## Power Distribution System


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## TSB3-63 Miniature Circuit Breaker

## Application

SB3-63 series MCB with $4.5 / 6 \mathrm{kA}$ breaking capacity makes ideal for commercial and industrial applications. The products comply with IEC60898-1.

| Number of Poles | 1P, 2P, 3P, 4P |
| :---: | :---: |
| Rated Current | 1A, 2A, 3A, 4A, 5A, 6A, 8A, 10A, 13A, 16A, 20A, 25A, 32A, 40A, 50A, 63A |
| Rated Operational Voltage | 1P: 240/415V 2P, 3P, 4P: 415V |
| Trip Unit Technology | Thermal-magnetic |
| Curve Code | B, C, D |
| Rated short-circuit capacity Icn:(A) | 6000A for $\ln 6 \mathrm{~A}$ to 40A 4500A for In 50A 63A |
| Energy Limiting Class 12t: | 3 comforming to IEC/EN 60898-1 |
| [Ui] Rated Insulation Voltage | 415 V AC |
| [Uimp] Rated Impulse Withstand Voltage | 4000V |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 4000 cycles |
| Tightening Torque | M5 2.5N.m II |
| IP Degree of Protection | IP20 comforming to IEC 60529 <br> IP40(modular enclosure) comforming to IEC 60529 |
| Ambient Air Temperature for Operation | $-5 \sim 40^{\circ} \mathrm{C}$ |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Pollution Degree | 2 comforming to IEC/EN 60898-1 |
| Upper Wiring Lower Wiring | $\text { 骝 } 1-25 \mathrm{~mm}^{2}$ |

## Dimensions

TSB3-63 3P

intertek


TSB4-63 Miniature Circuit Breaker

## Application

TSB4-63 series MCB is high performance current limiting device with the ability to disconnect short circuits up to $6 / 10 \mathrm{kA}$. Thermal trip unit is for normal overload protection and magnetic trip
unit is for short circuit protection. The products comply with IEC60898-1 or IEC60947-2.

## Specification

| Number of Poles | 1P, 2P, 3P, 4P |
| :---: | :---: |
| Rated Current | $1 \mathrm{~A}, 2 \mathrm{~A}, 3 \mathrm{~A}, 4 \mathrm{~A}, 5 \mathrm{~A}, 6 \mathrm{~A}, 8 \mathrm{~A}, 10 \mathrm{~A}, 13 \mathrm{~A}, 16 \mathrm{~A}, 20 \mathrm{~A}, 25 \mathrm{~A}, 32 \mathrm{~A}, 40 \mathrm{~A}, 50 \mathrm{~A}, 63 \mathrm{~A}$ |
| Rated Operational Voltage | 1P: 240/415V 2P, 3P, 4P:415V |
| Trip Unit Technology | Thermal-magnetic |
| Curve Code | B, C, D |
| Breaking Capacity | $6 \mathrm{kA} \mathrm{or} \mathrm{10kA}$ |
| Energy Limiting Class 12t: | 3 comforming to IEC/EN 60898-1 |
| [Ui] Rated Insulation Voltage | 500 V AC |
| [Uimp] Rated Impulse Withstand Voltage | 4000V |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 4000 cycles |
| Tightening Torque | M5 2.5N.m II |
| IP Degree of Protection | IP20 comforming to IEC 60529 IP40(modular enclosure) comforming to IEC 60529 |
| Ambient Air Temperature for Operation | $-5 \sim 40^{\circ} \mathrm{C}$ |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Pollution Degree | 2 comforming to IEC/EN 60898-1 |
| Upper Wiring | 70日, 1-25mm |
| Lower Wiring |  |

TSB4-63 2P


## Dimensions



TSB4-63 3P

## TSN3－32 Miniature Circuit Breaker

## Application

TSN3－32 series MCB is an extensive range of DIN rail mounted，phase－neutral miniature circuit breaker．Boasting exclusive features，they provide absolute protection to circuits against short－circuit currents and overload currents in both residential and small building applications．

| Number of Poles | $1 \mathrm{P}+\mathrm{N}$ |
| :---: | :---: |
| Rated Current | 1A，2A，3A，4A，5A，6A，10A，16A，20A，25A，32A， |
| Rated Operational Voltage | 230V／240V～ |
| Trip Unit Technology | Thermal－magnetic |
| Curve Code | B，C，D |
| Standards | IEC／EN 60898－1 |
| Breaking Capacity | $\mathrm{lcn=1cs=3000A}$ |
| ［Ui］Rated Insulation Voltage | 415 VAC |
| ［Uimp］Rated Impulse Withstand Voltage | 4000 V |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 4000 cycles |
| Tightening Torque | M4 2N．m II |
| IP Degree of Protection | IP20 comforming to IEC 60529 <br> IP40（modular enclosure）comforming to IEC 60529 |
| Ambient Air Temperature for Operation | $-5 \sim 40^{\circ} \mathrm{C}$ |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Pollution Degree | 2 comforming to IEC／EN 60898－1 |
| Upper Wiring Lower Wiring | 加留 $1-16 \mathrm{~mm}^{2}$ 览县 |
| Lower Wiring |  |

## Dimensions



## TSN4－40 Miniature Circuit Breaker

## Application

TSN4－40 series MCB is high performance current limiting device with the ability to disconnect short circuits up to $4.5 / 6 \mathrm{kA}$ ．Thermal trip unit is for normal overload protection and magnetic trip unit is for short circuit protection

| Number of Poles | 1P＋N |
| :---: | :---: |
| Rated Current | $1 \mathrm{~A}, 2 \mathrm{~A}, 3 \mathrm{~A}, 4 \mathrm{~A}, 5 \mathrm{~A}, 6 \mathrm{~A}, 10 \mathrm{~A}, 16 \mathrm{~A}, 20 \mathrm{~A}, 25 \mathrm{~A}, 32 \mathrm{~A}, 40 \mathrm{~A}$ |
| ［Ue］Rated Operational Voltage | $230 \mathrm{~V} / 240 \mathrm{~V}$～ |
| Trip Unit Technology | Thermal－magnetic |
| Curve Code | B，C，D |
| Standards | IEC／EN 60898－1 |
| Breaking Capacity | $\mathrm{lcn}=1 \mathrm{cs}=4500 / 6000 \mathrm{~A}$ |
| Energy Limiting Class 12t： | 3 comforming to IEC／EN 60898－1 |
| ［Ui］Rated Insulation Voltage | 415 VAC |
| ［Uimp］Rated Impulse Withstand Voltage | 4000 V |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 4000 cycles |
| Tightening Torque | M4 2N．m II |
| IP Degree of Protection | IP20 comforming to IEC 60529 <br> IP40（modular enclosure）comforming to IEC 60529 |
| Ambient Air Temperature for Operation | $-5 \sim 40^{\circ} \mathrm{C}$ |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Pollution Degree | 2 comforming to IEC／EN 60898－1 |
| Upper Wiring |  |
| Lower Wiring |  |

## Dimensions




TSN4－40


TSN4－20Q
Max 20A


TSN4－40B

## TSB4-125 Miniature Circuit Breaker



TSB4-125 1P


TSB4-125 2P


TSB4-125 3P

## Application

TSB4-125 series MCB is suitable for AC $50 / 60 \mathrm{~Hz}$ rated voltage 400 V and below, rated current to 125 A circuit for overload, short circuit protection, can also be used as a line infrequent operation conversion. it is suitable for commercial office buildings and residential houses. The products comply with IEC60898-1

## Specification

| Number of Poles | $1 \mathrm{P}, 2 \mathrm{P}, 3 \mathrm{P}, 4 \mathrm{P}$ |
| :--- | :---: |
| Rated Current | $80 \mathrm{~A}, 100 \mathrm{~A}, 125 \mathrm{~A}$ |
| Breaking Capacity | 6000 A |
| Rated Voltage | 230V/400V $240 \mathrm{~V} / 415 \mathrm{~V} \sim$ |
| Trip Unit Technology | Thermal-magnetic |
| Curve Code | $\mathrm{C}, \mathrm{D}$ |
| [Uimp] Rated Impulse | 4000 V |
| Withstand Voltage | 10000 cycles |
| Mechanical Durability | 6000 cycles |
| Electrical Durability | $\mathrm{M} 73.5 \mathrm{~N} . \mathrm{m} \mathrm{II}$ |
| Tightening Torque | $\geqslant 20000$ |
| Endurance | $-5^{\circ} \mathrm{C} \sim+40^{\circ} \mathrm{C}$ |
| Circumstance Temperature | IP 20 |
| Protection Degree |  |

## Characteristic Curve


typec
Dimensions


## TSB5-125 Miniature Circuit Breaker

## Application

TSB5-125 series MCB is used for AC $50 / 60 \mathrm{~Hz}$ single pole 240V, 2P/3P/4P 415 V for overload and short circuit protection. It can be used in lighting and electric motor distribution system. Meantime, it is applicable to an unfrequent switch over the electric apparatus and lighting circuit under normal condition. The products comply with IEC60898-1 or IEC60947-2.

## Specification

| Number of Poles | $1 \mathrm{P}, 2 \mathrm{P}, 3 \mathrm{P}, 4 \mathrm{P}$ |
| :--- | :---: |
| Rated Current | $80 \mathrm{~A}, 100 \mathrm{~A}, 125 \mathrm{~A}$ |
| Breaking Capacity | 6000 A |
| Rated Voltage | $240 \mathrm{~V} / 415 \mathrm{~V}$ |
| Curve Code | $\mathrm{C}, \mathrm{D}$ |
| Endurance | $\geqslant 20000$ |
| Circumstance Temperature | $-5^{\circ} \mathrm{C} \sim+40^{\circ} \mathrm{C}$ |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 6000 cycles |
| Protection Degree | IP 20 |

Characteristic Curve


Dimensions


TSB5-125 2P


TSB5-125 3P
intertek

## TSL3-63 Residual Current Circuit Breaker

## Application

TSL3-63 RCCBs incorporate the same housing and installation features as the MCBs With a range that includes pulse current sensitive and super immune devices, there's a unit for every application.

| Number of Poles | $1 \mathrm{P}+\mathrm{N}, 3 \mathrm{P}+\mathrm{N}$ |
| :---: | :---: |
| Rated Current | 16A, 25A, 40A, 63A |
| Rated Operational Voltage | 230V/400V $\sim$, 240V/415V |
| Earth-leakage Sensitivity | $30 \mathrm{~mA}, 100 \mathrm{~mA}, 300 \mathrm{~mA}$ |
| Trip Unit Technology | Electro-magnetic |
| Network Type | $\mathrm{AC} \square / \mathrm{A} \approx$ |
| Standards | IEC/EN 61008-1 |
| Rated Breaking Capacity(Icn) | $\operatorname{lnc}=1 \triangle \mathrm{c}=6000 \mathrm{~A}$ |
| [Ui] Rated Insulation Voltage | 415 V |
| [Uimp] Rated Impulse Withstand Voltage | 4000V |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 4000 cycles |
| Tightening Torque | M5 2.5N.m II |
| IP Degree of Protection | IP20 comforming to IEC 60529 <br> IP40(modular enclosure) comforming to IEC 60529 |
| Ambient Air Temperature for Operation | $-5 \sim 40^{\circ} \mathrm{C}$ |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Pollution Degree | 2 comforming to IEC/EN 60898-1 |
| Upper Wiring Lower Wiring | 胞 $1-25 \mathrm{~mm}^{2}$ |

Dimensions

| 35.6 |
| :---: |
|  |
| $\square$ |
|  |
| - |
| (8)0 ${ }^{(3)}$ |

## TSL3-100 Residual Current Circuit Breaker

## Application

TSL3-100 RCCBs incorporate the same housing and installation features as the MCB With a range that includes pulse current sensitive and super immune devices, there's a unit for every application.

| Specification |  |
| :--- | :---: |
| Number of Poles | $1 \mathrm{PP}+\mathrm{N}, 3 \mathrm{P}+\mathrm{N}$ |
| Rated Current | $80 \mathrm{~A}, 100 \mathrm{~A}$ |
| Rated Operational Voltage | $1 \mathrm{P}+\mathrm{N}: 230 / 240 \mathrm{~V} \sim, 3 \mathrm{P}+\mathrm{N}: 400 / 415 \mathrm{~V} \sim$ |
| Earth-leakage Sensitivity | $30 \mathrm{~mA}, 100 \mathrm{~mA}, 300 \mathrm{~mA}$ |
| Type of Trip | Electro-magnetic |
| Network Type | AC $\sim / \mathrm{A} / \approx$ |
| Standard | IEC/EN $61008-1$ |
| Rated Breaking Capacity | 6000 A |
| [Uimp] Rated Impulse | 4000 V |
| Withstand Voltage | 2000 Cycles |
| Electrical Durability | 4000 Cycles |
| Mechanical Durability | $\leq 0.1 \mathrm{~s}$ |
| Residual Current Off-time Under I $\triangle \mathrm{n}$ | IP20 |
| Protection Degree | $-5 \sim 40^{\circ} \mathrm{C}$ |
| Ambient Air Temperature for Operation | Cable/Pin-type busbar/Fork-type busbar |
| Terminal Connection Type | $35 \mathrm{~mm}{ }^{2}$ |
| Max.Terminal Size for Cable | $2.5 \mathrm{~N} . \mathrm{m}$ |
| Max.Tightening Torque | Mounting on 35 mm DIN rail |
| Installation |  |

TSL3-100 1P+N

TSL3-100 3P+N

## Dimensions




TSN1-40L

TSN1-40L Residual Current Operated Circuit Breaker (RCBO)

## Application

Designed for DIN rail distribution boards, the TSN1-40L range of RCBO provides maximum protection and continuity of service while minimizing service intervention time

| Number of Poles | $1 \mathrm{P}+\mathrm{N}$ |
| :---: | :---: |
| Rated Current | 5A, 6A, 10A, 16A, 20A, 25A, 32A, 40A |
| Rated Operational Voltage | 230V/240V |
| Earth-leakage Sensitivity | $10 \mathrm{~mA}, 30 \mathrm{~mA}, 100 \mathrm{~mA}$ |
| Trip Unit Technology | Electronic |
| Earth-leakage Protection Class | $\mathrm{AC} \sim / \mathrm{A}$ ® |
| Standards | IEC/EN 61009-1 |
| Rated Breaking Capacity (İn) | 6000A |
| [Ui] Rated Insulation Voltage | 415 V |
| [Uimp] Rated Impulse Withstand Voltage | 4000 V |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 4000 cycles |
| Curve Code | B, C |
| Tightening Torque | M4 2N.m |
| Ambient Air Temperature for Operation | $-5^{\circ} \mathrm{C} \sim 40^{\circ} \mathrm{C}$ |
| Upper Wiring Lower Wiring | 擱 $1-16 \mathrm{~mm}^{2}$ |

## Dimensions



TSN3-32L Residual Current Operated Circuit Breaker (RCBO)

## Application

Slim DIN mounted RCBO is available as single module devices to save valuable switchboard space.

| Number of Poles | $1 \mathrm{P}+\mathrm{N}$ |
| :---: | :---: |
| Rated Current | 6A, 10A, 16A, 20A, 25A, 32A |
| Rated Operational Voltage | 230V/240V~ |
| Earth-leakage Sensitivity | $10 \mathrm{~mA}, 30 \mathrm{~mA}, 100 \mathrm{~mA}$ |
| Trip Unit Technology | Electronic |
| Network Type | $\mathrm{AC} \sim / \mathrm{A} \approx$ |
| Standards | IEC/EN 61009-1 |
| Breaking Capacity | $\mathrm{lcn=Ics=6000A}$ |
| [Ui] Rated Insulation Voltage | 415 V AC |
| [Uimp] Rated Impulse Withstand Voltage | 4000 V |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 4000 cycles |
| Tightening Torque | M4 2N.m II |
| IP Degree of Protection | IP20 comforming to IEC 60529 IP40(modular enclosure) comforming to IEC 60529 |
| Curve Code | B, C |
| Ambient Air Temperature for Operation | $-5 \sim 40^{\circ} \mathrm{C}$ |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Pollution Degree | 2 comforming to IEC/EN 60898-1 |
| Upper Wiring Lower Wiring | $\text { 塯 } 1-16 \mathrm{~mm}^{2}$ |
| Lower Wiring |  |

## Dimensions



## TSN4－40L Residual Current Operated Circuit Breaker（RCBO）

## Application

Designed for DIN rail distribution boards，the TSN4－40L range of RCBO provides maximum protection and continuity of service while minimizing service intervention time．

| Number of Poles | $1 \mathrm{P}+\mathrm{N}$ |
| :---: | :---: |
| Rated Current | 6A，10A，16A，20A，25A，32A，40A |
| Rated Operational Voltage | $230 \mathrm{~V} / 240 \mathrm{~V} \sim$ |
| Earth－leakage Sensitvity | $10 \mathrm{~mA}, 30 \mathrm{~mA}, 100 \mathrm{~mA}$ |
| Trip Unit Technology | Electro－magnetic |
| Network Type | $\mathrm{AC} \sim 1 \mathrm{~A}$ ® |
| Standards | IEC／EN 61009－1 |
| Rated Breaking Capacity（İn） | 6000A |
| Rated Residual Breaking and Making Capacity $(1 \triangle \mathrm{~m})$ | 500A |
| ［Ui］Rated Insulation Voltage | 400 V |
| ［Uimp］Rated Impulse Withstand Voltage | 4000 V |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 4000 cycles |
| Tightening Torque | M4 $2 \mathrm{~N} . \mathrm{m}$ II |
| Curve Code | B，C |
| IP Degree of Protection | IP20 comforming to IEC 60529 <br> IP40（modular enclosure）comforming to IEC 60529 |
| Ambient Air Temperature for Operation | $-5^{\circ} \mathrm{C} \sim 40^{\circ} \mathrm{C}$ |
| EU RoHS Directive | Compliant EU RoHS Declaration |
| Pollution degree | 2 comforming to IEC／EN 60898－1 |
| Upper Wiring |  |
| Lower Wiring |  |

## Dimensions



## TSN3－63L Residual Current Operated Circuit

 Breaker（RCBO）
## Application

TSN3－63L RCBO is used in the single phase circuit of AC $50 / 60 \mathrm{~Hz}$ ，rated voltage 240 V ，as electron shock protection．It can protect circuit from overload and short circuit．This product has advantages of small volume and high breaking capacity．It cuts off the live wire and zero wire at the same time．It also protects person from electric shock when the live wire is connected opposite．The products comply with the standards of IEC61009．

Specification

| Number of Poles | 1P＋N |
| :---: | :---: |
| Rated Current | $6 \mathrm{~A}, 10 \mathrm{~A}, 16 \mathrm{~A}, 20 \mathrm{~A}, 25 \mathrm{~A}, 32 \mathrm{~A}, 40 \mathrm{~A}, 50 \mathrm{~A}, 63 \mathrm{~A}$ |
| Earth－leakage Sensitivity | $30 \mathrm{~mA}, 100 \mathrm{~mA}, 300 \mathrm{~mA}$ |
| Trip Unit Technology | Electronic |
| Network Type | $\mathrm{AC} \square / \mathrm{A}$ ® |
| Rated Voltage | 230V～240V～ |
| Residual Current Off－time | $\leqslant 0.1 \mathrm{~s}$ |
| Short Circuit Capacity（Icu） | 4500A |
| Characteristic | B，C |
| Mechanical Durability | 10000 cycles |
| Electrical Durability | 3000 cycles |
| Protection Degree | IP20 |
| Upper Wiring | 牟 $1-25 \mathrm{~mm}^{2}$ 些紫 |
| Lower Wiring |  |

Dimensions


TSN3－631

## TIL1 Modular Indicator

## Application

TIL1 modular indicator is applicable to the control system of a circuit with AC
$50 / 60 \mathrm{~Hz}$ rated voltage to 230 V or DC voltage to 230 V . It is used for indication $50 / 60 \mathrm{~Hz}$ rated voltage to 230 V or DC voltage to 230 V . It is used for indication
signals, preset signals, accident signals or other indications in telecommunication, electrical, and other industries as well.

| Specification |  |
| :--- | :---: |
| Rated Voltage | $6 \mathrm{~V}, 12 \mathrm{~V}, 24 \mathrm{~V}, 11 \mathrm{VV}, 230 \mathrm{VAC} / \mathrm{DC}$ |
| Color | Red, Yellow, Blue, Green, White |
| Rated Current | $\leq 20 \mathrm{~mA}$ |
| Working Life | $\geq 30000 \mathrm{~h}$ |
| Connecting Wire | $\leq 6 \mathrm{~mm}^{2}$ |
| Tightening Torque | $0.8 \mathrm{~N} . \mathrm{m}$ |
| Protection Grade | IP20 |
| Ambient Temperature | $-5^{\circ} \mathrm{C} \sim+40^{\circ} \mathrm{C}$ |
| Altitude | $\leq 2000 \mathrm{~m}$ |
| Installation Category | Class II and III |
| Pollution Level | Level 2 |
| Installation Method | Mounted on 35 mm Din Rail |

Dimensions



TPB1-1

TIL1-2

TPB1 Modular Pushbutton

## Application

TPB1 modular pushbutton is applicable to the control system of a circuit with AC
$50 / 60 \mathrm{~Hz}$ rated voltage to 230 V , such as to work with magnetic starter contactor and other electrical circuit control. The button with light is also applicable to places where various light signals indication are required.

| Specification |  |
| :--- | :---: |
| Rated Voltage | 230 V AC |
| Color | Red, Green |
| Rated Current | 6 A |
| Mechanical Life (times) | 250000 |
| Electrical Life (times) | 100000 |
| Contact Combination Mode | TPB1-1: $2 \mathrm{NO}+2 \mathrm{NC}, 3 \mathrm{NO}+1 \mathrm{NC}, 4 \mathrm{NO}$ |
|  | TPB1-2: $1 \mathrm{NO}+2 \mathrm{NC}, 2 \mathrm{NO}+1 \mathrm{NC}, 3 \mathrm{NO}$ |
| Connecting Wire | $\leq 6 \mathrm{~mm}^{2}$ |
| Tightening Torque | $0.8 \mathrm{~N} . \mathrm{m}$ |
| Use Category | $\mathrm{AC}-14$ |
| Protection Grade | IP20 |
| Rated Voltage of Indicator | $6 \mathrm{~V}, 12 \mathrm{~V}, 24 \mathrm{~V}, 110 \mathrm{~V}, 230 \mathrm{VAC} / \mathrm{DC}$ |
| Rated Working Current | $\leq 20 \mathrm{~mA}$ |
| Working Life | $\geq 30000 \mathrm{~h}$ |
| Ambient Temperature | $-5^{\circ} \mathrm{C} \sim+40^{\circ} \mathrm{C}$ |
| Altitude | $\leq 2000 \mathrm{~m}$ |
| Installation Method | Mounted on 35 mm Din Rail |

Dimensions

## TSG3-125 Modular Main Switch

## Application

TSG3-125 modular main switch offers an extensive range of high quality main switches for esidential, commercial and industrial applications. The products incorporate superior quality esternal mechanisms and come with a highly visible ON/OFF toggle, which allows for quick location when isolation of power is required in an emergency.


## Dimensions



## TSBL Modular Alarm

## Application

The electric bell issuitable for audible signaling for intermittent use only in domestic and commercial installations.

| Specification |  |
| :--- | :---: |
| Rated Voltage | $220-240$ VAC |
| Pollution Grade | II |
| Working Condition | Short-time Working |
| Installation | Mounting on 35mm Din Rail |
| Standard | IEC $60947-5-1$ |

Dimensions


## Modular Socket

TMS-5

TMS-6


TMS-6


TMS-7


TMS-8

TMS-9


## Modular Digital Over \& Under Voltage Protector



TDP-1


TDP-3

## Application

TDP Modular Digital Over \& Under Voltage Protector is self-healing phase failure \& phase sequence protective relay and it's a newly developed household electrical equipment protector
The protector can quickly disconnect the power supply to protect the appliances when there is power interruption or the voltage exceeds or falls below the predetermined value.
When the power supply recovers, the protector automatically connects the power after 1-2 minutes' delay
All the protective actions are automatically controlled. Indicators on the panel display the working condition of the protector
This product is convenient in use, reliable in quality and excellent in performance.

## Specification

| Model | TDP-1 |  |  |  |  |  | TDP-3 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Poles | 1 P |  |  |  |  |  | 3 P |  |  |  |  |
| Rated Voltage | 220 VAC |  |  |  |  |  | 380VAC |  |  |  |  |
| Rated Current | 20A | 32A | 40A | 50A | 63A | 80A | 32 A | 40A | 50A | 63 A | 80A |
| Loading Power (KVA) | 4.4 | 6.6 | 8.8 | 11 | 13 | 17 | 20 | 25 | 30 | 40 | 52 |
| Over-Voltage Cut-Off Value (VAC) | 230-270 adjustable (400V short time) |  |  |  |  |  | 230-270 adjustable |  |  |  |  |
| Time Delay | 0.01s |  |  |  |  |  | 0.01s |  |  |  |  |
| Under-Voltage Cut-Off Value | 120-210VAC adjustable |  |  |  |  |  | 120-210VAC adjustable |  |  |  |  |
| Time Delay | 0.1 s |  |  |  |  |  | 0.1s |  |  |  |  |
| Recovery Setting Time Range | 10-600s |  |  |  |  |  | 10-600s |  |  |  |  |
| Self Power Consumption | $\leqslant 3 \mathrm{~W}$ |  |  |  |  |  | $\leqslant 3 \mathrm{~W}$ |  |  |  |  |
| Ambient Temperature | $-20^{\circ} \mathrm{C} \sim+40^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |  |  |  |

## Dimensions



## Modular Digital Voltage \& Current Protector



TDP2-1


TDP2-3

## Application

TDP2 Voltage Protector, a new generation of home appliance protectors, is suitable for houses, hotels, buildings, school dormitories, etc, to protect the electrical safety of appliances and other loads, to prevent damage to the load caused by too high or too low mains power.

| Model | TDP2-1 |  |  |
| :---: | :---: | :---: | :---: |
| Rated Supply Voltage | AC 220 V |  | AC 380V |
| Operation Voltage Range | AC 80V $\sim 400 \mathrm{~V}$ (single phase) | AC 80~400V(three phase) | AC140~700V(three phase) |
| Electric Current(> A)setting Range | $1 \sim 40 / 63 \mathrm{~A}$ | 1~40A/63A/80A/100A | 1~40A/63A/80A/100A |
| Overvoltage(>U)setting Range | 230~300V |  | 390~500v |
| Undervoltage(<U)setting Range | 210~140V |  | $370 \sim 260 \mathrm{~V}$ |
| Rated Current | 40/63A | 40A/63A/80A/100A | 40A/63A/80A/100A |
| $>\mathrm{U}$ and < U Trip Delay | 0.1~30s |  |  |
| Reset/start Delay | $1 \sim 600 \mathrm{~s}$ | 1~500s |  |
| Voltage Measurement Accuracy | 2\% (Not exceeding 2\% of the overall range) |  |  |
| Rated Insulation Voltage | 400 V |  | 700 V |
| Output Contact | 1NO 3NO |  |  |
| Protection Degree | IP 20 |  |  |
| Pollution Degree | 3 |  |  |
| Altitude | $\leq 2000 \mathrm{~m}$ |  |  |
| Operatintg Temperature | $-50^{\circ} \mathrm{C} \sim 55^{\circ} \mathrm{C}$ |  |  |
| Humidity | $\leq 50 \%$ at $40^{\circ} \mathrm{C}$ (without condensation) |  |  |
| Storage Temperature | $-30^{\circ} \mathrm{C} \sim 70^{\circ} \mathrm{C}$ |  |  |

## Dimensions






TDP2-3
TSP2-3 80/100A

## Modular Digital Voltage \& Current Protector



TDP4-1


TDP4-3

## Application

TDP4 modular digital voltage and current protector can disconnect the circuit to protect the appliances automatically in case abnormal situation happens to power supply. When the power supply recovers, the protector switches on the circuit automatically after 1-2 minutes delay. Indicators on the panel show the working condition of the protector.

| Model | TDP4-1 | TDP4-3 |
| :---: | :---: | :---: |
| Rated Working Voltage | 220 V | 380 V |
| Operation Voltage Range | AC80V-400V(Single Phase) | 140-650V |
| Rated Frequency | $50 / 60 \mathrm{~Hz}$ |  |
| Rated Working Current | 32A/40A/63A/80A |  |
| Over-voltage Protection Value | AC230V-AC300V |  |
| Under-voltage Protection Value | AC120V-AC210V |  |
| Voltage Power Off Time | 0.45 |  |
| Overcurrent Protection Value | 1-32A/1-40A/1-63A/1-80A |  |
| Overcurrent Power Off Time | 1-60s |  |
| Recover time (Starting Delay Time) | 10-999s/80s |  |
| Own Power Consumption | s1.5W |  |
| Motor Mechanical Life | $\geq 100,000$ Times |  |
| Relative Humidity | 45-90\%RH |  |
| Temperature | $40^{\circ} \mathrm{C}$ |  |
| Altitude | s2000M |  |

## Dimensions





## TSP8 Surge Protector



TSP8 1P+NPE


TSP84P

Specification

| Type |  | 2P, 4P, 1P+NPE, 3P+NPE |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Discharge Current ( $8 / 20 \mu \mathrm{~s}$ ) (In) |  | 5 kA |  | 10kA |  | 20kA |  |
| Max. Discharge Current (8/20 $/$ ) (lmax) |  | 10kA |  | 20kA |  | 40kA |  |
| Max. Continuous Operating Voltage (a.c.) (Uc) |  | 150 V | 280 V | 320 V | 385 V | 440 V | 255V(NPE) |
| Voltage Protection Level (Up) | TSP8-10 | $\leqslant 0.7 \mathrm{kV}$ | $\leqslant 0.8 \mathrm{kV}$ | $\leqslant 1.0 \mathrm{kV}$ | $\leqslant 1.2 \mathrm{kV}$ | $\leqslant 1.6 \mathrm{kV}$ | $\leqslant 1.5 \mathrm{kV}$ |
|  | TSP8-20 | $\leqslant 0.8 \mathrm{kV}$ | \$1.0kV | $\leqslant 1.2 \mathrm{kV}$ | $\leqslant 1.45 \mathrm{kV}$ | $\leqslant 1.6 \mathrm{kV}$ | $\leqslant 1.5 \mathrm{kV}$ |
|  | TSP8-40 | $\leqslant 1.0 \mathrm{kV}$ | \$1.3kV | $\leqslant 1.4 \mathrm{kV}$ | $\leqslant 1.8 \mathrm{kV}$ | $\leqslant 2.2 \mathrm{kV}$ | $\leqslant 1.5 \mathrm{kV}$ |
| SPD According to EN61643-11 |  | Type 2/Class I/T2 |  |  |  |  |  |
| Response Time (tA) |  | 25ns/NPE: 100ns |  |  |  |  |  |
| Operating Temperature Range (Tu) |  | $-40^{\circ} \mathrm{C} \sim+80^{\circ} \mathrm{C}$ |  |  |  |  |  |
| Operating State / Fault Indication |  | 2P, 4P: Green: normal Red: invalid |  |  |  |  |  |
| Degree of Protection |  | IP20 |  |  |  |  |  |

Dimensions


## TSP7 Surge Protector

## Specification

| Type |  | 1P, 2P, 3P, 4P |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Discharge Current (8/2 | (s)(In) | 5 kA |  | kA | 20kA |  | 30kA |
| Max. Discharge Current (8/20 $\mathrm{\mu s}$ )(Imax) |  | 10kA |  | 20kA | 40kA |  | 60 kA |
| Max. Continuous Operating Voltage (a.c.) (Uc) |  | 150 V | 280 V | 320 V | 385 V | 440 V | 600 V |
| Voltage Protection Level (Up) | TSP7-10 | $\leqslant 0.7 \mathrm{kV}$ | $\leqslant 0.8 \mathrm{kV}$ | $\leqslant 1.0 \mathrm{kV}$ | $\leqslant 1.2 \mathrm{kV}$ | \$1.6kV | $\leqslant 2.0 \mathrm{kV}$ |
|  | TSP7-20 | $\leqslant 0.8 \mathrm{kV}$ | $\leqslant 1.0 \mathrm{kV}$ | $\leqslant 1.2 \mathrm{kV}$ | $\leqslant 1.45 \mathrm{kV}$ | $\leqslant 1.6 \mathrm{kV}$ | $\leqslant 2.0 \mathrm{kV}$ |
|  | TSP7-40 | $\leqslant 1.0 \mathrm{kV}$ | $\leqslant 1.3 \mathrm{kV}$ | $\leqslant 1.4 \mathrm{kV}$ | $\leqslant 1.8 \mathrm{kV}$ | $\leqslant 2.2 \mathrm{kV}$ | $\leqslant 2.5 \mathrm{kV}$ |
|  | TSP7-60 | $\leqslant 1.2 \mathrm{kV}$ | $\leqslant 1.5 \mathrm{kV}$ | $\leqslant 1.6 \mathrm{kV}$ | $\leqslant 1.8 \mathrm{kV}$ | $\leqslant 2.0 \mathrm{kV}$ | $\leqslant 2.5 \mathrm{kV}$ |
| SPD According to EN61643-11 |  | Type 2/Class II/T2 |  |  |  |  |  |
| Response Time (tA) |  | 1P, 2P, 3P, 4P: 25 ns |  |  |  |  |  |
| Operating Temperature Range (Tu) |  | $-40^{\circ} \mathrm{C} \sim+80^{\circ} \mathrm{C}$ |  |  |  |  |  |
| Operating State / Fault Indication |  | 1P, 2P, 3P, 4P: Green: normal Red: invalid |  |  |  |  |  |
| Degree of Protection |  | IP20 |  |  |  |  |  |


TSP7 1P

TSP7 2P

TSP7 3P

TSP7 4P

intertek

TSP7 3P+NPE
TSP7 1P+NPE

| 1P+NPE, 3P+NPE |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5 kA |  | 10kA |  | 20kA |  | 30kA |
| 10kA |  | 20kA |  | 40kA |  | 60kA |
| 150 V | 280 V | 320 V | 385 V | 440 V | 600 V | 255V(NPE) |
| $\leqslant 0.7 \mathrm{kV}$ | $\leqslant 0.8 \mathrm{kV}$ | $\leqslant 1.0 \mathrm{kV}$ | $\leqslant 1.2 \mathrm{kV}$ | \$1.6kV | $\leqslant 2.0 \mathrm{kV}$ | $\leqslant 1.5 \mathrm{kV}$ |
| $\leqslant 0.8 \mathrm{kV}$ | $\leqslant 1.0 \mathrm{kV}$ | $\leqslant 1.2 \mathrm{kV}$ | $\leqslant 1.45 \mathrm{kV}$ | $\leqslant 1.6 \mathrm{kV}$ | $\leqslant 2.0 \mathrm{kV}$ | $\leqslant 1.5 \mathrm{kV}$ |
| $\leqslant 1.0 \mathrm{kV}$ | $\leqslant 1.3 \mathrm{kV}$ | $\leqslant 1.4 \mathrm{kV}$ | $\leqslant 1.8 \mathrm{kV}$ | $\leqslant 2.2 \mathrm{kV}$ | $\leqslant 2.5 \mathrm{kV}$ | $\leqslant 1.5 \mathrm{kV}$ |
| $\leqslant 1.2 \mathrm{kV}$ | $\leqslant 1.5 \mathrm{kV}$ | $\leqslant 1.6 \mathrm{kV}$ | $\leqslant 1.8 \mathrm{kV}$ | $\leqslant 2.0 \mathrm{kV}$ | $\leqslant 2.5 \mathrm{kV}$ | $\leqslant 1.5 \mathrm{kV}$ |
| Type 2/Class 1/T2 |  |  |  |  |  |  |
| 1P+NPE, 3P+NPE: $25 / 100 \mathrm{~ns}$ |  |  |  |  |  |  |
| $-40^{\circ} \mathrm{C} \sim+80^{\circ} \mathrm{C}$ |  |  |  |  |  |  |
| 1P, 3P: Green: normal Red: invalid |  |  |  |  |  |  |
| IP20 |  |  |  |  |  |  |



TSP7 1P+NPE


Dimensions


## LCH8 Modular Contactor



Specification

| Model | Rating(In) |  | Control Voltage | Contact | Width in 9 mm modules | Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AC-1 | AC-3 |  |  |  |  |
| LCH8 2P | 16A | 6A | 24 VAC110 VAC | $\begin{gathered} 2 \mathrm{NO} \\ 1 \mathrm{NO}+1 \mathrm{NC} \\ 2 \mathrm{NC} \end{gathered}$ | 2 |  |
|  | 20A | 7A |  |  |  |  |
|  | 25A | 9A |  |  |  |  |
|  | 32A | 12A |  |  |  |  |
|  | 40A | 18A |  |  | 4 |  |
|  | 63 A | 25A |  |  |  |  |
|  | 80A | 32A |  |  |  |  |
|  | 100A | 40A |  |  | 6 |  |
|  | 125A | 50A |  |  |  |  |
| LCH8 3P | 16A | 6A | 230 VAC <br> $50 / 60 \mathrm{~Hz}$ | $\begin{aligned} & 3 \mathrm{NO} \\ & 3 \mathrm{NC} \end{aligned}$ |  |  |
|  | 20A | 7A |  |  | 4 |  |
|  | 25A | 9 A |  |  |  |  |
|  | 32A | 12A |  |  | 6 |  |
|  | 63A | 25A |  |  |  |  |
| LCH8 4P | 16A | 6A |  | $\begin{array}{\|c\|} 4 N O \\ 4 N C \\ 2 N O+2 N C \\ 3 N O+1 N C \end{array}$ |  |  |
|  | 20A | 7 A |  |  | 4 |  |
|  | 25A | 9 A |  |  | - |  |
|  | 32A | 12A |  |  | 6 |  |
|  | 40A | 18A |  |  |  |  |
|  | 80A | 32 A |  |  | 12 |  |
|  | 100A | 40 A |  |  |  |  |
|  | 125A | 50A |  |  |  |  |

Dimensions






DE


## Dimensions



LCHBM-16/200/25 2P
LCHBM-16/200/254P
ССНвМ-32/40/1/32P LCHBM-32/400/634P

## LCH9 AC/DC Modular Contactor



## Auxiliary

| Model | Used for Contactor | AC-12 |  | AC-15 |  | DC-13 |  | Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Control Voltage | Control Current | Control | Control Current | Control Voltage | Control Current |  |
| AUC11 | LCH8 | 240 V | 5A | 230 V | 2A | - | - | $e_{10}^{101}$ |
| AUC20 |  |  |  |  |  |  |  | $\left.\prod_{2}^{d}\right\|_{1} ^{d}$ |
| AC1-11 | LCH9 |  |  |  |  | 130 V | 1A |  |
| AC1-20 |  |  |  |  |  |  |  | $\prod_{2}^{d} \underbrace{d}_{4}$ |

## BIR Impulse Relay

## Application

- Closing of the impulse relay pole(s) is triggered by an impulse on the coil.
- Having two stable mechanical positions, the pole(s) will be opened by the nex
impulse. Each impulse received by the coil reverses the position of the pole(s).
Can be controlled by an unlimited number of pushbuttons.
- Zero energy consumption.

| Model | Rated Current (A) | Wiring Diagram | Control Voltage |
| :---: | :---: | :---: | :---: |
| BIR-16/20 | 16 | $\int_{1}^{1}-a_{1}^{3}-A_{1}^{A 1}$ | 24 VAC 12 VDC |
| BIR-16/11 |  | $f_{1}^{1}-A_{2}^{3}$ | 48VAC 24 VDC |
| BIR-16/1C |  |  | 130VAC 48VDC |
| BIR-16/10 |  |  | 230VAC 110VdC |

## Technical data

| Dissipated Power | 1P,2P: 19VA(during the impulse) |
| :---: | :---: |
| Illuminated PB Control | Max. current 3 mA (if > use an ATLz) |
| Operating Threshold | Min. $85 \%$ of Un |
| Duration of The Control Order | $50 \mathrm{msto} 1 \mathrm{~s}(200 \mathrm{~ms} \mathrm{recommended)}$ |
| Response Time | 50 ms |
| Rated Voltage | 24~250VAC |
| Maximum Operations | 5times/m |
| Maximum Switching Operation | 100times/d |
| Insulation Voltage(Ui) | 440 VAC |
| Rated Impulse Withstand Voltage (Uimp) | 6 kV |
| Electrical Life | 200,000 cycles (AC21) |
| Electrical Life | 100,000 cycles (AC22) |
| Overvoltage Category | IV |

Dimensions


## TSM4 Moulded Case Circuit Breaker

## Application

TSM4 series moulded case circuit breaker is applied for circuit of rated insulating voltage TSM4 series moulded case circuit breaker is applied for circuit of rated insulating vol

|  | AC $50 / 60 \mathrm{~Hz}$, for usage of infrequent transfer of the circuit and infrequent starting of the motor as well. <br> The breakers protect the circuit and devices in the circuit against being damaged by means of overload proection, short circuit protection and under voltage protection. The products comply with IEC60947-2. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| por | Model | Type | Pole | Rated Current (A) | \|cs (kA) | Icu (kA) | Arc Distance |
| TSM4-125L | TSM4-63 | L | 3,4 | 10,16,20,25, 32,40,50,63 | 15 | 18 | $\leq 50$ |
|  | TSM4-63 | M |  |  | 18 | 20 |  |
|  | TSM4-125 | L | 2,3,4 | $\begin{gathered} 16,20,32,40,50 \\ 63,80,100,125 \end{gathered}$ | 18 | 25 | $\leq 50$ |
|  | TSM4-125 | M |  |  | 22 | 30 |  |
|  | TSM4-250 | L | 2,3,4 | $\begin{gathered} 100,125,140,160,180 \\ 200,225,250 \end{gathered}$ | 20 | 25 | $\leq 50$ |
|  | TSM4-250 | M |  |  | 25 | 35 |  |
|  | TSM4-400 | L | 3,4 | 200,225,250,315,350,400 | 25 | 35 | $\leq 100$ |
|  | TSM4-400 | M |  |  | 35 | 50 |  |
|  | TSM4-630 | L | 3, 4 | 400,500,630 | 30 | 40 | $\leq 100$ |
|  |  | M |  |  | 35 | 50 |  |
| 1810 | TSM4-800 | M | 3, 4 | 630,700,800 | 35 | 50 | $\leq 100$ |

TSM4-250L

## Dimensions

| Model Type |  | L | w | W1 | H | a | b | 4-中d |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TSM4-63 | L | 136 | 75 | 103 | 90.5 | 25 | 117 | 3.5 |
| TSM4-63 | M |  |  |  | 98.5 |  |  |  |
| TSM4-125 | L | 150 | 93 | 122 | 96 | 30 | 129 | 4.5 |
| TSM4-250 | M |  |  |  | 104 |  |  |  |
|  | M | 165 | 107 | 142 | 127 | 35 | 126 | 4.5 |
| TSM4-400 | L,M | 257 | 150 | 198 | 151.5 | 44 | 194 | 7 |
| TSM4-630 | L,M | 270 | 182 | 238 | 155 | 58 | 200 | 7 |
| TSM4-800 | M | 280 | 210 | 280 | 155 | 70 | 243 | 7 |

## TSM4E Electronic Type Moulded Case Circuit Breaker

Application
TSM4E series electronic type moulded case circuit breaker is applied for circuit of rated insulating voltage up to 1000 V , rated operation voltage up to 400 V , rated operation current up to $800 \mathrm{~A}, \mathrm{AC} 50 / 60 \mathrm{~Hz}$, for usage of infrequent transfer of the circuit and infrequent starting of the motor as well.
The breakers protect the circuit and devices in the circuit against being damaged by means of inverse time long time delay overload proection, inverse time short time delay short circuit proection, short time delay short circuit protection, short circuit protection and under voltage protection.
The products comply with IEC60947-2

## Feature

- Five options of tripping characteristic are available, user can adjust the current
according to the required loading;
Alarm indication: when loaded current is bigger than the preset current, the LED
indicator on the front panel indicates yellow color immediately.
- Overload indication: when loaded current is bigger than the rectified current, the LED indicator on the front panel indicates red color immediately.

Specification

| Model | Type | Pole | Rated Current (A) | \|cs (kA) | $\mathrm{lcu}(\mathrm{kA})$ | Arc Distance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TSM4E-125 | L | 3 | 16,20,25,32, 36,40,45,50,55,60, 65,70,75,80,85,90,95,125 | 18 | 25 | <50 |
|  | M |  |  | 22 | 30 |  |
| TSM4E-250 | L | 3 | $\begin{gathered} 100,125,140 \\ 160,180,200,225,250 \end{gathered}$ | 20 | 25 | <50 |
|  | M |  |  | 25 | 35 |  |
| TSM4E-400 | M | 3 | $\begin{gathered} 200,225,250 \\ 280,315,350,400 \end{gathered}$ | 35 | 50 | $\leq 100$ |
| TSM4E-630 | M | 3 | $\begin{gathered} 400,420,440,460 \\ 500,530,560,600,630 \end{gathered}$ | 35 | 50 | $\leq 100$ |
| TSM4E-800 | M | 3 | 630, 640,660,680, $700,720,740,760,780,800$ | 35 | 50 | $\leq 100$ |

## TSM4L Residual Current Operated Moulded Case Circuit Breaker

## Application

TSM4L residual current operated moulded case circuit breaker is applied for circuit of


TSM4L-125
rated insulating voltag up to 1000 V , rated operation voltage up to 400 V r ated oper on current up to $800 \mathrm{~A}, \mathrm{AC} 50 / 60 \mathrm{~Hz}$, for usage of infrequent transfer of the circuit and inf requent starting of the motor as well.
The breakers protect the circuit and devices in the circuit against being damaged by me ans of overload proection, short circuit protection, under voltage protection and residual current proection.
The products comply with IEC60947-2.

## Feature

- The product can work normally when phase failure happens to one of phases.
- The product can work normally even when the voltage is reduced to 85 V .
- User can adjust the rated residual operation current $I \Delta n$ and the maximum tripping
duration according to the detailed situation.
- Output signal of alarm against residual current is available.

Specification

| Model | TSM4L-125 |  | TSM4L-250 |  | TSM4L-400 | TSM4L-800 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type | L | M | L | M | M | M |
| Pole | 4 |  | 4 |  | 4 | 4 |
| Rated Current (A) | $\begin{gathered} 16,20,25 \\ 32,40,50 \\ 63,80,100,125 \end{gathered}$ |  | $\begin{gathered} 100,125, \\ 140,160,180, \\ 200,225,250 \end{gathered}$ |  | $\begin{aligned} & 200,225,250 \\ & 315,350,400 \end{aligned}$ | $\begin{gathered} 400,500 \\ 630,700,800 \end{gathered}$ |
| Ics (kA) | 18 | 22 | 20 | 25 | 35 | 35 |
| Icu (kA) | 25 | 30 | 25 | 35 | 50 | 50 |
| Arc Distance | $\leq 50$ |  | $\leq 50$ |  | $\leq 100$ | $\leq 100$ |

Rated Residual A
Current $I \Delta n(m A)$
100,300,500 (optional)

TSM4L-250

## TSM8 Moulded Case Circuit Breaker

## Application

TSM8 series moulded case circuit breaker is applied for circuit of rated insulating voltage up to 800 V , rated operation voltage up to 690 V , rated operation current up to $1600 \mathrm{~A}, \mathrm{AC}$ $50 / 60 \mathrm{~Hz}$, for usage of infrequent transfer of the circuit and infrequent starting of the motor as well.
Model of TSM8-100, TSM8-160, TSM8-250, TSM8-400 and TSM8-630 protect the circuit and devices in the circuit against being damaged by means of overload proection, short circuit protection and under voltage protection. Model with bigger current ( bigger than 630 A ) protect the circuit and devices in the circuit against being damaged by means inverse time long time delay overload proection, inverse time short time delay short circuit proection, short time delay short circuit protection, short circuit protection and The products comply with IEC60947-2

| Model | Type | Pole | Rated Current (A) | Ics (kA) | Icu (kA) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| TSM8-100 | F | 3, 4 | 16,20,25,32,40,50,63,80,100 | 36 | 36 |
|  | N |  |  | 50 | 50 |
|  | H |  |  | 70 | 70 |
| TSM8-160 | F | 3, 4 | 63,80,100,125,160 | 36 | 36 |
|  | N |  |  | 50 | 50 |
|  | H |  |  | 70 | 70 |
| TSM8-250 | F | 3, 4 | 100,125,160,200,250 | 36 | 36 |
|  | N |  |  | 50 | 50 |
|  | H |  |  | 70 | 70 |
| TSM8-400 | F | 3, 4 | 160-400 | 36 | 36 |
|  | N |  |  | 50 | 50 |
|  | H |  |  | 70 | 70 |
| TSM8-630 | F | 3, 4 | 250-630 | 36 | 36 |
|  | N |  |  | 50 | 50 |
|  | H |  |  | 70 | 70 |
| TSM8-800 | F | 3, 4 | 320-800 | 36 | 36 |
|  | N |  |  | 50 | 50 |
|  | H |  |  | 70 | 70 |
| TSM8-1000 | F | 3, 4 | 400-1000 | 36 | 36 |
|  | N |  |  | 50 | 50 |
|  | H |  |  | 70 | 70 |
| TSM8-1250 | F | 3, 4 | 500-1250 | 36 | 36 |
|  | N |  |  | 50 | 50 |
|  | H |  |  | 70 | 70 |
| TSM8-1600 | F | 3, 4 | 640-1600 | 36 | 36 |
|  | N |  |  | 50 | 50 |
|  | H |  |  | 70 | 70 |

SM8-630F
intertek

## TSW8 Intelligent Circuit Breaker



TSW8-2000

## Application

TSW8 series intelligent circuit breaker is suitable for the circuit of AC $50 / 60 \mathrm{~Hz}$ with rated voltage $400 \mathrm{~V}, 690 \mathrm{~V}$ and rated current up to 6300A. It is mainly used for distribution electric energy as well as protecting circuit and power supply equipment from overload, under-voltage, short-circuit and single phase earthing. With intelligent and selective protection functions, the breaker can improve the reliability of power supply, and avoid unnecessary power failure. The breaker is applied to power stations, factories, mines (for 690V) and modern high-building, especially to the distribution system of intelligent building. The breakers comply to IEC60947-2

| Specification |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model |  | TSW8-1600 | TSW8-2000 | TSW8-3200 | TSW8-4000 | TSW8-6300 |
| Frame Rated Current Inm (A) |  | 1600 | 2000 | 3200 | 4000 | 6300 |
| Number of Poles |  | 3,4 | 3,4 | 3,4 | 3,4 | 3,4 |
| Rated Current In (A) |  | $\begin{gathered} 400,630 \\ 800,1000 \\ 1250,1600 \end{gathered}$ | $\begin{gathered} 630,800, \\ 1000,1250, \\ 1600,2000 \end{gathered}$ | $\begin{aligned} & 2000,2500, \\ & 2900,3200 \end{aligned}$ | 3600,4000 | $\begin{gathered} 4000,5000, \\ 6300 \end{gathered}$ |
| Icu (kA) | 400V | 65 | 80 | 100 | 100 | 120 |
|  | 690 V | 50 | 50 | 65 | 65 | 65 |
| Ics (kA) | 400 V | 55 | 65 | 80 | 80 | 100 |
|  | 690 V | 50 | 50 | 65 | 65 | 65 |
| Rated Current at N -pole In (A) |  | 100\% In | 100\% In | 100\% In | 50\% In | 50\% In |
| Inherent Making \& Breaking Time |  | $\leqslant 30 \mathrm{~ms}$ |  |  |  |  |
| Electrical Life (times) |  | 6000 | 5000 | 3000 | 2000 | 1500 |
| Mechanical Life (times) |  | 15000 | 10000 | 8000 | 5000 | 2000 |
| Mounting Mode |  | Fixed type or Withdrawable type |  |  |  |  |
| Arcing Distance (mm) |  | 0 |  |  |  |  |
| Intelligent Controller |  | Standard type (M) telecommunication type (H) |  |  |  |  |

## MP Motor Protection Circuit Breaker

## Application

MP series motor protection circuit breakers are mainly used for the overload and short circuit protection of the motor in $\mathrm{AC} 50 / 60 \mathrm{~Hz}$, up to $660 \mathrm{~V}, 0.1-80 \mathrm{~A}$ power circuit, as a full-voltage starter to start and cut off the motor, under the AC3 load or for the overload and short circuit protection of the circuit and power equipment in the power distribution network.

| Specification |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model | Rated Standard Power of 3-phase Motors $50 / 60 \mathrm{~Hz}$ in Category AC-3 |  |  |  | Setting Range (A) | Magnetic Trip Current (A) |
|  | 230 V | 400 V | 415V | 440 V |  |  |
|  | kW | kw | kW | kw |  |  |
| M01 | - | - | - | - | 0.1-0.16 | 1.5 |
| M02 | - | - | - | - | 0.16-0.25 | 2.4 |
| м03 | - | - | - | - | 0.25-0.4 | 5 |
| M04 | - | - | - | - | 0.4-0.63 | 8 |
| M05 | - | - | - | 0.37 | 0.63-1 | 13 |
| M06 | - | 0.37 | - | 0.55 | 1-1.6 | 22.5 |
| M07 | 0.37 | 0.75 | 0.75 | 1.1 | 1.6-2.5 | 33.5 |
| M08 | 0.75 | 1.5 | 1.5 | 1.5 | 2.5-4 | 51 |
| M10 | 1.1 | 2.2 | 2.2 | 3 | 4-6.3 | 78 |
| M14 | 2.2 | 4 | 4 | 4 | 6-10 | 138 |
| M16 | 3 | 5.5 | 5.5 | 7.5 | 9-14 | 170 |
| M20 | 4 | 7.5 | 9 | 9 | 13-18 | 223 |
| M21 | 5.5 | 11 | 11 | 11 | 17-23 | 327 |
| M22 | 5.5 | 11 | 11 | 11 | 20-25 | 327 |
| M32 | 7.5 | 15 | 15 | 15 | 24-32 | 416 |


| Model | Contact Type | Installation | Type |
| :---: | :---: | :---: | :---: |
| AE11 | N/O+N/C | Front (1PC for each circuit breaker) | Instantaneous auxiliary contact |
| AE20 | N/O+N/O |  |  |
| AN11 | N/O+N/C | Side (Max. 2PCS on the left side of circuit breaker) |  |
| AN20 | N/O+N/O |  |  |
| AD1010 | N/O+N/O | Side (1PC on the left side of circuit breaker) | Fault signal contact + instantaneous auxiliary contact |
| AD1001 | ( Fault)+N/C |  |  |
| AD0110 | N/C+N/O |  |  |
| AD0101 | ( Fault)+N/C |  |  |

## Specification

| Model | Voltage | Installation | Type |
| :---: | :---: | :---: | :---: |
| AU115 | $110 . .127 \mathrm{~V} 50 \mathrm{~Hz}$ | Side (1PC on the right side of circuit breaker) | Under Voltage Tripper |
| AU225 | $220 . .240 \mathrm{~V} 50 \mathrm{~Hz}$ |  |  |
| AU385 | $380 . .415 \mathrm{~V} 50 \mathrm{~Hz}$ |  |  |
| AS115 | $110 . .127 \mathrm{~V} 50 \mathrm{~Hz}$ | Side (1PC on the right side of circuit breaker) | Shunt Tripper |
| AS225 | $220 . .24050 \mathrm{~Hz}$ |  |  |
| AS385 | $380 . .415 \mathrm{~V} 50 \mathrm{~Hz}$ |  |  |



AU

## Dimensions






| Specification |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model | Rated Standard Power of 3-phase Motors $50 / 60 \mathrm{~Hz}$ in category AC-3 |  |  |  | Setting Range <br> (A) | Magnetic Trip Current (A) |
|  | 230 V | 400 V | 415 V | 440 V |  |  |
|  | kw | kW | KW | KW |  |  |
| MP3-M40 | 11 | 18.5 | 22 | 22 | 25-40 | 480 |
| MP3-M63 | 15 | 30 | 33 | 33 | 40-63 | 756 |
| MP3-M80 | 22 | 40 | 45 | 45 | 56-80 | 960 |

Dimensions
MP3

MP2-MC02

AD

## TSMQ1-100 Double Power Automatic Changeover Switch



TSMQ1-100 2P


TSMQ1-100 4P

## Application

TSMQ1-100 modular double power automatic changeover switch is used to provide the power supply for circuit constantly when the main TSMQ1-100 modular double power automatic changeover switch is used to provide the power supply for circuit constantly when the main
power supply is not available suddenly. The switch is suitable in power supply system with $50 / 60 \mathrm{~Hz}$, rated voltage up to 415 V and rated up to 100A.
When the product works under automatic mode, the switch converses the circuit from the main power supply (I) to standby power supply (II) automatically in case the main supply power is off (or phase failure). When the main power supply (I) resumes to be available, the switch converses the circuit back to main power supply (I) from standby power supply (II) automatically.
When the product works under manual mode, the changeover of circuit between main power supply (I) and standby power supply (II) should be realized manually.
The switch is characteristic of small in volume, prompt in reaction, reliable in conversion, convenient in installation and long life in service.

## Specification

| Number of Poles | 2P, 4P |
| :---: | :---: |
| Rated Current | 20A, 32A, 40A, 50A, 63A, 80A, 100A |
| Usage Category | AC-33iB |
| Rated Working Voltage (Ue) | 2P 230/240V/50Hz; 4P 400/415V/50Hz |
| Rated Insulation Voltage (Ui) | AC690V/50Hz |
| Rated Impulse Withstand Voltage | 8 kV |
| Rated limiting Short Circuit Current | 50kA |
| Mechanical life | 5000 times |
| Electrical life | 2000 times |
| Classification | PC class: can be manufactured and withstood without short circuit current |
| Control Circuit | Rated control voltage Us: AC220V, 50Hz Narmal working conditions: $85 \%$ Us-110\%Us |
| Auxiliary | Contact capacity of contact: AC220V 50Hz le=5y |
| Operation Conversion Time | <30ms |
| Return Conversion Time |  |
| Power off Time |  |

## owerortime

## Dimensions


2P

4 P


TSMQ6 Double Power Automatic Changeover Switch


TSMQ6-63/2P


TSMQ6-63/4P

## Application

TSMQ6 Double power automatic changeover switch is suitable in terminal type double-circuit power supply system with $50 / 60 \mathrm{~Hz}$, rated working voltage $220 \mathrm{~V}(2 \mathrm{P}), 380 \mathrm{~V}(3 \mathrm{P}, 4 \mathrm{P}$ ), rated current 10A~63A. Automatic switching between common power supply and standby power supply can be completed to prove the reliability of power supply. The item are widely used in high-rise buildings, shopping malls, fire pumps, smoke elimination fans, elevators, life pumps, emergency lighting etc.

## Specification

| Number of Poles | $2 \mathrm{P}, 3 \mathrm{P}, 4 \mathrm{P}$ |
| :--- | :---: |
| Rated Current | $10 \mathrm{~A}, 16 \mathrm{~A}, 20 \mathrm{~A}, 25 \mathrm{~A}, 32 \mathrm{~A}, 40 \mathrm{~A}, 50 \mathrm{~A}, 63 \mathrm{~A}$ |
| Rated Working Voltage | 2P: 220V; 3P, 4P:380V |
| Rated Insulation Voltage | 690 V |
| Frequency | $50 / 60 \mathrm{~Hz}$ |
| Breaking Capacity | 6 KA |
| Ambient Temperature | $-5^{\circ} \mathrm{C} \sim+40^{\circ} \mathrm{C}$ |
| Protection Degree | IP 30 |
| Protection | Overload/Short circuit |

## Dimensions

| Model | mm | W | W1 | L | L |
| :---: | :---: | :---: | :---: | :---: | :---: |
| TSMQ6-63/2P | 186 | 158 | 125 | 114 | H |
| TSMQ6-63/3P | 222 | 194 | 125 | 114 | 111 |
| TSMQ6-63/4P | 258 | 230 | 125 | 114 | 111 |



## TSMQ2 Intelligent Double Power Changeover Switch



TSMQ2-225

## Application

TSMQ2 intelligent double power changeover switch is suitable for electrical system with AC $50 / 60 \mathrm{~Hz}$, rated working voltage up to 400 V , rated working current 100A-1250A. The items are widely used in varieties of residence community, military installations, hospital, shopping mall, airports etc.
The product consists of microcomputer controller and switching changeover device which includes the function: auto control switch, manual control switch, common switching on indicator, emergency switching on indicator, mechanical and electrical dual interlocking and so on. There are three state positions for the users to choose: common power ( $N$ ) switching on, double off and emergency power ( $R$ ) switching on.

| Specification |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model | Applicable Circuit Breaker | Rated <br> Working Current <br> (A) | Conversion <br> Action <br> Time (s) | Utilization <br> Category | Mechanical Life (times) | Electrica Life <br> (times) | Rated Short-circuit Impulse Withstand Voltage (Uimp) | Rated <br> Short-circuit Breaking Capacity Icu (kA) |
| TSMQ2-100 | $\begin{aligned} & \text { TSM2 } \\ & \text { series } \end{aligned}$ | 100 | $\leqslant 5$ | AC-33iB | 5000 | 1000 | 8KV | 10 |
| TSMQ2-225 |  | $\begin{gathered} 100,125,160, \\ 200,225 \end{gathered}$ | $\leqslant 5$ |  | 5000 | 1000 |  | 10 |
| TSMQ2-400 |  | $\begin{gathered} 225,250,315 \\ 350,400 \end{gathered}$ | $\leqslant 6$ |  | 3000 | 1000 |  | 10 |
| TSMQ2-630 |  | 400,500,630 | $\leqslant 6$ |  | 2500 | 500 |  | 12.6 |
| TSMQ2-800 |  | 630,700,800 | $\leqslant 6$ |  | 2500 | 500 |  | 16 |
| TSMQ2-1250 |  | $\begin{gathered} 800,1000, \\ 1250 \end{gathered}$ | $\leqslant 6$ |  | 2500 | 500 |  | 25 |

HGLD Double Power Automatic Changeover Switch

## - Morpor



HGLD-400A 4P

## Application

HGLD series Double power automatic changeover switch is suitable in electrical system with $\mathrm{AC} 50 / 60 \mathrm{~Hz}$, rated insulation voltage up to 1000 V , rated voltage up to 440 V , conventional heat current up to 3200 A . The items are widely used in varieties of hospital, building, bank airport, coal mine, telecom, freeway, military installations etc

## Specification

| Rated heating current (A) |  | 100 | 160 | 250 | 400 | 630 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rated insulation voltage |  | 750 V |  |  |  |  | 1000V |  |  |  |  |  |
| Rated impulse withstand voltage |  | 8KV |  |  |  |  | 12KV |  |  |  |  |  |
| Rated working current (A) | AC-31A | 100 | 160 | 250 | 400 | 630 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 |
|  | AC-35A | 100 | 160 | 250 | 400 | 630 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 |
|  | AC-33A | 100 | 160 | 250 | 400 | 630 | 1000 | 1250 | 1600 | 2000 | 2500 | 3200 |
| Rated short-term withstand current |  | 7KA | 9 KA |  | 13KA |  | 50KA |  |  | 55KA |  |  |
| Rated limited short circuit current |  | 100KA |  |  | 70KA |  | 100KA | 120KA |  | 80KA |  |  |
| Control power supply voltage |  | DC24V, 48V, 110V, AC220V |  |  |  |  |  |  |  |  |  |  |
| Conversion time (S) |  | 0.5 | 1 | 1.1 | 1.2 |  | 1.25 |  |  | 2.45 |  |  |

## HGLZ Double Power Automatic Changeover Switch



HGLZ-160/4


## HGLZ-160~1600 Overall Mounting Dimension

| Model | Overall Dimension |  |  |  |  |  | Mounting Dimension |  |  |  | Terminal Dimension |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A | B | C | D | E | H | a | b | Фc | e | R | S | T | Y1 | M |
| HGLZ-160/3 | 195 | 135 | 196 | 36 | 140 | 85 | 120 | 65 | 5.5 | 20 | 20 | 10 | 3.5 | 72 | 8 |
| HGLZ-160/4 | 225 | 135 | 196 | 36 | 170 | 85 | 150 | 65 | 5.5 | 20 |  |  |  |  |  |
| HGLZ-250/3 | 235 | 170 | 215 | 50 | 180 | 110 | 160 | 90 | 5.5 | 20 | 25 | 15 | 3.5 | 82 | 10 |
| HGLZ-250/4 | 285 | 170 | 215 | 50 | 230 | 110 | 210 | 90 | 5.5 | 20 |  |  |  |  |  |
| HGLZ-400/3 | 300 | 240 | 278 | 65 | 230 | 160 | 210 | 140 | 7 | 35 | 32 | 17 | 5 | 114 | 10 |
| HGLZ-400/4 | 360 | 240 | 278 | 65 | 290 | 160 | 270 | 140 | 7 | 35 |  |  |  |  |  |
| HGLZ-630/3 | 300 | 260 | 278 | 65 | 230 | 160 | 210 | 140 | 7 | 35 | 40 | 20 | 6 | 114 | 12 |
| HGLZ-630/4 | 360 | 260 | 278 | 65 | 290 | 160 | 270 | 140 | 7 | 35 |  |  |  |  |  |
| HGLZ-1000/3 | 473 | 312 | 380 | 120 | 378 | 200 | 353 | 230 | 9 | 40 | 60 | 20 | 8 | 156 | 12 |
| HGLZ-1000/4 | 593 | 312 | 380 | 120 | 498 | 200 | 473 | 230 | 9 | 40 |  |  |  |  |  |
| HGLZ-1250/3 | 473 | 356 | 380 | 120 | 378 | 200 | 353 | 230 | 9 | 40 | 80 | 20 | 8 | 156 | 12 |
| HGLZ-1250/4 | 593 | 356 | 380 | 120 | 498 | 200 | 473 | 230 | 9 | 40 |  |  |  |  |  |
| HGLZ-1600/3 | 473 | 356 | 380 | 120 | 378 | 200 | 353 | 230 | 9 | 40 | 80 | 20 | 10 | 156 | 12 |
| HGLZ-1600/4 | 593 | 356 | 380 | 120 | 498 | 200 | 473 | 230 | 9 | 40 |  |  |  |  |  |


HGLZ-160~630

HGLZ-1000~1600

HGLZ-2000~3200 Overall Mounting Dimension

| Model | Overall Mounting Dimension |  |  |  |  | Mounting Dimension |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A | B/B* | E | a | e | R/R* | T/T* | Y/Y* | z/2* |
| HGLZ-2000/3 | 473 | 356/502 | 378 | 350 | 40 | 80/80 | 8/10 | 98/85 | 88/115 |
| HGLZ-2000/4 | 593 | 356/502 | 498 | 470 | 40 |  |  |  |  |
| HGLZ-2500/3 | 473 | 356/502 | 378 | 350 | 40 | 80/80 | 8/12 | 98/85 | 88/115 |
| HGLZ-2500/4 | 593 | 356/502 | 498 | 470 | 40 |  |  |  |  |
| HGLZ-3200/3 | 473 | 356/502 | 378 | 350 | 40 | 80/100 | 10/15 | 99/83 | 88/120 |
| HGLZ-3200/4 | 593 | 356/502 | 498 | 470 | 40 |  |  |  |  |

Note: "*" is the size for products with connecting copper.

HGLZ-2000~3200 without connecting copper


HGLZ-2000~3200 with connecting copper

## HGL Isolating Switch



## Application

The products are suitable for making and breaking power turn-circuit of voltage 415 V , frequency $50 / 60 \mathrm{~Hz}$, rated current up to 1600 A , acting as power switch, isolating switch and emergency switch. Because of special system of arc-contact and main-contact, HGL operates with high efficiency, safety and reliability, complying with IEC60947-3. Rotational operation and direct mechanical connection between
handle and moving contact, on-off handle makes contact break and indicating place of contact. Panel and independent type installation are fitted with HGL.

| Specification |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conventional Heat Current Ith(A) |  |  | 160 | 250 | 400 | 630 | 1000 | 1250 | 1600 | 2500 | 3200 |
| Rated Insulation Voltage Ui |  |  | 800 V |  | 1000 V |  |  |  |  |  |  |
| Dielectric Strength |  |  | 3000 V |  | 3500 V |  |  |  |  |  |  |
| Rated Impulse Withstand Voltage |  |  | 8kA |  | 12 kA |  |  |  |  |  |  |
| Rated Working Voltage |  |  | AC400-660V |  |  |  |  |  |  |  |  |
| Rated Frequency |  |  | 50 Hz |  |  |  |  |  |  |  |  |
| Utilization category |  |  | AC-21, 22, 23 |  |  |  |  |  |  |  |  |
| Rated Working Current le (A) | AC400V | AC-21 | 160 | 250 | 400 | 630 | 1000 | 1250 | 1600 | 2500 | 3200 |
|  |  | AC-22 | 160 | 250 | 400 | 630 | 1000 | 1250 | 1600 | 2500 | 3200 |
|  |  | AC-23 | 160 | 250 | 400 | 630 | 800 | 1000 | 1250 | 2000 | 2500 |
| Rated Making Capacity (A Rms) |  |  | 10le |  |  |  |  |  |  |  |  |
| Rated Breaking Capacity (A Rms) |  |  | 8 le |  |  |  |  |  |  |  |  |
| Rated Short-circuit Making Capacity Icm (kA Rms) |  |  | 12 | 17 | 30 | 40 | 70 |  |  | 100 |  |
| 1 S Short-time Withstand Current (A Rms) |  |  | 10 | 12 | 20 | 25 |  | 50 |  | 70 |  |
| Mechanical Life (times) |  |  | 5000 |  | 3000 |  | 2000 |  |  | 1000 |  |
| Electric Life (times) |  |  | 1000 |  | 600 |  | 300 |  |  | 1 |  |

## Configuration



HR17 Fuse Switch Disconnector


HR17-160 3P


HR17-250 3P

## Application

HR17 Fuse switch disconnector is applied to the high short circuit current circuit with AC $50 / 60 \mathrm{~Hz}$, voltage up to 690 V and rated working current up to 630 A . It processes upper and lower end input and output structure, leads in equipment with knife-edge and arc extinguishing equipment, it also can be operated with load. It is used as power switch, isolating switch and emergency switch for overload protection and short circuit protection.

## Specification

| Model | Rated Working Current le | Rated Short Circuit Connecting Capacity Icm | Rated Limit Short Circuit Current Inc | Rated Insulated Voltage Ui | Use Type | Number of Poles | Matched Fuse Link |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HR17-160 | 160A | 1600A | 50kA | 690 V | AC-22B | 3,4 | NTOO |
| HR17-250 | 250A | 2500A |  |  |  |  | NT1 |
| HR17-400 | 400A | 4000A |  |  |  |  | NT2 |
| HR17-630 | 630 A | 6300 A |  |  |  |  | NT3 |

Dimension

| Model | Assorted Fuse | A | B | C | D | a | b | $\phi \mathrm{C}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HR17-1603P | NT00 | 106 | 200 | 83 | 205 | 66 | 25 | $\phi 7$ |
| HR17-2503P | NT1 | 185 | 247 | 110 | 295 | 114 | 50 | $\phi 11$ |
| HR17-4003P | NT2 | 210 | 290 | 125 | 340 | 130 | 50 | $\phi 11$ |
| HR17-6303P | NT3 | 256 | 300 | 145 | 360 | 162 | 50 | $\phi 11$ |
| HR17-1604P | NT00 | 138 | 200 | 83 | 205 | 100 | 25 | $\phi 7$ |
| HR17-2504P | NT1 | 242 | 247 | 110 | 295 | 172 | 50 | $\phi 11$ |
| HR17-4004P | NT2 | 276 | 290 | 125 | 340 | 195 | 50 | $\phi 11$ |
| HR17-6304P | NT3 | 340 | 300 | 145 | 360 | 243 | 50 | $\phi 11$ |



## Bar Fuse Switch Disconnector



## Application

BFD1 BFD2 BFD3 series fuse switch disconnector is integrated with initiating current transformer and fuse switch in circuit with rated working current of $160 \mathrm{~A}, 250 \mathrm{~A}, 400 \mathrm{~A}, 630 \mathrm{~A}$ or $800 \mathrm{~A} 50 / 60 \mathrm{~Hz}$. These fuse switch disconnectors provide reliable overload and short circuit protection for distribution facility, such as cable branch box, box transformer in industrial plants, cormnunity and other infrastructure as well.

The location of the switch installation is no more than 2000 m .
The level of environmental pollution of the switch is grade 3 .

- The installation category of the switch is class ill.
- The switch is installed in a place where there is no vibration or shock.
- Fuse units of BFD3 model are closed or opened integrately while fuse unites under BFD2 model are operated separately only

The operation is safer, the core is mounted on the handle, and can be used directly as contact blades;
Beautiful and practical, seat and body disassembly convenience, and box installation fast, convenient construction.
Reduce wiring, easy to increase the loop. Increase the use rate of the box;

- Resin glass fiber base, V0 grade flame retardant, and the protection grade of shell can reach P30;
- New products, H field, he used semi tender 7 l bid to develop styles.

Instantaneous time off up to 100 KA , with a load capacity of up to 1.3 times of rated current
Can add fuse monitor, signal switch and remote control module.

## Specification

| Model | BFD1-160 | BFD1-250 | BFD1-400 | BFD1-630 |
| :---: | :---: | :---: | :---: | :---: |
| Rated Operational Voltage (Ue) | 690 V |  |  |  |
| Rated Operational Current (e) | 160 A | 250 A | 400 A | 630A |
| Fuse Size | 00 | 1 | 2 | 3 |
| Rated Insulation Voltage (Ui) | 1000v |  |  |  |
| Rated Impulse Withstand Voltage (Uimp) | 12KV |  |  |  |
| Degree of Protection | 1P10 |  |  |  |
| Mechanica Life (times) | 2000 |  |  |  |
| Wire Specifications | $10-95 \mathrm{~mm}^{2}$ | $120 \mathrm{~mm}{ }^{2}$ | $240 \mathrm{~mm}{ }^{2}$ | $300 \mathrm{~mm}^{2}$ |
| Method Connecting Wire | Screw \& V-Clamp |  |  |  |
| Installation Method | Screw \& Hook |  |  |  |
| Use Classes | AC-21B AC-22B AC-23B |  |  |  |
| Standard | IEC/EN60947-3 |  |  |  |
| Rated Short Circuit Current (lq) | 120 KA |  |  |  |
| Rated Short Time Current (lcw) | 16KA/1s |  |  |  |
| Screw Fastening | M8/M10/M12 |  |  |  |
| Ambinet Temperature | $-45^{\circ} \mathrm{C} \sim 50^{\circ} \mathrm{C}$ |  |  |  |

BFD1-250 (400/630)

## Dimensions



## Bar Fuse Switch Disconnector

| $\sqrt{1}$ | Model | BFD2-160 | BFD2-250 | BFD2-400 | BFD2-630 | BFD2-800 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Rated Operational Voltage (Ue) | 690 V |  |  |  |  |
|  | Rated Operational Current (le) | 160A | 250A | 400A | 630 A | 800 A |
|  | Fuse Size | 00 | 1 | 2 | 3 | 3 |
|  | Rated Insulation Voltage (Ui) | 1000 |  |  |  |  |
|  | Rated Impulse Withstand Voltage (Uimp) | 12KV |  |  |  |  |
|  | Degree of Protection | 1 P 20 |  |  |  |  |
|  | Mechanica Life (times) | 2000 |  |  |  |  |
| BFD2-160 | Wire Specifications | 10-70mm ${ }^{2}$ | $120 \mathrm{~mm}^{2}$ | $240 \mathrm{~mm}^{2}$ | $300 \mathrm{~mm}{ }^{2}$ | $2 \times 240 \mathrm{~mm}^{2}$ |
|  | Method Connecting Wire | Screw \& V-Clamp |  |  |  |  |
|  | Installation Method | Screw \& Hook |  |  |  |  |
|  | Use Classes | AC-21B AC-22B AC-23B |  |  |  |  |
|  | Standard | IEC/EN60947-3 |  |  |  |  |
|  | Rated Short Circuit Current (lq) | 120 KA |  |  |  |  |
|  | Rated Short Time Current (lcw) | 16KA/1s |  |  |  |  |
|  | Screw Fastening | M8/M10/M12 |  |  |  |  |
|  | Ambinet Temperature | $-45^{\circ} \mathrm{C} \sim+50^{\circ} \mathrm{C}$ |  |  |  |  |

## Dimensions



Specification

| Model | BFD3-160 | BFD3-250 | BFD3-400 | BFD3-630 | BFD3-800 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rated Operational Voltage (Ue) | 690 V |  |  |  |  |
| Rated Operational Current (le) | 160A | 250A | 400 A | 630 A | 800 A |
| Fuse Size | 00 | 1 | 2 | 3 | 3 |
| Rated Insulation Voltage (Ui) | 1000v |  |  |  |  |
| Rated Impulse Withstand Voltage (Uimp) | 12kV |  |  |  |  |
| Degree of Protection | 1 P20 |  |  |  |  |
| Mechanica Life (times) | 2000 |  |  |  |  |
| Wire Specifications | $10-70 m^{2}$ | $120 \mathrm{~mm}^{2}$ | $240 \mathrm{~mm}{ }^{2}$ | $300 \mathrm{~mm}{ }^{2}$ | $2 \times 240 \mathrm{~mm}{ }^{2}$ |
| Method Connecting Wire | Screw \& V-Clamp |  |  |  |  |
| Installation Method | Screw \& Hook |  |  |  |  |
| Use Classes | AC-21B AC-22B AC-23B |  |  |  |  |
| Standard | IEC/EN60947-3 |  |  |  |  |
| Rated Short Circuit Current (lq) | 120 KA |  |  |  |  |
| Rated Short Time Current (Icw) | $16 \mathrm{KA} / 1 \mathrm{~s}$ |  |  |  |  |
| Screw Fastening | M8/M10/M12 |  |  |  |  |
| Ambinet Temperature | $-45^{\circ} \mathrm{C} \sim 55^{\circ} \mathrm{C}$ |  |  |  |  |

Dimensions




BFD3-250 (400/630/800)

## NT Low Voltage Fuse



NTO

## Cylindrical Fuse Link

## Application

The fuse links with cylindrical contact caps are designed for protecting electrical distributing installations of rated voltage of 660 V AC. with rated current up to 125 A against damage due to overload and short circuit. Fuse links with the striker are supplied for the purpose of protecting motors against motor single phase operation when fitted in fuse isolators.


## Specificatio

| Model |  | Rated Current (A) | Rated Voltage (V) | Dimension |
| :---: | :---: | :---: | :---: | :---: |
| $\underset{\mathrm{aM}}{\mathrm{gL/gG}}$ | aR |  |  | $\varnothing \mathrm{D} \times \mathrm{L}$ |
| RO14 | - | 2,4,6,10,16,20 | 380/500 | $\varnothing 8.5 \times 31.5$ |
| RO15 | RS15 | 1,2,4,6,10,16,20,25,32 |  | ø10x 38 |
| RO16 | RS16 | 2,4,6,10,16,20,25,32,40,50,63 |  | ø14× 51 |
| RO17 | RS17 | 10,16,20,25,32,40,50,63,80,100,125 |  | ø22x 58 |
| RO54 | - | 1,2,4,6,10,16 | 250 | $05 \times 20$ |
| RO55 | - |  |  | $\varnothing 5 \times 25$ |
| RO57 | - |  |  | 06x 25 |

Spiral Fuse Link

| Specification |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Model | Size | $\begin{gathered} \text { Rated } \\ \text { Current } \\ \text { (A) } \end{gathered}$ | Dimension |  |  |  |
| gG |  |  | ФA | $\varphi C$ | $\varphi D$ | $\varphi$ L |
| RO21 | DII | 2,4,6 | 6 | 22 | 13 | 50 |
|  |  | 8,10 | 8 | 22 | 13 | 50 |
|  |  | 13 | 8 | 22 | 13 | 50 |
|  |  | 16 | 10 | 22 | 13 | 50 |
|  |  | 20 | 12 | 22 | 13 | 50 |
|  |  | 25 | 14 | 22 | 13 | 50 |
| RO22 | DIII | 30,35,40 | 16 | 27 | 20 | 50 |
|  |  | 50 | 18 | 27 | 20 | 50 |
|  |  | 63 | 20 | 27 | 20 | 50 |
| RO24 | DI | 2,4,6 | 6 | 12.5 | 11.3 | 50 |
|  |  | 10 | 8 | 12.5 | 11.3 | 50 |
|  |  | 16 | 10 | 12.5 | 11.3 | 50 |
|  |  | 20,25 | 12 | 12.5 | 11.3 | 50 |

## 

| Model | Size | Rated (A) | Dimension |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| gG |  |  | $\varphi A$ | $\varphi$ B | $\varphi \mathrm{C}$ | $\varphi \mathrm{D}$ | L |
| RO26 | D01 | 2,4,6 | 5 | 7.3 | 10.6 | 10 | 36 |
|  |  | 10 | 5 | 8.5 | 10.6 | 10 | 36 |
|  |  | 16 | 5 | 9.7 | 10.6 | 10 | 36 |
|  | D02 | 20 | 8.5 | 11 | 15 | 14 | 36 |
|  |  | 25 | 8.5 | 12 | 15 | 14 | 36 |
|  |  | 35 | 8.5 | 13.3 | 15 | 14 | 36 |
|  |  | 50 | 8.5 | 14.5 | 15 | 14 | 36 |
|  |  | 63 | 8.5 | 16 | 15 | 14 | 36 |
|  | D03 | 80 | 17 | 22 | 22 | 21 | 43 |
|  |  | 100 | 17 | 25 | 22 | 21 | 43 |

## 3



## Fuse Holder



## Dimensions



RT18L
RT18-63X 1 P

RT18L-125 1P


