

**SMART
SOLUTIONS
*** FOR ***
SMARTER
PROTECTION**

SWITCHGEAR RETAIL
CATALOGUE





60 years of smart ideas

For over sixty years, we have strived to delight you with innovative products that set the benchmark against the finest. This commitment has helped us become a household name, not just in India but in over 30 countries around the world. With state-of-the-art manufacturing facilities, we have not only become the largest manufacturer and exporter of fans, but have also carved a niche in lighting and home appliances.

Not one to rest on our laurels, we brought to life our next generation avatar - Orient Electric. An avatar that's more intuitive, efficient and smarter. And today, as we foray into switchgear with EuroTech, we have taken another smart step in the right direction - that of becoming your one-stop-shop for electrical solutions.

Inch closer to all-round protection as you turn the pages ahead.

Presenting EuroTech

EuroTech ranges aim to offer you the right solution at the right price. All our products and solutions offer reliable performance, propose modularity, quality and sophisticated design. The breadth and depth of Orient's product offerings, technical expertise, customer service and global reach clearly differentiate us. Highest quality, cutting-edge products, modularity, ease of installation, ease of use, excellent service and sophisticated design are the features that distinguish Orient. At Orient, we are passionate towards smart electrical solutions. Innovative and European, energy saving technologies. Ease of installation. Ease of use and safety. Intuitive user interface.

Modularity and durability are the core brand values that we aim to deliver through these products.

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BREAKER**

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**RESIDUAL CURRENT
CIRCUIT BREAKER**

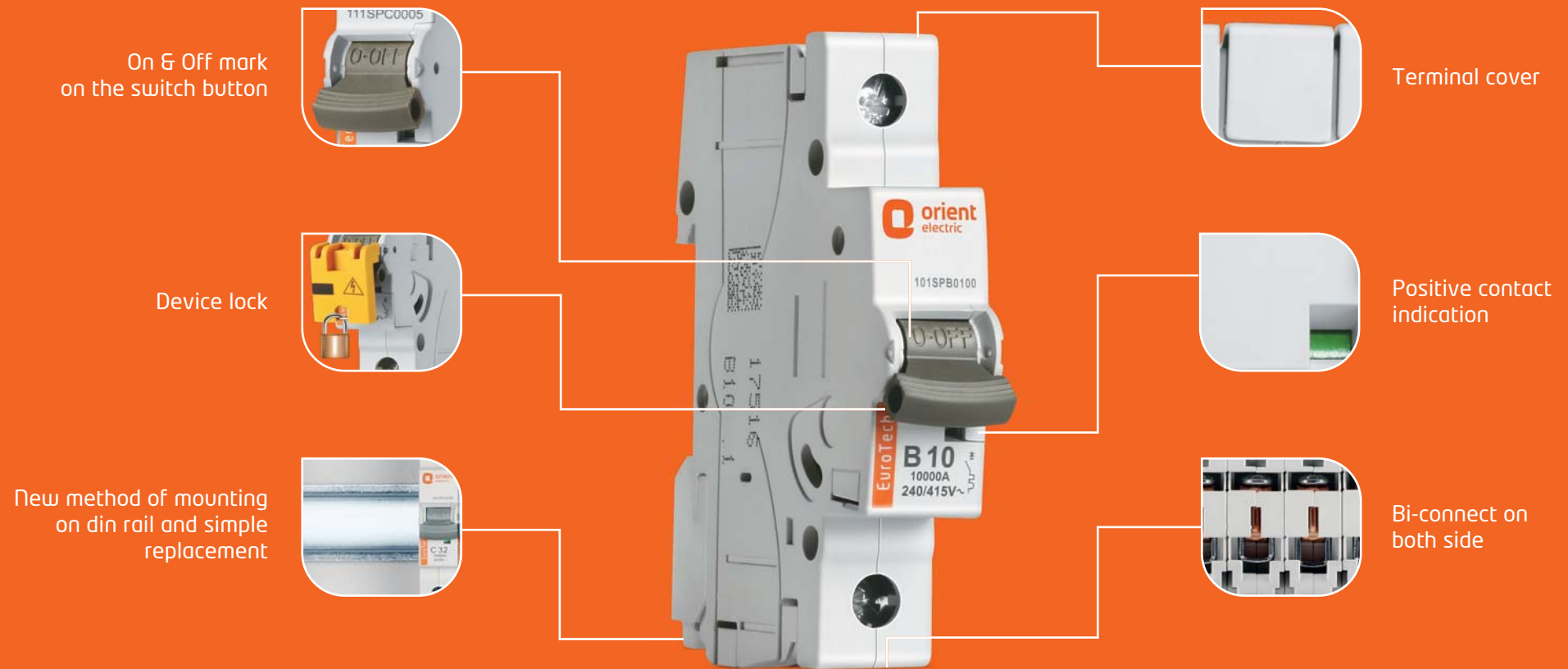
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MINIATURE CIRCUIT BREAKER



COMPLIANCE & CERTIFICATION:



Smart Features & Benefits:

- Positive contact indication for more safety to the user
- Trip-Free Mechanism-MCB trips even if held in ON position
- High short-circuit switching capacity
- Low let-through energy at the point of fault
- Easy and quick method of MCB mounting and replacement on din rail
- Longer electrical life through precisely controlled thermal and magnetic tripping
- Air Circulation design on outer body so that when two poles are placed adjacent to each other, the channels between two poles form a tunnel resulting in very effective air circulation around individual poles
- User-friendly dual-function terminals for connection through busbar and cable
- Portable accessories which can be fitted to range, on site by the user
- Suitable for isolation
- Load and line resistivity
- ROHS compliant

Range

6A-63A - 'B' Curve
0.5A-63A - 'C' Curve
0.5A-32A - 'D' Curve

Accessories

- Auxiliary Switch
- Shunt Trip
- Bell/Buzzer
- Terminal Cover
- Locking Kit

Execution

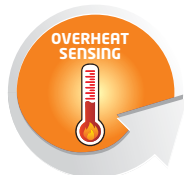
Single Pole (1P), Single Pole & Neutral (1P N)
Double Pole (2P)
Three Pole (3P), Three Pole & Neutral (3P N)
Four Pole (4P)

Specification

IS/IEC 60898-1
IEC 60947-2 for Industrial Application

SMART PROTECTION

A circuit breaker is an automatically-operated electrical switch designed to protect an electrical circuit from damage caused by overload of electricity or short circuit. Its function is to detect a fault condition and by interrupting continuity, to immediately discontinue electrical flow. The overload protection is achieved by the heat generated inside the magnetic coil, which activates the bimetallic disc and separates the contact through trip mechanism. So, in case the overload hits the danger-level, the MCB promptly opens the contacts and cuts off the power supply, hence, protecting your dream household appliances.



SDB TECHNOLOGY

Orient Electric brings to you the revolutionary SDB Technology (Snap Disc Bi-metal) for MCBs which is superior to conventional MCBs for the following reasons;

A conventional MCB is prone to manual adjustment of thermal bi-metal strip to manipulate tripping characteristics under overloading conditions. Whereas Orient Electric MCBs with SDB technology come in a single enclosed unit which can not be tampered manually, thus ensuring precise tripping every time.

Conventional MCBs do not detect heat generated by terminals due to loose wire contacts whereas, Orient Electric MCBs with SDB technology detect heat from extreme ambient or loose wire connection and trips at specified limit, thereby safeguarding the circuits connected with it.

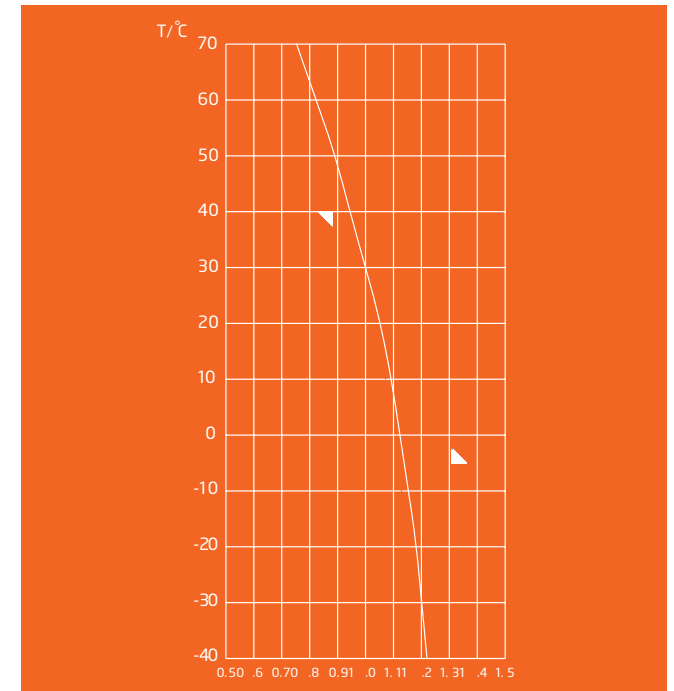
Orient Electric MCBs SDB technology sense the heat of magnetic coil during overload condition and reduces number of weld connections in the MCB; thereby reducing substantial amount of power dissipation, keeping the MCB cool for longer life. Smart technology for your safety!

TECHNICAL SPECIFICATION - MCB

| | B Curve | C Curve | D Curve |
|----------------------------------|--|--|--|
| Rated Current (In) | 6-63 A | 0.5-63 | 0.5-32 |
| Rated Voltage (Ue) | 240-415 V a.c | 240-415 V a.c | 240-415 V a.c |
| Rated Frequency (f) | 50 Hz | 50 Hz | 50 Hz |
| Shock resistance | 40mm free fall | 40mm free fall | 40mm free fall |
| Rated short-circuit capacity | 10 kA | 10 kA | 10 kA |
| Energy limiting class | 3 | 3 | 3 |
| Back-up fuse | 100A gG | 100A gG | 100A gG |
| Index of protection | IP 20 (IP 40) | IP 20 (IP 40) | IP 20 (IP 40) |
| Terminals | 1-25mm ² , max. 2Nm | 1-25mm ² , max. 2Nm | 1-25mm ² , max. 2Nm |
| Mechanical endurance | 20000 op.c. | 20000 op.c. | 20000 op.c. |
| Electrical endurance | 20000 op.c. (In≤32A) 10000 op.c. (In>32A) | 20000 op.c. (In≤32A) 10000 op.c. (In>32A) | 20000 op.c. (In>32A) |
| Impulse withstand voltage (Uimp) | 4 kV | 4 kV | 4 kV |
| Ambient temperature | max. -25° C ...+55°C | max. -25° C ...+55°C | max. -25° C ...+55°C |
| Storage temperature | max. -40° C ...+70°C | max. -40° C ...+70°C | max. -40° C ...+70°C |
| Build-in width | 17.8 mm | 17.8 mm | 17.8 mm |
| Power supply | Bi directional (Top & bottom) | Bi directional (Top & bottom) | Bi directional (Top & bottom) |
| Mounting on the rail | IS/IEC 60715 | IS/IEC 60715 | IS/IEC 60715 |
| Sealing possibility | Yes | Yes | Yes |
| Terminal cover | Yes | Yes | Yes |
| Locking device | Yes | Yes | Yes |
| Standards | IS/IEC 60898-1, EN 60898-1 | IS/IEC 60898-1, EN 60898-1 | IEC-60947-1 |
| Positive Contact Indication | Yes, Through Flag Indication (Red-ON, Green-OFF) | Yes, Through Flag Indication (Red-ON, Green-OFF) | Yes, Through Flag Indication (Red-ON, Green-OFF) |
| Installation Position | Vertical/Horizontal | Vertical/Horizontal | Vertical/Horizontal |
| Case & Cover | Moulded, flame-retardant thermoplastic material | Moulded, flame-retardant thermoplastic material | Moulded, flame-retardant thermoplastic material |
| Auxiliary Contacts | Yes | Yes | Yes |
| Shunt Trip | Yes | Yes | Yes |
| Bell/Buzzer | Yes | Yes | Yes |
| Locking Kit | Yes | Yes | Yes |

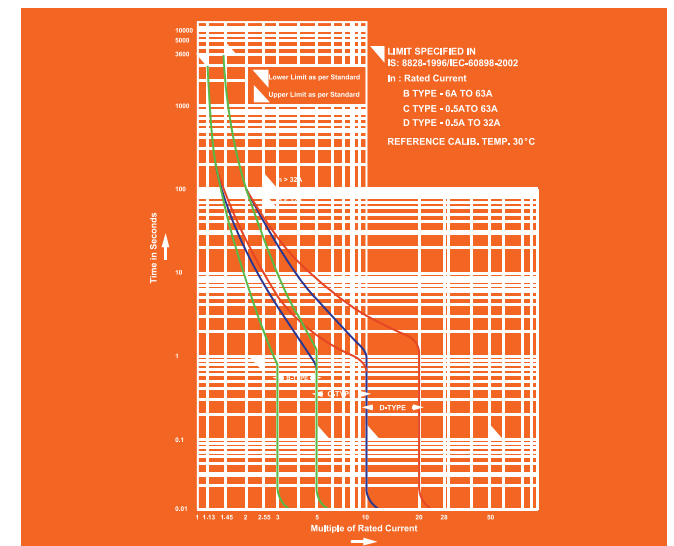
AMBIENT WORKING TEMPERATURE

| Effect Of The Ambient Temperature On The Tripping Characteristic | | | | | | | | | | | | |
|--|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| 1n(A) | -40°C | -30°C | -20°C | -10°C | -0°C | -10°C | -20°C | -30°C | -40°C | -50°C | -60°C | -70°C |
| 0.5 | 0.61 | 0.6 | 0.59 | 0.57 | 0.56 | 0.54 | 0.52 | 0.5 | 0.47 | 0.44 | 0.41 | 0.38 |
| 1 | 1.22 | 1.2 | 1.18 | 1.15 | 1.12 | 1.09 | 1.05 | 1 | 0.94 | 0.88 | 0.82 | 0.75 |
| 2 | 2.44 | 2.4 | 2.36 | 2.30 | 2.24 | 2.18 | 2.1 | 2 | 1.88 | 1.77 | 1.65 | 1.5 |
| 4 | 4.88 | 4.8 | 4.72 | 4.61 | 4.49 | 4.36 | 4.20 | 4 | 3.77 | 3.55 | 3.29 | 3 |
| 6 | 7.32 | 7.2 | 7.09 | 6.91 | 6.73 | 6.54 | 6.31 | 6 | 5.66 | 5.33 | 4.94 | 4.5 |
| 10 | 12.2 | 12 | 11.8 | 11.5 | 11.2 | 10.9 | 10.5 | 10 | 9.44 | 8.99 | 8.23 | 7.5 |
| 13 | 15.9 | 15.6 | 15.4 | 14.9 | 14.5 | 14.1 | 13.6 | 13 | 12.2 | 11.5 | 10.7 | 9.75 |
| 16 | 19.5 | 19.2 | 18.9 | 18.4 | 17.9 | 17.4 | 16.8 | 16 | 15.1 | 14.2 | 13.2 | 12 |
| 20 | 24.4 | 24 | 23.6 | 23 | 22.4 | 21.8 | 21 | 20 | 18.8 | 17.7 | 16.5 | 15 |
| 25 | 30.5 | 30 | 29.5 | 28.8 | 28 | 27.2 | 26.3 | 25 | 23.6 | 22.2 | 20.6 | 18.8 |
| 32 | 39 | 38.4 | 37.8 | 36.9 | 35.9 | 34.9 | 33.6 | 32 | 30.2 | 28.4 | 26.3 | 24 |
| 40 | 48.8 | 48 | 47.8 | 46.1 | 44.9 | 43.6 | 42 | 40 | 37.7 | 35.5 | 32.9 | 30 |
| 50 | 61 | 60 | 59.1 | 57.6 | 56.1 | 54.5 | 52.6 | 50 | 47.2 | 44.4 | 41.2 | 37.5 |
| 63 | 76.9 | 75.6 | 74.4 | 72.6 | 70.7 | 68.7 | 66.2 | 63 | 59.4 | 56 | 51.9 | 47.3 |



Correction factor is valid for current with times over 30s
 $I(x^{\circ}C)$ - test current at x ambient temperature
 $I(30^{\circ}C)$ - test current at 30°C ambient temperature

TRIPPING CURVES



MCB SELECTION CHART FOR MOTOR PROTECTION

| MCB SELECTION CHART FOR MOTOR PROTECTION | | | | | | | | |
|--|--------|-------|--------------|------------|-------------|------------|---------------------|-------------|
| S.No. | Kw | HP | DOL STARTING | | | | Star Delta Starting | Type of MCB |
| | | | Single Phase | | Three Phase | | Three Phase | |
| | | | Light Duty | Heavy Duty | Light Duty | Light Duty | | |
| 1 | 0.037 | 0.05 | 0.7A | 1A | - | - | - | C curve |
| 2 | 0.075 | 0.1 | 1A | 2A | - | - | - | C curve |
| 3 | 0.093 | 0.125 | 2A | 2A | - | - | - | C curve |
| 4 | 0.112 | 0.15 | 2A | 2A | - | - | - | C curve |
| 5 | 0.149 | 0.2 | 2A | 4A | - | - | - | C curve |
| 6 | 0.187 | 0.25 | 4A | 4A | - | - | - | C curve |
| 7 | 0.246 | 0.33 | 4A | 6A | - | - | - | C curve |
| 8 | 0.373 | 0.5 | 4A | 6A | 1 | 2 | - | D curve |
| 9 | 0.560 | 0.75 | 6A | 10A | - | - | - | C curve |
| 10 | 0.746 | 1 | 6A | 10A | 2 | 4 | - | D curve |
| 11 | 0.933 | 1.25 | 10A | 16A | - | - | - | D curve |
| 12 | 1.119 | 1.5 | 10A | 16A | - | - | - | C curve |
| 13 | 1.492 | 2 | 16A | 20A | 4 | 6 | - | C curve |
| 14 | 2.238 | 3 | 16A | 25A | 6 | 10 | - | C curve |
| 15 | 2.984 | 4 | 25A | 32A | - | - | - | C curve |
| 16 | 3.730 | 5 | 32A | 40A | 10 | 16 | 16 | C curve |
| 17 | 4.476 | 6 | 40A | 50A | - | - | 16 | D curve |
| 18 | 5.595 | 7.5 | 40A | 63A | 20 | 32 | 25 | C curve |
| 19 | 7.46 | 10 | 50A | 63A | 16 | 20 | 20 | C curve |
| 20 | 9.325 | 12.5 | 63A | - | 25 | 40 | 32 | C curve |
| 21 | 11.190 | 15 | 63A | - | 32 | 50 | 40 | C curve |
| 22 | 14.92 | 20 | 0 | 0 | 40 | 63 | 50 | C curve |
| 23 | 18.65 | 25 | - | - | - | - | 63 | D curve |

Calculation Formulae:

Incomer Current Rating, For Single Phase:

$$\frac{\text{Total Load in Watts}}{240}$$

Incomer Current Rating, For Three Phase:

"C" series MCB is used for all Motor Applications

$$\frac{\text{Total Load in Watts}}{\sqrt{3} \times 240}$$

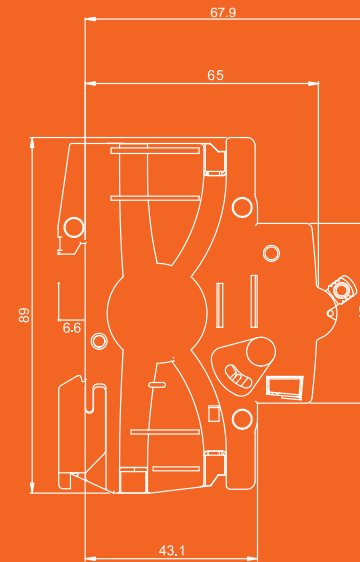
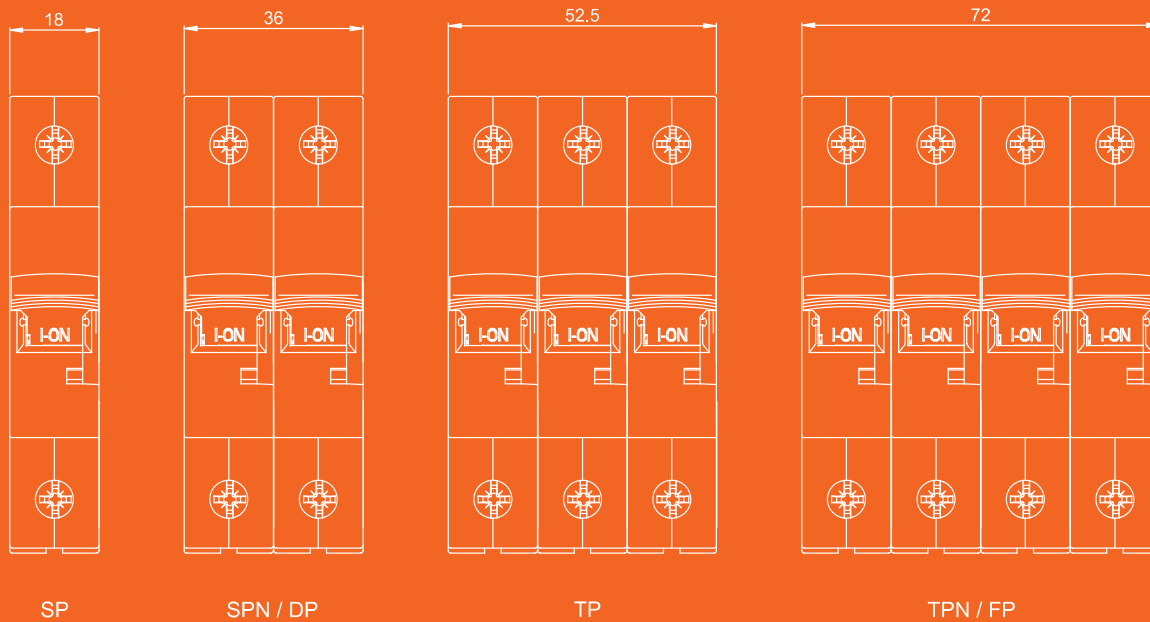
Note: One Lighting circuit can have up to 800W or up to 10 Lighting points One power circuit can have up to 2000 W or 1 power points.

MCB SELECTION CHART FOR HOUSEHOLD APPLICATIONS

| FOR HOUSEHOLD APPLICATIONS | | | |
|--|----------------------|-----------------------|-------------|
| Appliances | Capacity wait (Load) | Current Rating of MCB | Type of MCB |
| Air Conditioner | 1 Ton | 10A | C Curve |
| | 1.5 Ton | 16A | C Curve |
| | 2 Ton | 20A | C Curve |
| Refrigerator | 285 Ltr. | 2A | C Curve |
| | 581 Ltr. | 6A | C Curve |
| Washing Machine | 1800 W | 2A | C Curve |
| | 2200 W | 10A | C Curve |
| Domestic Pump set | 0.5 H.P. | 16A | C Curve |
| | 1 H. P. | 6A | C Curve |
| | 2 H.P. | 10A | C Curve |
| Water Heater (Storage of Instontaneous Geysers) | 1 KW | 16A | B Curve |
| | 2 KW | 6A | B Curve |
| | 3 KW | 10A | B Curve |
| Cooking range | 6 KW | 32A | B Curve |
| Oven Cum griller | 4500 Watts | 25A | B Curve |
| Oven only | 1750 Watts | 10A | B Curve |
| Hot Plate only | 750 Watts | 6A | B Curve |
| Micowave Oven | 2000 Watts | 10A | B Curve |
| Electric Kettl | 1000 Watts | 6A | B Curve |
| Room Heater | 1500 Watts | 10A | B Curve |
| | 1000 Watts | 6A | B Curve |
| Iron | 2000 Watts | 10A | B Curve |

*Above mentioned data may vary from product manufacturers, check product details before installation.

DIMENSIONS (MM)



| Characteristics | Test current | Tripping time | Result |
|-----------------|--------------|---|-------------|
| B, C, D | $1,13 I_n$ | $t \geq 3600s$ | No tripping |
| B, C, D | $1,45 I_n$ | $t < 3600s$ | Tripping |
| B, C, D | $2,55 I_n$ | $1s < t < 60s$ (for $\leq I_n 32A$) $1s < t < 120s$ (for $\geq I_n 32A$) | Tripping |
| B | $3 I_n$ | $t \leq 0.1s$ | No tripping |
| C | $5 I_n$ | $t \leq 0.1s$ | No tripping |
| D | $10 I_n$ | $t \leq 0.1s$ | No tripping |
| B | $5 I_n$ | $t < 0.1s$ | Tripping |
| C | $10 I_n$ | $t < 0.1s$ | Tripping |
| D | $20 I_n$ | $t < 0.1s$ | Tripping |

APPLICATIONS OF MCB

Depending upon whether the equipment is resistive or inductive in nature, its protection is categorized under **B**, **C** or **D**.

- **B-Series:** For protection of appliances and equipment that are resistive in nature.
E.g.: Geyser, lights, room heaters and microwave oven.
- **C-Series:** For protection of appliances and equipment that are inductive in nature.
E.g.: ACs, washing machines, compressor etc.
- **D-Series:** For protection of equipment that are highly inductive in nature.
E.g.: Transformers

TECHNICAL SPECIFICATIONS DC MCB

| | |
|--|--------------------|
| Rated voltage - for 1 pole U_n -for 2 pole U_n | 220 VD.C |
| | 220 440 VD.C. |
| Rated time constant LR | 5 ms |
| Rated current I_n | 0.5 - 63A |
| Rated short circuit capacity | 10kA |
| Tripping characteristic | C |
| Back up Fuse | 100 A gG |
| Terminals | 1-25mm 2 - max 3nm |
| Standards | IS IEC60947-2 |

DC MCB



CONNECTING DIAGRAMS IN DC CIRCUITS

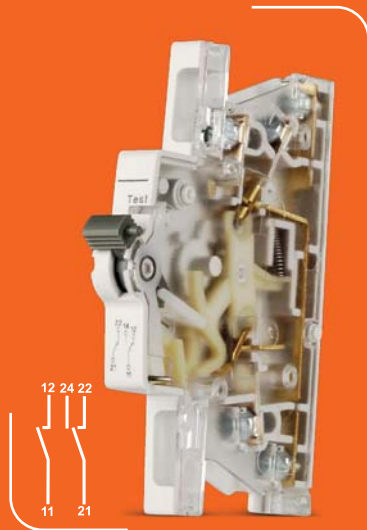
| Connecting diagrams in direct current electric circuits | | | | |
|---|---------------------|-------------------------|-------------------------|-------------------------|
| Rated voltage of circuit breaker | 220 V _{DC} | 220/440 V _{DC} | 220/440 V _{DC} | 220/440 V _{DC} |
| Voltage between conductors - max. | 220 V _{DC} | 440 V _{DC} | 440 V _{DC} | 440 V _{DC} |
| Voltage between conductor and earth - max. | 220 V _{DC} | 220 V _{DC} | 440 V _{DC} | 220 V _{DC} |
| Circuit breaker | 1-pole | 2-pole | 2-pole | 2-pole |
| Connecting diagram | | | | |

Miniature Circuit Breakers for DC are used for protection of conductors in DC electric circuits.

- **1-pole** circuit breakers are used for voltages of up to 220 V D.C
- **2-pole** circuit breakers with poles connected in a series are used for higher voltages up to 440 V D.C

While connecting the MCB for DC, attention must be paid to polarity because when connected in a wrong way, the MCB can be destroyed. Note that in a 2-pole circuit, 1-pole MCBs cannot be used and vice-versa.

ACCESSORIES FOR MCB



Auxiliary Signal Switch



Auxiliary Signal Switch Terminal Cover



Shunt Trip



Bell/Buzzer



Locking Kit

Auxiliary Signal Switches are provided for remote signaling of the MCB. The width of auxiliary switch is 0.5 module (9mm). During fitting, the MCB must be switched off.

Allows to cover connection terminals, screws of circuit. It gives protection from electric shocks and provides better protection.

For remote opening of the MCB, fix the Shunt Trip to the right side of the circuit breaker. With dimensions that correspond with those of the MCB, this Shunt Trip goes the extra mile in ensuring your personal safety.

Bell/Buzzer is used for signalling in-house command panels, etc.

MCB can be pad locked in OFF position for personal safety during maintenance and in ON position for extremely critical loads with the help of locking kit.

Technical Specifications

| | |
|---------------------------------|-------------------------------------|
| Rated voltage (U _c) | 240V a.c., 110V d.c. |
| Rated current (I _n) | 6A a.c., 1A d.c. |
| Rated frequency | a.c. / d.c. |
| Index of protection | IP 20 (IP 40) |
| Terminals | max. 1.5mm ² , max 0.8mm |
| Ambient temperature | max. 35°C |
| Storage temperature | max. -40°C to +70°C |
| Contacts | 1x NC, 1x NC/NO |
| Standards | IS/IEC 60947-1 |

Technical Specifications

| | |
|----------------------|---------------------------------|
| Rated voltage | 912/48 a.c/d.c, 110/240 a.c/d.c |
| Rated frequency | 50/60Hz, d.c. |
| Index of protection | IP 20 (IP 40) |
| Terminals | 1-25mm ² , max. 2mm |
| Ambient temperature | max. 35°C |
| Storage temperature | max. -40°C to +70°C |
| Mounting on the rail | IS/IEC 60947-3 |
| Sealing possibility | Yes |
| Terminal cover | Yes |

ORDERING INFORMATION FOR MCB



- Rated short circuit capacity **10 kA**
- Rated Current **0.5 to 63 A**
- Tripping characteristic **B, C, D**

SP



- Rated short circuit capacity **10 kA**
- Rated Current **0.5 to 63 A**
- Tripping characteristic **B, C, D**

SPN



DP

| 1 Pole | | Cat. No. SP | | |
|------------|-------------|-------------|------------|------------|
| Rating (A) | Voltage (V) | B curve | C curve | D curve |
| 0.5 | 240/415 | - | 101SPC0005 | 101SPD0005 |
| 1 | 240/415 | - | 101SPC0010 | 101SPD0010 |
| 2 | 240/415 | - | 101SPC0020 | 101SPD0020 |
| 4 | 240/415 | - | 101SPC0040 | 101SPD0040 |
| 6 | 240/415 | 101SPB0060 | 101SPC0060 | 101SPD0060 |
| 10 | 240/415 | 101SPB0100 | 101SPC0100 | 101SPD0100 |
| 13 | 240/415 | 101SPB0130 | 101SPC0130 | 101SPD0130 |
| 16 | 240/415 | 101SPB0160 | 101SPC0160 | 101SPD0160 |
| 20 | 240/415 | 101SPB0200 | 101SPC0200 | 101SPD0200 |
| 25 | 240/415 | 101SPB0250 | 101SPC0250 | 101SPD0250 |
| 32 | 240/415 | 101SPB0320 | 101SPC0320 | 101SPD0320 |
| 40 | 240/415 | 101SPB0400 | 101SPC0400 | - |
| 50 | 240/415 | 101SPB0500 | 101SPC0500 | - |
| 63 | 240/415 | 101SPB0630 | 101SPC0630 | - |

| Cat. No. SPN | | |
|--------------|------------|------------|
| B curve | C curve | D curve |
| - | 101SNC0005 | 101SND0005 |
| - | 101SNC0010 | 101SND0010 |
| - | 101SNC0020 | 101SND0020 |
| - | 101SNC0040 | 101SND0040 |
| 101SNB0060 | 101SNC0060 | 101SND0060 |
| 101SNB0100 | 101SNC0100 | 101SND0100 |
| 101SNB0130 | 101SNC0130 | 101SND0130 |
| 101SNB0160 | 101SNC0160 | 101SND0160 |
| 101SNB0200 | 101SNC0200 | 101SND0200 |
| 101SNB0250 | 101SNC0250 | 101SND0250 |
| 101SNB0320 | 101SNC0320 | 101SND0320 |
| 101SNB0400 | 101SNC0400 | - |
| 101SNB0500 | 101SNC0500 | - |
| 101SNB0630 | 101SNC0630 | - |

| Cat. No. DP | | |
|-------------|------------|------------|
| B curve | C curve | D curve |
| - | 101DPC0005 | 101DPD0005 |
| - | 101DPC0010 | 101DPD0010 |
| - | 101DPC0020 | 101DPD0020 |
| - | 101DPC0040 | 101DPD0040 |
| 101DPB0060 | 101DPC0060 | 101DPD0060 |
| 101DPB0100 | 101DPC0100 | 101DPD0100 |
| 101DPB0130 | 101DPC0130 | 101DPD0130 |
| 101DPB0160 | 101DPC0160 | 101DPD0160 |
| 101DPB0200 | 101DPC0200 | 101DPD0200 |
| 101DPB0250 | 101DPC0250 | 101DPD0250 |
| 101DPB0320 | 101DPC0320 | 101DPD0320 |
| 101DPB0400 | 101DPC0400 | - |
| 101DPB0500 | 101DPC0500 | - |
| 101DPB0630 | 101DPC0630 | - |

ORDERING INFORMATION FOR MCB



TP



TPN

- Rated short-circuit capacity **10 kA**
- Rated Current **0.5 to 63 A**
- Tripping characteristic **B, C, D**



FP

| 3 Pole | | Cat. No. TP | | | Cat. No. TPN | | | Cat. No. FP | | |
|------------|-------------|-------------|------------|------------|--------------|-------------|-------------|-------------|-------------|-------------|
| Rating (A) | Voltage (V) | B curve | C curve | D curve | B curve | C curve | D curve | B curve | C curve | D curve |
| 0.5 | 415 | - | 101TPC0005 | 101TPD0005 | - | 101TPNC0005 | 101TPND0005 | - | 101TPFC0005 | 101TPFD0005 |
| 1 | 415 | - | 101TPC0010 | 101TPD0010 | - | 101TPNC0010 | 101TPND0010 | - | 101TPFC0010 | 101TPFD0010 |
| 2 | 415 | - | 101TPC0020 | 101TPD0020 | - | 101TPNC0020 | 101TPND0020 | - | 101TPFC0020 | 101TPFD0020 |
| 4 | 415 | - | 101TPC0040 | 101TPD0040 | - | 101TPNC0040 | 101TPND0040 | - | 101TPFC0040 | 101TPFD0040 |
| 6 | 415 | 101TPB0060 | 101TPC0060 | 101TPD0060 | 101TPNB0060 | 101TPNC0060 | 101TPND0060 | 101TPFB0060 | 101TPFC0060 | 101TPFD0060 |
| 10 | 415 | 101TPB0100 | 101TPC0100 | 101TPD0100 | 101TPNB0100 | 101TPNC0100 | 101TPND0100 | 101TPFB0100 | 101TPFC0100 | 101TPFD0100 |
| 13 | 415 | 101TPB0130 | 101TPC0130 | 101TPD0130 | 101TPNB0130 | 101TPNC0130 | 101TPND0130 | 101TPFB0130 | 101TPFC0130 | 101TPFD0130 |
| 16 | 415 | 101TPB0160 | 101TPC0160 | 101TPD0160 | 101TPNB0160 | 101TPNC0160 | 101TPND0160 | 101TPFB0160 | 101TPFC0160 | 101TPFD0160 |
| 20 | 415 | 101TPB0200 | 101TPC0200 | 101TPD0200 | 101TPNB0200 | 101TPNC0200 | 101TPND0200 | 101TPFB0200 | 101TPFC0200 | 101TPFD0200 |
| 25 | 415 | 101TPB0250 | 101TPC0250 | 101TPD0250 | 101TPNB0250 | 101TPNC0250 | 101TPND0250 | 101TPFB0250 | 101TPFC0250 | 101TPFD0250 |
| 32 | 415 | 101TPB0320 | 101TPC0320 | 101TPD0320 | 101TPNB0320 | 101TPNC0320 | 101TPND0320 | 101TPFB0320 | 101TPFC0320 | 101TPFD0320 |
| 40 | 415 | 101TPB0400 | 101TPC0400 | - | 101TPNB0400 | 101TPNC0400 | - | 101TPFB0400 | 101TPFC0400 | - |
| 50 | 415 | 101TPB0500 | 101TPC0500 | - | 101TPNB0500 | 101TPNC0500 | - | 101TPFB0500 | 101TPFC0500 | - |
| 63 | 415 | 101TPB0630 | 101TPC0630 | - | 101TPNB0630 | 101TPNC0630 | - | 101TPFB0630 | 101TPFC0630 | - |

ORDERING INFORMATION FOR DC



- Rated short-circuit capacity **10 kA**
- Rated Current **0.5 to 63 A**
- Tripping characteristic **C**

SP DC

SP - DC MCB

Conforming to IS/IEC 60947-2, Rated Current 0.5 to 63A, 220Vd.c.
Breaking Capacity 10kA,

| Ratings (A) | Voltage | Cat. No. |
|-------------|------------|------------|
| 0.5A | 220 V d.c. | 111SPC0005 |
| 1A | 220 V d.c. | 111SPC0010 |
| 2A | 220 V d.c. | 111SPC0020 |
| 4A | 220 V d.c. | 111SPC0040 |
| 6A | 220 V d.c. | 111SPC0060 |
| 10A | 220 V d.c. | 111SPC0100 |
| 13A | 220 V d.c. | 111SPC0130 |
| 16A | 220 V d.c. | 111SPC0160 |
| 20A | 220 V d.c. | 111SPC0200 |
| 25A | 220 V d.c. | 111SPC0250 |
| 32A | 220 V d.c. | 111SPC0320 |
| 40A | 220 V d.c. | 111SPC0400 |
| 50A | 220 V d.c. | 111SPC0500 |
| 63A | 220 V d.c. | 111SPC0630 |



DP DC

DP - DC MCB

Conforming to IS/IEC 60947-2, Rated Current 0.5 to 63A, 220/440Vd.c.,
Breaking Capacity 10kA.

| Ratings (A) | Voltage | Cat. No. |
|-------------|----------------|------------|
| 0.5A | 220/440 V d.c. | 111DPC0005 |
| 1A | 220/440 V d.c. | 111DPC0010 |
| 2A | 220/440 V d.c. | 111DPC0020 |
| 4A | 220/440 V d.c. | 111DPC0040 |
| 6A | 220/440 V d.c. | 111DPC0060 |
| 10A | 220/440 V d.c. | 111DPC0100 |
| 13A | 220/440 V d.c. | 111DPC0130 |
| 16A | 220/440 V d.c. | 111DPC0160 |
| 20A | 220/440 V d.c. | 111DPC0200 |
| 25A | 220/440 V d.c. | 111DPC0250 |
| 32A | 220/440 V d.c. | 111DPC0320 |
| 40A | 220/440 V d.c. | 111DPC0400 |
| 50A | 220/440 V d.c. | 111DPC0500 |
| 63A | 220/440 V d.c. | 111DPC0630 |

ISOLATOR



PRODUCT OVERVIEW



Isolators are switch disconnectors with independent manual operation, capable of making, carrying and breaking currents under normal circuit conditions, which may include operating under overload condition and also carry currents under specified abnormal circuit conditions such as those of short circuit for a specified time.

ISOLATOR

New method of mounting on din rail and simple replacement



Device lock



Terminal cover



Sealing device in on & off position



Bi-connect on both side upto 63A

Smart Features & Benefits

- Forced opening and suitable for use as main switch
- High short-circuit withstanding capacity
- Optimal protection against unintentional touch of live parts
- Dual-function terminals
- Quick mounting clip, lockable in open position
- Same form and design as MCB Range
- The switch-isolators are equipped with dual-function terminals which enable simultaneous connection of conductors and bus bar
- Cross-/ slotted-head screws size 2, system Pozidrive, enable easy, reliable and time-saving wiring
- Facility for sealing or padlocking in closed or isolated position
- Internal connection of switching mechanisms ensures simultaneous switching even without toggle linkage

Range :

40A - 63A & 80A - 125A

Execution

Single Pole (1P), Double Pole (2P)

Three Pole (3P) & Four Pole (4P)

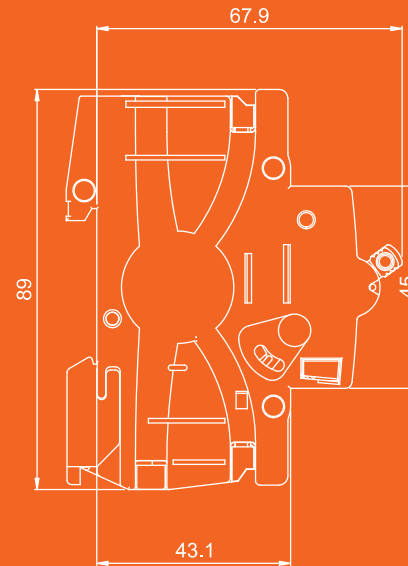
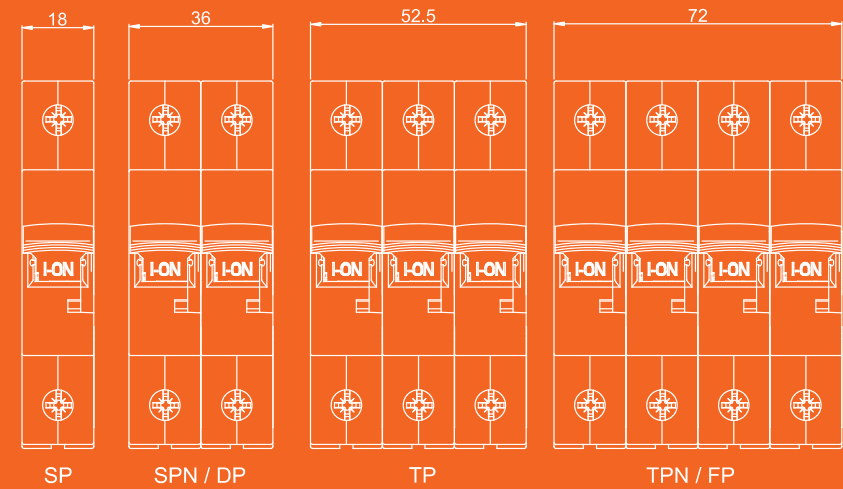
Specification

IS/IEC60947-3

TECHNICAL SPECIFICATIONS

| Details | |
|------------------------------|--|
| Rated Current (In) | 40 - 63 A, 80, 100 & 125A |
| Rated Voltage (Ue) | 240/415 V |
| Rated Frequency (f) | 50 Hz |
| Short-circuit capacity (Icm) | 630 A up to 63A, 1.25kA up to 125A |
| Tightening Torque | 2.0 Nm. (as per IS/IEC 60947-1) |
| Dielectric strength | 2000 V |
| Index of protection | IP 20 (IP 40) |
| Terminals | 1-25mm ² , max. 2Nm up to 63A, 50mm ² for 12 |
| Mechanical endurance | > 10,000 Operations |
| Electrical endurance | > 5,000 Operations |
| Ambient temperature | max. -25°C ... +55°C |
| Storage temperature | max. -40°C ... +70°C |
| Build-in width | 18 mm/pol |
| Mounting on the rail | IS/IEC 60715 |
| Sealing possibility | Yes |
| Terminal cover | Yes |
| Locking device | Yes |
| Pole count | 1 to 4 Pole |
| Standards | IS/IEC 60947-3 |

DIMENSION (MM)



ORDERING INFORMATION



Single Pole

| 1 Pole | | |
|------------|-------------|---------------|
| Rating (A) | Voltage (V) | Catalogue No. |
| 40 | 240/415 | 161SP0040 |
| 63 | 240/415 | 161SP0063 |
| 80 | 240/415 | 161SP0080 |
| 100 | 240/415 | 161SP0100 |
| 125 | 240/415 | 161SP0125 |



Triple Pole

| 3 Pole | | |
|------------|-------------|---------------|
| Rating (A) | Voltage (V) | Catalogue No. |
| 40 | 240/415 | 161TP0040 |
| 63 | 240/415 | 161TP0063 |
| 80 | 240/415 | 161TP0080 |
| 100 | 240/415 | 161TP0100 |
| 125 | 240/415 | 161TP0125 |



Double Pole

| 2 Pole | | |
|------------|-------------|---------------|
| Rating (A) | Voltage (V) | Catalogue No. |
| 40 | 240/415 | 161DP0040 |
| 63 | 240/415 | 161DP0063 |
| 80 | 240/415 | 161DP0080 |
| 100 | 240/415 | 161DP0100 |
| 125 | 240/415 | 161DP0125 |



Four Pole

| 4 Pole | | |
|------------|-------------|---------------|
| Rating (A) | Voltage (V) | Catalogue No. |
| 40 | 240/415 | 161FP0040 |
| 63 | 240/415 | 161FP0063 |
| 80 | 240/415 | 161FP0080 |
| 100 | 240/415 | 161FP0100 |
| 125 | 240/415 | 161FP0125 |

RESIDUAL CURRENT CIRCUIT BREAKER

PRODUCT OVERVIEW



Day after day we come across many mishaps hampering human lives due to negligent usage of electricity. Even a large number of industrial and domestic fires are attributed to and caused by electricity. Faulty insulated equipments or wrong usage of electrical devices cause current to flow through insulation to the earth. This is leakage current. This current poses two severe risk factors which are:

Fire Risk

Electrocution Risk

Residual Current Circuit Breaker provides the function of isolation switching and earth leakage protection of electrical circuits. It also provides the indirect protection of the operator's body against the dangerous effects of electric current.

It is also a protective device against fire caused by the electrical circuit fault.

RESIDUAL CURRENT CIRCUIT BREAKER

COMPLIANCE & CERTIFICATION:



New method of mounting on din rail and simple replacement



Test button for device testing



Bi-connect on both side



Terminal cover



Sealing device in On & Off position



Positive contact indication



Smart Features & Benefits

- Provide protection against earth fault/leakage current and also fulfill the functional isolation
- Automatically measures and disconnects the circuit when earth fault/leakage current occurs and exceeds the rated sensitivity
- High short-circuit current withstand capacity - 10kA
- Dual termination possible for cable and comb type busbar connection
- Equipped with finger protected disconnection terminals (IP20)
- Fire resistant plastic parts to withstand abnormal heating and strong impact
- Independent of line voltage. Also free from external voltage fluctuation
- Incorporates and filtering device for prevention of nuisance tripping due to transient voltage.

Range: 25A, 40A, 63A

Sensitivities: 30mA, 100mA, 300mA

Execution: Double Pole (2P), Four Pole (4P)

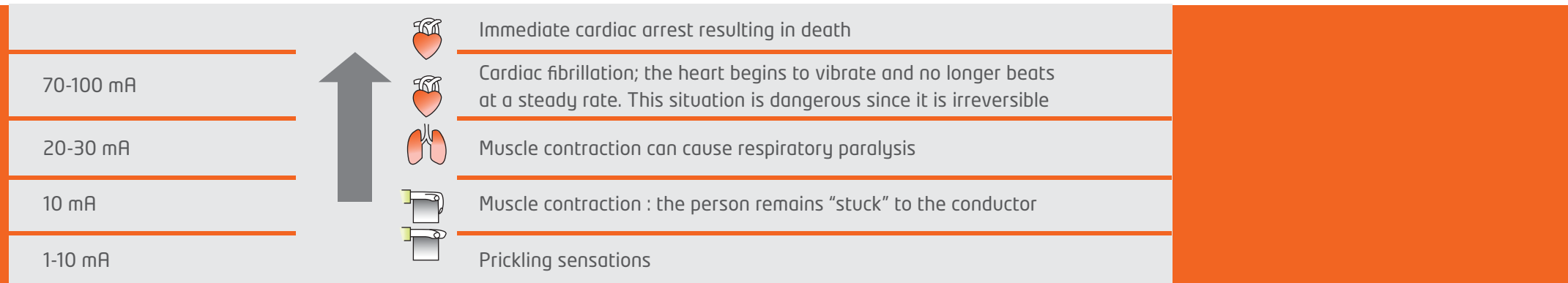
Specification: IS12640 Part 1/IEC61008-1

PROTECTION AGAINST ELECTROCUTION

The use of exposed, substandard, badly wired, wrongly connected or damaged equipment as well as frayed or badly repaired cables reduces the safety of an installation and increases the risk of person receiving an electric shock. Electrocutation is a passage of current through human body, which is dangerous. The flow of current through human body effects vital functions such as:

1. Breathing 2. Heartbeat

A correctly chosen RCCB can detect small currents flowing to earth and reduce the risk of electrocution. Effect of electric current through human body has been well researched and following chart summarizes the results:



However, electrical shock 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

AGAINST INDIRECT CONTACT

Over-current protection devices like MCB are unable to act promptly on small earth leakage currents. To comply with wiring regulations, the earth fault loop impedance in Ohms, multiplied by the rated tripping current of the RCD in amperes must not exceed 50.

PROTECTION IN THE EVENT OF DIRECT CONTACT

To provide extra protection in the event of direct contact with an (unearthed) live part, extremely sensitive RCCBs with a rated residual operating current of 30 mA ($I_{\Delta n}=30$ mA) are used instead of more conventional RCCBs with higher residual operating fault currents.

This extra protection is necessary in the following cases;

- The insulation of totally insulated devices or their load is damaged
- The earth wire is interrupted
- The earth wire and live wire have been accidentally transposed
- A component which is live in normal operation is touched during repair work
- In case of a socket outlet power circuit in rooms with a bath or shower
- For caravans, boats and yachts and the power supply on camping or berthing sites
- For electrical appliances used in medical facilities

The drawn-in-switch-off characteristics of residual current devices with a rated fault current of 10 and 30 mA is proof that these are able to prevent the occurrence of dangerous heart chamber fibrillation. For this reason, residual current circuit breaker with rated fault current of 10 mA are used for protection of particularly exposed individually equipment.

Residual current circuit breaker with 30 mA rated fault current are already specified for many areas (bath, rooms with medical facilities, outside areas, agricultural land etc.)

WORKING PRINCIPLE

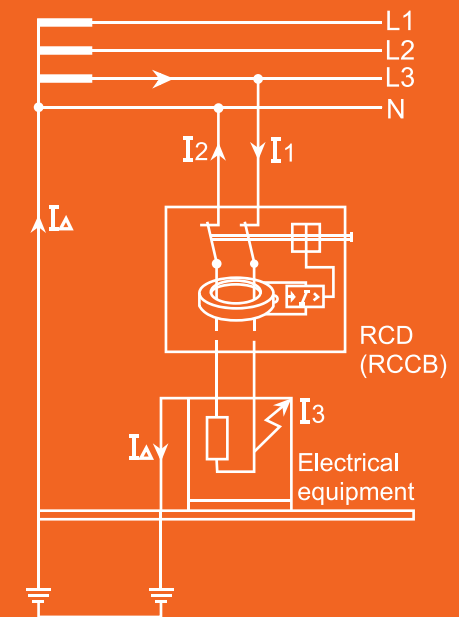
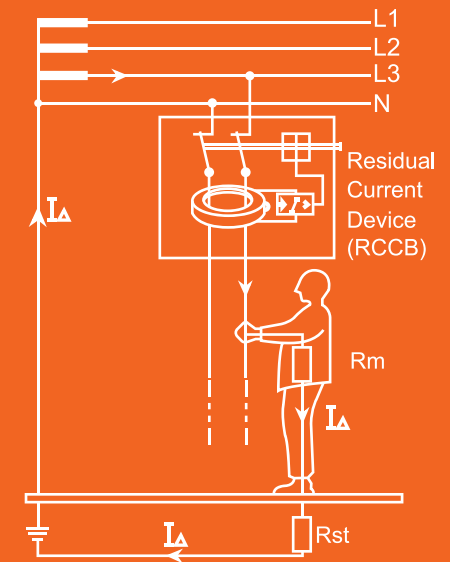
The RCCB function is based on Kirchoff's current law explained below:

- If the vector sum of incoming current is equal to the vector sum of outgoing current, the RCCB will not trip
- If the vector sum of incoming current is not equal to the vector sum of outgoing current, it indicates a leakage and the RCCB will trip

Due to magnetic imbalance in the transformer of the RCCB, the residual magnetism induces a current in the secondary winding coiled around the transformer core which acts on the trip relay. When reaching the trip value (dependent on the rated fault current), this current causes the armature of the magnetic trip to drop out.

The trip operates the lock which open the contacts by way of the energy stored within.

Consequently all poles of the system are separated from the mains system.

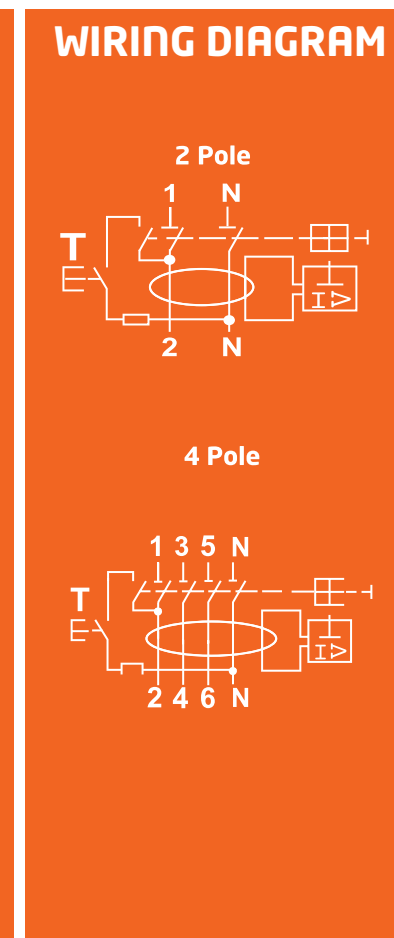
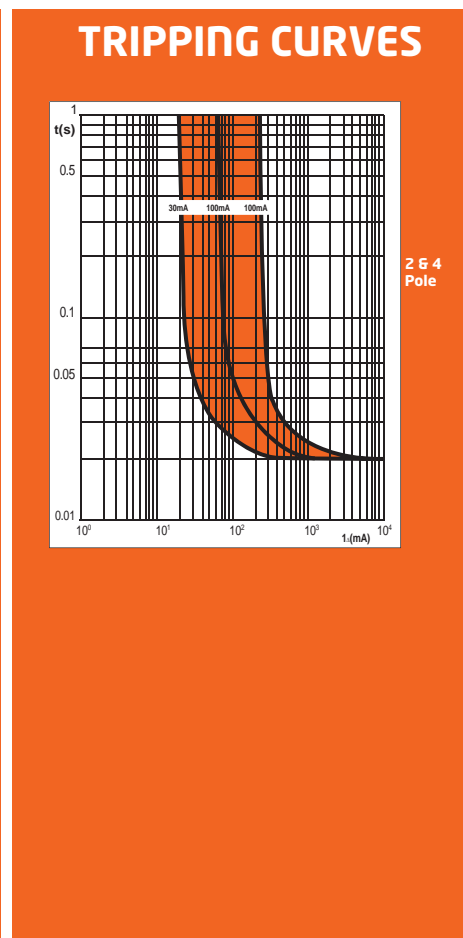
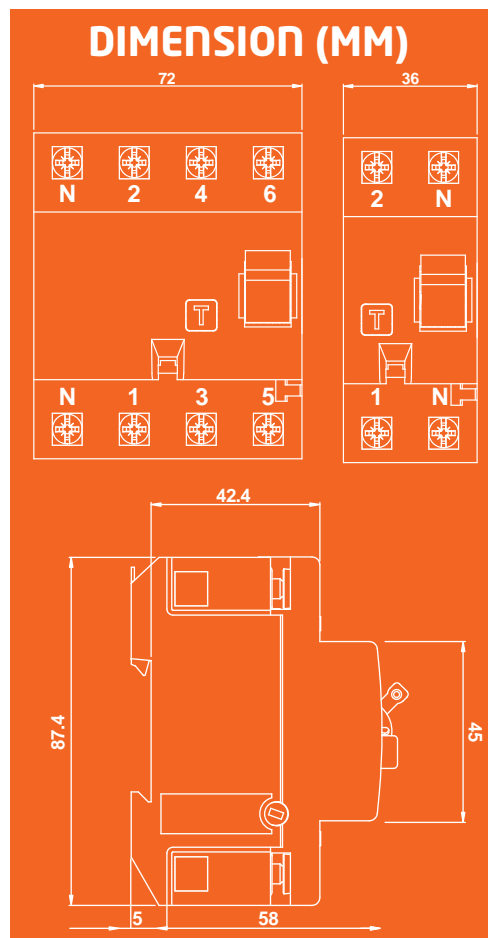


SENSITIVITY SELECTION CHART - RCCB

| Sensitivity | Applications |
|-------------|--|
| 30mA | Tripping current designed for additional protection against direct contact or where specially required by the Indian wiring regulations. e.g.- sockets outside the equipotential zone TT systems, supply to caravan installation etc., the 30mA RCCB protects against leakage currents & indirect contact with earth loop impedance upto 1667 ohms; for use as additional protection against direct contact, residual tripping current must not exceed 30mA. |
| 100mA | Tripping current is suitable for protection against indirect contact & leakage currents for larger installations ; the 100mA RCCB operate within 30ms, but don't provide the same level of personal protection as the 30mA units; the 100mA RCCB protects against leakage currents and indirect contact with earth loop impedance upto 500 Ohms. |
| 300mA | Less sensitive protection suitable for large installations having high level of leakage currents; 300mA RCCB protects against leakage current and indirect contact upto 1670hms earth loop impedance. |

TECHNICAL SPECIFICATIONS - RCCB

| | Details |
|--------------------------------------|---|
| Rated voltage U_n | 240v-DP |
| Rated current I_n | 415V -FP |
| Rated residual current I | 0.03 , 0.1, 0.3 A |
| Conditional short-circuit current | 10 kA |
| Rated making and breaking capacity I | 500A upto 40A RCCB 630A for 63A RCCB |
| Tripping Time | 0.2 Seconds |
| Back-up fuse | 63/100 A gG |
| Degree of protection | IP 20 (IP40) |
| Dielectric strength | 2000 V, 50Hz |
| Cross-section of connecting lead | 1 - 25 mm ² |
| No. of Poles | 2 Pole, 4 Pole |
| Rated Insulation Voltage (U_i) | 500 V |
| Rated Impulse Voltage (U_{imp}) | 4 kV |
| Operating Temperature | Min. = -25°C. Max. = +70°C |
| Vibration | 3g, 50Hz |
| Positive Contact Indicator | Yes ((Red-"ON", Green-"OFF")) |
| Shock Resistance | 40mm free fall |
| Auxiliary Contacts | On request |
| Shunt Trip | On request |
| Mounting | On Din rail IS/IEC 60715 |
| Installation Position | Vertical / Horizontal |
| Standards | IS 12640-1&IEC/EN61008-1 |



ORDERING INFORMATION



2P



4P

Rated short circuit capacity **10 kA**
 Rated Current **25 to 63 A**
 Sensitivity **30mA, 100mA, 300mA**

| AC Type | | |
|------------|------------------|---------------|
| Rating (A) | Sensitivity (mA) | 2 Pole (240V) |
| | | Cat. No. |
| 25 | 30 | 201DA03025 |
| | 100 | 201DA10025 |
| | 300 | 201DA30025 |
| 40 | 30 | 201DA03040 |
| | 100 | 201DA10040 |
| | 300 | 201DA30040 |
| 63 | 30 | 201DA03063 |
| | 100 | 201DA10063 |
| | 300 | 201DA30063 |

| AC Type | | |
|------------|------------------|----------------|
| Rating (A) | Sensitivity (mA) | 4 Pole (415 V) |
| | | Cat. No. |
| 25 | 30 | 201FA03025 |
| | 100 | 201FA10025 |
| | 300 | 201FA30025 |
| 40 | 30 | 201FA03040 |
| | 100 | 201FA10040 |
| | 300 | 201FA30040 |
| 63 | 30 | 201FA03063 |
| | 100 | 201FA10063 |
| | 300 | 201FA30063 |

'N' SERIES OF DISTRIBUTION BOARDS



PRODUCT OVERVIEW

The Distribution Board is not merely an enclosure but a composite system in itself, through which the power is distributed to various circuits received from a single source of supply. Enclosure may be single door or double door comprising of copper busbars, brass neutral links, and earth links to facilitate effective distribution of current.

Orient Electric introduces panoptic range of compact, elegant & economical Distribution Boards coupled with functionality and aesthetics suitable for residential, commercial & industrial applications.

Orient Electric's range of distribution boards are much more than enclosures. They incorporate new dimensions of protection for safety and convenience. Orient DBs combine very well with MCB & RCCB to provide comprehensive protection as a complete system.

DISTRIBUTION BOARDS



Smart Features & Benefits

- Compact design which occupies minimum space
- Raised neutral link for easy assembly
- Sliding door lock method with earthing and removable front plate
- Removable top / bottom gland plates
- Pozidrive screws for easy removal
- Tin plated insulated copper busbar
- Choice of plain and acrylic door
- Circuit identification labels
- Detachable din rail for easy assembly of breaker
- Suitable for surface as well as flush mounting

Colour :

RAL 7035, Light Grey, Matt Finish

Specification

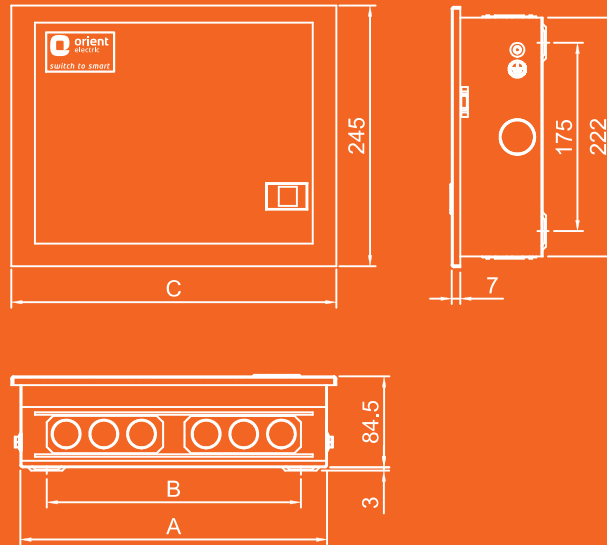
IS 8623, IS 13032, IEC 61439-3

'N' SERIES SPN DBS

DESCRIPTION

Metal DBs for Single Phase & Neutral (SPN) supply distribution.

Available in single, double & acrylic door.



Technical Specification

| | |
|---|--|
| Type of Installation | Surface & Flush mounting |
| Colour / Finish | RAL 7035, Light grey matt finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240 V a.c, 1 Phase |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP30 for single door IP42 for double door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming: | Two pole MCBs / RCCB / Isolator |
| Outgoing: | SP MCBs |

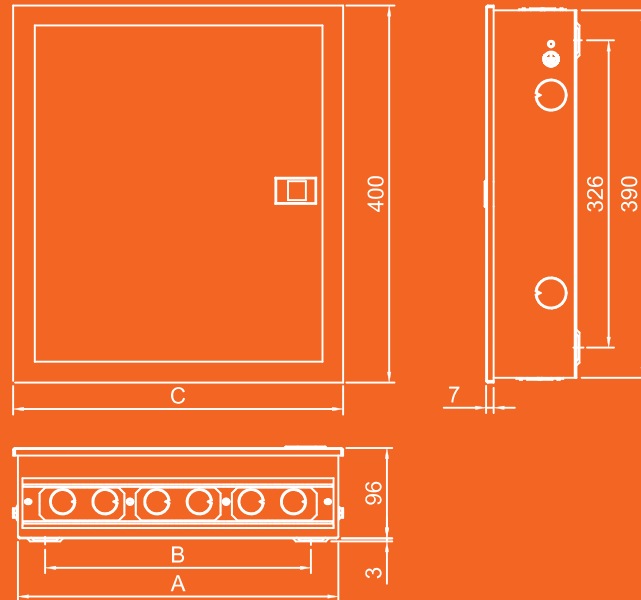
| No. of Ways | SINGLE DOOR | | | DOUBLE DOOR | | | ACRYLIC DOOR | | | Ø 26, K'OUT TOP/BOTTOM | Ø 26, K'OUT LH/RH SIDE | | | |
|-------------|-------------|-----|-----|-------------|-------------|-----|--------------|-----|-------------|------------------------|------------------------|-----|------------|-----------|
| | CAT. No. | A | B | C | CAT. No. | A | B | C | CAT. No. | | | A | B | C |
| 4 | 301SSDRG04T | 135 | 60 | 150 | 301SDDRG04T | 145 | 96 | 162 | 301SADRG04T | 145 | 96 | 162 | 2 / 2 Nos. | 1 / 1 No. |
| 6 | 301SSDRG06T | 170 | 95 | 185 | 301SDDRG06T | 180 | 131 | 197 | 301SADRG06T | 180 | 131 | 197 | 2 / 2 Nos. | 1 / 1 No. |
| 8 | 301SSDRG08T | 205 | 130 | 220 | 301SDDRG08T | 215 | 166 | 232 | 301SADRG08T | 215 | 166 | 232 | 3 / 3 Nos. | 1 / 1 No. |
| 10 | 301SSDRG10T | 240 | 165 | 255 | 301SDDRG10T | 250 | 201 | 267 | 301SADRG10T | 250 | 201 | 267 | 3 / 3 Nos. | 1 / 1 No. |
| 12 | 301SSDRG12T | 275 | 200 | 290 | 301SDDRG12T | 285 | 236 | 302 | 301SADRG12T | 285 | 236 | 302 | 4 / 4 Nos. | 1 / 1 No. |
| 14 | 301SSDRG14T | 310 | 235 | 325 | 301SDDRG14T | 320 | 271 | 337 | - | - | - | - | 4 / 4 Nos. | 1 / 1 No. |
| 16 | 301SSDRG16T | 350 | 275 | 365 | 301SDDRG16T | 355 | 306 | 372 | - | - | - | - | 5 / 5 Nos. | 1 / 1 No. |

'N' SERIES TPN DB

Description

Metal DBs for Three Phase & Neutral (TPN) supply distribution.

Available in single, double and acrylic door.



Technical Specification

| | |
|---|--|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey matt finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240-415 V a.c, 3 Phase/4 wire |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP30 for single door IP42 for double door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming: | Four pole MCBs / RCCB / Isolator |
| Outgoing: | SP MCBs |

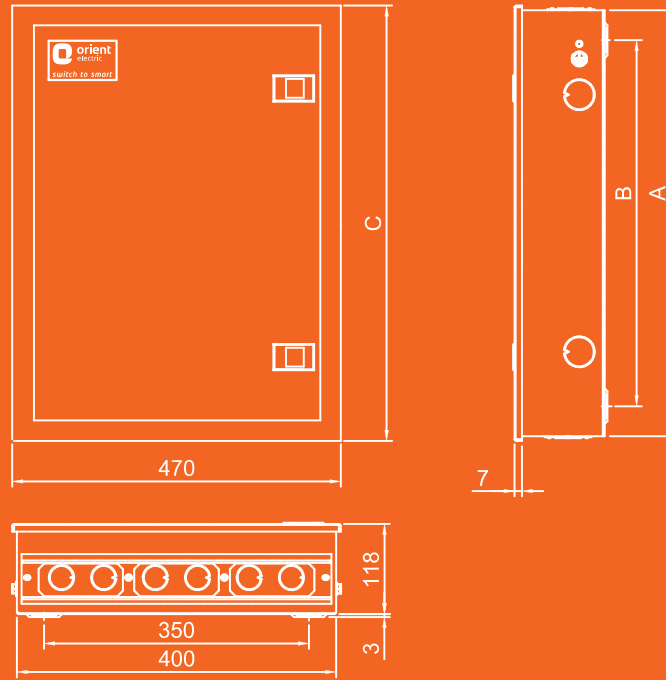
| No. of Ways | SINGLE DOOR | | | DOUBLE DOOR | | | ACRYLIC DOOR | | | Ø 26, K'OUT TOP/BOTTOM | Ø 26, K'OUT LH/RH SIDE | | | |
|-------------|-------------|-----|-----|-------------|-------------|-----|--------------|-----|-------------|---------------------------|---------------------------|-----|------------|------------|
| | CAT. No. | A | B | C | CAT. No. | A | B | C | CAT. No. | | | A | B | C |
| 4 | 301TSDRG04T | 295 | 220 | 310 | 301TDDRG04T | 270 | 212 | 280 | 301TADRG04T | 270 | 212 | 280 | 4 / 4 Nos. | 3 / 3 Nos. |
| 6 | 301TSDRG06T | 330 | 255 | 345 | 301TDDRG06T | 340 | 282 | 350 | 301TADRG06T | 340 | 282 | 350 | 4 / 4 Nos. | 3 / 3 Nos. |
| 8 | 301TSDRG08T | 460 | 385 | 475 | 301TDDRG08T | 410 | 352 | 420 | 301TADRG08T | 410 | 352 | 420 | 6 / 4 Nos. | 3 / 3 Nos. |
| 10 | 301TSDRG10T | 600 | 525 | 620 | 301TDDRG10T | 480 | 422 | 490 | 301TADRG10T | 480 | 422 | 490 | 6 / 6 Nos. | 3 / 3 Nos. |
| 12 | 301TSDRG12T | 740 | 665 | 760 | 301TDDRG12T | 550 | 492 | 560 | 301TADRG12T | 550 | 492 | 560 | 8 / 8 Nos. | 3 / 3 Nos. |

'N' SERIES TPN VERTICAL DB

Description

Metal DBs with 200A vertical bus-bar for Three Phase & Neutral (TPN) supply distribution.

Available in single, double & acrylic door.



Technical Specification

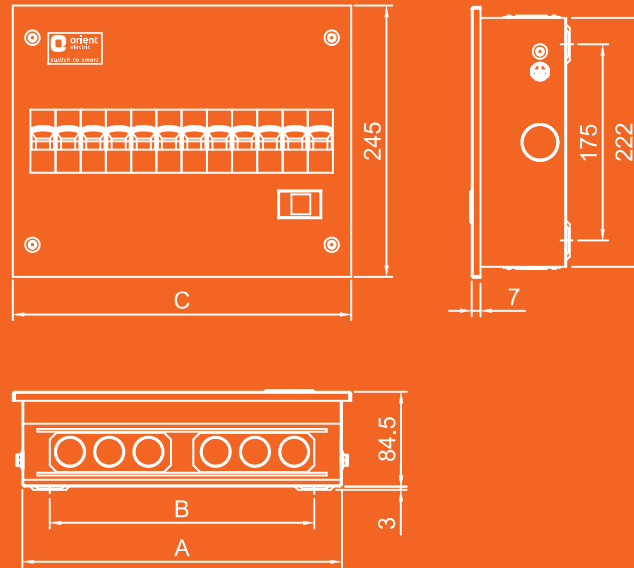
| | |
|---|--|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey matt finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 200 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240-415 V a.c, 3 Phase/4 wire |
| Neutral Bar Terminal Capacity | 35 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP30 for single door IP42 for double door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming | Four pole MCBs / RCCB / Isolator |
| Outgoing | SP/TP MCBs |

| No. of Ways | SINGLE DOOR | | | DOUBLE DOOR | | | Ø 26, K'OUT TOP/BOTTOM | Ø 26, K'OUT LH/RH SIDE | | |
|-------------|-------------|-----|-----|-------------|-------------|-----|---------------------------|---------------------------|------------|------------|
| | CAT. No. | A | B | C | CAT. No. | A | | | B | C |
| 4 | 302TSDRG04T | 500 | 450 | 520 | 302TDDRG04T | 500 | 450 | 520 | 5 / 5 Nos. | 2 / 2 Nos. |
| 6 | 302TSDRG06T | 550 | 500 | 570 | 302TDDRG06T | 550 | 500 | 570 | 5 / 5 Nos. | 3 / 3 Nos. |
| 8 | 302TSDRG08T | 600 | 550 | 620 | 302TDDRG08T | 600 | 550 | 620 | 5 / 5 Nos. | 4 / 4 Nos. |
| 12 | 302TSDRG12T | 700 | 650 | 720 | 302TDDRG12T | 700 | 650 | 720 | 5 / 5 Nos. | 6 / 6 Nos. |

'N' SERIES CONSUMER UNIT SPN DBS

Description

Consumer Unit DBs for Single Phase & Neutral (SPN) supply distribution.



Technical Specification

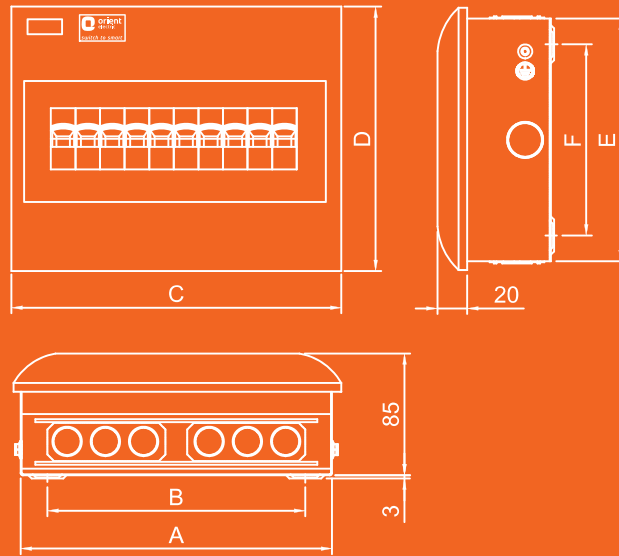
| | |
|---|--------------------------------------|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240 V a.c, 1 Phase |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP30 for single door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming: | Two pole MCBs / RCCB / Isolator |
| Outgoing: SP MCBs | SP MCBs |

| No. of Ways | SINGLE DOOR | | | | Ø 26, K'OUT TOP/BOTTOM | Ø 26, K'OUT LH/RH SIDE |
|-------------|-------------|-----|-----|-----|---------------------------|---------------------------|
| | CAT. No. | A | B | C | | |
| 4 | 321SSWRG04T | 135 | 60 | 150 | 2 / 2 Nos. | 1 / 1 No. |
| 6 | 321SSWRG06T | 170 | 95 | 185 | 2 / 2 Nos. | 1 / 1 No. |
| 8 | 321SSWRG08T | 205 | 130 | 220 | 3 / 3 Nos. | 1 / 1 No. |
| 12 | 321SSWRG12T | 275 | 200 | 290 | 4 / 4 Nos. | 1 / 1 No. |

'N' SERIES CONSUMER UNIT SPN DBS WITH ACRYLIC WINDOW

Description

Consumer Unit DBs with acrylic window for Single Phase & Neutral (SPN) supply distribution.



Technical Specification

| | |
|---|--------------------------------------|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240 V a.c, 1 Phase |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP40 for single door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming: | Two pole MCBs / RCCB / Isolator |
| Outgoing: SP MCBs | SP MCBs |

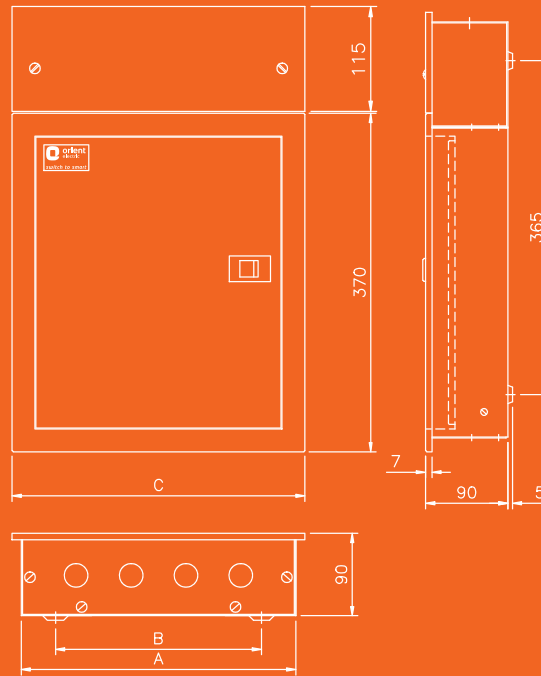
| No. of Ways | CAT. No. | SINGLE DOOR | | | | | | Ø 26, K'OUT TOP/BOTTOM | Ø 26, K'OUT LH/RH SIDE | Window Cat No. |
|-------------|-------------|-------------|-----|-----|-----|-----|-----|---------------------------|---------------------------|----------------|
| | | A | B | C | D | E | F | | | |
| 4 | 321SAWRG04T | 135 | 80 | 147 | 160 | 140 | 70 | 2 / 2 Nos. | 1 / 1 No. | 321SAWRG04 |
| 6 | 321SAWRG06T | 185 | 130 | 215 | 197 | 175 | 105 | 2 / 2 Nos. | 1 / 1 No. | 321SAWRG06 |
| 8 | 321SAWRG08T | 220 | 165 | 250 | 212 | 190 | 120 | 3 / 3 Nos. | 1 / 1 No. | 321SAWRG08 |
| 12 | 321SAWRG12T | 290 | 235 | 320 | 212 | 190 | 120 | 4 / 4 Nos. | 1 / 1 No. | 321SAWRG12 |
| 16 | 321SAWRG16T | 365 | 310 | 395 | 212 | 190 | 120 | 5 / 5 Nos. | 1 / 1 No. | 321SAWRG16 |

'N' SERIES PREWIRED SPN DBS

Description

Metal DBs for Three Phase & Neutral (TPN) supply distribution with total phase segregation.

Available in double door.



Technical Specification

| | |
|---|--------------------------------------|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240 V a.c, 1 Phase |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP42 |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming: | Two pole MCBs / RCCB / Isolator |
| Outgoing: SP MCBs | SP MCBs |

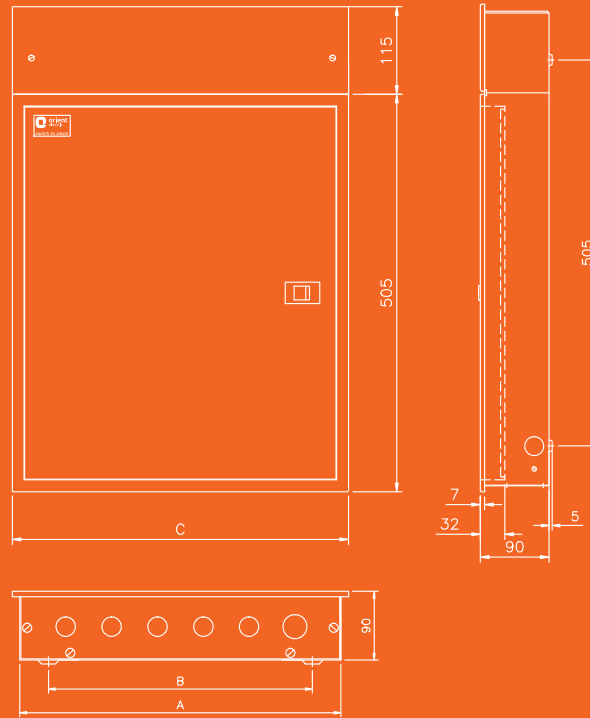
| Dimensions (mm) | | | | | | ø26, K'OUT | | |
|-----------------|-------|-----|-----|-----|-----------|------------|--------|---------------------|
| NO OF WAYS | IC/OG | A | B | C | 4 SQMM TB | TOP | BOTTOM | DOUBLE DOOR CAT NO. |
| 6 | 6+2 | 260 | 165 | 280 | 6 NOS | 3 NOS | 3 NOS | 311SDDRG06T |
| 8 | 8+2 | 300 | 205 | 320 | 8 NOS | 4 NOS | 4 NOS | 311SDDRG08T |
| 10 | 10+2 | 340 | 245 | 360 | 10 NOS | 5 NOS | 5 NOS | 311SDDRG10T |
| 12 | 12+2 | 380 | 285 | 400 | 12 NOS | 6 NOS | 6 NOS | 311SDDRG12T |
| 16 | 16+2 | 460 | 365 | 480 | 16 NOS | 6 NOS | 6 NOS | 311SDDRG16T |

'N' SERIES PREWIRED TPN DBS

Description

Metal DBs for Three Phase & Neutral (TPN) supply distribution.

Available in double door.



Technical Specification

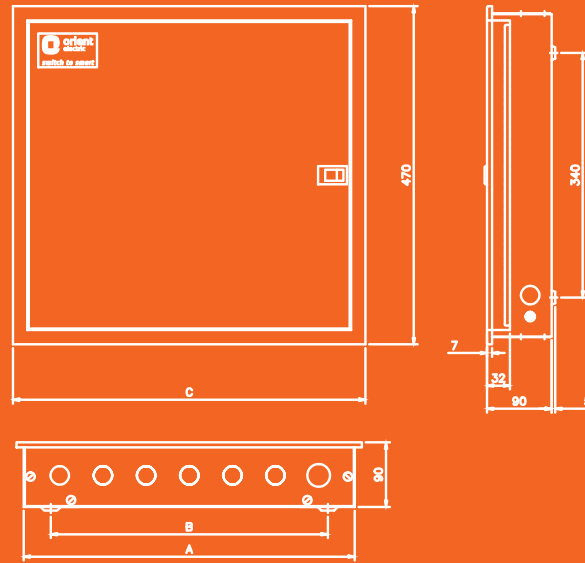
| | |
|---|--------------------------------------|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240-415 V a.c, 3 Phase/4 wire |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP42 |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming | Four pole MCBs / RCCB / Isolator |
| Outgoing | SP MCBs |

| NO OF WAYS | Dimensions (mm) | | | PHASE TB | ø26, K'OUT | | ø26, K'OUT | | ø26, K'OUT | | |
|------------|-----------------|-----|-----|----------|------------|--------|------------|--------|------------|---------|---------------------|
| | A | B | C | | TOP | BOTTOM | TOP | BOTTOM | LH SIDE | RH SIDE | DOUBLE DOOR CAT NO. |
| 4 | 420 | 345 | 440 | 12 NOS | 5 NOS | 5 NOS | 1 NO. | 1 NO. | 1 NO. | 1 NO. | 311TDDR04T |
| 6 | 455 | 380 | 475 | 18 NOS | 5 NOS | 5 NOS | 1 NO. | 1 NO. | 1 NO. | 1 NO. | 311TDDR06T |
| 8 | 490 | 415 | 510 | 24 NOS | 6 NOS | 6 NOS | 1 NO. | 1 NO. | 1 NO. | 1 NO. | 311TDDR08T |
| 12 | 630 | 555 | 650 | 36 NOS | 8 NOS | 8 NOS | 1 NO. | 1 NO. | 1 NO. | 1 NO. | 311TDDR12T |

'N' SERIES PER PHASE ISOLATION TPN DBS

Description

Metal DBs for Three Phase & Neutral (TPN) supply distribution with (PPI) per phase isolation.



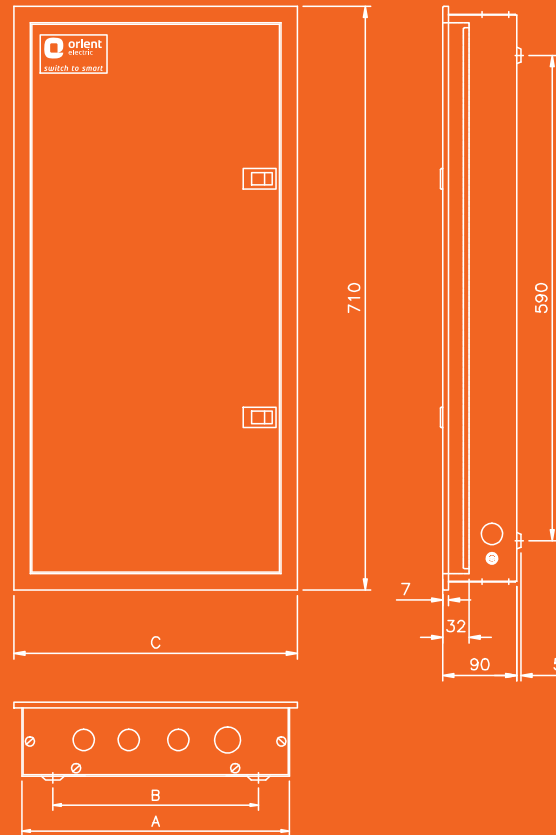
| Technical Specification | |
|---|--|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240-415 V a.c, 3 Phase/4 wire |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP30 for single door IP42 for double door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming | Four pole MCBs / RCCB / Isolator |
| Sub Incoming | Two pole MCBs / RCCB |
| Outgoing | SP MCBs |

| NO OF WAYS | Dimensions (mm) | | | ø32 K'OUT | | ø26, K'OUT | | ø32 K'OUT | | |
|------------|-----------------|-----|-----|-----------|--------|------------|--------|-----------|---------|--------------|
| | A | B | C | TOP | BOTTOM | TOP | BOTTOM | LH SIDE | RH SIDE | DOOR CAT NO. |
| 4 | 375 | 300 | 395 | 1 NO | 1 NO | 4 NOS | 4 NOS | 1 NOS | 1 NOS | 351TDDRG04T |
| 6 | 470 | 395 | 490 | 1 NO | 1 NO | 6 NOS | 6 NOS | 1 NOS | 1 NOS | 351TDDRG06T |
| 8 | 500 | 425 | 520 | 1 NO | 1 NO | 7 NOS | 7 NOS | 1 NOS | 1 NOS | 351TDDRG08T |

'N' SERIES PER PHASE ISOLATION TPN 4 TIER DBS

Description

Metal DBs for Three Phase & Neutral (TPN) supply distribution with (PPI) per phase isolation.



Technical Specification

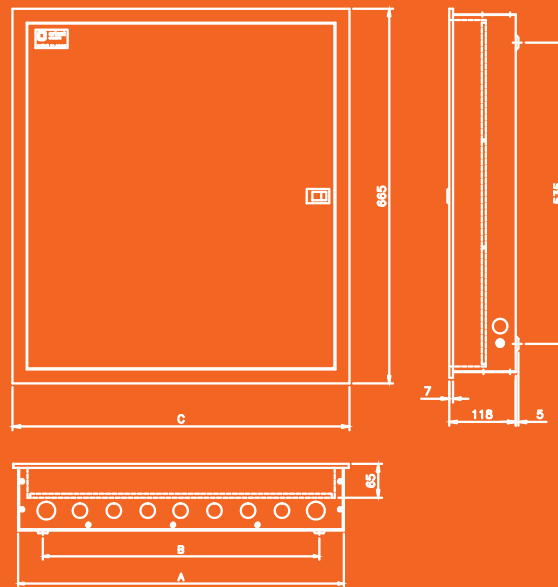
| | |
|---|--|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240-415 V a.c, 3 Phase/4 wire |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP30 for single door IP42 for double door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming | Four pole MCBs / RCCB / Isolator |
| Sub Incoming | Two pole MCBs / RCCB |
| Outgoing | SP MCBs |

| NO OF WAYS | Dimensions (mm) | | | ø32, K'OUT | | ø26, K'OUT | | ø32, K'OUT | | | |
|------------|-----------------|-----|-----|------------|------|------------|-------|------------|--------|---------|----------------------------|
| | IG/OG | A | B | C | TOP | BOTTOM | TOP | BOTTOM | LHSIDE | RH SIDE | 4 TIER DOUBLE DOOR CAT NO. |
| 8 | 8+6+24 | 375 | 300 | 395 | 1 NO | 1 NOS | 4 NOS | 4 NOS | 1 NOS | 1 NOS | 352TDDRG08T |
| 12 | 8+6+36 | 450 | 375 | 470 | 1 NO | 1 NOS | 5 NOS | 5 NOS | 1 NOS | 1 NOS | 352TDDRG12T |

'N' SERIES 7 SEGMENT DBS

Description

Metal 7 Segment DBs for Three Phase & Neutral (TPN) supply distribution.



Technical Specification

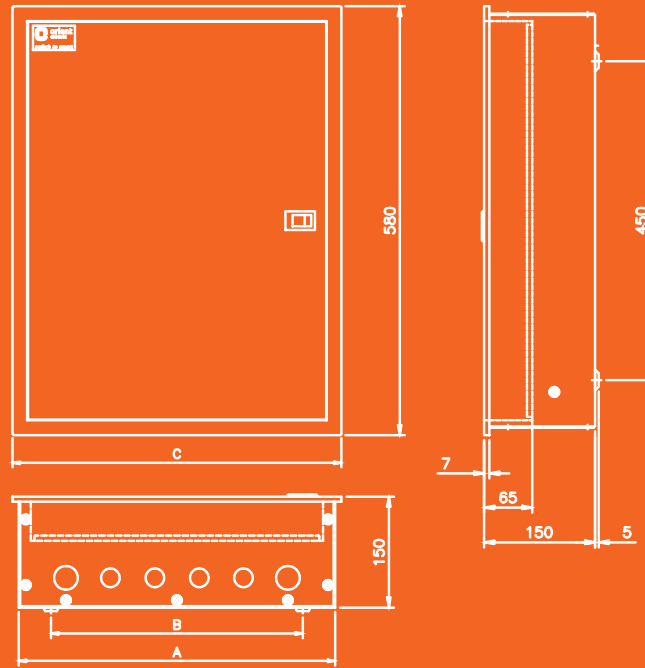
| | |
|---|--------------------------------------|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240-415 V a.c, 3 Phase/4 wire |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP42 for double door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming | Four pole MCBs / RCCB / Isolator |
| Sub-incoming | Two pole MCBs / RCCB / Isolator |
| Outgoing | SP MCBs |

| NO OF WAYS | Dimensions (mm) | | | Ø32, K'OUT | | Ø26, K'OUT | | SIDE, K'OUT | | |
|------------|-----------------|-----|-----|------------|--------|------------|--------|-------------|--------|---------------------|
| | A | B | C | TOP | BOTTOM | TOP | BOTTOM | LHSIDE | RHSIDE | DOUBLE DOOR CAT NO. |
| 4 | 520 | 430 | 540 | 1 NOS | 1 NOS | 5 NOS | 5 NOS | 1 NOS | 1 NOS | 341TDDRG04T |
| 6 | 620 | 530 | 640 | 1 NOS | 1 NOS | 7 NOS | 7 NOS | 1 NOS | 1 NOS | 341TDDRG06T |
| 8 | 730 | 640 | 750 | 1 NOS | 1 NOS | 9 NOS | 9 NOS | 1 NOS | 1 NOS | 341TDDRG08T |
| 12 | 940 | 850 | 960 | 1 NOS | 1 NOS | 13 NOS | 13 NOS | 1 NOS | 1 NOS | 341TDDRG12T |

'N' SERIES VERTICAL PHASE SELECTOR TPN DBS

Description

Metal DB for Three Phase & Neutral (TPN) supply distribution with selector switches for phase selection.



Technical Specification

| | |
|---|--------------------------------------|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Distribution Technique | Insulated Bus Bar |
| Material | CRCA sheet steel |
| Bus bar Rating | 100 A |
| Dielectric strength | 2.5 kV |
| Bus bar Short Time Withstand (Icw) | 5 kA for 0.1 second |
| Bus bar Conditional Short Circuit (Ics) | 10 kA |
| Voltage Rating | 240-415 V a.c, 3 Phase/4 wire |
| Neutral Bar Terminal Capacity | 16 mm ² |
| Earthing Bar Terminal Capacity | 16 mm ² |
| Index of Protection (IP) | IP42 for double door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |
| Incoming | Four pole MCBs / RCCB / Isolator |
| Outgoing | SP MCBs |

| NO OF WAYS | Dimensions (mm) | | | ø26, K'OUT | | ø32, K'OUT | | 63A Double Door Cat No. |
|------------|-----------------|-----|-----|------------|--------|------------|--------|-------------------------|
| | A | B | C | TOP | BOTTOM | TOP | BOTTOM | |
| 4 | 420 | 345 | 440 | 4 NOS | 4 NOS | 2 NOS | 2 NOS | 332TDDRG6304T |
| 6 | 455 | 380 | 475 | 5 NOS | 5 NOS | 2 NOS | 2 NOS | 332TDDRG6306T |
| 8 | 490 | 415 | 510 | 5 NOS | 5 NOS | 2 NOS | 2 NOS | 332TDDRG6308T |

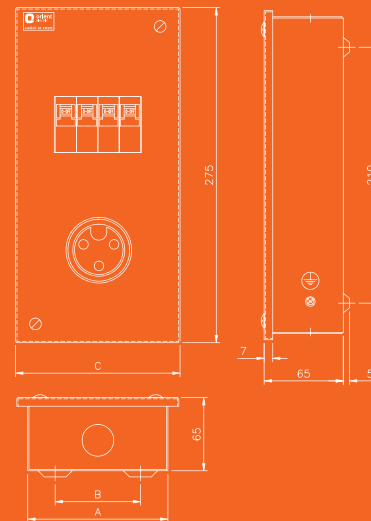
'N' SERIES PLUG & SOCKET DBS

SPARES - PLUG & SOCKET



Description

Insulated / Metal-clad plug & socket outlets suitable for protection of appliances like ACs & Motors



| Technical Specification | |
|--------------------------|--------------------------------------|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Material | CRCA sheet steel |
| Voltage Rating | 240 V a.c, 1 Phase |
| Index of Protection (IP) | IP30 for single door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |

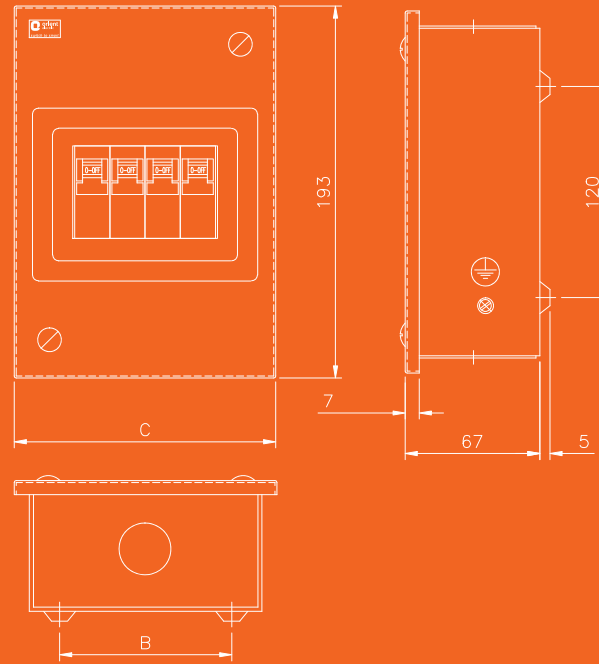
| Plug Assembly | | | Socket Assembly |
|---------------|------|------------|-----------------|
| Rating | Type | Cat No. | Cat No. |
| 20A | SPN | 372SPARG20 | 372SSARG20 |
| 30A | TPN | 372TPARG30 | 372TSARG30 |

| Rating | Dimensions (mm) | | | ø26, K'OUT | | CAT NO. |
|---------|-----------------|----|-----|------------|--------|-----------|
| | A | B | C | TOP | BOTTOM | |
| 20A SP | 120 | 80 | 135 | 2 | 2 | 371SPG20T |
| 20A SPN | 120 | 80 | 135 | 2 | 2 | 371SRG20T |
| 30A TPN | 120 | 80 | 135 | 2 | 2 | 371TRG30T |

'N' SERIES MCB ENCLOSURE

Description

Enclosures for independent cut off/connections of electrical appliances



Technical Specification

| | |
|--------------------------|--------------------------------------|
| Type of Installation | Surface & Flush Mounting |
| Colour / Finish | RAL 7035, Light grey Textured finish |
| Material | CRCA sheet steel |
| Voltage Rating | 240 V a.c, 1 Phase |
| Index of Protection (IP) | IP30 for single door |
| Insulation Voltage (Ui) | 690 V a.c |
| Frequency | 50 Hz |
| Ambient Temperature | -5° C to 40° C |
| Reference Standard | IS 8623; IS 13032; IEC 61439-3 |

Dimensions (mm)

| NO OF WAYS | Dimensions (mm) | | | ø26, K'OUT | | |
|------------|-----------------|----|-----|------------|--------|---------------------|
| | A | B | C | TOP | BOTTOM | Sheet Steel Cat No. |
| 2 | 85 | 45 | 100 | 1 NO | 1 NO | 361DPSDSSRGT |
| 4 | 120 | 80 | 135 | 1 NO | 1 NO | 361DPSDSSRGT |

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Technical Assistance:

Telephonic technical assistance for selection of products, technical information, guidance, wiring diagrams and estimation is now made available to you at each Regional Office.

Contact the Technical Officer of Orient Electric at the following telephone numbers.

New Delhi - Ph: 011 40507000

Kolkata - Ph: 033-23203619

Mumbai - Ph: 022-25334542

Chennai - Ph: 044-65551091

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