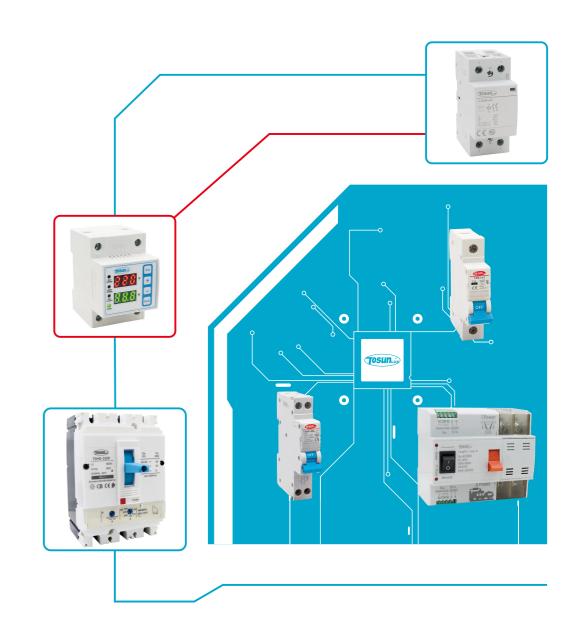
### Power Distribution System



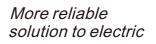


Add: Birnbaumsmühle 65, 15234 Frankfurt Oder, Germany

Factory Add: Yangwen Industrial Zone, Wenzhou, Zhejiang Province, China
Office Add: Room No.1001, Fortune Center, Station Road, Wenzhou, China
E-mail:ceo@tosun.com

Http://www.tosunlux.eu







# Contents

TSB3-63 Miniature Circuit Breaker	P1
TSB4-63 Miniature Circuit Breaker	P2
TSN3-32 Miniature Circuit Breaker	P3
TSN4-40 Miniature Circuit Breaker	P4
TSB4-125 Miniature Circuit Breaker	P5
TSB5-125 Miniature Circuit Breaker	P6
TSL3-63 Residual Current Circuit Breaker	P7
TSL3-100 Residual Current Circuit Breaker	P8
TSN1-40L Residual Current Operated Circuit Breaker (RCBO)	P9
TSN3-32L Residual Current Operated Circuit Breaker (RCBO)	P10
TSN3-63L Residual Current Operated Circuit Breaker (RCBO)	P11
TSN4-40L Residual Current Operated Circuit Breaker (RCBO)	P12
TSN9-63L Residual Current Operated Circuit Breaker (RCBO)	P13
TSAF1 Arc Fault Detection Device	P14
TSG3-125 Modular Main Switch	P15
TIL2 Modular Indicator	P16
TIL1 Modular Indicator	P17
TPB1 Modular Pushbutton	P18
Modular Digital Voltage & Current Protector	P19-P20
Modular Digital Over & Under Voltage Protector	P21
TSP8 Surge Protector	P22
TSP7 Surge Protector	P23-P24
LCH8 Modular Contactor	P25-P26
LCH9 AC/DC Modular Contactor	P27
BIR Impulse Relay	P28
TSM4 Moulded Case Circuit Breaker	P29
TSM4E Electronic Type Moulded Case Circuit Breaker	P30
TSM4L Residual Current Operated Moulded Case Circuit Breaker	P31
TSM8 Moulded Case Circuit Breaker	P32
TSM9 Moulded Case Circuit Breaker	P33-P34
TSW8 Intelligent Circuit Breaker	P35-P36
MP Motor Protection Circuit Breaker	P37-P38
TSBL Modular Alarm	P39
Modular Socket	P39
Dual Power Automatic Changeover Switch	P40-P44
TSMQ2 Intelligent Dual Power Changeover Switch	P45
HGLD Dual Power Automatic Changeover Switch	P46
HGLZ Dual Power Changeover Switch	P47-P48
HGL Isolating Switch	P49
HR17 Fuse Switch Disconnector	P50
Bar Fuse Switch Disconnector	P51-P54
NT Low Voltage Fuse	P55-P56
Cylindrical Fuse Link	P57
Spiral Fuse Link	P58
Fuse Holder	P59















#### **TSB3-63 Miniature Circuit Breaker**

# Tiga 43

TSB3-63 1P



TSB3-63 2P



TSB3-63 3P





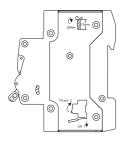
#### **Application**

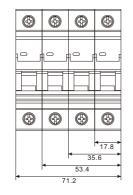
TSB3-63 series MCB with 4.5/6kA breaking capacity makes ideal for commercial and industrial applications. The products comply with IEC60898-1.

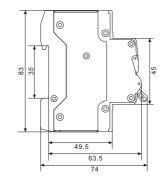
#### **Specification**

•	
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 lcn:(A)	6000A for In 6A to 40A 4500A for In 50A 63A
Rated Insulation Voltage (Ui)	AC 415V~
Rated Impulse Withstand Voltage (Uimp)	4000V
Mechanical Durability	10000 cycles
Electrical Durability	4000 cycles
Tightening Torque	М5 2.5N.m П
IP Degree of Protection	IP20 comforming to IEC 60529 IP40(modular enclosure) comforming to IEC 60529
Ambient Air Temperature for Operation	-5°C~40°C
EU RoHS Directive	Compliant EU RoHS Declaration
Pollution Degree	2 comforming to IEC/EN 60898-1
Upper Wiring Lower Wiring	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

#### **Dimensions**







#### **TSB4-63 Miniature Circuit Breaker**

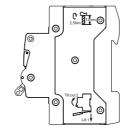
#### **Application**

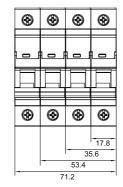
TSB4-63 series MCB is high performance current limiting device with the ability to disconnect short circuits up to 6/10kA. Thermal trip unit is for normal overload protection and magnetic trip unit is for short circuit protection. The products comply with IEC60898-1 or IEC60947-2.

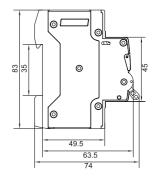
#### Specification

Number of Poles	1P, 2P, 3P, 4P
Rated Current	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
Breaking Capacity	6000A or 10000A
Rated Insulation Voltage (Ui)	AC 500V~
Rated Impulse Withstand Voltage (Uimp)	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°C~40°C
EU RoHS Directive	Compliant EU RoHS Declaration
Pollution Degree	2 comforming to IEC/EN 60898-1
Upper Wiring	
Lower Wiring	☐ ☐ ☐ 1-25mm²

#### **Dimensions**









TSB4-63 1P



TSB4-632P



TSB4-63 3P







#### **TSN3-32 Miniature Circuit Breaker**

TSN3-32

#### Application

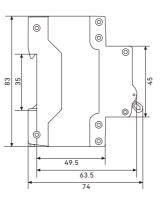
TSN3-32 series MCB is an extensive range of DIN rail mounted, phase-neutral miniature circuit breaker. Boasting exclusive features, they provide absolute protection to circuits against short-circuit currents and overload currents in both residential and small building applications.

#### Specification

•	
Number of Poles	1P+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	Icn=Ics=3000A
Rated Insulation Voltage (Ui)	AC 415V
Rated Impulse Withstand Voltage (Uimp)	4000V
Mechanical Durability	10000 cycles
Electrical Durability	4000 cycles
Tightening Torque	М4 2N.m II
IP Degree of Protection	IP20 comforming to IEC 60529 IP40(modular enclosure) comforming to IEC 60529
Ambient Air Temperature for Operation	-5°C~40°C
EU RoHS Directive	Compliant EU RoHS Declaration
Pollution Degree	2 comforming to IEC/EN 60898-1
Upper Wiring	
Lower Wiring	☐ ☐ 1-16mm²

#### **Dimensions**





#### **TSN4-40 Miniature Circuit Breaker**

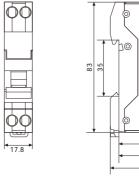
#### **Application**

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

#### Specification

•	
Number of Poles	1P+N
Rated Current	1A, 2A, 3A, 4A, 5A, 6A, 10A, 16A, 20A, 25A, 32A, 40A
Rated Operational Voltage (Ue)	230V/240V~
Trip Unit Technology	Thermal-magnetic
Curve Code	B, C, D
Breaking Capacity	Icn=Ics=4500/6000A
Standards	IEC/EN 60898-1
Rated Insulation Voltage (Ui)	AC 415V
Rated Impulse Withstand Voltage (Uimp)	4000V
Mechanical Durability	10000 cycles
Electrical Durability	4000 cycles
Tightening Torque	M42N.m II
IP Degree of Protection	IP20 comforming to IEC 60529 IP40(modular enclosure) comforming to IEC 60529
Ambient Air Temperature for Operation	-5°C~40°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**

#### 138-125 138-12

TSB4-125 1P

# TEMALIS CHAN

TSB4-125 2P



TSB4-125 3P

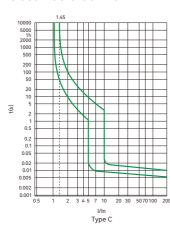
#### Application

TSB4-125 series MCB is suitable for AC 50/60Hz rated voltage 415V and below, rated current to 125A 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.

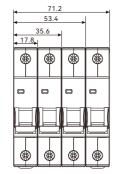
#### **Specification**

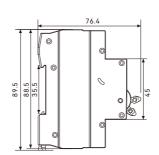
•	
Number of Poles	1P, 2P, 3P, 4P
Rated Current	80A, 100A, 125A
Breaking Capacity	6000A
Rated Voltage	230V/400V~, 240V/415V~
Trip Unit Technology	Thermal-magnetic
Curve Code	C, D
Rated Impulse Withstand Voltage [Uimp]	4000V
Mechanical Durability	10000 cycles
Electrical Durability	6000 cycles
Tightening Torque	M7 3.5N.m II
Endurance	≥20000
Circumstance Temperature	-5°C~+40°C
Protection Degree	IP20

#### **Characteristic Curve**









#### **TSB5-125 Miniature Circuit Breaker**

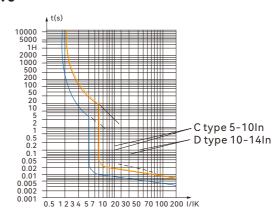
#### Application

TSB5-125 series MCB is used for AC 50/60Hz single pole 240V, 2P/3P/4P 415V 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.

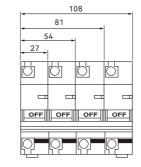
#### **Specification**

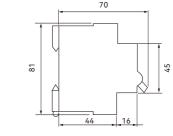
Number of Poles	1P, 2P, 3P, 4P	
Rated Current	80A, 100A, 125A	
Breaking Capacity	6000A	
Rated Voltage	240V/415V~	
Curve Code	C, D	
Endurance	≥20000	
Circumstance Temperature	-5°C~+40°C	
Mechanical Durability	10000 cycles	
Electrical Durability	6000 cycles	
Protection Degree	IP20	

#### **Characteristic Curve**



#### **Dimensions**







TSB5-125 1P



TSB5-125 2P



TSB5-125 3P





5 \_\_\_\_\_



#### **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.

TSL3-63 1P+N

TSL3-63 3P+N

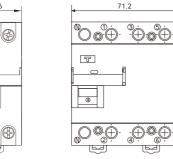
#### Specification

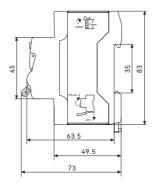
Number of Poles	1P+N, 3P+N
Rated Current	16A, 25A, 40A, 63A
Rated Operational Voltage	230V/400V~, 240V/415V~
Earth-leakage Sensitivity	30mA, 100mA, 300mA
Trip Unit Technology	Electro-magnetic
Network Type	AC ፫ /A ᠌
Standards	IEC/EN 61008-1
Rated Breaking Capacity(Icn)	Inc=I∆c=6000A
Rated Insulation Voltage [Ui]	415V
Rated Impulse Withstand Voltage [Uimp]	4000V
Mechanical Durability	10000 cycles
Electrical Durability	4000 cycles
Tightening Torque	М5 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°C~40°C
EU RoHS Directive	Compliant EU RoHS Declaration
Pollution Degree	2 comforming to IEC/EN 60898-1
Upper Wiring	∏ ∏ ∏ 1-25mm²
Lower Wiring	117 1-25111111-

intertek

#### **Dimensions**







#### TSL3-100 Residual Current Circuit Breaker

#### **Application**

TSL3-100 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.

#### **Specification**

Number of Poles	1P+N, 3P+N
Rated Current	80A,100A
Rated Operational Voltage	1P+N: 230/240V~, 3P+N:400/415V~
Earth-leakage Sensitivity	30mA,100mA,300mA
Type of Trip	Electro-magnetic
Network Type	AC ∼/A ≅
Standards	IEC/EN 61008-1
Rated Breaking Capacity	6000A
Rated Impulse Withstand Voltage [Uimp]	4000V
Electrical Durability	2000 cycles
Mechanical Durability	4000 cycles
Residual Current Off-time Under I△n	≤ 0.1s
Protection Degree	IP20
Ambient Air Temperature for Operation	-5°C~40°C
Terminal Connection Type	Cable/Pin-type busbar/Fork-type busbar
Max.Terminal Size for Cable	35mm²
Max.Tightening Torque	2.5N.m
Installation	Mounting on 35mm DIN rail

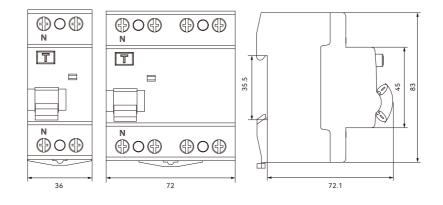


TSL3-100 1P+N



TSL3-100 3P+N

#### **Dimensions**







TSN1-40L

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

#### Application

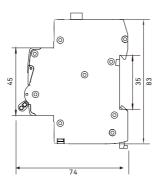
Designed for DIN rail distribution boards, the TSN1-40L range of RCBO provides maximum protection and continuity of service while minimizing service intervention time.

#### **Specification**

Number of Poles	1P+N
Rated Current	5A, 6A, 10A, 16A, 20A, 25A, 32A, 40A
Rated Operational Voltage	230V/240V~
Earth-leakage Sensitivity	10mA, 30mA, 100mA
Trip Unit Technology	Electronic
Network Type	AC ∼/A ≅
Standards	IEC/EN 61009-1
Rated Breaking Capacity (Icn)	6000A
Rated Insulation Voltage (Ui)	AC 415V
Rated Impulse Withstand Voltage (Uimp)	4000V
Mechanical Durability	10000cycles
Electrical Durability	4000 cycles
Curve Code	B, C
Tightening Torque	M4 2N.m
Ambient Air Temperature for Operation	-5°C~40°C
Upper Wiring Lower Wiring	□ □ □ 1-16mm²

#### **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.

#### **Specification**

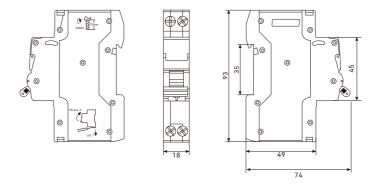
Number of Poles	1P+N
	11 - 11
Rated Current	6A, 10A, 16A, 20A, 25A, 32A
Rated Operational Voltage	230V/240V~
Earth-leakage Sensitivity	10mA, 30mA, 100mA
Trip Unit Technology	Electronic
Network Type	AC ₹/A ₹
Standards	IEC/EN 61009-1
Breaking Capacity	Icn=Ics=6000A
Rated Insulation Voltage (Ui)	AC 415V
Rated Impulse Withstand Voltage (Uimp)	4000V
Mechanical Durability	10000 cycles
Electrical Durability	4000 cycles
Tightening Torque	M42N.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°C~40°C
EU RoHS Directive	Compliant EU RoHS Declaration
Pollution Degree	2 comforming to IEC/EN 60898-1
Upper Wiring	1 1 16mm²
Lower Wiring	☐ ☐ ☐ 1-16mm²



TSN3-32L



#### **Dimensions**





# TSN3-63L Residual Current Operated Circuit Breaker (RCBO)

#### Application

TSN3-63L RCBO is used in the single phase circuit of AC 50/60Hz, rated voltage 240V, 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 neatral 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.

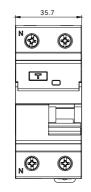


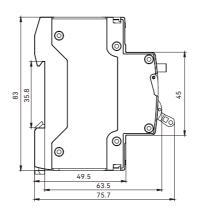
TSN3-63L

#### Specification

1P+N
6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A
30mA, 100mA, 300mA
Electronic
AC ₹/A ₹
230V/240V~
≤0.1s
4500A
B, C
10000 cycles
3000 cycles
IP20
1-25mm²

#### **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.

#### Specification

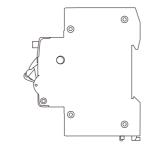
Number of Poles	1P+N						
Rated Current	6A, 10A, 16A, 20A, 25A, 32A, 40A						
Rated Operational Voltage	230V/240V~						
Earth-leakage Sensitvity	10mA, 30mA, 100mA						
Trip Unit Technology	Electro-magnetic						
Network Type	AC ∼/A ≅						
Standards	IEC/EN 61009-1						
Rated Breaking Capacity(Icn)	6000A						
Rated Residual Breaking and Making Capacity(I△m)	500A						
Rated Insulation Voltage (Ui)	400V						
Rated Impulse Withstand Voltage (Uimp)	4000V						
Mechanical Durability	10000 cycles						
Electrical Durability	4000 cycles						
Tightening Torque	М4 2N.m II						
Curve Code	B, C						
IP Degree of Protection	IP20 comforming to IEC 60529 IP40 (modular enclosure) comforming to IEC 60529						
Ambient Air Temperature for Operation	-5°C~40°C						
EU RoHS Directive	Compliant EU RoHS Declaration						
Pollution degree	2 comforming to IEC/EN 60898-1						
Upper Wiring	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
Lower Wiring	☐ ☐ 1-16mm²						

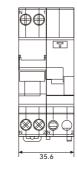
#### TSN-40L TSN-40

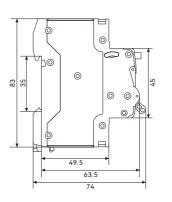
TSN4-40L



#### **Dimensions**









### TSN9-63L Residual Current Operated Circuit Breaker (RCBO)

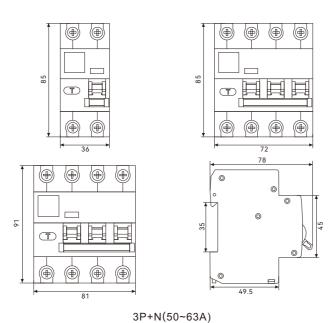
#### **Application**

The product serves in the circuit of AC 50/60Hz, rated voltage 230/400V and rated current up to 63A, to cut off the power supply automatically and immediately once someone suffers from electric shock or residual current above specified value. It can protect personal safety and avoid the damage against equipments effectively. The circuit breaker can also be operated as overload protection, short circuit protection and infrequent changeover of the circuit under normal condition. The product is in conformity with IEC61009-1 standard.

#### Specification

Number of Poles	1P+N, 3P+N
Rated Current	6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A
Rated Voltage	230V/240V~, 400V/415V~
Rated Residual Operating Current	10mA, 30mA, 100mA, 300mA
Trip Unit Technology	Electro-magnetic
Curve Code	B, C
Network Type	AC ∼/A ☎/F
Rated Short-circuit Capacity (Icn)	6000A
Rated Residual Current Operated Making and Breaking Capacity (I△m)	3000A
Rated Residual Non-operated Current	l∆no: 0.5l∆n

#### **Dimensions**





TSN9-63L 1P+N

# TSN-41 CE CE CENT

TSN9-63L 3P+N

#### **TSAF1 Arc Fault Detection Device**

#### **Application**

AFDDs detect and automatically disconnect arc faults which occur in damaged or crushed cables, loose terminations and ageing installations where the insulation performance degrades over time. It can provide over current protection, short circuit protection, residual current protection and arc fault protection as well. The products comply with IEC62606 and IEC61009-1.

#### Specification

Model	TSAF1-40	TSAF1-63				
Rated Current	6A, 10A, 16A, 20A, 25A, 32A, 40A	6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A				
Network Type	AC 🔁					
Rated Voltage	230/2	240V~				
Maximum Operating Voltage	1.1	Un				
Minimum Operating Voltage	18	0V				
Curve Code	В,	, C				
Rated Residual Making and Breaking Capacity (I $\triangle$ m)	3000A					
Rated Residual Operating Current (I $\triangle$ n)	30mA, 100mA, 300mA					
Rated Short Circuit Capacity (Icn)	6000A					
AFDD Test Means	Automatic test funct	tion as per IEC 62606				
Classification as Per IEC 62606	4.1.2 - AFDD unit integrated in a protective dev					
Ambient Operating Temperature	-25°C	~ 40°C				
AFDD Ready Indication	Single LED	Indication				
Over voltage Function	Over voltage condition of 270Vrms to 300Vrm for 10 seconds will cause device to trip. LED indication of over voltage trip will be provi on product re-latch.					
Self Test Interval	1 Hour					

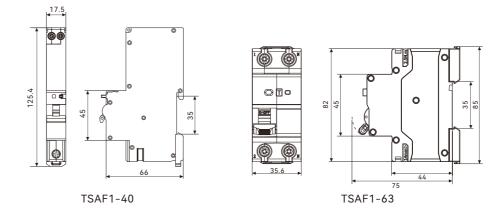


TSAF1-63



TSAF1-40

#### **Dimensions**





#### TSG3-125 Modular Main Switch

# T56/125 12 ACR | 1 ACR

TSG3-125 1P



TSG3-125 2P



TSG3-125 3P

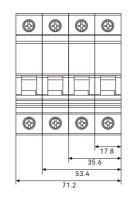
#### **Application**

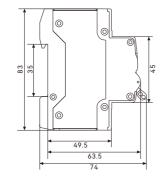
TSG3-125 modular main switch offers an extensive range of high quality main switches for residential, commercial and industrial applications. The products incorporate superior quality internal mechanisms and come with a highly visible ON/OFF toggle, which allows for quick location when isolation of power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

#### **Specification**

Number of Poles	1P, 2P, 3P, 4P					
Utilisation Category	AC-22A					
Rated Operational Current	32A, 40A, 63A, 80A, 100A, 125A					
Rated Operational Voltage	230/400V~, 240/415V~					
Standards	IEC/EN60947-3					
Rated Short-circuit Making Capacity (Icm)	5 kA switch-disconnector alone					
Rated Short-time Withstand Current (Icw)	1500A					
Rated Insulation Voltage (Ui)	AC 250V					
Rated Impulse Withstand Voltage (Uimp)	6000V					
Mechanical Durability	8500 cycles					
Electrical Durability	1500 cycles					
Tightening Torque	M6 3.5N.m Ⅱ					
IP Degree of Protection	IP20 comforming to IEC 60529 IP40(modular enclosure) comforming to IEC 60529					
Ambient Air Temperature for Operation	-5°C~40°C					
EU RoHS Directive	Compliant EU RoHS Declaration					
Pollution Degree	2 comforming to IEC/EN 60898-1					
Upper Wiring						
Lower Wiring	1-50mm²					
	-					

#### **Dimensions**





#### **TIL2 Modular Indicator**

#### Application

TIL2 Modular indicator is applicable to circuit for visual indication and signaling.

#### Specification

Rated Voltage		AC/DC 24V, AC/DC 48V AC 100V AC 230V					
	TIL2-1	Red, Yellow, Green					
Colour	TIL2-2	Red+Green					
	TIL2-3	Red+Green+Yellow, Red+Blue+White					
Connection Terminal Pillar terminal with clam		Pillar terminal with clamp					
Connection Capacity		Rigid conductor 2.5mm²					
Installation		Mounted on 35mm din rail					
Max Power 0.06W		0.06W					
Illumination		LED					
Working Life		≥30,000h					

#### **Circuit Diagram**







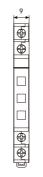


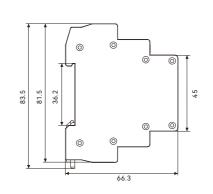
TIL2-1R



TIL2-2RG

#### **Dimensions**







TIL2-3RGY



#### **TIL1 Modular Indicator**

#### **Application**

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

#### Specification

•	
Rated Voltage	AC/DC 6V, 12V, 24V, 110V, 230V
Color	Red, Yellow, Blue, Green, White
Rated Current	≤20mA
Working Life	≥30000h
Connecting Wire	≤6mm²
Tightening Torque	0.8N.m
Protection Grade	IP20
Ambient Temperature	-5°C~+40°C
Altitude	≤ 2000m
Installation Category	Class II and III
Pollution Level	Level 2
Installation Method	Mounted on 35mm Din Rail

### TIL1-1

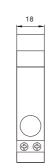


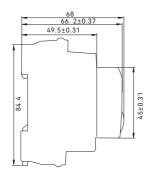
TIL1-2

#### **Dimensions**



TIL1-3





#### **TPB1 Modular Pushbutton**

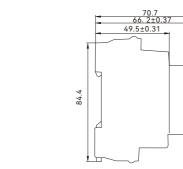
#### Application

TPB1 modular pushbutton is applicable to the control system of a circuit with AC 50/60Hz rated voltage to 230V, 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

-p	
Rated Voltage	AC 230V~
Color	Red, Green
Rated Current	6A
Mechanical Life (times)	250000
Electrical Life (times)	100000
Contact Combination Mode	TPB1-1: 2NO+2NC, 3NO+1NC, 4NO
Contact Combination Mode	TPB1-2: 1NO+2NC, 2NO+1NC, 3NO
Connecting Wire	≤6mm²
ightening Torque	0.8N.m
Jse Category	AC-14
rotection Grade	IP20
ated Voltage of Indicator	AC/DC 6V, 12V, 24V, 110V, 230V
Rated Working Current	≤20mA
Vorking Life	≥30000h
mbient Temperature	-5°C~+40°C
ltitude	≤ 2000m
nstallation Method	Mounted on 35mm Din Rail

#### **Dimensions**





TPB1-1



TPB1-2



#### Modular Digital Voltage & Current Protector





TDP4-1 TDP4-3

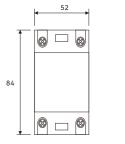
#### Application

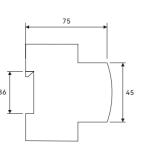
TDP4 modular digital voltage and current protector can disconnect the circuit to protect the appliances automatically in case abnormal situation happens to power supply. When the power supply recovers, the protector switches on the circuit automatically after 1-2 minutes delay. Indicators on the panel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

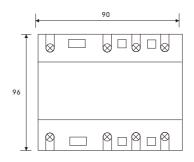
#### Specification

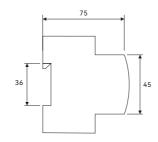
Model	TDP4-1	TDP4-3				
Rated Working Voltage	AC 220V~	AC 380V~				
Operation Voltage Range	AC 80V-400V(Single Phase)	AC 140V-650V				
Rated Working Current	32A/40A	/63A/80A				
Over Voltage Protection Value	AC 230V	-AC 300V				
Under Voltage Protection Value	AC 120V	-AC 210V				
Voltage Power Off Time	0.4s					
Overcurrent Protection Value	1-32A/1-40A/1-63A/1-80A					
Overcurrent Power Off Time	1-0	1-60s				
Recover time (Starting Delay Time)	10-99	10-999s/80s				
Own Power Consumption	≤1.	5W				
Motor Mechanical Life	≥100,00	00 Times				
Relative Humidity	45-90%RH					
Temperature	40	°C				
Altitude	≤20	00М				

#### **Dimensions**













TDP2-1

TDP2-3

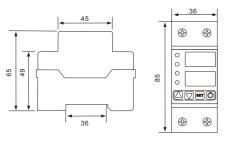
#### Application

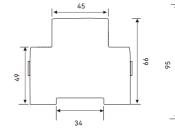
TDP2 Voltage Protector, a new generation of home appliance protectors, is suitable for houses, hotels, buildings, school dormitories, etc, to protect the electrical safety of appliances and other loads, to prevent damage to the load caused by too high or too low mains power.

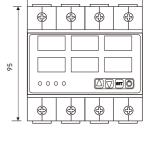
#### Specification

Model	TDP2-1 TDP2-3						
Rated Supply Voltage	AC 2	20V~ AC 380V~					
Operation Voltage Range	AC 80V~400V(single phase)	AC 80V~400V(three phase)	AC140V~700V(three phase)				
Electric Current(> A)setting Range	1~40A/63A	1~40A/63A/80A	1~40A/63A/80A				
Overvoltage(>U)setting Range	230V	-300V	390V~500V				
Undervoltage( <u)setting range<="" td=""><td>210V</td><td>~140V</td><td>370V~260V</td></u)setting>	210V	~140V	370V~260V				
Rated Current	40A/63A	40A/63A/80A/100A	40A/63A/80A/100A				
>U and <u delay<="" td="" trip=""><td></td><td colspan="6">0.1~30s</td></u>		0.1~30s					
Reset/start Delay	1 ~600s 1~500s						
Voltage Measurement Accuracy	2% (Not exceeding 2% of the overall range)						
Rated Insulation Voltage	40	0V	700V				
Output Contact	1NO	18	NO				
Protection Degree		IP 20					
Pollution Degree		3					
Altitude		≤2000m					
Operatintg Temperature	- 50°C~55°C						
Humidity	≤50	≤50% at 40°C(without condensation)					
Storage Temperature		- 30°C~70°C					

#### **Dimensions**







TDP2-1 TDP2-3



#### Modular Digital Over & Under Voltage Protector





TDP-1

TDP-3

#### **Application**

TDP Modular Digital Over & Under Voltage Protector is self-healing phase failure and 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.

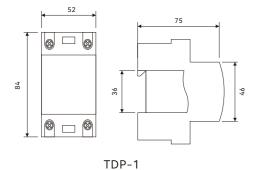
All the protective actions are automatically controlled. Indicators on the panel display the working condition of the protector.

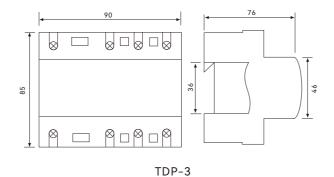
This product is convenient in use, reliable in quality and excellent in performance.

#### **Specification**

Model	TDP-1							TDP-3					
Number of Poles		1P							3P				
Rated Voltage		AC 220V~						AC 380V~					
Rated Current	20A	32A	40A	50A	63A	80A	32A	40A	50A	63A	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-	230-270 adjustable (400V short time)						230-270 adjustable					
Time Delay		0.01s					0.01s						
Under-Voltage Cut-Off Value		AC 12	0V-21	0V adju	stable		AC 120V-210V adjustable						
Time Delay		0.1s						0.1s					
Recovery Setting Time Range		10-600s						10-600s					
Self Power Consumption		≤3W ≤3W											
Ambient Temperature		-20°C~+40°C											

#### **Dimensions**





#### TSP8 Surge Protector





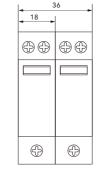
TSP8 1P+NPE

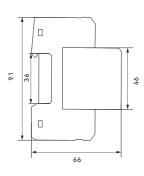
TSP8 4P

#### Specification

Туре		2P, 4P, 1P+NPE, 3P+NPE					
Nominal Discharge Current (8/20)	μs)(In)	51	kA	10	kA	20kA	
Max. Discharge Current (8/20μs)(	lmax)	10kA		20kA		40kA	
Max. Continuous Operating Volta	ge (a.c.) (Uc)	150V	280V	320V	385V	440V	255V(NPE)
	TSP8-10	≤0.7kV	≤0.8kV	≤1.0kV	≤1.2kV	≤1.6kV	≤1.5kV
Voltage Protection Level (Up)	TSP8-20	≤0.8kV	≤1.0kV	≤1.2kV	≤1.45kV	≤1.6kV	≤1.5kV
	TSP8-40	≤1.0kV	≤1.3kV	≤1.4kV	≤1.8kV	≤2.2kV	≤1.5kV
SPD According to EN61643-11				Type 2/0	Class II/T2		
Response Time (tA)				25ns / NP	E: 100ns		
Operating Temperature Range (T	u)	-40°C~+80°C					
Operating State / Fault Indication		2P, 4P/Green: normal Red: invalid					
Degree of Protection		IP20					

#### **Dimensions**







#### **TSP7 Surge Protector**







TSP71P

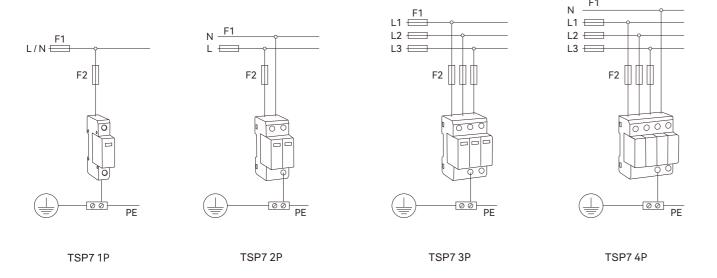
TSP7 2P

TSP7 3P

#### Specification

Туре		1P, 2P, 3P, 4P							
Nominal Discharge Current (8/20	μs)(In)	5kA 10kA 20kA :					30kA		
Max. Discharge Current (8/20μs)(	(Imax)	10kA		20kA		40kA		60kA	
Max. Continuous Operating Volta	ge (a.c.) (Uc)	150V	150V 280V 320V 385V 440V			600V			
	TSP7-10	≤0.7kV	≪0.	8kV	≤1.0kV	≤1.2kV	≤1.	6kV	≤2.0kV
\\alta = 0 Desta ation   0.00 (110)	TSP7-20	≤0.8kV	≤1.	0kV	≤1.2kV	≤1.45kV	≤1.	6kV	≤2.0kV
Voltage Protection Level (Up)	TSP7-40	≤1.0kV	≤1.	3kV	≤1.4kV	≤1.8kV	≪2.2		≤2.5kV
	TSP7-60	≤1.2kV	≤1.	5kV	≤1.6kV	≤1.8kV	≤2.	0kV	≤2.5kV
SPD According to EN61643-11					Type 2/C	Class II/T2			
Response Time (tA)					1P, 2P, 3P	, 4P: 25ns			
Operating Temperature Range (T	ū)	-40°C~+80°C							
Operating State / Fault Indication	1	1P, 2P, 3P, 4P/Green: normal Red: invalid							
Degree of Protection					IP.	20			

#### Standard Wiring









UK CA

TSP7 1P+NPE

TSP7 3P+NPE

	1P+NPE, 3P+NPE								
5kA 10kA 20kA 30kA						30kA			
10kA	1	20kA	20kA 40kA		40kA 60kA				
150V	280V	320V	38	5V	440V	600V	255V(NPE)		
≤0.7kV	≤0.8kV	≤1.0kV	≤1.2	2kV	≤1.6kV	≤2.0kV	≤1.5kV		
≤0.8kV	≤1.0kV	≤1.2kV	≤1.4	5kV	≤1.6kV	≤2.0kV	≤1.5kV		
≤1.0kV	≤1.3kV	≤1.4kV	≤1.8	3kV	≤2.2kV	≤2.5kV	≤1.5kV		
≤1.2kV	≤1.5kV	≤1.6kV	≤1.8	3kV	≤2.0kV	≤2.5kV	≤1.5kV		

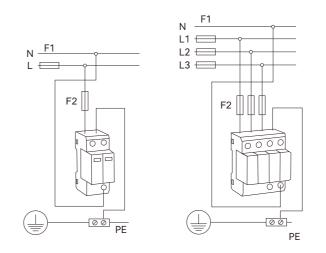
Type 2/Class II/T2

#### 1P+NPE, 3P+NPE: 25/100ns

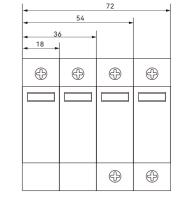
-40°C~+80°C

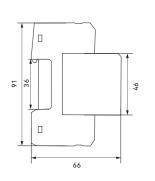
1P, 3P/Green: normal Red: invalid

IP20



#### Dimensions





TSP7 1P+NPE TSP7 3P+NPE



#### **LCH8 Modular Contactor**







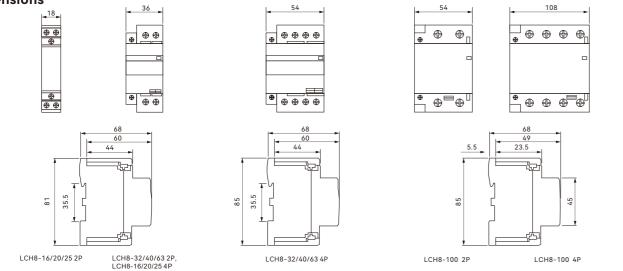


Specification

Model	Ratir	ıg(In)	Control Voltage Contact Width		Width in 9mm modules	Туре			
Model	AC-1	AC-3	Control voltage	Contact	width in 9mm modules	туре			
LCH8-16 2P	16A	6A							
LCH8-20 2P	20A	7A			2				
LCH8-25 2P	25A	9A							
LCH8-32 2P	32A	12A		2NO		A1 R1 R3			
LCH8-40 2P	40A	18A		1NO+1NC	4	ф- <i>7-7</i> ; ф- <i>7</i> -4; ф-4-			
LCH8-63 2P	63A	25A		2NC		I I I I I I I I I I I I I I I I I I I			
LCH8-80 2P	80A	32A							
LCH8-100 2P	100A	40A			6				
LCH8-125 2P	125A	50A							
LCH8-16 3P	16A	6A							
LCH8-20 3P	20A	7A	AC 24V		4	A1 1 3 5 A1 R1 R3 R5			
LCH8-25 3P	25A	9A	AC 110V	3NO					
LCH8-32 3P	32A	12A	ACTION	3NC		7777 7777			
LCH8-40 3P	40A	18A	AC 230V		6	A2 2 4 6 A2 R2 R4 R6			
LCH8-63 3P	63A	25A							
LCH8-16 4P	16A	6A							
LCH8-20 4P	20A	7A			4	A1 1 3 5 7 A1 R1 R3 R5 R7			
LCH8-25 4P	25A	9A		(NO		中 <i>-</i> ド-ド-ド 中 <i>-</i> ア-ア-ア			
LCH8-32 4P	32A	12A		4NO 4NC		1 1 1 1 1 1 1 1 1 1 1 1 A2 2 4 6 8 A2 R2 R4 R6 R8			
LCH8-40 4P	40A	18A		2NO+2NC	6				
LCH8-63 4P	63A	25A		3NO+1NC		A1 R1 1 3 R3 A1 1 3 5 R1			
LCH8-80 4P	80A	32A		311011110		ф- <b>/</b> - <b>/</b>			
LCH8-100 4P	100A	40A			12				
LCH8-125 4P	125A	50A							

#### **Dimensions**

25











Specification	n							
Model	Ratin	ıg(ln)	Control Voltage	Contact	Width in 9mm modules	Type		
Model	AC-1	AC-3	Control voltage	Contact   width in 9mm modules		Туре		
LCH8-16M 2P	16A	6A				A1 1 3 A1 1 R1		
LCH8-20M 2P	20A	7A		0110	2	autol=プーキャイー		
LCH8-25M 2P	25A	9A		2NO 1NO+1NC		O· — J       O· — J       A2 2 R2		
LCH8-32M 2P	32A	12A		2NC		A1 R1 R3		
LCH8-40M 2P	40A	18A		ZINC	4	auto = 1 + 7-7		
LCH8-63M 2P	63A	25A				0. — 3 1 1 1 A2 R2R4		
LCH8-16M 3P	16A	6A						
LCH8-20M 3P	20A	7A	AC 24V		4	A1 1 3 5 A1 R1 R3 R5		
LCH8-25M 3P	25A	9A	AC 110V	3NO				
LCH8-32M 3P	32A	12A	ACTION	3NC		O· — J       O· — J         A2 R4 R6		
LCH8-40M 3P	40A	18A	AC 230V		6			
LCH8-63M 3P	63A	25A	1					

4NO

4NC

2NO+2NC

3NO+1NC

#### **Dimensions**

LCH8-16M 4P 16A

20A

25A

32A

40A

63A

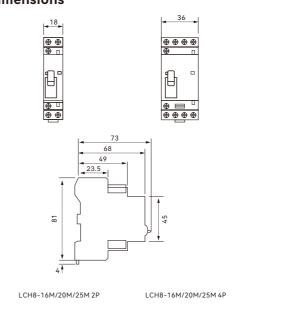
LCH8-20M 4P

LCH8-25M 4P

LCH8-32M 4P

LCH8-40M 4P

LCH8-63M 4P



6A

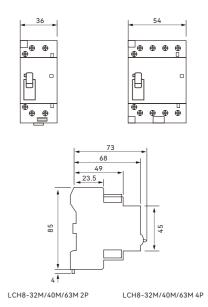
7A

9A

12A

18A

25A





#### LCH9 AC/DC Modular Contactor

#### Specification





LCH9-63 2P



LCH9-63 4P





AUC20

•						
Model		ng(In)	Control Voltage Contact		Width in 9mm	Туре
	AC-1	AC-3			modules	
LCH9-16 2P	16A	6A				
LCH9-20 2P	20A	7A			2	A1 1 3 - 7 - 7
LCH9-25 2P	25A	9A		2NO 1NO+1NC	2	A1 R1 1
LCH9-32 2P	32A	12A		2NC		T ( ) A2 R2 2
LCH9-40 2P	40A	18A	AC/DC 12V AC/DC 24V AC/DC 48V		4	A1 1 3 d
LCH9-63 2P	63A	25A			4	72 2 7
LCH9-16 4P	16A	6A	AC/DC 110V			A1 1 3 5 7
LCH9-20 4P	20A	7A	AC/DC 230V	,	4	A1 R1 R3 R5 R7
LCH9-25 4P	25A	9A		4NO 4NC	7	A2 R2 R4 R6 R8
LCH9-32 4P	32A	12A		2NO+2NC 3NO+1NC		A1 R1 1 3 R3
LCH9-40 4P	40A	18A			6	A2 R2 2 4 R4  A1 1 3 5 R1
LCH9-63 4P	63A	25A				A2 2 4 6 R2

#### Auxiliary

		AC-12		AC-15		DC-13		
Model	Used for Contactor	Control Voltage	Control Current	Control Voltage	Control Current	Control Voltage	Control Current	Type
AUC11	1 СП 0					_	_	R1 1 1 1 R2 2
AUC20	LCH8	0.4014	5.A					1 d
AC1-11	LCH9	240V	5A	230V	2A	130V	1A	R1 1 1 1 R2 2
AC1-20	LCHY					1300	IA	1 d

#### **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 next 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.

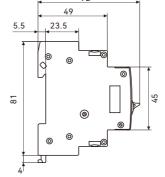
#### Specification

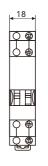
•					
Model	Rated Current (A)	ated Current (A) Wiring Diagram			
BIR-16/20		1 3 A1 	AC 24V DC 12V		
BIR-16/11		1 3 A1 	AC48V DC24V		
BIR-16/1C	16	1 A1 A1 A2 A2	AC130V DC48V		
BIR-16/10		1 A1 A1 A2 A2	AC230V DC110V		

#### **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 ms to 1 s (200 ms recommended)
ResponseTime	50 ms
Rated Voltage	AC 24V~250V
Maximum Operations	5 times/m
Maximum Switching Operation	100 times/d
Insulation Voltage (Ui)	AC 440V
Rated Impulse Withstand Voltage (Uimp)	6000V
El	200,000 cycles (AC21)
ElectricalLife	100,000 cycles (AC22)
Overvoltage Category	IV

#### **Dimensions**







BIR-16/10



TSM4-125L

TSM4-250L

#### **TSM4 Moulded Case Circuit Breaker**

#### **Application**

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

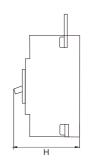
The breakers protect the circuit and devices in the circuit against being damaged by means of overload protection, short circuit protection and under voltage protection. The products comply with IEC60947-2.

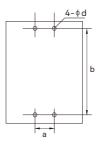
#### **Specification**

Model	Туре	Pole	Rated Current (A)	Ics (kA)	Icu (kA)	Arc Distance
TSM4-63	L	3, 4	10,16,20,25,32,40,50,63	15	18	≤50
10114 00	М	3, 4	10,10,20,23,32,40,30,03	18	20	≥50
TSM4-125	TSM4-125 L 2,3,4 16,20,32,40,50,		18	25	≤50	
10114 120	М	2,3,4	63,80,100,125	22	30	≥50
TSM4-250	L	2,3,4	100,125,140,160,180,	20	25	- ≤50
	М		200,225,250	25	35	
TSM4-400	L	3, 4	200,225,250,315,350,400	25	35	≤100
1314-400	М		200,225,250,315,350,400	35	50	
TCM/ /20	L	2 /	400,500,630	30	40	<100
TSM4-630	М	3, 4	400,500,650	35	50	≤100
TSM4-800	М	3, 4	630,700,800	35	50	≤100

#### **Dimensions**

Model	Туре	L	W	W1	Н	а	b	4-
TSM4-63	L	136	75	103	90.5	25	117	3.5
	М	130	/5	103	98.5	23	117	
TSM4-125	L	150	93	122	96	30	129	4.5
	М	150	93	122	104			
TCM/ 250	L	165	107	142	110	35	126	4.5
TSM4-250	М				127			
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	М	280	210	280	155	70	243	7





up to 1000V, rated operation voltage up to 400V, rated operation current up to 800A, AC 50/60Hz, for usage of infrequent transfer of the circuit and infrequent starting of the

Model	Туре	Pole	Rated Current (A)	Ics (kA)	Icu (kA)	Arc Distance
TSM4-63	L	3, 4	10,16,20,25,32,40,50,63	15	18	≤50
10114 00	М	3,4	10,10,20,23,32,40,30,03	18	20	≥50
TSM4-125	L	2,3,4	16,20,32,40,50,	18	25	- ≤50
10114 123	М	2,3,4	63,80,100,125	22	30	_ ≥50
TSM4-250	L	2,3,4	100,125,140,160,180,	20	25	- ≤50
	М		200,225,250	25	35	
TSM4-400	L	3, 4	200,225,250,315,350,400	25	35	<100
13144-400	М	3, 4	200,223,230,313,330,400	35	50	- ≤100
TSM4-630	L	3, 4	400,500,630	30	40	<100
13144-030	М	3, 4	400,500,650	35	50	- ≤100
TSM4-800	М	3, 4	630,700,800	35	50	≤100

Model	Туре	L	W	W1	Н	a	b	4-
TSM4-63	L	136	75	103	90.5	25	117	3.5
	М	130	/5	103	98.5	23	117	3.5
TSM4-125	L	150	93	122	96	30	129	4.5
	М	150	73		104			
TCM/ 250	L	165	107	142	110	35	126	4.5
TSM4-250	М				127			
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	М	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 1000V, rated operation voltage up to 400V, rated operation current up to 800A, AC 50/60Hz, 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 protection, inverse time short time delay short circuit protection, 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;
- The electronic tripper is energized by the circuit breaker itself.
- 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	Pole	Rated Current (A)	Ics (kA)	Icu (kA)	Arc Distance
TSM4E-125	3	16,20,25,32, 36,40,45,50,55,60, 65,70,75,80,85,90,95,125	22	30	≤50
TSM4E-250	3	100,125,140, 160,180,200,225,250	25	35	≤50
TSM4E-400	3	200,225, 250, 280,315,350,400	35	50	≤100
TSM4E-630	3	400,420,440,460, 500,530,560,600,630	35	50	≤100
TSM4E-800	3	630, 640,660,680, 700,720,740,760,780,800	35	50	≤100



TSM4E-125



TSM4E-250





#### **Application**

TSM4L residual current operated moulded case circuit breaker is applied for circuit of rated insulating voltage up to 1000V, rated operation voltage up to 400V, rated operation current up to 800A, AC 50/60Hz, 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 overload protection, short circuit protection, under voltage protection and residual current protection.

The products comply with IEC60947-2.



- 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 85V.
- User can adjust the rated residual operation current I∆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			
Туре	L	L	М	М			
Pole	4	4	4	4			
Rated Current (A)	16,20,25, 32,40,50, 63,80,100,125	100,125, 140,160,180, 200,225,250	200,225,250, 315,350,400	400,500, 630,700,800			
Ics (kA)	18	20	35	35			
Icu (kA)	25	25	50	50			
Arc Distance	≤50	≤50	≤100	≤100			
Rated Residual Action Current I∆n (mA)	100,300,500 (optional)						



TSM4L-125

TSM4L-250

#### TSM8 Moulded Case Circuit Breaker

#### Application

TSM8 series moulded case circuit breaker is applied for circuit of rated insulating voltage up to 800V, rated operation voltage up to 690V, rated operation current up to 1600A, AC 50/60Hz, 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 protection, short circuit protection and under voltage protection. Model with bigger current (bigger than 630A) protect the circuit and devices in the circuit against being damaged by means of inverse time long time delay overload protection, inverse time short time delay short circuit protection, short circuit protection and under voltage protection.

The products comply with IEC60947-2.



TSM8-250F

#### Specification

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



TSM8-630F





#### **TSM9 Moulded Case Circuit Breaker**

# TRACTO OF TRACTOR OT TRACTOR OF T

TSM9-100L

# MCCB TRACES TRACES

TSM9-400L

#### Application

TSM9 moulded case circuit breaker supplied with rated insulation voltage 1000V is used for circuit of AC 50/60Hz, rated operating voltage AC 690V and rated operating current up to 1600A for infrequent changing over and starting of the motors.

Equipped with the protection devices against over current, short circuit and under voltage, the product is capable of preventing damage of circuits and supply units. The product can be used to replace a load switch with isolation function. The products comply with IEC60947-2.

The product is equipped with an intelligent controller with LCD display. Rated operating current, overload setting current, short circuit delay current, short circuit instantaneous current, tripping time, as well as short circuit instantaneous three-stage protection and under voltage protection can be set in advance.

The product is also equipped with RS485 communication interface and MODBUS-RTU protocol, DL/T 645 protocol.

The following indication can be chosen by the users:

- Remote signal: breaking closing, tripping, alarm and fault status indication;
- Remote control: breaking, closing, resetting;
- Telemetry: three phase current and N phase current, grounding current, trip memory function, and functions such as querying trip recording parameters.

#### Specification

Model	TSM9-100	TSM9-160	TSM9-250	TSM9-400	TSM9-630	TSM9- 1600	
Number of Poles	3P, 4P						
Shell Frame Maximum Rated Current Inm(A)	100	100 160 250 400 630					
Rated Current In(A)	12.5,16,20, 25,32,40, 50,63,80, 100	16,20,25, 32,40,50, 63,80,100, 125,160	100,160, 180,200, 225,250	250,315, 350,400	400,500, 630	630,800, 1000,1250, 1600	
Rated Insulation Voltage Ui			100	00V			
Rated Impulse Withstand Voltage Uimp	8000V						
Rated Voltage Ue	AC 400V/415V 50/60HZ						
Flying arc Distance (mm)			(	)			
Rated Ultimate Short Circuit Breaking Capacity Icu(kA) 400/415V		L=50kA	, M=85kA, H	l=100kA		L=50kA	
Rated Service Short Circuit Breaking Capacity Ics(kA) 400/415V			lcs=10	00%lcu			
Utilization Category	А	A	А	В	В	В	
Rated Short Time Withstand Current lcw (kA)(1s)	1				5.0kA/1s		
Electrical Life (times)	10000	8000	8000	6000	5000	1500	
Mechanical Life (times)	20000	20000	20000	10000	10000	10000	

#### Micrologic 5.0E measurement function

		Overload protection	
		Short circuit short delay protection	
		Instantaneous action protection	
	Current (A)	(4P) Netural line protection	
		Grounding protection	
Protection Function		Current unbalance protection	
runction		Overload preliminary warning	
		Breaking zero	•
		Voltage unbalance protection	
	Voltage (V)	Over frequency and under frequency protection	
	Phase sequence protection		
		Phase current and neutral line current	
		Average phase current	
	Current (A)	The maximum value of phase current and neutral line current	
		Percentage of ground faults	
		Interphase unbalanced current value	
		Line voltage	
	Voltage (V)	Phase voltage	
		Average line voltage	
Measurement Function		Average phase voltage	
runction		Unbalanced line voltage, unbalanced phase voltage	
		Phase sequence	
		Frequency (Hz)	
		Active	
		Reactive	
	Power	Apparent	
		Power factor	
	Electricity	Active (kWh), Reactive (kVARh), Visual (kVAh)	
	The figures record	Times of all kinds of prection of tripping	
	MAX/MIN value record	Max/Min record of current and voltage from each phase	
	Record	Trip ,alarm and deflection record	
	Contact wear	Contact abrasive wear record	
	Times of operation	The times of operation record	
Maintenance	RTC Function	Real time clock	-
Function	Auxiliary alarm detection function function	Auxiliary alarm detection, display the state of circuit breaker	
	Electric operation control function	Remote electric operation control function	•
		LED display	-
	Human and machine interaction	LCD display	-
l lui	1		
		Enter setting	

■ Have □ Optional



#### **TSW8 Intelligent Circuit Breaker**



#### TSW8-2000

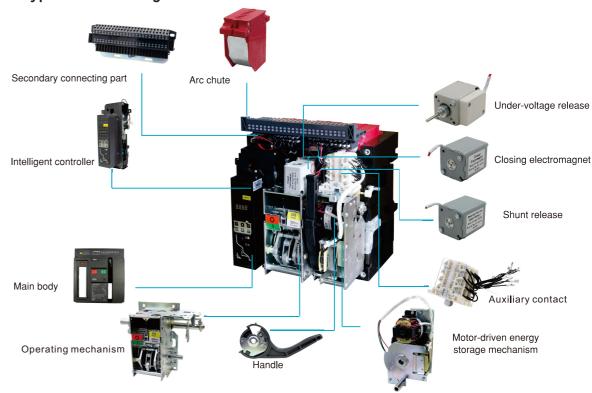
#### Application

TSW8 series intelligent circuit breaker is suitable for the circuit of AC 50/60Hz with rated voltage 400V, 690V 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 products with IEC60947-2.

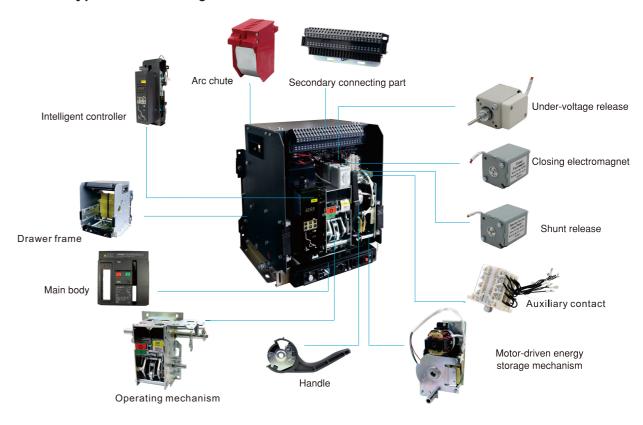
#### Specification

Model		TSW8-1600	TSW8-2000	TSW8-3200	TSW8-4000	TSW8-6300
Frame Rated Current Ir	nm (A)	1600	2000	3200	4000	6300
Number of Poles		3,4	3,4	3,4	3,4	3,4
Rated Current In (A)		400,630, 800,1000, 1250,1600	630,800, 1000,1250, 1600,2000	2000,2500, 2900,3200	3600,4000	4000,5000, 6300
1 (I.A.)	400V	50	65	80	80	120
Icu (kA)	690V	35	50	65	65	85
Ics (kA)	400V	42	50	65	65	100
ics (kA)	690V	35	40	50	50	75
Rated Current at N-pole In (A)		100% In	100% In	100% In	50% In	50% In
Inherent Making & B	reaking Time	Time ≤30ms				
Electrical Life (times)		1500	1500	1000	500	500
Mechanical Life (times)		5000	5000	4000	2500	2500
Mounting Mode	unting Mode Fixed type or Withdrawable type					
Arcing Distance (mm	g Distance (mm) –					
Intelligent Controlle	r		Standard type	(M), telecommun	ication type (H)	

#### Fixed Type Structure Diagram



#### **Drawer Type Structure Diagram**





#### **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 AC 50/60Hz, up to 660V, 0.1A-80A 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		l Standard F		Setting	Magnetic Trip	
	230V	400V	415V	440V	Range (A)	Current (A)
MP1 MP2	kW	kW	kW	kW		
M01	-	-	-	-	0.1-0.16	1.5
M02	-	-	-	-	0.16-0.25	2.4
M03	-	-	-	-	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	Туре
AE11	N/O+N/C	Front (1PC for each	
AE20	N/O+N/O	circuit breaker)	Instantaneous auxiliary
AN11	N/O+N/C	Side (Max. 2PCS on the	contact
AN20	N/O+N/O	left side of circuit breaker)	
AD1010	N/O+N/O		
AD1001	(Fault)+N/C	Side (1PC on the left side	Fault signal contact +
AD0110	N/C+N/O	of circuit breaker)	instantaneous auxiliary contact
AD0101	(Fault)+N/C		





MP2



MP2-MC02



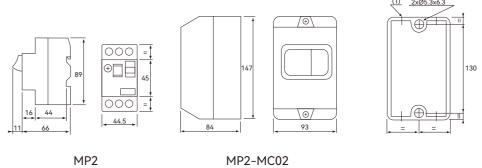


#### Specification

Model	Voltage	Installation	Туре
AU115	110127V 50Hz	0:1 (400	
AU225	220240V 50Hz	Side (1PC on the right side of circuit breaker)	Under Voltage Tripper
AU385	380415V 50Hz	side of circuit breaker)	
AS115	110127V 50Hz	0:1 (400	
AS225	220240V 50Hz	Side (1PC on the right side of circuit breaker)	Shunt Tripper
AS385	380415V 50Hz	olde of elledit breaker)	



**Dimensions** 





ΑN

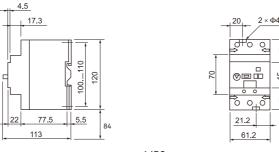
AD

#### Specification

		d Standard F ors 50/60Hz	Setting	Magnetic Trip		
Model 230V kW	230V	400V	415V	440V	Range (A)	Current (A)
	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

ΑE

Dimensions



MP3

MP3



#### **TSBL Modular Alarm**



TSBL

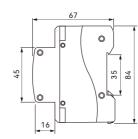
#### Application

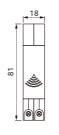
The electric bell is suitable for audible signaling for intermittent use only in domestic and commercial installations.

#### Specification

Rated Voltage	AC 220-240V
Pollution Grade	II
Working Condition	Short-time Working
Installation	Mounting on 35mm Din Rail
Standard	IEC 60947-5-1

#### **Dimensions**





#### **Modular Socket**







TMS-7

TMS-5

5 TMS-6





TMS-8

TMS-9

#### **Dual Power Automatic Changeover Switch**





TSMQ7-XFZ 63/2P

TSMQ7-XFZ 63/4P

#### Application

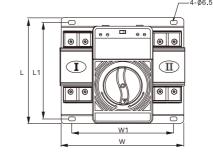
TSMQ7-XFZ dual power automatic changeover switch is suitable for dual circuit power supply system with 50/60Hz, rated working voltage up to 400V and rated current up to 63A. Automatic switching of the power between mains power and standby power ensures the reliability of power supply. The product is widely used in high rise buildings, shopping malls, fire control, smoke elimination fans, elevators, life pumps, emergency lighting, photovoltaic system and so on.

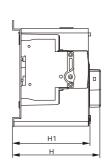
#### Specification

Product category	CB Class Automatic Changeover Switch
Number of Poles	2P, 3P, 4P
Rated Current	10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A
Rated Working Voltage	230/400V
Rated Insulation Voltage	690V
Rated Impulse Withstand Voltage	4kV
Rated Short Circuit Breaking Capacity	5kA
Rated Short Time Making Capacity	7.65kA
Mechanical Life (times)	4500
Electrical Life (times)	1500
Working Temperature	-5°C to +40°C

#### Dimensions

Model	W	W1	L	L1	Н	H1
TSMQ7-XFZ/2P	155	128	135	123	110	98
TSMQ7-XFZ/3P	191	164	135	123	110	98
TSMQ7-XFZ/4P	227	200	135	123	110	98







#### **Dual Power Automatic Changeover Switch**





TSMQ1-100 2P

TSMQ1-100 4P

#### Application

TSMQ1-100 modular dual 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 50/60Hz, rated voltage up to 415V 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.

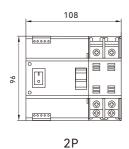
When the product works under manual mode, the changeover of circuit between main power supply (I) and standby power supply (II) should be realized manually.

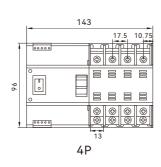
The switch is characteristic of small in volume, prompt in reaction, reliable in conversion, convenient in installation and long life in service.

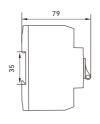
#### **Specification**

Number of Poles	2P, 4P
Rated Current	20A, 32A, 40A, 50A, 63A, 80A, 100A
Utilization Category	AC-33iB
Rated Working Voltage (Ue)	2P 230/240V, 4P 400/415V
Rated Insulation Voltage (Ui)	AC690V
Rated Impulse Withstand Voltage	8kV
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	
Return Conversion Time	<30ms
Power off Time	

#### **Dimensions**











TSMQ8 2P

TSMQ8 4P

#### Application

TSMQ8 dual power automatic changeover switch is a PC class infrequent changeover switch to provide the power supply for the circuit constantly when the mains power supply is not available suddenly. The switch is suitable in power supply system with 50/60Hz, rated voltage up to 400V and rated current up to 63A.

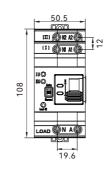
When the product works under "auto" mode, the switch converses the circuit from the mains power supply (I) to standby power supply (II) automatically in case the mains supply power is off (or phase failure). When the mains power supply (I) resumes to be available, the switch converses the circuit back to mains power supply (I) from standby power supply (II) automatically.

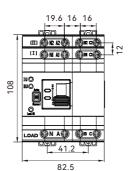
The switch is characteristic of being small in volume, prompt in reaction, reliable in conversion, convenient in installation, and long life in service.

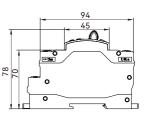
#### Specification

-	
Product category	PC class: can be switched on and loaded without generating short circuit current
Number of Poles	2P, 4P
Rated Current	6A, 10A, 16A, 20A, 25A, 32A, 40A,50A, 63A
Rated Insulation Voltage (UI)	AC 690V
Rated Impulse Withstand Voltage (Uimp)	8kV
Rated Operating Voltage (Ue)	2P 110/220V, 4P 400V
Rated Short Circuit Current (Iq)	5kA
Short Circuit Protection Device (fuse)	NT00 63A
Rated Impulse Withstand Voltage	8kV
Control Circuit	Rated control voltage Us: AC220V/110V, 50/60Hz Normal workingconditions: 85%Us-110%Us
Auxiliary Circuit	AC220V/110V 50/60Hz le=5A
Over voltage/Under voltage Protection Range (Return to Normal 30s)	220V Under voltage value: 175V Recovery value: 195V Over voltage value: 260V Recovery value: 240V(±5V) 110V Under voltage value: 85V Recovery value: 95V Over voltage value: 145V Recovery value: 130(±5V)
Mechanical Life	≥8000 times
Electrical Life	≥1500 times
Utilization Category	AC-31B

#### **Dimensions**









#### **Dual Power Automatic Changeover Switch**



TSMQ3-630

#### Specification

43

Product Category		PC Class Automatic Changeover Switch								
Model	TSMQ3-63	TSMQ3-125	TSMQ3-250	TSMQ3-630						
Number of Poles		2P, 3F	P, 4P							
Rated Current	16A, 20A, 25A, 32A, 40A, 50A, 63A	20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A, 125A	160A, 200A, 225A, 250A	315A, 350A, 400A, 450A, 500A, 550A, 600A, 630A						
Working Feature		3 Positions 1-0-2								
Rated Insulation Voltage		AC690V								
Rated Voltage		AC400V								
The Rated Impulse Withstand Voltage		8kV								
Utilization Category		AC-3	33iB							
Position Number		Double	Throw							
Wiring Manner		Panel Mo	ounting							
Short Time Withstand Current	5kA	101	κA	12.6kA						
Connectsub-capacity	10le	610	e	6le						
Mechanical Life		20000 times		4000 times						
Electrical Life		6000 times 1000 times								
Operating Cycle		≤60 times/h								
Accessory	Manual operating handle, partition plate									
Working Mode		R: Priority for mains power (defaulted) F: Priority for power supply from generator (optional) T: With communication function (optional)								





TSMQ4-125

TSMQ4-250

#### Specification

Product Category		PC	Class Automatic	Changeover Swit	ch					
Model	TSMQ4-32	TSMQ4-63	TSMQ4-125	TSMQ4-250	TSMQ4-400	TSMQ4-630				
Number of Poles			2P, 3P, 4P			3P, 4P				
Rated Current	16A, 20A, 25A, 32A	250A, 315A, 400A	500A, 630A							
Working Feature		2 Positions 1–2								
Rated Control Current		5A 7A								
Rated Short Circuti Current			10	)kA						
The Rated Impulse Withstand Voltage			8	kV						
Utilization Category			AC-	-33B						
Mechanical Life		20000 times			17000 times					
Electric Life		6000 times 6000 times								
Operating Cycle		≤360 times/h								
Working Mode		ains power ( defa		B: Priority tonal ) T: With cor	for standby powe					



#### TSMQ2 Intelligent Dual Power Changeover Switch



TSMQ2-225

#### Application

TSMQ2 intelligent dual power changeover switch is suitable for electrical system with AC 50/60Hz, rated working voltage up to 400V, rated working current 100A-400A. The items are widely used in varieties of residence community, military installations, hospital, shopping mall, airports etc.

This 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 Working Current (A)	Conversion Action Time (s)	Utilization Category	Mechanical Life (times)	Electrical Life (times)	Rated Short-circuit Impulse Withstand Voltage (Uimp)	Rated Short-circuit Breaking Capacity Icu (kA)
TSMQ2-100		100	≤5		5000	1000		10
TSMQ2-225	TSM2 series 3P, 4P	100,125,160, 200,225	≤5	AC-33iB	5000	1000	8kV	15
TSMQ2-400		225,250,315, 350,400	≪6		3000	1000		25

#### **HGLD Dual Power Automatic Changeover Switch**



HGLD-400A 4P

#### Application

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

#### Specification

Rated heating cur	rent (A)	100	160	250	400	630	1000	1250	1600	2000	2500	3200
Rated insulation v	oltage			750V			1000V					
Rated impulse wit	hstand voltage			8kV					12	kV		
	AC-31A	100	160	250	400	630	1000	1250	1600	2000	2500	3200
Rated working current (A)	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 9kA			13kA			50kA		55kA		
Rated limited short circuit current			100kA		70	70kA 100kA 120kA				80kA		
Control power supply voltage		DC24V, 4				C24V, 4	8V, 110V	, AC220	V			
Conversion time (s	s)	0.5	1	1.1	1.	2	1.25 2.45					



#### **HGLZ Dual Power Changeover Switch**



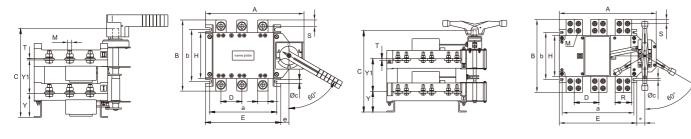




#### HGLZ-160~1600 Overall Mounting Dimension

Model		٥٧	erall D	imensi	on		Мо	unting	Dimens	sion		Termir	nal Dim	ension	
Model	Α	В	С	D	E	Н	а	b	Φс	е	R	S	Т	Y1	М
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	20	10	3.5	12	0
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	25	15	3.5	82	10
HGLZ-400/3	300	240	278	65	230	160	210	140	7	35	20	17	_	11/	10
HGLZ-400/4	360	240	278	65	290	160	270	140	7	35	32	17	5	114	10
HGLZ-630/3	300	260	278	65	230	160	210	140	7	35		0.0	,	447	4.0
HGLZ-630/4	360	260	278	65	290	160	270	140	7	35	40	20	6	114	12
HGLZ-1000/3	473	312	380	120	378	200	353	230	9	40				457	
HGLZ-1000/4	593	312	380	120	498	200	473	230	9	40	60	20	8	156	12
HGLZ-1250/3	473	356	380	120	378	200	353	230	9	40			_	457	
HGLZ-1250/4	593	356	380	120	498	200	473	230	9	40	80	20	8	156	12
HGLZ-1600/3	473	356	380	120	378	200	353	230	9	40	-00		4.0	457	
HGLZ-1600/4	593	356	380	120	498	200	473	230	9	40	0 80	20	10	156	12

Note: The hole size of wiring board is corresponding to HGLZ.



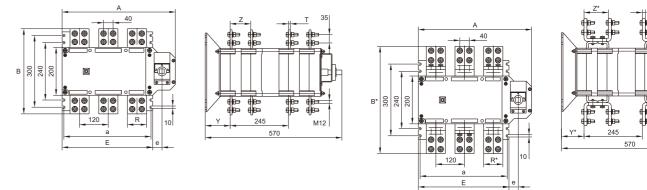
HGLZ-160~630 HGLZ-1000~1600



#### HGLZ-2000~3200 Overall Mounting Dimension

Model		Overall Moun	ting Dime	ension	Mounting Dimension					
Model	А	B/B*	E	а	е	R/R*	T/T*	Y/Y*	Z/Z*	
HGLZ-2000/3	473	356/502	378	350	40	00/00	0./10	00/05	00/445	
HGLZ-2000/4	593	356/502	498	470	40	80/80	8/10	98/85	88/115	
HGLZ-2500/3	473	356/502	378	350	40	00/00	0./10	00/05	00/11	
HGLZ-2500/4	593	356/502	498	470	40	80/80	8/12	98/85	88/115	
HGLZ-3200/3	473	356/502	378	350	40	00/100	10/15	00/02	00/10	
HGLZ-3200/4	593	356/502	498	470	40	80/100	10/15	99/83	88/120	

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



HGLZ-2000~3200 without connecting copper

HGLZ-2000~3200 with connecting copper

48



#### **HGL** Isolating Switch





HGLB-250A 3P transparent case

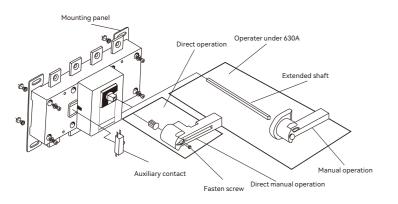
#### Application

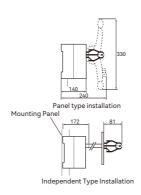
The products are suitable for making and breaking power turn-circuit of voltage 415V, frequency 50/60Hz, rated current up to 1600A, acting as power switch, isolating switch and emergency switch. HGL operates with high efficiency, safety and reliability, complying with IEC60947-3. Rotational operation 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 He	eat Current Ith(	(A)	160         250         400         630         1000         1250         1600         2500         3								3200
Rated Insulation	Voltage (Ui)		80	)0V				1000V			
Dielectric Streng	gth		30	00V				3500V			
Rated Impulse V	Vithstand Volta	ige	8	kV				12kV			
Rated Working \	/oltage					А	C 400-660	V			
Utilization categ	jory					А	C-21, 22, 2	!3			
		AC-21	160	250	400	630	1000	1250	1600	2500	3200
Rated Working Current le (A)	AC400V	AC-22	160	250	400	630	1000	1250	1600	2500	3200
Current ic (A)		AC-23	160	250	400	630	800	1000	1250	2000	2500
Rated Making Ca	apacity (A Rms	)	10le								
Rated Breaking	Capacity (A Rm	ns)					8le				
Rated Short-circuit	Making Capacity	Icm (kA Rms)	12	17	30	40		70		10	00
1s Short-time Withstand Current (A Rms)			10	12	20	25		50		7	0
Mechanical Life (times)			5000 3000 2000 10						10	000	
Electric Life (times)			10	00	60	00		300			/

#### Configuration





#### **HR17 Fuse Switch Disconnector**







HR17-160 3P

HR17-250 3P

#### Application

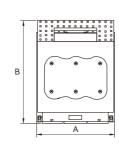
HR17 Fuse switch disconnector is applied to the high short circuit current circuit with AC 50/60Hz, voltage up to 690V and rated working current up to 630A. It processes upper and lower end input and output structure, leads in equipment with knife-edge and arc extinguishing equipment, it also can be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

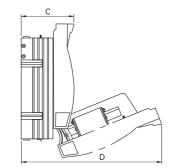
#### Specification

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					NT00
HR17-250	250A	2500A					NT1
HR17-400	400A	4000A	50kA	690V	AC-22B	3,4	NT2
HR17-630	630A	6300A					NT3

#### **Dimension**

Model	Assorted Fuse	A	В	С	D	a	b	φс
HR17-160 3P	NT00	106	200	83	205	66	25	ф7
HR17-250 3P	NT1	185	247	110	295	114	50	ф11
HR17-400 3P	NT2	210	290	125	340	130	50	ф11
HR17-630 3P	NT3	256	300	145	360	162	50	ф11
HR17-160 4P	NT00	138	200	83	205	100	25	ф7
HR17-250 4P	NT1	242	247	110	295	172	50	ф11
HR17-400 4P	NT2	276	290	125	340	195	50	ф11
HR17-630 4P	NT3	340	300	145	360	243	50	ф11









#### **Bar Fuse Switch Disconnector**



#### Application

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

- The location of the switch installation is no more than 2000m.
- $\bullet \;\;$  The level of environmental pollution of the switch is grade 3.
- The installation category of the switch is class III.
- 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 units 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 IP30;
- $\bullet \ \ \, \text{The instantaneous breaking capacity is up to 100kA, loading capacity is up to 1.3 times of rated current.}$
- Can add fuse monitor, signal switch and remote control module.

#### Specification

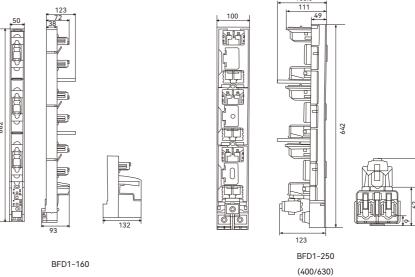
Model	BFD1-160	BFD1-250	BFD1-400	BFD1-630					
Rated Operational Voltage (Ue)	690V								
Rated Operational Current (le)	160A	250A	400A	630A					
Fuse Size	00	1	2	3					
Rated Insulation Voltage (Ui)		100	00V						
Rated Impulse Withstand Voltage (Uimp)		12	kV						
Degree of Protection		IP	30						
Mechanical Life (times)	2000								
Wire Specifications	10-95mm²	120mm²	240mm²	300mm²					
Method Connecting Wire	Screw & V-Clamp								
Installation Method	Screw & Hook								
Utilization Category		AC-21B/AC-	22B/AC-23B						
Standard		IEC/EN	50947-3						
Rated Breaking Capacity (Iq)		120	)kA						
Rated Short Time Withstand Current (Icw)	16kA/1s								
Screw Fastening	M8/M10/M12								
Ambinet Temperature		-45°C	~+50°C						

# ORI COMPANY ORI COMPANY OR COMPAN

BFD1-250 (400/630)

52

#### **Dimensions**





#### **Bar Fuse Switch Disconnector**

# Specification

Time to the second	
Q.	
E	
Total Control	

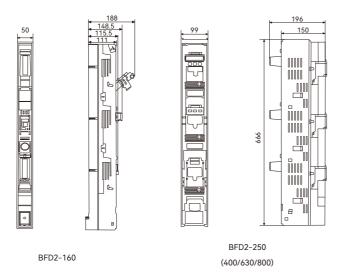
BFD2-160

<b>FAR</b>
1 71
204
Sec.

BFD2-250 (400/630/800)

Model	BFD2-160	BFD2-250	BFD2-400	BFD2-630	BFD2-800
Rated Operational Voltage (Ue)			690V		
Rated Operational Current (le)	160A	250A	400A	630A	800A
Fuse Size	00	1	2	3	3
Rated Insulation Voltage (Ui)	1000V				
Rated Impulse Withstand Voltage (Uimp)	12kV				
Degree of Protection	IP30				
Mechanical Life (times)	2000				
Wire Specifications	10-70mm²	120mm²	240mm²	300mm²	2x240mm²
Method Connecting Wire		Sc	rew & V-Cla	ımp	
Installation Method		Ç	Screw & Hoo	ok	
Utilization Category		AC-21	B/AC-22B/A	C-23B	
Standard		IE	EC/EN 60947	-3	
Rated Breaking Capacity (Iq)			120kA		
Rated Short Time Withstand Current (Icw)	16KA/1s				
Screw Fastening			M8/M10/M12	2	
Ambinet Temperature			-45°C~+50°C	:	

#### **Dimensions**



#### Specification

Model	BFD3-160	BFD3-250	BFD3-400	BFD3-630	BFD3-800
Rated Operational Voltage (Ue)			690V		
Rated Operational Current (le)	160A	250A	400A	630A	800A
Fuse Size	00	1	2	3	3
Rated Insulation Voltage (Ui)	1000V				
Rated Impulse Withstand Voltage (Uimp)	12kV				
Degree of Protection	IP30				
Mechanical Life (times)	2000				
Wire Specifications	10-70mm²	120mm²	240mm²	300mm²	2x240mm²
Method Connecting Wire		Sc	rew & V-Cla	mp	
Installation Method		5	Screw & Hoo	ok	
Utilization Category		AC-21	B/AC-22B/A	C-23B	
Standard		IE	EC/EN 60947-	-3	
Rated Breaking Capacity (Iq)			120kA		
Rated Short Time Withstand Current (Icw)			16kA/1s		
Screw Fastening			M8/M10/M12	2	
Ambinet Temperature			-45°C~+55°C		

BFD3-160

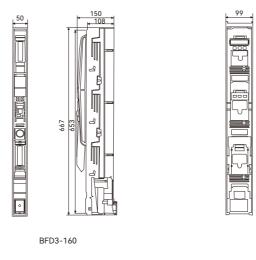
BFD3-250 (400/630/800)

54

BFD3-250

(400/630/800)

#### **Dimensions**





#### NT Low Voltage Fuse

#### NT00C



NT00



NT0

#### Application

NT low voltage fuse features light in weight, small in size, low in power loss and high in breaking capacity. This product has been widely used in overload and short circuit protection of electric installation. This product conforms to IEC60269.

#### Specification

		Fuse Link		Fuse	Base
Model	Rated Current (A)	Rated Voltage (V)	Rated Power Loss (W)	Model	Rated Current (A)
	6		0.81		
	10		1.08		
	16		1.60		
	20		1.81		
	25		2.31		
NT00C	32	500/660	3.07	Sist 101	160
NTOOC	36	500/660	3.17	SISC 101	100
	40		4.05		
	50		4.25		
	63		4.70		
	80		5.7		
	100		7		
	6		0.89		
	10		1.14		
	16		1.65		
	20		1.94		
	25		2.50		
	32	500///0	3.32		
NITOO	36	500/660	3.56		
NT00	40		4.30		
	50		4.5		
	63		4.6	Sist 101	160
	80		6	3131 101	100
	100		7.3		
	125	500	7.6		
	160	500	9.6		
	6		1.03		
	10		1.42		
	16		2.45		
	20		2.36		
	25		2.7		
NT0	32	500/660	3.74		
	40		4.7	Sist 160	160
	50		5.5		
	63		6.9		
	80		7.6		
	100		8.9		
	125	500	10.1		
	160	500	15.2		

#### Specification

		Fuse Link		Fuse	Base	
Model	Rated Current (A)	Rated Voltage (V)	Rated Power loss (W)	Model	Rated Curren (A)	
	80		6.2			
	100		7.5			
NT1	125	F00	10.2	C:-+201	250	
INTT	160	500	13	Sist201	250	
	200		15.2			
	250		18.3			
	125		9			
	160		11.5			
	200		15			
NT2	250		18.4	Sist401	400	
NIZ	300	500	21			
	315		19.2			
	355		24.5			
	400		26			
	315		21.7			
	355		22.7			
	400	F00	26.8			
NT3	425	500	28.9	Sist601	630	
	500		32			
	630	]	40.3			
NIT (	800	200	62	C:a+1001	1000	
NT4	1000	380	75	Sist1001	1000	

-	Model	00	0	1	2	3
	In(A)	160	160	250	400	630





Fuse Puller



Knife Link (Neutral)



#### Cylindrical Fuse Link

#### Application

The fuse links with cylindrical contact caps are designed for protecting electrical distributing installations of rated voltage of AC 660V. with rated current up to 125A 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.



#### Specification

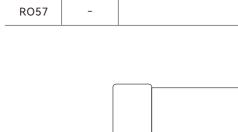
Dimension

Ø10x38

Мо	del	Rated Current (A)	Rated	Dimension
gL/gG aM	aR	Rated Current (A)	Voltage (V)	ØD x L
RO14	-	2,4,6,10,16,20		Ø8.5 x 31.5
RO15	RS15	1,2,4,6,10,16,20,25,32	380/500	Ø10x 38
RO16	RS16	2,4,6,10,16,20,25,32,40,50,63	360/500	Ø14x 51
RO17	RS17	10,16,20,25,32,40,50,63,80,100,125		Ø22x 58
RO54	-			Ø5 x 20
RO55	-	1,2,4,6,10,16	250	Ø5 x 25
RO57	-			Ø6x 25

Ø14x51

Ø22x58





Neutral link

### Spiral Fuse Link

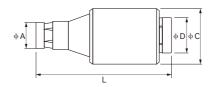
#### Specification

Model	0:	Rated		Dime	nsion	ı
gG	Size	Current (A)	ФА	φС	φD	φL
		2,4,6	6	22	13	50
		8,10	8	22	13	50
RO21	DII	13	8	22	13	50
RO21	ווט	16	10	22	13	50
		20	12	22	13	50
		25	14	22	13	50
		30,35,40	16	27	20	50
RO22	DIII	50	18	27	20	50
		63	20	27	20	50
		2,4,6	6	12.5	11.3	50
RO24	DI	10	8	12.5	11.3	50
RO24	DI	16	10	12.5	11.3	50
		20,25	12	12.5	11.3	50







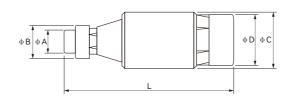


Model	Size	Rated Current		I	Dimensior	า		
gG	Size	(A)	φΑ	φВ	φС	φD	L	
		2,4,6	5	7.3	10.6	10	36	
	D01	10	5	8.5	10.6	10	36	
		16	5	9.7	10.6	10	36	
		20	8.5	11	15	14	36	
RO26			25	8.5	12	15	14	36
RO20	D02	35	8.5	13.3	15	14	36	
		50	8.5	14.5	15	14	36	
		63	8.5	16	15	14	36	
	D03	80	17	22	22	21	43	
	р03	100	17	25	22	21	43	











#### **Fuse Holder**

#### RT18

0	0
	RT18-32 50X33 30A 603V- IEC60059 C E
0	
	9

RT18-32 1P

Model	Assorted Rated		Rated	Dimensions				
	Fuse	Voltage(V)	Current (A)	Α	В	С	D	Е
RT18-32 1P			32	80	78	35	60	18
RT18-32 2P	ø10 x 38		32	80	78	35	60	36
RT18-32 3P			32	80	78	35	60	54
RT18-63 1P			63	98	96	35	68	26
RT18-63 2P	ø14 x 51		63	98	96	35	68	52
RT18-63 3P		690	63	98	96	35	68	78
RT18-32X 1P			32	80	78	35	60	18
RT18-32X 2P	ø10 x 38		32	80	78	35	60	36
RT18-32X 3P			32	80	78	35	60	54
RT18-63X 1P			63	98	96	35	68	26
RT18-63X 2P	ø14 x 51		63	98	96	35	68	52
RT18-63X 3P			63	98	96	35	68	78

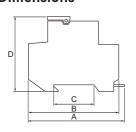
#### **Dimensions**



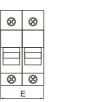
RT18-63X 1P



RT18L-125 1P



8	
8	
Ε.	

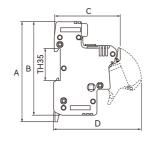




#### RT18L

Model	Matched	Rated	Rated	Dimensions				
Model	Fuse Link	Voltage (V)	Current (A)	Α	В	С	D	E
RT18L-63 1P	ø14 x 51	- 690 -	63	110	108	78	100	27
RT18L-63 2P				110	108	78	100	54
RT18L-63 3P				110	108	78	100	81
RT18L-63 4P				110	108	78	100	108
RT18L-125 1P	ø22 x 58			127	125	78	104	36
RT18L-125 2P				127	125	78	104	72
RT18L-125 3P			125	127	125	78	104	108
RT18L-125 4P				127	125	78	104	144

#### Dimensions



8		8	8
□ Egg			□ cox
8		8	8
	i		
E			☶.

8	8	8	
			ļ
			l
LCCK	COX.	□ GOK	I
8	8	8	
	E		ļ

8	8	8	8
E COX	LCCK	E COX	LCCK
8	8	8	8
	E	E	