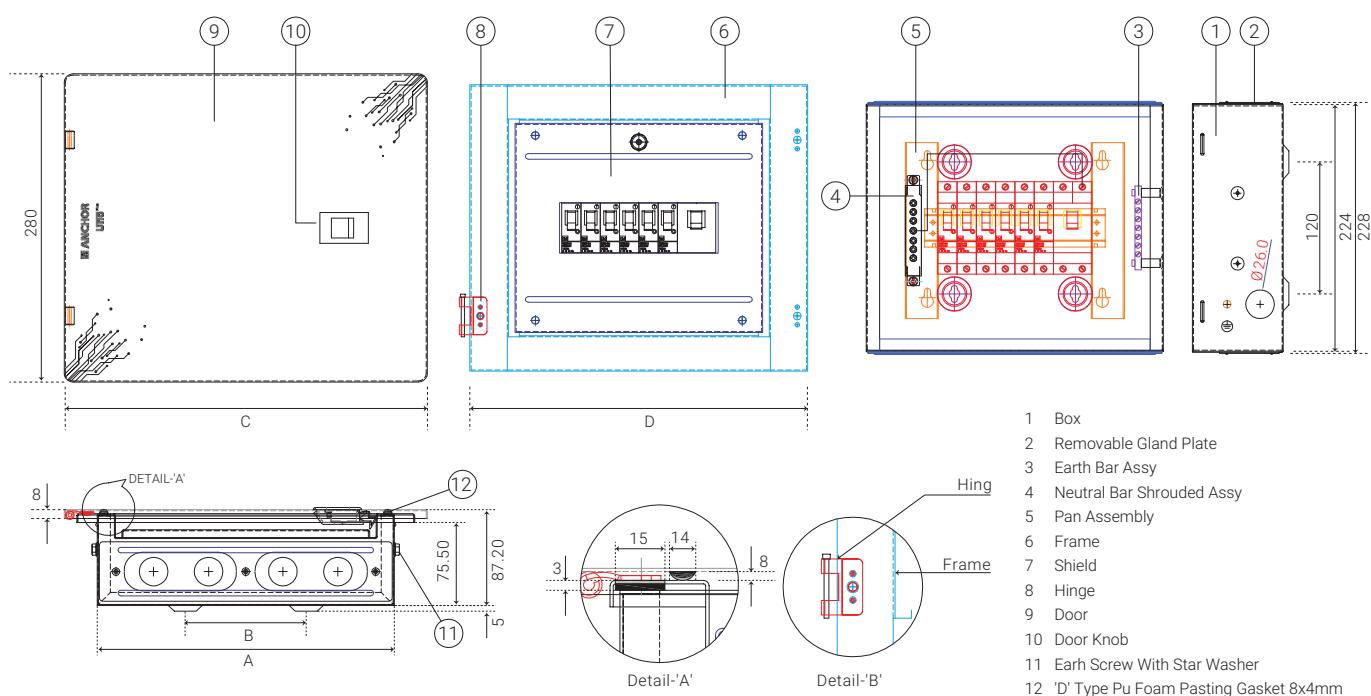
#### Benefits:

- Easy entry & termination of cables.

## SPN Double Door Distribution Board



Circuit Diagram



L X H X D = Length X Height X Depth

CODE	NO. OF WAYS	INCOMING + OUTGOING	SHEET THICKNESS(mm)	Dimensions (in mm)				Knockout Holes (ø25 mm)		
				A	B	C	D	TOP	BOTTOM	EACH SIDE
98651	Way	2+2	1.00	220	170	280	257	2	2	1
98652	6 Way	2+4	1.00	255	75	315	292	2	2	1
98653	8 Way	2+6	1.00	290	110	350	327	3	3	1
98654	12 Way	2+10	1.00	360	180	420	397	4	4	1
98655	16 Way	2+14	1.00	430	250	490	467	5	5	1

\*1.2 mm and 1.6 mm sheet thickness as per customer request

## Technical Specifications

FEATURES	UNO PLUS SPN DB
DB reference Standard	IEC 61439-3-2012
No of Ways	4, 6, 8, 12, 16 way SPN DD
Type of Installation	Flush/ Surface
Colour/ Finish	RAL 9003 Texture
Door Locking Options	Sliding Type
Removable Gland Plate	Rectangular Cut Out
Protection Level of Distribution Board	Gasket Provision
Distribution Technique	100A Copper Insulated Bus-bar
Bus-bar Rating	63A
Incoming	Max 63A
Outgoing	Max Individual 63A
Voltage Rating	240/415V~
Main Incoming Option	MCB or RCCB or ISOLATOR
Box Sheet Thickness	1 mm
Neutral Bar Terminal Capacity	25 sqmm
Earthing Bar Terminal Capacity	25 sqmm
Protection (IP)	IP 43 / IP54
Protection (IK)	Ik 09
Rated Insulated Voltage (Ui)	690V~
Frequency	50Hz
Dielectric Strength	2.5KV
Ambient Temperature	-5°C to 40°C

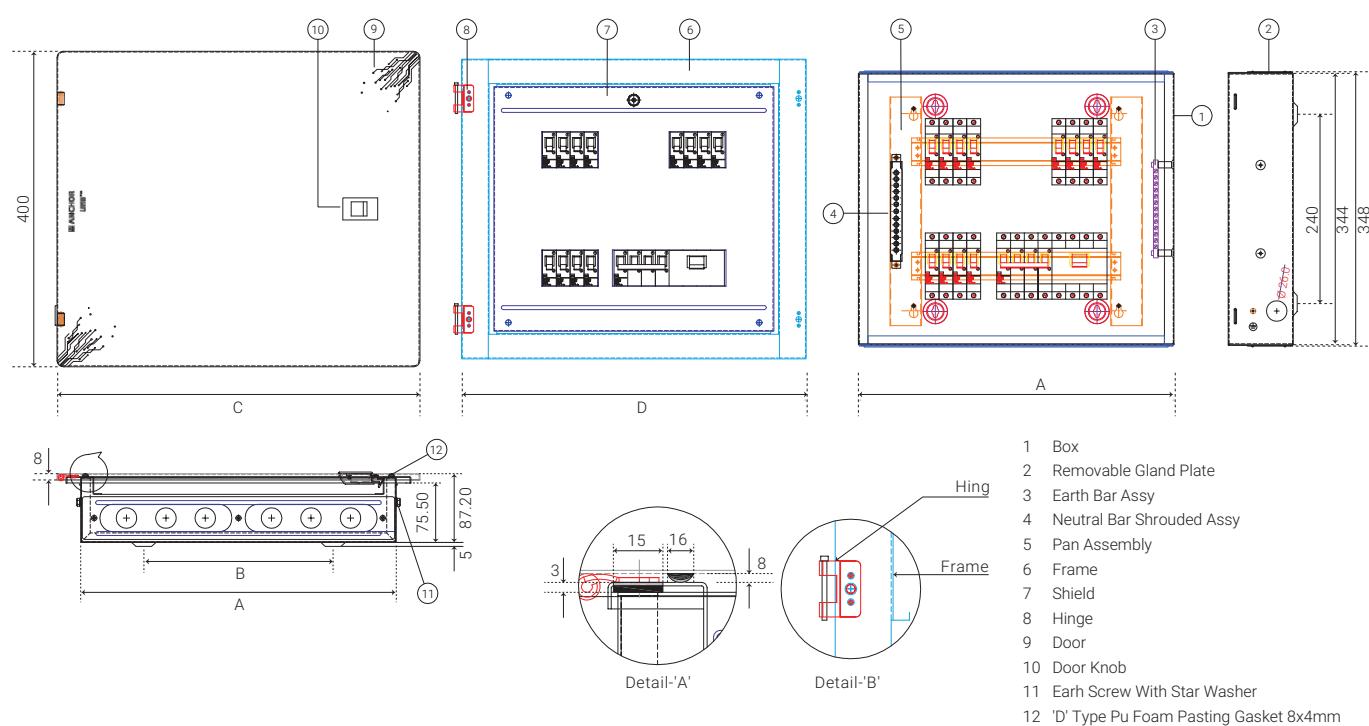
CODE	ITEM DESCRIPTION
<b>SPN DOUBLE DOOR DB</b>	
98951	4 WAY SPN UNO PLUS DD IP43 DB
98952	6 WAY SPN UNO PLUS DD IP43 DB
98953	8 WAY SPN UNO PLUS DD IP43 DB
98954	12 WAY SPN UNO PLUS DD IP43 DB
98955	16 WAY SPN UNO PLUS DD IP43 DB
98961	4 WAY SPN UNO PLUS DD IP54 DB
98962	6 WAY SPN UNO PLUS DD IP54 DB
98963	8 WAY SPN UNO PLUS DD IP54 DB
98964	12 WAY SPN UNO PLUS DD IP54 DB
98965	16 WAY SPN UNO PLUS DD IP54 DB



## TPN Double Door Distribution Board



Circuit Diagram



L X H X D = Length X Height X Depth

CODE	NO. OF WAYS	INCOMING + OUTGOING	SHEET THICKNESS(mm)	Dimensions (in mm)				Knockout Holes (ø25 mm)		
				A	B	C	D	TOP	BOTTOM	EACH SIDE
98656	4 Way 4M	2+2	1.00	330	135	390	367	2	2	1
98657	4 Way	2+4	1.00	400	205	460	437	2	2	1
98658	6 Way	2+6	1.00	435	240	495	472	3	3	1
98659	8 Way	2+10	1.00	470	275	530	507	4	4	1
98660	12 Way	2+14	1.00	650	455	710	688	5	5	1

## Technical Specifications

FEATURES	UNO PLUS TPN DB
DB reference Standard	IEC 61439-3-2012
No of Ways	4+12, 8+12, 8+16, 8+24, 8+36 way TPN DD
Type of Installation	Flush/ Surface
Colour/ Finish	RAL 9003 Texture
Door Locking Options	Sliding Type
Removable Gland Plate	Rectangular Cut Out
Protection Level of Distribution Board	Gasket Provision
Distribution Technique	100A Copper Insulated bus-bar
Bus-bar Rating	63A
Incoming	Max 63A
Outgoing	Max individual 63A
Voltage Rating	240/415V~
Main Incoming Option	MCB or RCCB or ISOLATOR
Box Sheet Thickness	1 mm
Neutral Bar Terminal Capacity	25 sqmm
Earthing Bar Terminal Capacity	25 sqmm
Protection (IP)	IP 43 / IP 54
Protection (IK)	Ik 09
Rated Insulated Voltage (Ui)	690V~
Frequency	50Hz
Dielectric Strength	2.5KV
Ambient Temperature	-5°C to 40°C

CODE	ITEM DESCRIPTION
<b>TPN DOUBLE DOOR DB</b>	
98956	4 way TPN 4+12 (4P Incomer) UNO PLUS DD IP43 DB
98957	4 way TPN 8+12 (8P Incomer) UNO PLUS DD IP43 DB
98958	6 way TPN 8+18 UNO PLUS DD IP43 DB
98959	8 way TPN 8+24 UNO PLUS DD IP43 DB
98960	12 way TPN 8+36 UNO PLUS DD IP43 DB
98966	4 way TPN 4+12 (4P Incomer) UNO PLUS DD IP54 DB
98967	4 way TPN 8+12 (8P Incomer) UNO PLUS DD IP54 DB
98968	6 way TPN 8+18 UNO PLUS DD IP54 DB
98969	8 way TPN 8+24 UNO PLUS DD IP54 DB
98970	12 way TPN 8+36 UNO PLUS DD IP54 DB



## MCB Selection Chart



Appliances	Capacity/W (Load) (240V ~ 1 Phase)	Current Rating of MCB	Type of MCB
Air Conditioner	3.5 kW(1.0 Ton)	10 A *	"C" Series
	5.28 kW(1.5 Ton)	16 A *	"C" Series
	7.03 kW(2.0 Ton)	20 A *	"C" Series
Refrigerator	165 L(Litres)	3 A*	"C" Series
	350 L(Litres)	4 A*	"C" Series
Oven cum Griller	4500 W	32 A	"B" Series
	1750 W	10 A	"B" Series
Oven Only	750 W	6 A	"B" Series
Hot Plate Only	2000 W	10 A	"B" Series
Room Heater	1000 W	6 A	"B" Series
	2000 W	10 A	"B" Series
Washing Machine	300 W	2 A	"C" Series
Washing Machine (with heater)	1300 W	8 A	"C" Series
	1000 W	6 A	"B" Series
Water Heater (Storage/Instant)	2000 W	10 A	"B" Series
	3000 W	16 A	"B" Series
	6000 W	32 A	"B" Series
Electric Iron	750 W	6 A	"B" Series
	1250 W	8 A	"B" Series
2 Slice	1200 W	8 A	"B" Series
Electric Kettle	1500 W	10 A	"B" Series

### Formula For Load Calculation:

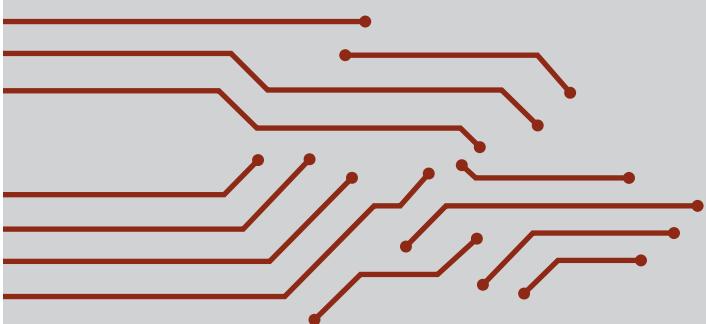
<ul style="list-style-type: none"> <li>Incomer Rating: Single Phase*</li> </ul>	<ul style="list-style-type: none"> <li>Incomer Rating: Three Phase*</li> </ul>
$= \frac{\text{Total Load in Watts}}{240 \text{ Volts}}$	$= \frac{\text{Total Load in Watts}}{3 \times 415 \text{ Volts}}$

\* The given data is only for guidance and may vary for different manufacturers.

## Notes

## Notes





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**Dealer Stamp**