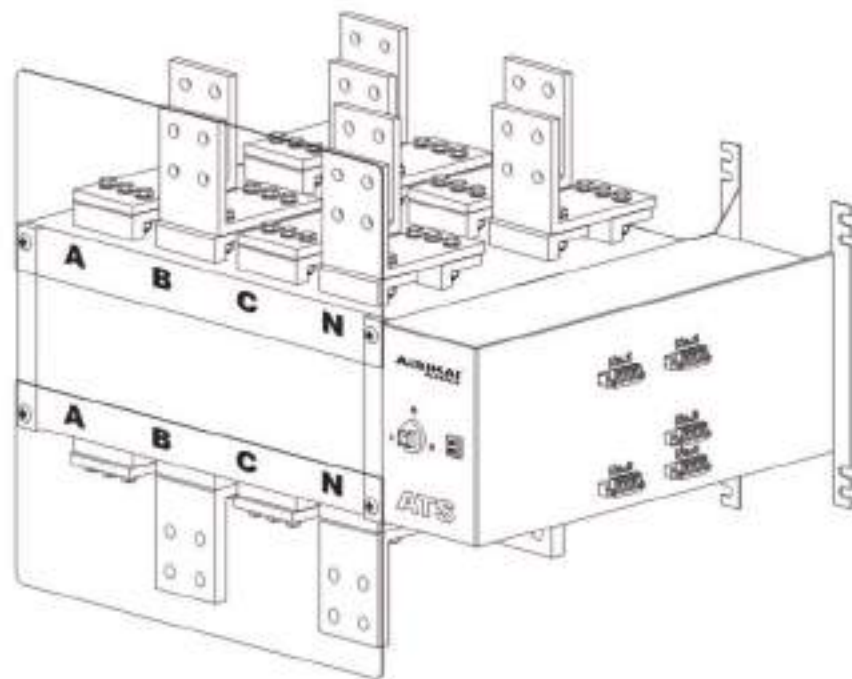




AiSIKAI
ELECTRIC

AUTOMATIC TRANSFER SWITCHES

LECTOTYP EMANUAL





AISIKAI ELECTRIC

COMPANY PROFILE

WE FOCUS ATTENTION ON

- Dual power automatic/manual transfer switching equipment -ATS
- Integrated control and protection switches -CPS
- Plastic case type circuit breakers- MCCB
- Universal circuit breakers-ACB
- Miniature circuit breakers- MCB
- Surge Protectors-SPD
- Load Isolation switch -LIS
- Automatic voltage protection delay switch -VPSR & D and manufacturing



Environmental



Construction



Solidarity

WE HAVE OBTAINED

- A number of independent intellectual property patents
- ISO9001: 2000 Quality System certification
- CE certification
- SGS certification
- National compulsory CCC certification
- Multi-voltage, full load test station

WE PURSUE

- Innovative Design & Excellent Manufacture
- Oriented by Customer satisfaction & expectation
- Be vigilant in peace time, broaden sources of income and reduce expenditures is our enterprise training code
- Solidarity, Mutual Aid and Harmonious Development is our team spirit
- Sincerity, Excellence and Esteem is our business philosophy
- Quality, Service, Reputation and Innovation is our development philosophy

WE MISSION

Making Contributions to the Society, For Benefits of the Employees

We are AISIKAI





TYPES SPECIFICATIONS AND THEIR MEANINGS



CATALOG

SKT Series Automatic Switch ATS (Class PC 20A-3200A)

Product Overview	ATS-01
SKT Series ATS Function Code Table	ATS-04
SKT Series Outline Drawing	ATS-07
SKT Series Typical Wiring Diagram	ATS-12



SKS Series Manual Switch ATS (Class PC 20A-3200A)

Product Overview	ATS-13
SKS Series Manual Switch ATS Outline Dimensions Diagram	ATS-14
SKS Series Manual Switch ATS Typical Wiring Diagram	ATS-14



ASKQ Series Switch ATS (Class PC 20A-3200A)

Product Overview	ATS-15
ASKQ-43A Switch Outline Dimensions Diagram	ATS-17
ASKQ-4300A Switch Outline Dimensions Diagram	ATS-19
ASKQ-4300A Switch Typical Wiring Diagram	ATS-20



SKQ1 Series Automatic Switch ATS (Class CB 10A-32A)

Product Overview	ATS-21
SKQ1 Series Automatic Switch ATS Outline Dimensions Diagram	ATS-23
SKQ1 Series Automatic Switch ATS Typical Wiring Diagram	ATS-24



EQ

CE



ZL

ZL



ZL

ZL



CCC

CCC

CCC

CCC

CCC

CCC



CLASS PC AUTOMATIC SWITCH ATS SKT SERIES



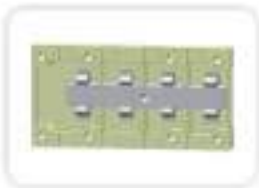
SKT SERIES (MOTOR-DRIVEN TYPE)

PRODUCT OVERVIEW

- SKT series dual power automatic transfer switch is currently the most advanced third generation product, is Class PC in grade and is an AC-33A frequently operable electrical transfer switch in application category, which having such four working modes as automatic, electric, emergency manual and locking, is suitable to be used in the 50/60Hz 20A-3200A low voltage AC power distribution systems for reliable transfer between two power supplies.

Applicable standards

- IEC60947-1/GB/T-14048.1-2008 General Provisions for Low-Voltage Switchgears and Control Equipment.
- IEC60947-3/GB-14048.3 Low-Voltage Switchgears and Control Equipment Low-Voltage Switches, Isolators, Isolating Switches and Fuse-Combination Units.
- IEC60947-6-1/GB-14048.11 Automatic Transfer Switching Electric Device



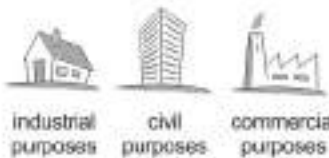
DMC Main body

PERFORMANCE CHARACTERISTICS

RAW MATERIALS

- **99.99% high purity T2 copper material**
The dynamic and the static contacts are manufactured with T2 copper material, their surfaces are plated technically with pure silver and their breaking capacity is much higher than the that of the welding silver-point switches.
- **DMC Main body**
The main body of DMC is reinforced with unsaturated polyester glass fiber material, which is extremely high in the mechanical strength and the insulation performance and, compared with the ordinary ABS, is characteristic of such advantages as high strength, corrosion resistance and fire retardancy.
- **Self-restoring drive motor**
Selection of polychloroprene rubber insulation damp & heat type motor or permanent-magnet synchronous motor (patent technology), which is large in torque, low in noise, long in service life, is provided with overheating and over-current self-restoring protection and is better than that of the electromagnet in the comprehensive performance.
- **Components & elements brand assurance**
The electronic components & elements adopted are those of the well-known brands and the master control board is the product produced in the domestic front-line electronic OEM factory, which is treated with three-anti-process, thus making them reliable in use, high in performance and long in service life.

Application area

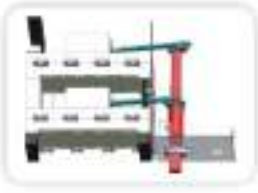


Certification mark





CLASS PC AUTOMATIC SWITCH ATS SKT SERIES



Mechanical interlock



Double-row composite contacts



Ultra-thin Design

Structural design

- **Double-row composite contacts**
A double-row composite design is adopted for the dynamic contacts, the conductive area of which is twice as much as that of the single-sided contact switches.
- **Transverse-pull moving mechanism**
The dynamic contact makes reciprocating motion in the transverse direction, which has the advantages of zero arc and high safety factor as compared with the longitudinal separation type switches.
- **Double interlocking mechanically and electrically**
The precise mechanical design ensures complete separation between the two power supplies and the logical management of the master control circuit board achieves the electrical interlocking.
- **Safety zero position**
All the products of this series are equipped with a safety zero position, which is used to cut off both the two power supplies simultaneously, thus making them better than the two-section switches in the safety performance.

FUNCTIONAL ADVANTAGES

- **Prevention of early failure and damage to equipment**
In each piece of the dynamic contact, a high strength spring leaf made of the silicon manganese steel is fixed reliably in the base and the pressure between the dynamic and the static contacts is kept constant during the transfer process and after the closing of the switch, which can prevent effectively the equipment breakdown generated from the high voltage pulse caused by the contact bounce or fibrillation (common in the contactor switches). It is designed to be installed for use in such equipment as the diesel generators of frequent vibrations.
- **Load isolation function**
The precise safe distance can isolate effectively the power supply from the load and meet the creepage requirements, is provided with the obvious on-off position display and can be operated under a load.
- **Zero line overlapping switching**
This patented function is used to prevent the equipment from being damaged caused by the zero line potential drift, when the switch is switching (optional function).

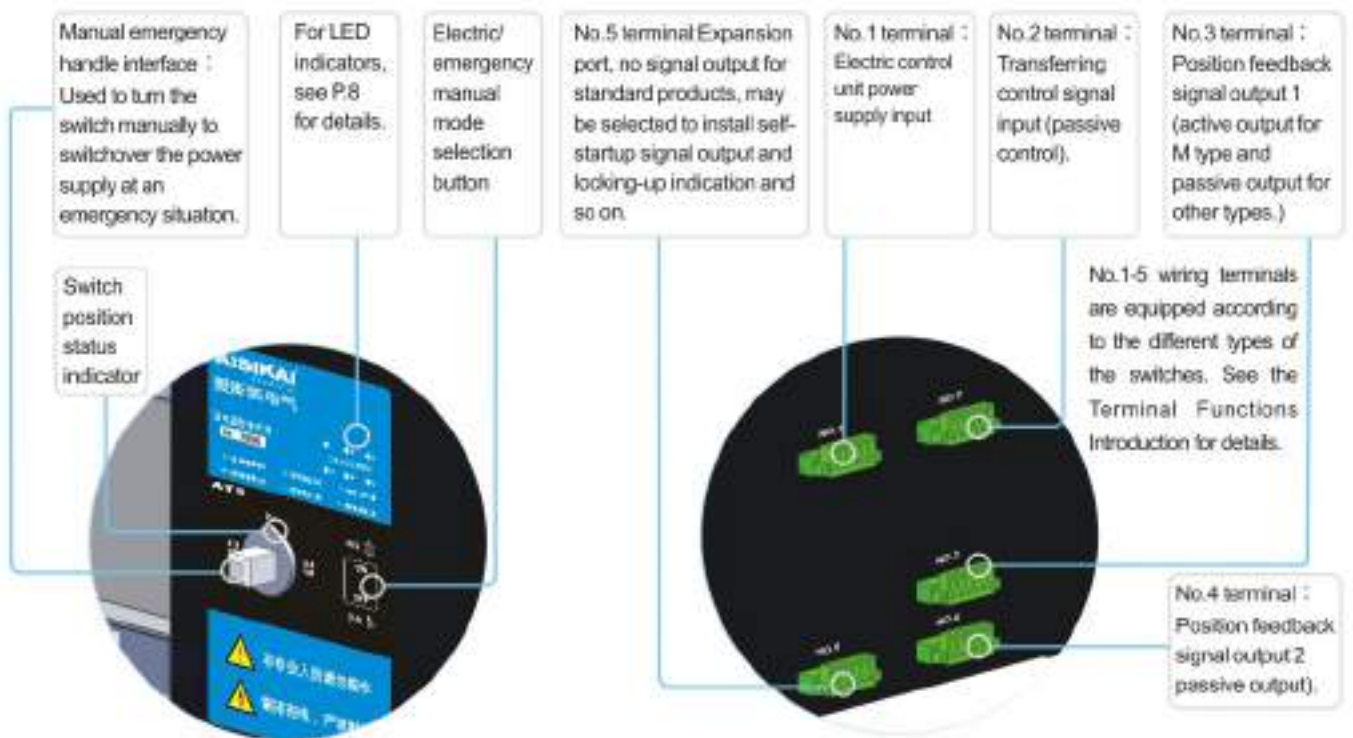
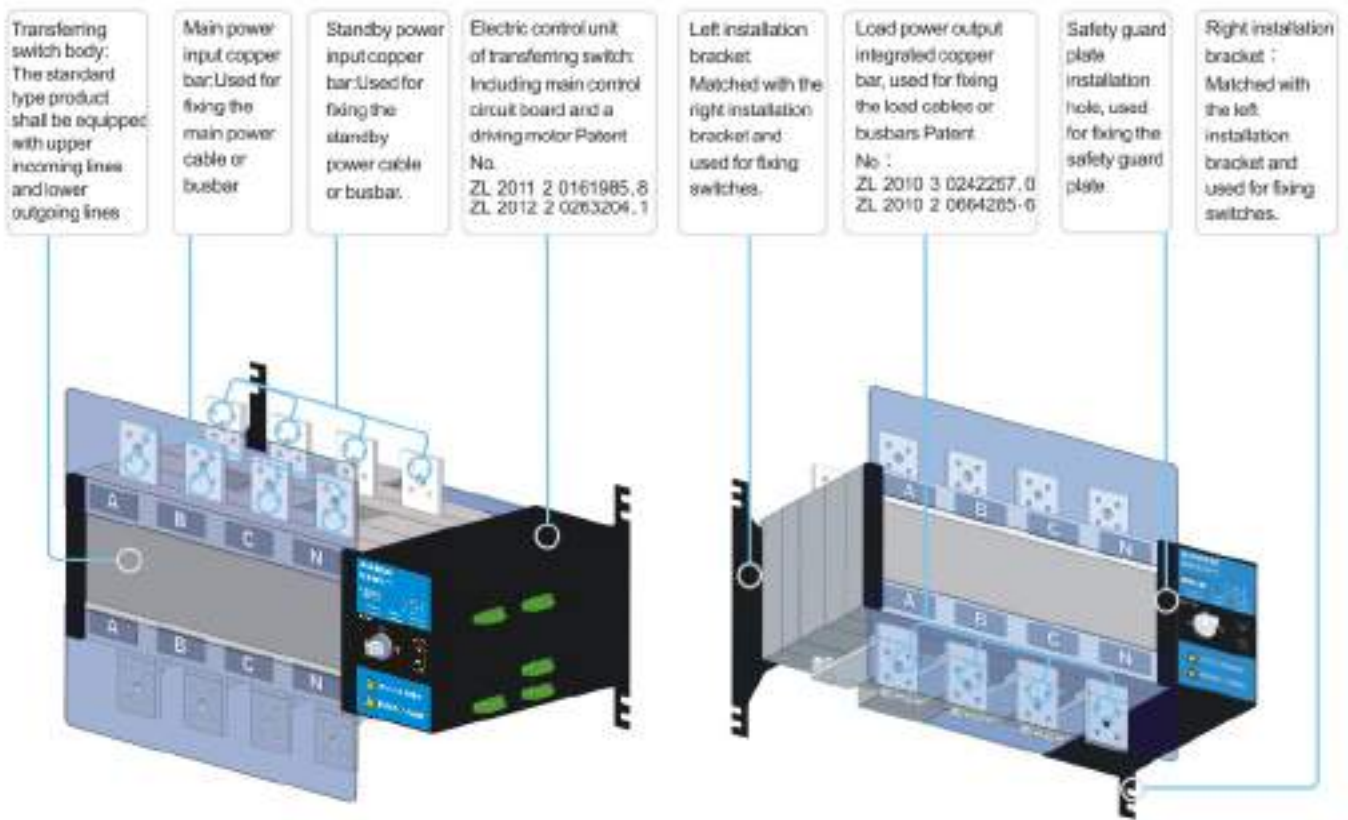
PERFORMANCE ADVANTAGES

- **High breaking capacity**
8 times rated current breaking capacity, 10 times rated current making capacity, 12kV rated withstand impulse voltage, 120kA Rated limit short-circuit current.
- **High-grade use category**
AC-33A use category, Frequently operable, which has a wider scope of application than AC-33B that is not frequently operable in its scope of application in the use category.
- **Meeting Grade I and II power distribution requirements**
The good electrical properties can meet the technical requirements of the Grade I and II power distribution systems and have a higher impact resistance than that of the circuit breaker type ATS to avoid the master switch from tripping caused by the short-circuit of a single load.
- **Ultra-thin volume (20A-100A)**
The precise mechanical design achieves an ultra-thin volume and the volume of an electrical box assembled is only 25% of a floor tile (60 × 60) in size.



CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

STRUCTURE INTRODUCTION





CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

FUNCTION CODE TABLE

Application type	Terminal type	Fire-fighting type	Intelligent type	
Function Code	M	X	W (External controller type)	N (Built-in controller type)
Structure				
Electrical two-section type	Y			
Electrical three-section type		Y	Y	Y
Manual three-section type	Y	Y	Y	Y
Control mode				
Controller manual / automatic control			Y	Y
Remote electric control (external control)		Y		
Emergency manual	Y	Y	Y	Y
Fully automatic switching	Y	External control	Y	Y
Locking mode	Optional	Optional	Optional	Optional
Fire-fighting signal (forced to zero)		Passive closed signal	See the controllers	Active DC24V signal
Locked up				
Commonly used / standby power monitoring and protection				
Overvoltage protection	Single-phase (optional)	Single-phase (optional)	Three-phase (range adjustable)	Three-phase (range adjustable)
Undervoltage protection	Single-phase (optional)	Single-phase (optional)	Three-phase (range adjustable)	Three-phase (range adjustable)
Lost phase protection			Y	Y
Frequency protection			See the controllers	Y
Phase angle detection				Y
N-phase fault alarm				Y
Phase sequence inconsistency alarm				Y
Application function				
Automatically throw-in and automatic recovery	M1 (Standard products)	External control	Y	Y
Automatically throw-in but not automatic recovery	M2 (Tailor-made)	External control	See the controllers	Settable
The commonly used power supply takes priority to supply the electric current.	Y	External control	Y	Y
The standby power supply takes priority to supply the electric current.		External control	Settable	Settable
Generator self-start signal (passive)	Optional	Optional	Y	Y
Transfer delay	(1s or 2s) (Optional undervoltage)	External control	Adjustable	Adjustable
Power failure delay setting			Y	Y
Power restoration delay setting			Y	Y
Alarm records storage				Y
Communication			See the controllers	Y
Feedback signal	Active AC220V (I , II)	Passive closed signal (I , II , 0)		
Display function				
Switch position status display			Y	Y
Voltage display			See the controllers	Y
Frequency display			See the controllers	Y
Current display			See the controllers	Y

Note : The W-type is composed of a controller of corresponding functions and an X-type switch.

Type meaning: SKT-250A-4P-M2

A Class PC motor-driven type switch (Q5) ATS is selected and adopted, its electric current is 250A, the number of poles is 4, it is provided with the function of automatic self throw-in but not automatic self recovery and is used at the terminal site for automatic switching.



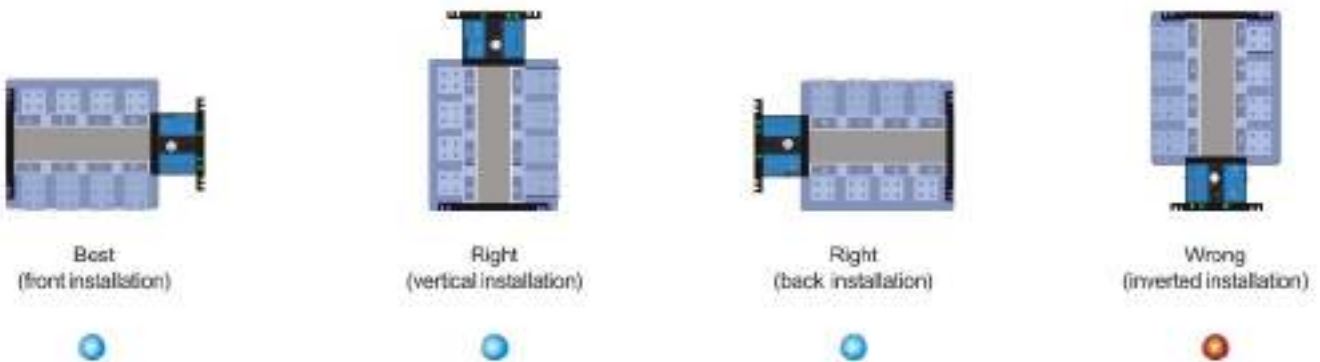
CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

MAIN TECHNICAL PARAMETERS

SKT SERIES								
Conventional thermal current I _{th}	20A	40A	63A	80A	100A	125A	160A	250A
Rated insulation voltage of copper bar U _i	750V							
Rated impulse withstand voltage U _{imp}	8kV							
Rated operating voltage of copper bar U _e	AC440V							
Use category	AC-33A							
Rated operating current of copper bar I _e	20	40	63	80	100	125	160	250
Rated making capacity	10I _e (10 times the rated current)							
Rated breaking capacity	8I _e (8 times the rated current)							
Rated limit short-circuit current	100kA							
Rated short time withstand current	7kA		9kA			13kA		
Transferring time - or -	0.45S							
Rated operating voltage of the control power supply V _s	Standard product:AC220V, Optional:DC24V, AC110V, AC280V, Correct working range:85% V _s ~ 115% V _s .							
Start	300W							
Normal	55W							
Net weight (kg) 4-pole	3.5					5.3	5.5	7

Note: The 20A-100A standard product is a ultra-thin product and a tailor-made thickened style is optional (with the same volume as 125A).

SCHEMATIC DIAGRAM OF CORRECT INSTALLATION METHOD





CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

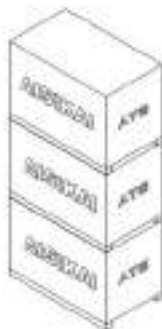
400A	630A	800A	1000A	1250A	1600A	2000A	2500A	3200A
1000V								
12KV								
400	630	800	1000	1250	1600	2000	2500	3200
70KA			100KA		120KA		80KA	
26KA			50KA		55KA			
0.6S			1.2S				2.4S	
325W		355W		400W	440W		600W	
62W		74W		90W	98W		120W	
17	17.5	43	43.5	44	51	118	119	120

ENVIRONMENTAL REQUIREMENTS FOR USE

SKT SERIES	
Name	Requirements
Operating temperature	-20 To +45°C, the average value for 24 hours shall not exceed +35°C;
Operating humidity	The average humidity under the +40°C conditions shall not exceed 50% without condensation;
Altitude	Lower than 2000 meters and, if higher than 2000 meters, reduce its rated value for use;
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use;
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances ;
Class of pollution	Class III;
IP rating	IP20 ;
Storage requirements	To be stored under -30 To 70°C and in a dry, non-corrosive and saline environment and the longest period of storage shall be 1 year
Packing	630 A and below packed in carton boxes; 800 A and above packed in wooden boxes
Stack	630 A and below stacked no more than 5 layers; 800 A and above stacked no more than 3 layers



Schematic diagram of paper packaging stacked.

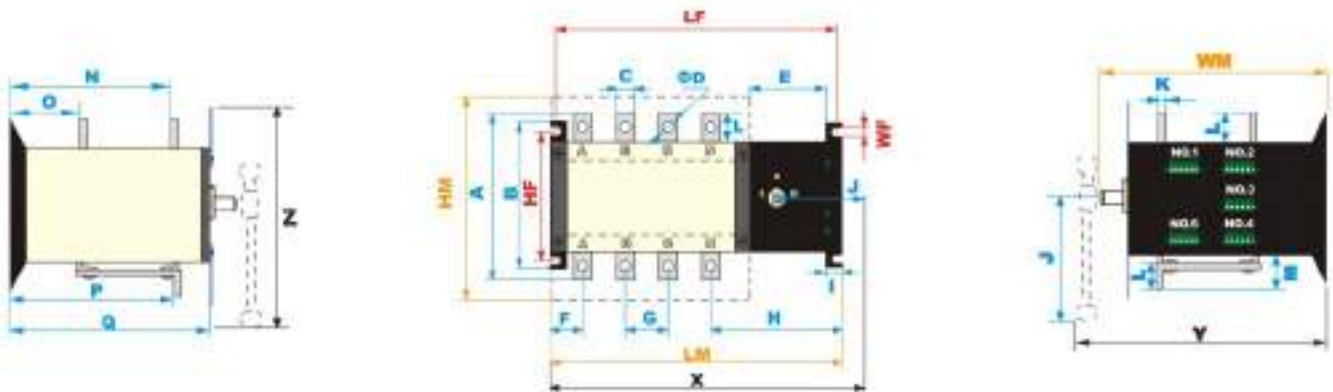


Schematic diagram of wooden box packaging stacked.



CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

OUTLINE DRAWING 1
20A-3200A outline dimensions



20A-3200A outline and installation dimensions table

SKT SERIES													
Series	Current range	Installation data			Maximum size of the body			Other detailed dimensions of switch					
		LF	WF	HF	LM	WM	HM	A	B	C	D	E	F
	20-100A	225	7	84	244	135	136	113	103	14	6	102.5	21
	125-160A	271	7	110	292	188	163	142	130	20	9	101.5	34
	250A	334.5	7	110	351	194	200	170	130	25	11	102.5	38
	400A	416	9	175	437.5	260	324	268	200	40	13	121.5	46
	630A	416	9	175	437.5	260	324	268	200	40	13	121.5	46
	800A	608	11	221	633	321	451	350	250	63	15	111	61
	1000A	608	11	221	633	321	451	350	250	63	15	111	61
	1250A	608	11	221	633	320.5	451	350	250	63	13	111	49
	1600A	608	11	221	633	320.5	451	392	250	80	13	111	41
	2000A	464	11	361	633	492.5	451	466	400	80	13	111	38.5
	2500A	464	11	361	633	492.5	451	466	400	80	13	111	38.5
	3200A	464	11	361	633	492.5	451	466	400	80	13	111	38.5
Auxiliary dimensions													
Current range	2000A-3200A												
Auxiliary dimensions		ALF	AL	AN	AO	AP							
		140	130.5	423.5	193	92.5							

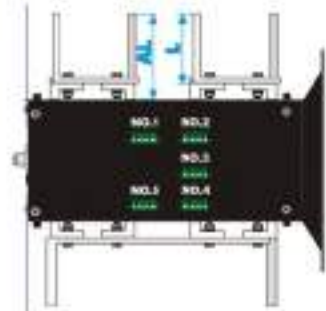
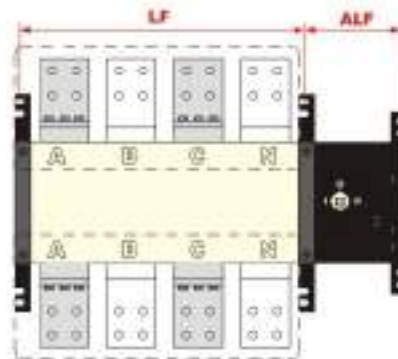
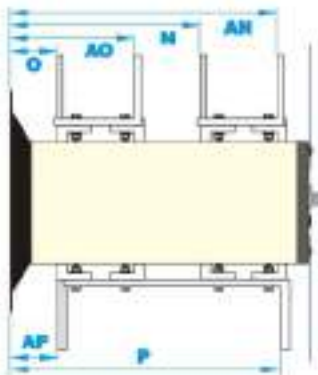
Note: X, Y and Z are the maximum width, depth and height of the switch assembled with a manual emergency handle. Depending on the angle of the handle when installing or the difference of positions of the slider moving, the corresponding dimensions will be smaller than the data listed in the table above, which are listed for reference only.



CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

OUTLINE DIMENSIONS 2 (AUXILIARY DIMENSIONS)

2000A-3200A Auxiliary outline dimensions

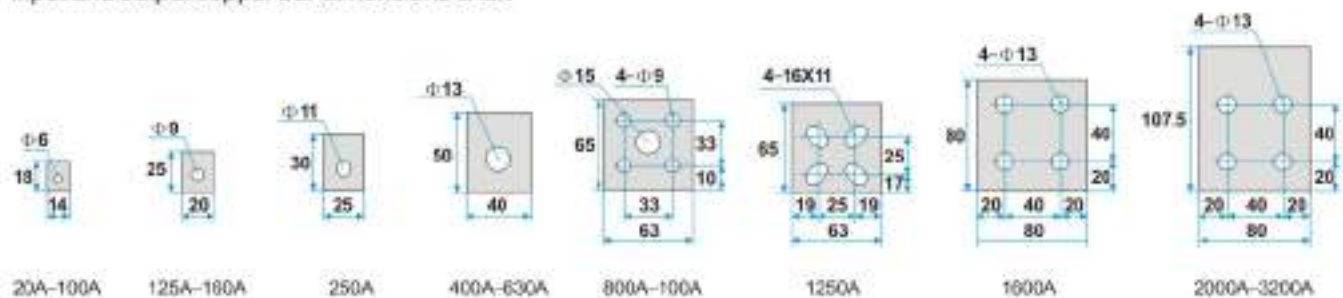


Other detailed dimensions of switch

Reference dimensions

G	H	I	J	K	L	M	N	O	P	Q	X	Y	Z
30	133	13	141	2.5	18	8	86	37	86	113	303.5	168.5	208
36	150	18	188	3.5	25	31	133	56	133.5	167.5	302.5	220	269
50	163.5	20	188	3.5	30	36	138	59	138	171	451.5	222.5	288
65	195.5	25	188	5	50	56	187	78	205	237	522	293	354.5
65	195.5	25	188	5	50	56	187	78	205	237	522	293	354.5
120	212	27	473	7	67	81	245.5	102	254	298.5	1008	381	794
120	212	27	473	7	67	81	245.5	102	254	298.5	1008	381	794
120	224.5	27	473	7	67	81	245.5	102	254	298.5	1008	381	794
120	232	27	473	10	80	110	245.5	102	251.5	298.5	1008	381	794
120	232	27	473	15	107.5	131	317	86.5	418.5	470.5	1008	553.5	711.5
120	232	27	473	15	107.5	131	317	86.5	418.5	470.5	1008	553.5	711.5
120	232	27	473	15	107.5	131	317	86.5	418.5	470.5	1008	553.5	711.5

Input and output copper bar dimensions chart



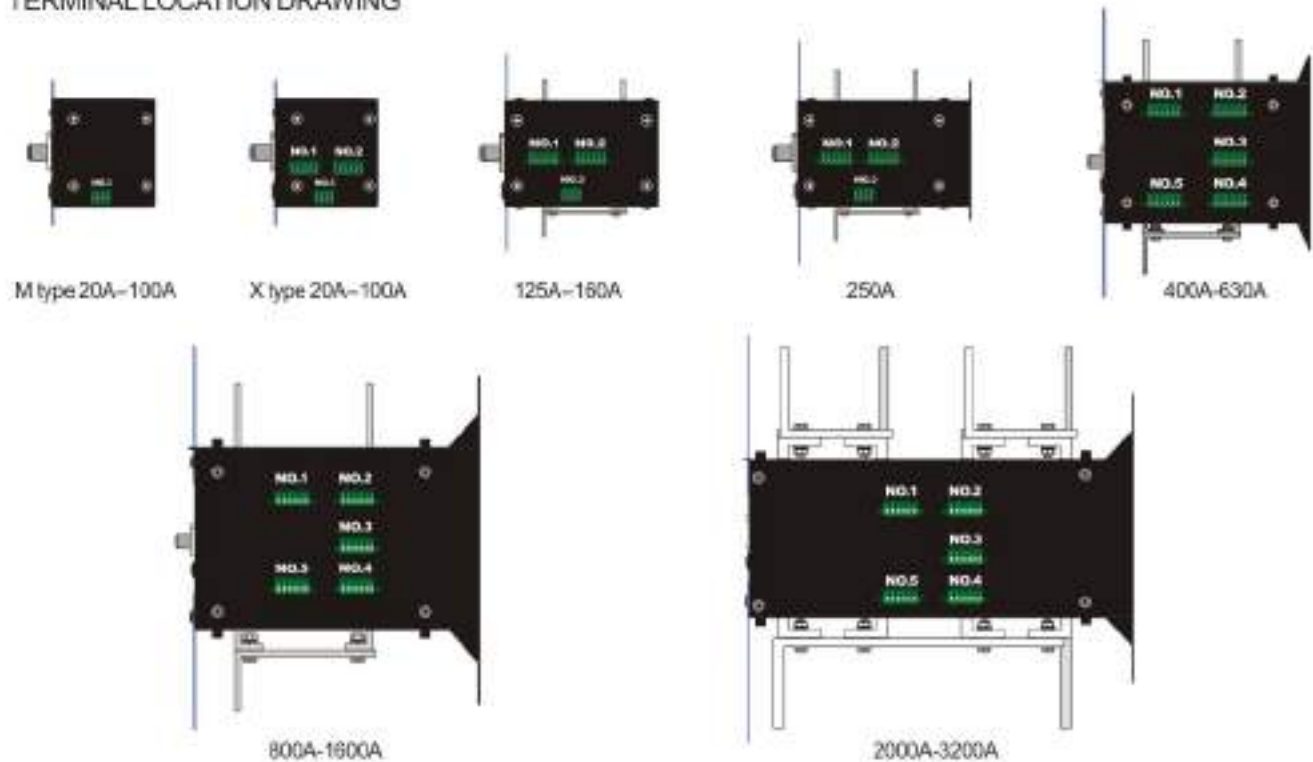


CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

TERMINAL FUNCTIONS INTRODUCTION

SKT SERIES			
Terminal Serial No	Access point serial No	Function	Notes
Terminal No. 1	101, 106	Power supply neutral wire for feedback and live wire output	Active output, 1A AC220V
	102, 103	No.1 operating power supply live wire and neutral wire input	>5A AC 220V
	104, 105	No.2 operating power supply live wire and neutral wire input	>5A AC 220V
Terminal No. 2	201, 206	Passive control when disconnected and active control when closed	See SKT Type Principle Diagram for details
	202	External passive control signal input common terminal	
	203	Line I is switched on, when closed with 202.	
	204	Line 0 is switched on, when closed with 202.	
	205	Line II is switched on, when closed with 202.	
Terminal No. 3	301, 306	Not used, directly connected internally.	20A-250A Unassembled
	302	Passive position feedback signal output common terminal.	M type is active output, the other types are passive output, see the principle diagram for details.
	303	Closed with 302, when Line I is switched on.	
	304	Closed with 302, when Line 0 is switched on.	
	305	Closed with 302, when Line II is switched on.	
Terminal No. 4	401, 406	Not used, directly connected internally.	400A and above assembly
	402, 403	Line I is closed after switched on.	Passive 1A AC 220V
	404, 405	Line II is closed after switched on.	Passive 1A AC 220V
Terminal No. 5	501	Self-starting signal output normally open point	Optional parts, passive 1A AC 220V
	502	Self-starting signal output common terminal	
	503	Self-starting signal output normally closed point	
	504	Locked-up signal output normally open point	Optional parts, passive 1A AC 220V
	505	Locked-up signal output common terminal	
	506	Locked-up signal output normally closed point	

TERMINAL LOCATION DRAWING

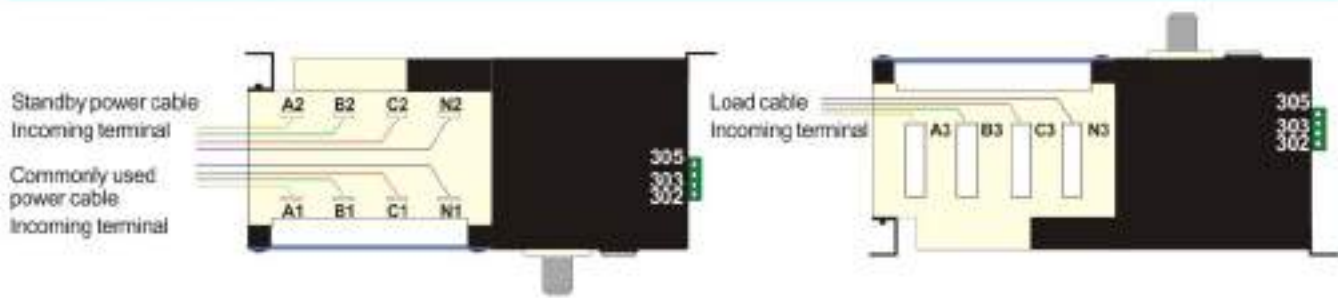




CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

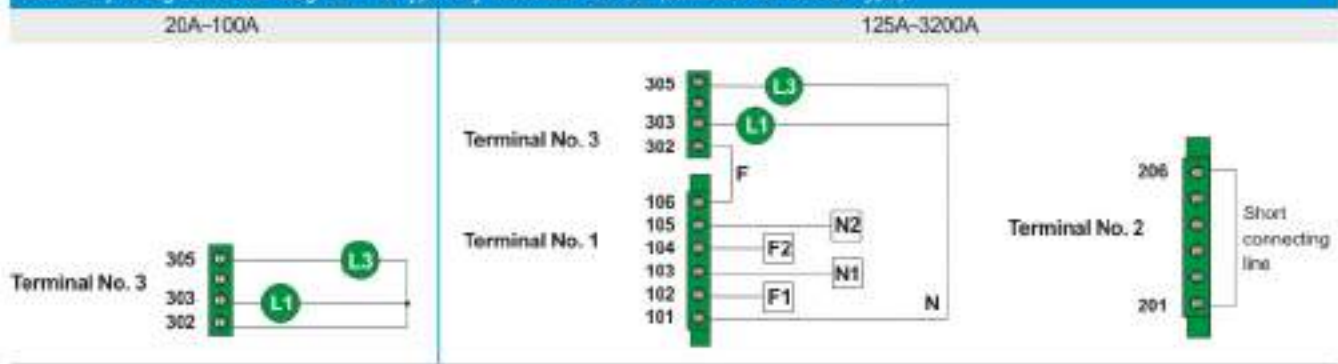
TYPICAL WIRING

First wiring schematic diagram



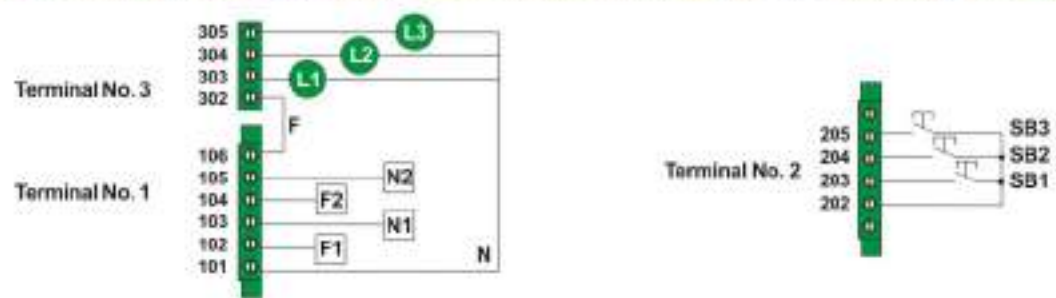
Note: The standard type product shall be equipped with upper incoming lines and lower outgoing lines and the product can be tailor-made with upper outgoing lines and lower incoming lines.

Secondary wiring schematic diagram : M type fully automatic transfer (electrical two-section type).



Note: M1 \ M2 type ATS is applicable to the end places without any requirement for the transfer delay.

Secondary wiring schematic diagram : X type remote control / external control electric transfer (passive control mode, electric three-section type).



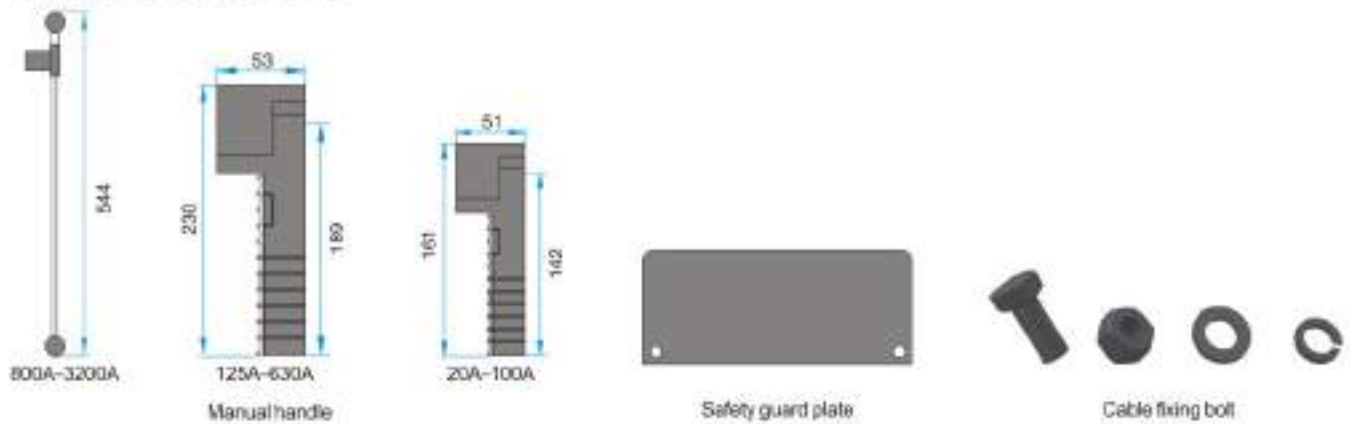
Note: X type ATS is applicable to the end places that have technical requirement for the transfer delay and is generally used in conjunction with the generator unit. The passive control mode can achieve two/ three-section control and the active control mode can also be used to achieve the two-section control. For the secondary wiring schematic diagram, see M1/M2 type 125A-3200A circuit diagram for details.

- F1 / N1** : Commonly used power live wire/neutral wire.
- F2 / N2** : Standby power live wire/neutral wire.
- L1** : Commonly used power powered-on indicator light, Line I is switched on.
- L2** : Line 0 powered-on indicator light.
- L3** : Standby power powered-on indicator light, Line II is switched on.
- SB3** : Standby switching-on button (Line II is switched on).
- SB2** : Double switching-off button (Line 0 is switched on).
- SB1** : Commonly used switching-on button (Line I is switched on).



CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

STANDARD ACCESSORIES



SKT SERIES					
Current (A)	Number of wiring terminals (pieces)	Manual handle number/material	Safety guard plate number/material	Users Manual quantity	Cable fixing bolt number/ specifications (set)
2000-3200	5	1 pc/steel	2 pcs/PMMA	1 copy	M12*45/48
1600	5	1 pc/steel			M12*40/48
1250	5	1 pc/steel			M10*35/48
800-1000	5	1 pc/steel			M8*35/48
400-630	5	1个/ABS			M12*30/12
250	3	1个/ABS			M10*25/12
125-160	3	1个/ABS			M8*25/12
20-100	3 (M type is equipped with only one)	1个/ABS			M6*20/12

INSTRUCTIONS FOR USE OF LED INDICATORS

SKT SERIES



No.1	No.2	No.3	No.4	No.5	No.6
Line I control power supply is powered-on. (There is AC 220V between the access points 102 and 103 of No.1 terminal.)	Line I control power supply fuse is normal.	Line I control relay is normal (the relay is mounted on the internal circuit board and No.3 light is used for this function, only when No.4 light is not lit up).	Line II control power supply is powered-on (There is AC 220V between the access-points 104 and 105).	Line II control power supply fuse is normal.	125A-250A switch, key lock or button is in the AUTO position (the key lock or the button is mounted on the front side of the switch). 400A-3200A switch and Line II control relay are normal (the relay is mounted on the internal circuit board).

● Instructions for rapid application of LED indicators :

- A. No. 1 and No.4 indicator lights are lit up, which stands for that the control power supply of the lines I and II are powered on.
- B. No.2 and No.5 indicator lights are lit up, which stands for that the fuses of the control power supply of the lines I and II are normal.
- C. No.3 indicator light is lit up, which stands for that the control relay of the line I is working normally.
- D. No.6 indicator light for the 400A to 3200A switches is lit up, which stands for that the control relay of the line II is working normally.
- E. No.6 indicator light for the 125A to 250A switches is lit up, which stands for that the key switch or the button is in the ON position.

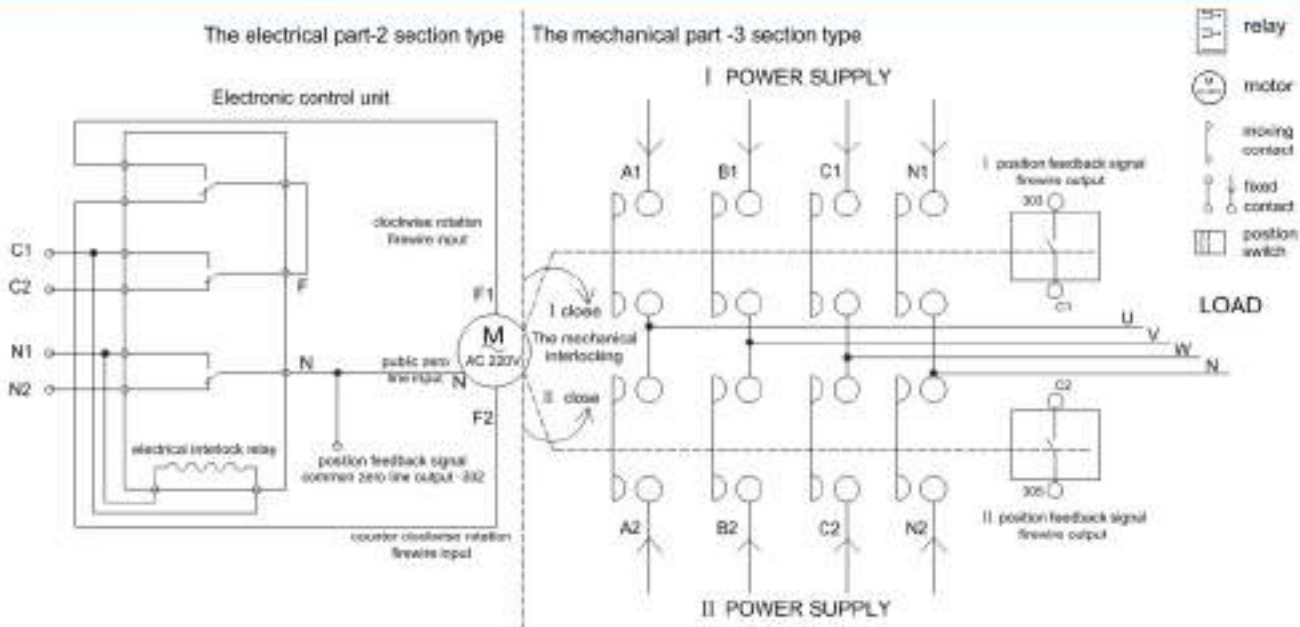
Note : M type switch 20A-100A has no LED indicator equipped.



CLASS PC AUTOMATIC SWITCH ATS SKT SERIES

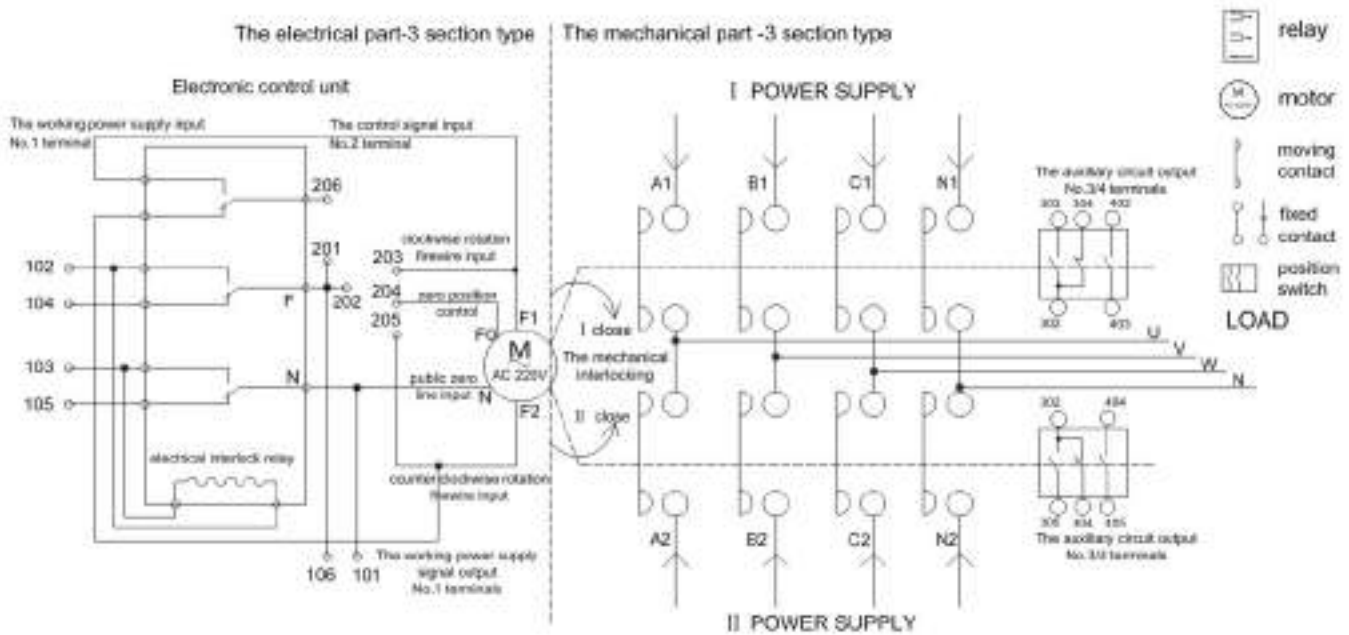
INTERNAL PRINCIPLE DIAGRAM

M Type Internal Principle Schematic Diagram



● Note: The above drawing is only a schematic diagram of its working principle, which does not represent the number of its internal components.

X Type Internal Principle Schematic Diagram



● Note: The above drawing is only a schematic diagram of its working principle, which does not represent the number of its internal components.



CLASS PC MANUAL SWITCH ATS SKS SERIES

SKS SERIES (MANUALLY DRIVEN TYPE)



PRODUCT OVERVIEW

- SKS series dual power manual transfer switch, Class PC in grade, is a non-frequently operable electrical transfer switch, AC-33B in application category, which is suitable to be used in the 50/60Hz 20A-3200A low voltage AC power distribution systems for reliable manual transfer between two power supplies.

APPLICABLE STANDARDS

- IEC60947-1/GB/T • 14048.1-2008 General Provisions for Low-Voltage Switchgears and Control Equipment.
- IEC60947-3/GB • 14048.3 Low-Voltage Switchgears and Control Equipment Low-Voltage Switches, Isolators, Isolating Switches and Fuse-Combination Units.
- IEC60947-6-1/GB • 14048.11 Automatic Transfer Switching Electric Device

PERFORMANCE CHARACTERISTICS

- A composite dynamic contact is used, a spring energy-storage and instantaneous-release operating mechanism is adopted for instantly making and breaking and an obvious on-off position display is equipped, thus realizing reliable isolation between the power source and the load.
- The shell is made of unsaturated polyester fibers, which is high in the fire, pressure and high temperature resistance.
- High reliability: Accurate, flexible and smooth in switching transfer and long in service life up to more than 10,000 times.
- Beautiful in appearance, small in volume and light in weight.
- Operations inside or outside the cabinet will be provided as required.



Spring energy-storage mechanism

ENVIRONMENTAL REQUIREMENTS FOR USE

SKS SERIES	
Name	Requirements
Operating temperature	-20 To +45 °C, the average value for 24 hours shall not exceed +35 °C;
Operating humidity	The average humidity under the +40 °C conditions shall not exceed 50% without condensation;
Altitude	Lower than 2000 meters and, if higher than 2000 meters, reduce its rated value for use;
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use;
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances ;
Class of pollution	Class III ;
IP rating	IP20 ;
Storage requirements	To be stored under -30 To 70°C and in a dry, non-corrosive and saline environment and the longest period of storage shall be 1 year.
Packing	630 A and below packed in carton boxes; 800 A and above packed in wooden boxes.
Stack	630 A and below stacked no more than 5 layers; 800 A and above stacked no more than 3 layers

应用领域



认证标志

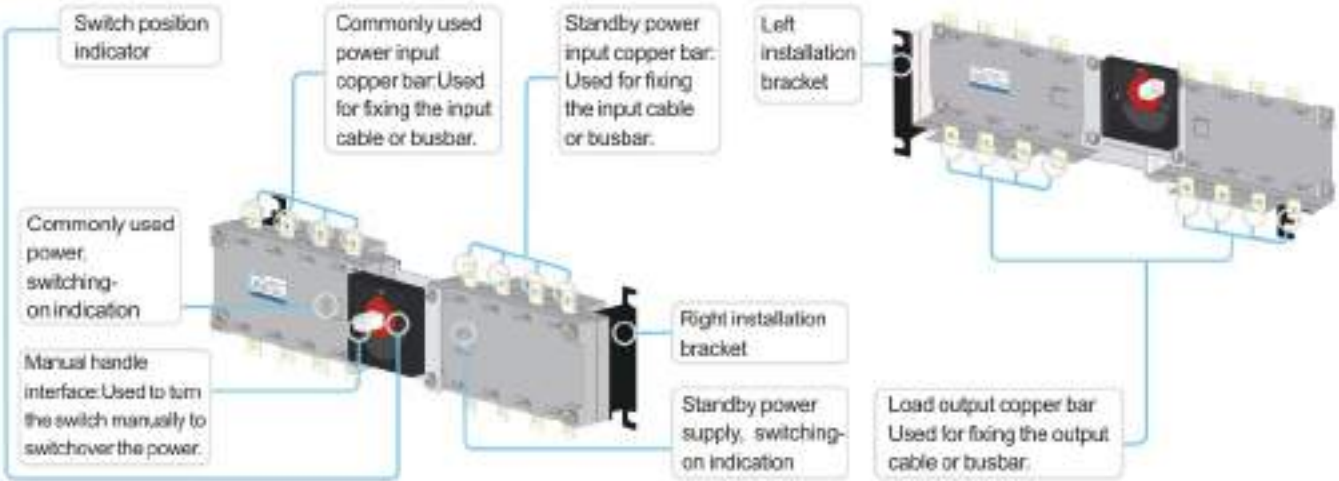


Main technical parameters : The manual ATS switch and the automatic ATS switch are identical in basic structure, see P3for details .

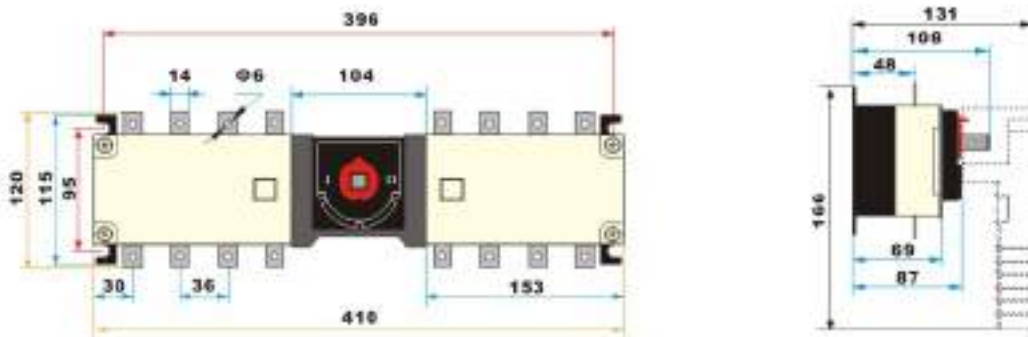


CLASS PC MANUAL SWITCH ATS SKS SERIES

STRUCTURE INTRODUCTION (20A-100A)



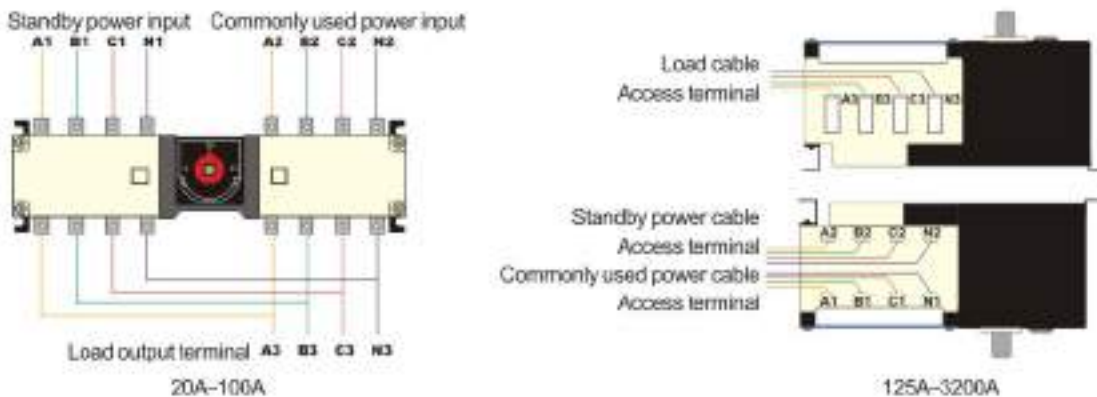
OUTLINE DIMENSIONS DIAGRAM (20A-100A)



Note: 125A-3200A manual switch ATS and SKT ATS Series 125A-3200A are fully identical in appearance, see P5 for details.

TYPICAL WIRING

First wiring schematic diagram



Note: When installing the 20A-100A switch, first connect the commonly used power and the standby power input terminals properly and, having verified that the phase sequence of both the power supplies are consistent, connect the load output terminal in parallel.



CLASS PC AUTOMATIC SWITCH ATS ASKQ SERIES

ASKQ SERIES (ELECTROMAGNETIC DRIVEN TYPE)

PRODUCT OVERVIEW



- ASKQ series dual power automatic transfer switch, Class PC in grade, is a non-frequently operable electrical transfer switch, which, having such 3 working modes as fully automatic, electric and emergency manual, is suitable to be used in the 50/60Hz 6A-6300A low voltage AC power distribution systems for reliable transfer between two power supplies.

APPLICABLE STANDARDS

- IEC60947-1/GB/T 14048.1-2008 General Provisions for Low-Voltage Switchgears and Control Equipment.
- IEC60947-3/GB 14048.3 Low-Voltage Switchgears and Control Equipment Low-Voltage Switches, Isolators, Isolating Switches and Fuse-Combination Units.
- IEC60947-6-1/GB 14048.11 Automatic Transfer Switching Electric Device



PERFORMANCE CHARACTERISTICS

- The electromagnet coil is protected with a temperature control device to prevent it from being burnt out.
- The excitation type electromagnet drive is adopted, which is extremely fast in transferring.
- The 6A-63A switch is suitable for home use, which meets the requirements of the pole power distribution system and the guideway installation is quick and easy in construction.
- 3200A-6300A switch is suitable for use in the industrial places for large-current switching and meets the Class I power distribution requirements.

ENVIRONMENTAL REQUIREMENTS FOR USE

ASKQ SERIES	
Name	Requirements
Operating temperature	-5 To +45 °C, the average value for 24 hours shall not exceed +35 °C
Operating humidity	The relative air humidity of the installation location shall not be more than 50% at the maximum temperature of +40 °C; measures shall be taken, For example up to 90% at +25°C, when there is condensation on the products due to temperature changes.
Altitude	Lower than 2000 meters and, if higher than 2000 meters, reduce its rated value for use
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances
Class of pollution	Class III
Installation category	Category III
Installation conditions	Installed vertically in the control cabinet and the power distribution cabinet

应用领域



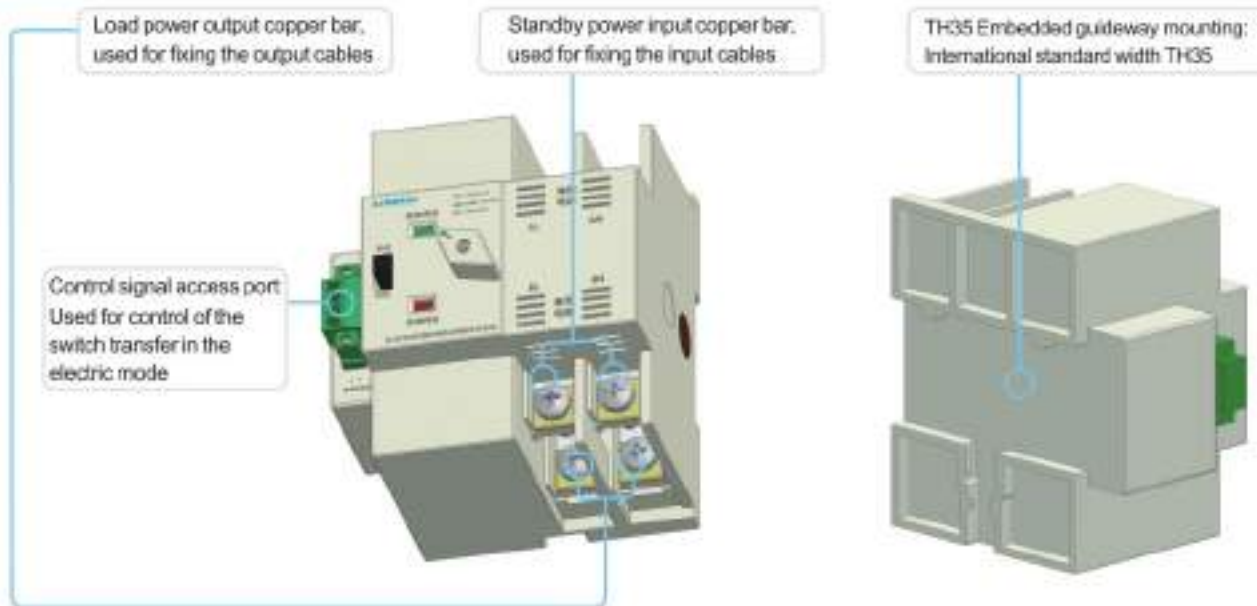
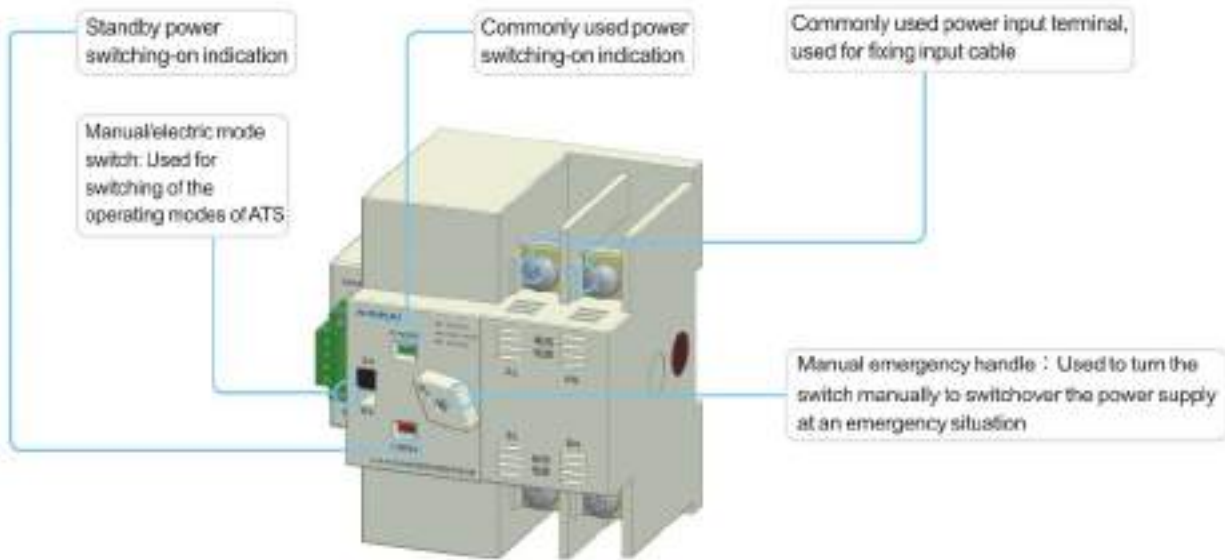
认证标志





CLASS PC AUTOMATIC SWITCH ATS ASKQ SERIES

STRUCTURE INTRODUCTION (6A-63A)

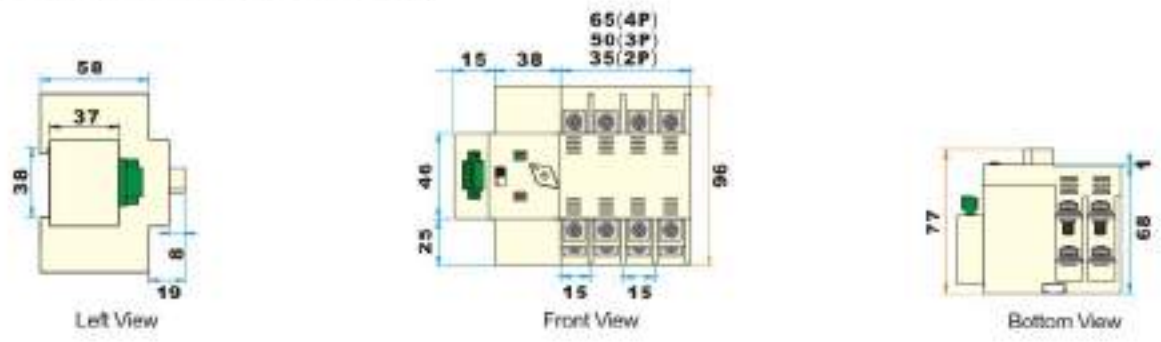


MAIN TECHNICAL PARAMETERS (6A-63A)

ASKQ SERIES	
Copper bar rated operating voltage U_e	AC 400V
Copper bar rated operating current I_e	6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A
Copper bar rated insulation voltage U_i	690V AC
Rated impulse withstand voltage U_{imp}	8kV
Use category	AC-33A
Electrical class	CLASS PC
Frequency of use	50Hz-60Hz
Applicable standards	IEC60947.1 GB/T14048.11

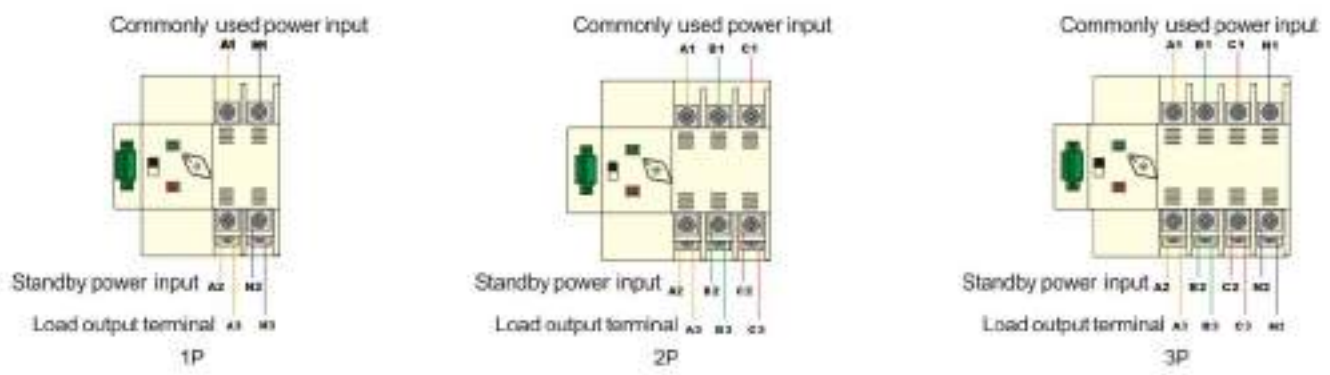
CLASS PC AUTOMATIC SWITCH ATS ASKQ SERIES

OUTLINE DIMENSIONS DIAGRAM (6A-63A)



TYPICAL WIRING DIAGRAM (6A-63A)

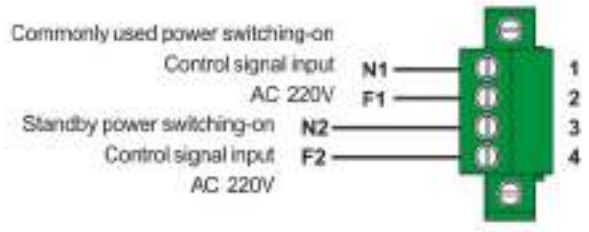
First wiring schematic diagram



- Note: 1. Under the manual mode, first connect the commonly used power and the standby power cables properly and, having verified that the positions of the live wires and the zero lines of both the two power supplies are consistent, connect the load cable.
- 2. When it is required for the transfer switch to be operated manually, first put the button switch to the manual position and then turn the handle to switch over between the commonly used power and the standby power.

Secondary wiring schematic diagram

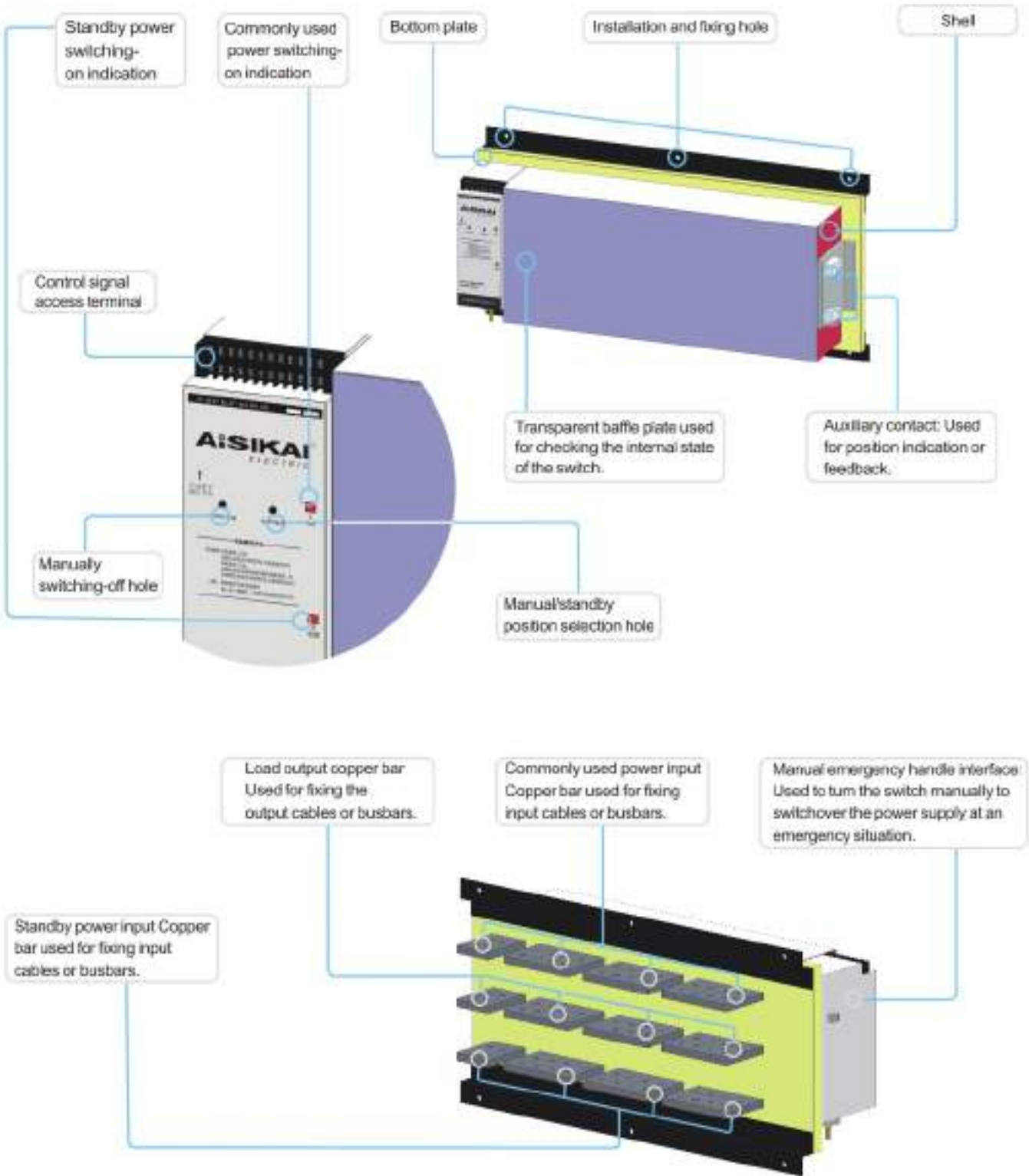
- Note: 1. The control signal input terminal of the 6A-63A type ATS switch was connected to the corresponding position of the copper bar before its delivery from the factory, so as to achieve such functions as automatically throw-into and automatic recovery and the commonly used power taking priority to supply the power. For the external control signals required, carry out the electric connections with reference to the following figure.
- 2. When connecting the power cables, make sure that the corresponding positions of the live wires and the zero lines of both the two power supplies should be consistent, or otherwise there may be damage caused to the control circuit of the switch.





CLASS PC AUTOMATIC SWITCH ATS ASKQ SERIES

STRUCTURE INTRODUCTION (3200A-6300A)



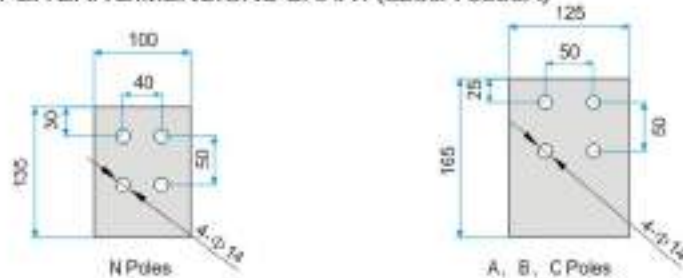


CLASS PC AUTOMATIC SWITCH ATS ASKQ SERIES

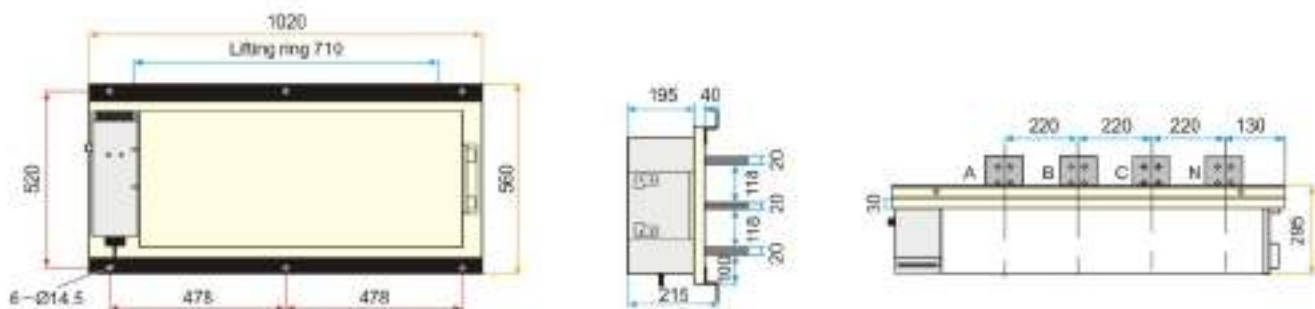
MAIN TECHNICAL PARAMETERS (3200A-6300A)

Conventional thermal current Ith		3200A, 4000A, 5000A, 6300A	
Rated insulation voltage of copper bar Ui		AC800V	
Rated impulse withstand voltage Uimp		8kV	
Copper bar rated operating voltage Uie		AC400V	
Copper bar rated operational current Ie		3200A, 4000A, 5000A, 6300A	
Mechanical structure		Three-section type	
Wiring mode		After panel (Before plate shall be the product supplied specially)	
Number of poles		3P	4P
Weight (kg)		121	130
Operating current (A)	DC110V/125V	36	38
	AC100V/110V	36	38
	AC200V/220V/230V	18	20
Tripping current (A)	DC110V/125V	6	
	AC100V/110V	6	
	AC220V	2	
Short time withstand current		50kA	
Rated limit short-circuit current (fuse for protection)		120KA	
Making and breaking capacity		AC-33B (10Ie making/10Ie breaking) cosφ=0.35 DC-33B(4Ie making/4Ie breaking)/R-2.5ms	
Performance	Time-shifting	A source-B source B source-A source	< 0.2s
	Service life	Electrical service life : 6000 times, Mechanical service life: 10000 times	
Operating cycle frequency		120 times/hour	
Auxiliary switch		A and B power supply sides are 2 normally open and 2 normally closed; switching capacity : AC: 110V5A/AC: 220V3A DC: 220V0.2A.	
Accessory		Operating handle	

INPUT AND OUTPUT COPPER BAR DIMENSIONS CHART (3200A-6300A)



OUTLINE DIMENSIONS DIAGRAM (3200A-6300A)



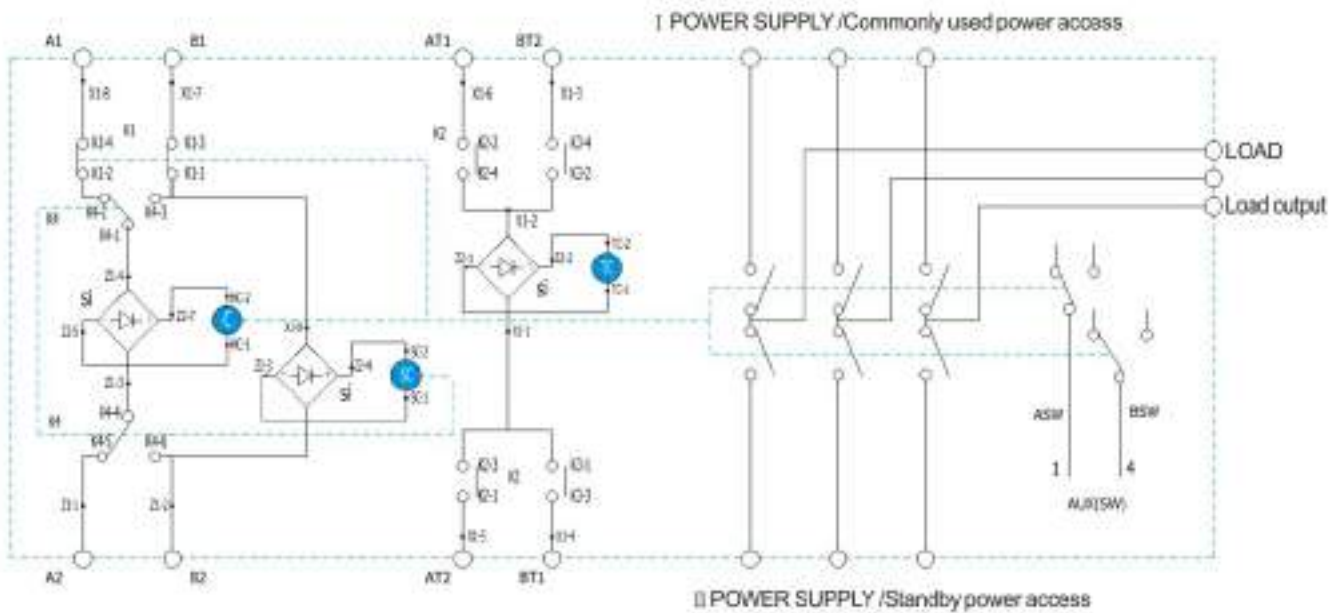
- Note: ATS is equipped with four lifting rings. Before lifting, it is necessary to check the lifting rings to find out whether they are tightened up onto the mounting guideway of the switch, to check the carrying capacity of the ropes to find out whether it should not be less than 500kg and to carry out a trial lifting to determine the position of the center of gravity of the ATS, so as to prevent any rollover and slipping accident occurring due to the incorrect center of gravity.



CLASS PC AUTOMATIC SWITCH AT5 ASKQ SERIES

INTERNAL PRINCIPLE DIAGRAM (3200A-6300A)

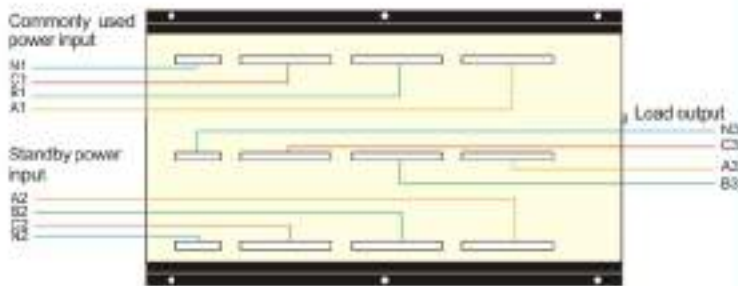
ASKQ SERIES



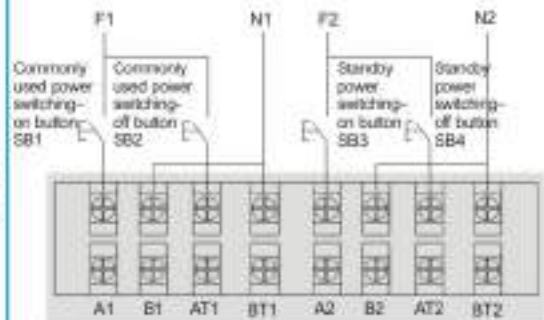
- C = input coil
- SC = Selection coil
- TC = Tripping coil
- SI = Rectifier
- LS = Selector switch
- ATS1, ATS2 = A power disconnect terminal
- BTS1, BTS2 = B power disconnect terminal
- AX, BX = control switch
- AUX = auxiliary switch
- A1-A2 = A power side input terminal
- B1-B2 = B power side input terminal
- BT1-BT2 = B power side tripping terminal
- AT1-AT2 = A power side tripping terminal
- Dynamic contacts
- Static contact

TYPICAL WIRING (3200A-6300A)

First wiring schematic diagram



Secondary wiring schematic diagram





CLASS CB AUTOMATIC SWITCH ATS SKQ1 SERIES

SKQ1 SERIES (MOTOR-DRIVEN TYPE)



PRODUCT OVERVIEW

- SKQ1 series dual power automatic transfer switch is currently the most advanced third generation product, is Class PC in grade and is an AC-33A frequently operable electrical transfer switch in application category, which having such four working modes as automatic, electric, emergency manual and locking, is suitable to be used in the 50/60Hz 20A-3200A low voltage AC power distribution systems for reliable transfer between two power supplies.

APPLICABLE STANDARDS

- IEC60947-1/GB/T 14048.1-2006 General Provisions for Low-Voltage Switchgears and Control Equipment
- IEC60947-3/GB 14048.3 Low-Voltage Switchgears and Control Equipment Low-Voltage Switches, Isolators, Isolating Switches and Fuse-Combination Units.
- IEC60947-6-1/GB 14048.11 Automatic Transfer Switching Electric Device

PERFORMANCE CHARACTERISTICS

- Reasonable in structure, smallest in volume, beautiful in appearance, provided with a protective cover, more safe and reliable in supply of power.
- Complete in protection functions; provided with short circuit and overload protection.
- Noise-free operation, energy saving and consumption reducing, convenient in installation, easy in operation, reliable and stable in performance.
- D type miniature circuit breaker is adopted internally.



D type MCB

应用领域



民用

商用

工业用

认证标志



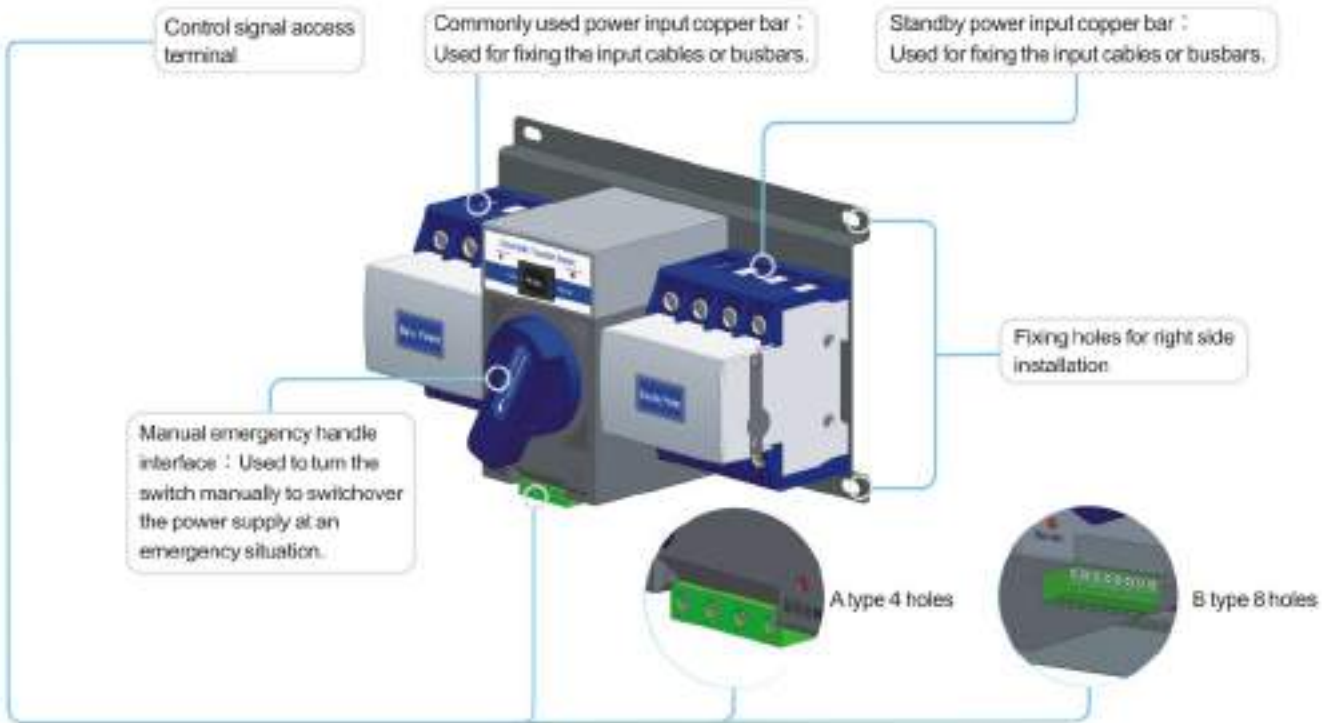
ENVIRONMENTAL REQUIREMENTS FOR USE

SKQ1 SERIES	
Name	Requirements
Operating temperature	-5 To +45 °C, the average value for 24 hours shall not exceed +35 °C
Operating humidity	The relative air humidity of the installation location shall not be more than 50% at the maximum temperature of +40 °C ; measures shall be taken, For example up to 90% at +25°C, when there is condensation on the products due to temperature changes.
Altitude	Lower than 2000 meters and, if higher than 2000 meters, reduce its rated value for use
Vibration and gas	There shall be no strong vibration or shock and no harmful gases to corrode the metals and to damage the insulation within the environment of its use
Surrounding material	There shall be no serious dust, conductive particles or explosive hazardous substances
Class of pollution	Class III
Installation category	Category III



CLASS CB AUTOMATIC SWITCH ATs SKQ1 SERIES

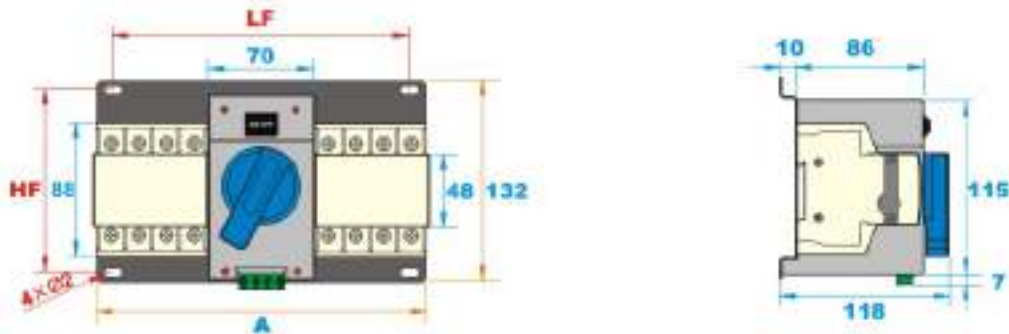
STRUCTURE INTRODUCTION





CLASS CB AUTOMATIC SWITCH ATs SKQ1 SERIES

OUTLINE DIMENSIONS DIAGRAM



SKQ1 SERIES			
	LF	HF	A
4P	200	120	220
3P	164	120	184
2P	128	120	148

MAIN TECHNICAL PARAMETERS

SKQ1 SERIES													
Rated short-circuit breaking capacity	3KA												
Rated short-circuit making capacity	3KA												
Transferring time	< 3s												
Control voltage of transfer switch	AC220V												
Mechanical service life of transfer switch	The mechanical service life of transferring between the commonly used power and the standby power shall be 3000 times and the electric service life shall be 1500 times.												
Copper bar rated insulation voltage Ui	Ui=500V												
Copper bar rated operating voltage Ue	AC380V (2P switch is AC220V)												
Copper bar rated operating current Ie	10A, 16A, 20A, 25A, 32A, 40A, 63A												
Making and breaking capacity													
Use category	Making and breaking test conditions												
AC-33B	<table border="1"> <thead> <tr> <th>L/Ie</th> <th>u/ue</th> <th>σβst</th> <th>Power-on time S</th> <th>Cycle period min</th> <th>Operating cycles</th> </tr> </thead> <tbody> <tr> <td>6,0</td> <td>1,05</td> <td>0,5</td> <td>0,05</td> <td>< 5</td> <td>12</td> </tr> </tbody> </table>	L/Ie	u/ue	σβst	Power-on time S	Cycle period min	Operating cycles	6,0	1,05	0,5	0,05	< 5	12
L/Ie	u/ue	σβst	Power-on time S	Cycle period min	Operating cycles								
6,0	1,05	0,5	0,05	< 5	12								

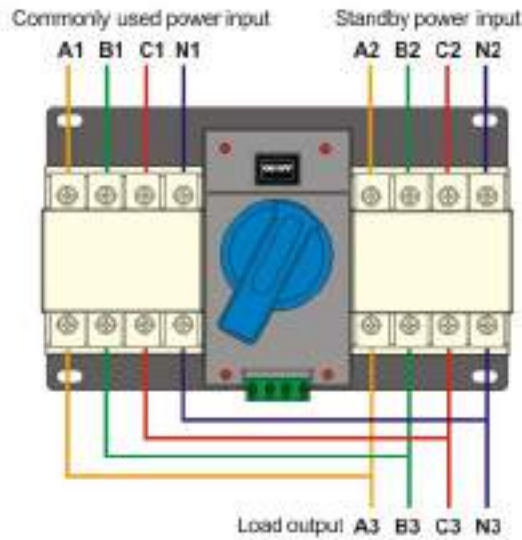
Note: The motor load under the non-frequent operation of AC-33B may include the hybrid load of the motor and the resistance load.



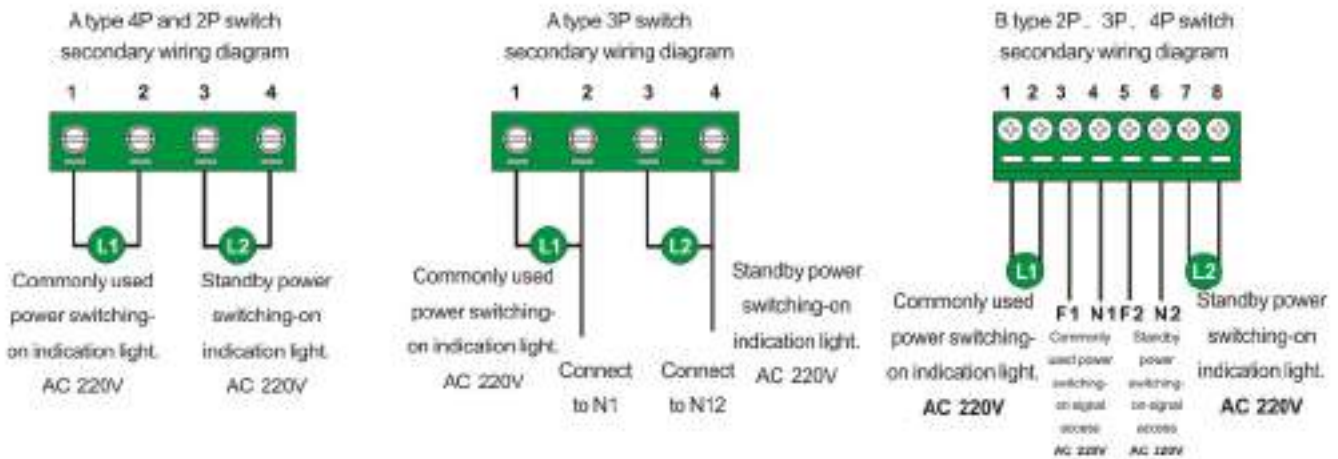
CLASS CB AUTOMATIC SWITCH ATSSKQ1 SERIES

TYPICAL WIRING

First wiring schematic diagram



Secondary wiring schematic diagram



Note:

1. According to the actual needs of the power distribution lines, connect the input terminals of the commonly used power and the standby power properly and, having verified that the phase sequences of the two power supplies should be consistent connect the load terminals in parallel.
2. When it is required for the transfer switch to be operated manually, first put the button switch to the manual position and then turn the handle to switch over between the commonly used power and the standby power.