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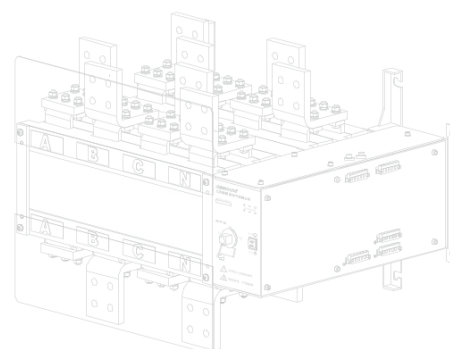
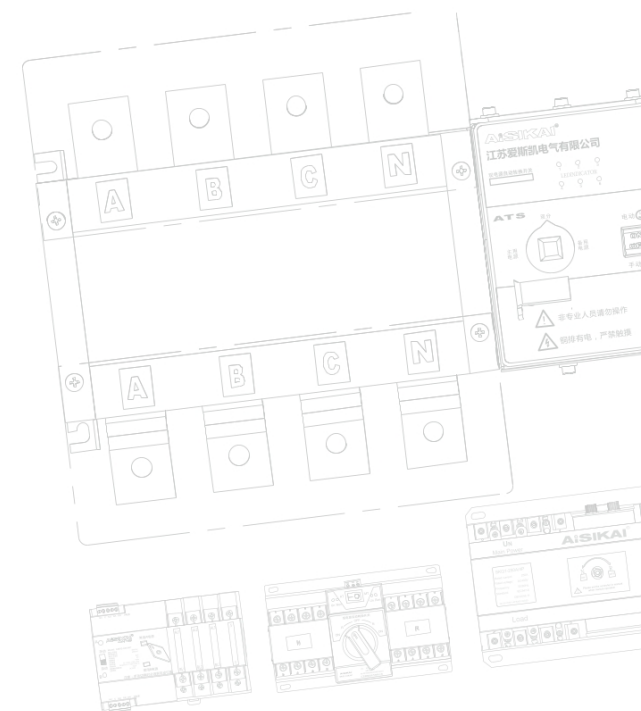


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AISIKAI®



AUTOMATIC TRANSFER SWITCH SELECTION GUIDE

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JIANGSU AISIKAI ELECTRIC CO.,LTD

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Since established in 2007, AISIKAI has been committed to the manufacture, research, development and marketing of the high-quality high and low voltage electric switches. Our product lines cover level I ,II ,III power distribution fields. We are awarded as the National High Tech Enterprise, Double-Soft Certified Enterprise (i.e., software product certified and software enterprise certified), Little Giant Science and Technology Enterprise of Jiangsu Province, and Contract-keeping and Trustworthy Enterprise. We have invention patents, utility model patents and appearance patents. All of AISIKAI products have China Compulsory Certification (CCC) and China Quality Certification (CQC). From 2014, we have been recognized as Yangzhou City Engineering Technology Center and National Adopting International Standard Enterprise.

AISIKAI products have CE certification and IEC CB certification. We have passed the ISO9001 Quality Management System and ISO14001 Environment Management System, ISO45001 Occupational Health Management System, and SGS Global Qualified Supplier Authentication.

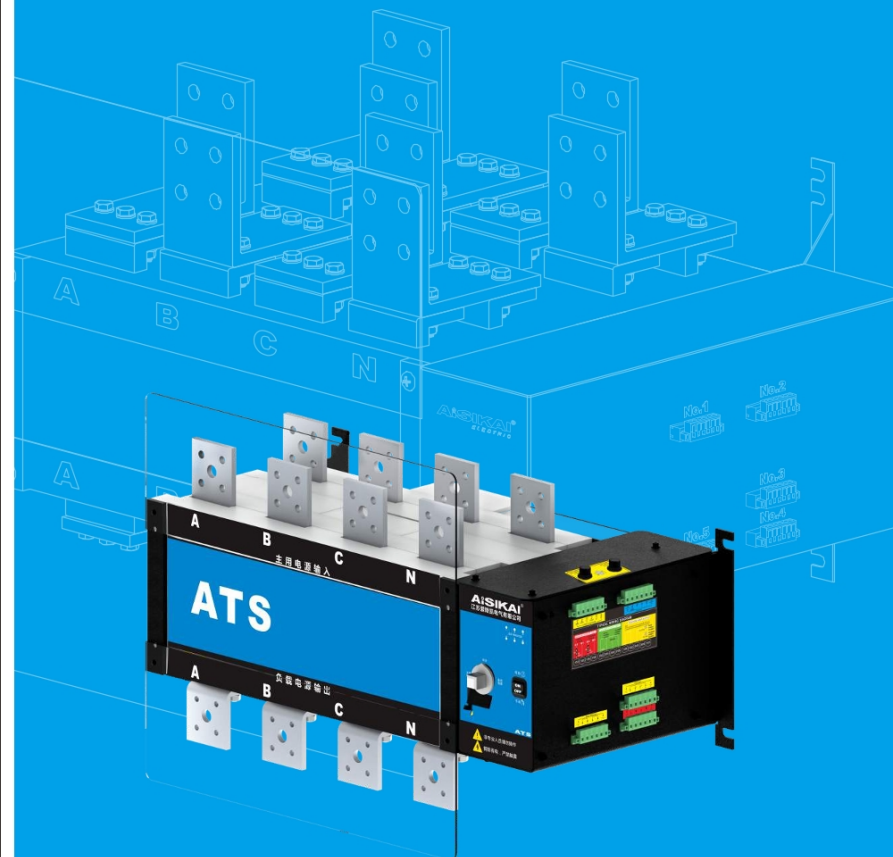
QUALITY, SERVICE, REPUTATION, INNOVATION is AISIKAI's unchanging company principle. We're always eager to make progress to offer reliable products and impeccable services. With your support and trust, AISIKAI will thrive and work towards a brighter future.





AUTOMATIC TRANSFER SWITCHES

AiSIKAI®



ATS
AUTOMATIC TRANSFER SWITCH

INTELLIGENT DUAL POWER AUTOMATIC TRANSFER SWITCH

Complete Series, Comprehensive Functions

AISIKAI dual power automatic transfer switches consist of SKT, SKQ and ASKQ series. From CB class products with general performance requirements to PC class products with the highest performance, from infrequent to frequent workable products, the perfect solution can be found here. Switches have a wide current range from 6A to 6300A- easily meet the requirements of diverse loads for residential, industrial and commercial use, and are applicable to the first, second and third level distribution network system in the field of low voltage distribution. The perfect functional configuration meets the power switching between utility-utility, utility-generation, generation-generation and more complex uninterrupted backup power. We conform to the relevant technical standards of IEC/GB and implement international standards for production. Switches have national compulsory CCC certification and EU CE certification.



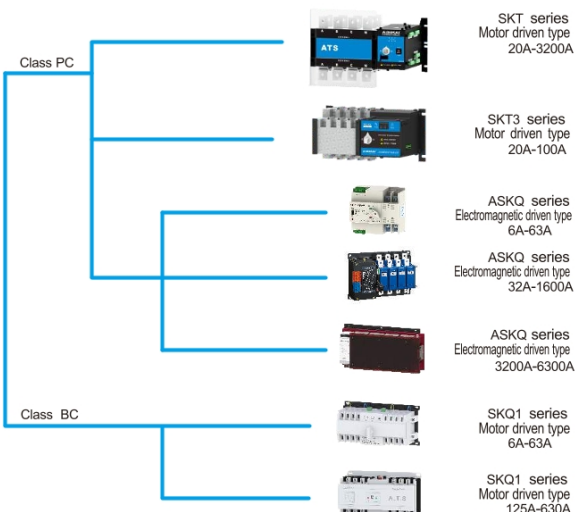
APPLICATIONS



STANDARDS

GB10963.1-2005
IEC60898-1-2002

ATS
Product Line



High-tech Product

Having leading structural design and innovative patented technology, SKT series dual power automatic transfer switches has obtained the national high-tech product certificate (Ref No.141081G0527N).The technical standards comply with IEC60947-1/IEC60947-3/IEC60947-6-1/GB14048.1/GB14048.3/GB14048.11,We implement the international production standards.The switches have national compulsory CCC certification and EU CE certification.

Ultra-small Size, Ideal for Household

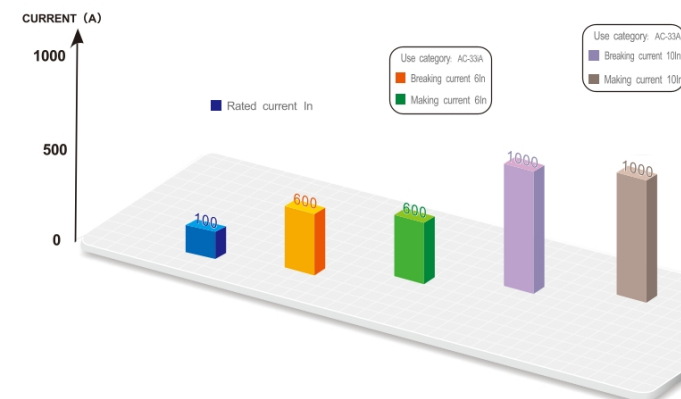
ASKQ(6A-63A)series ATS is a new product developed by AISIKAI according to the international household market demand. Switches has four working modes: automatic, remote control, manual and lock. When matched with a small generator, it can fully meet the uninterrupted power supply requirements of family houses, villas, private clubs and other places.

Ultra-high Current, Industrial Specialist

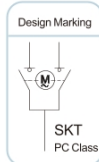
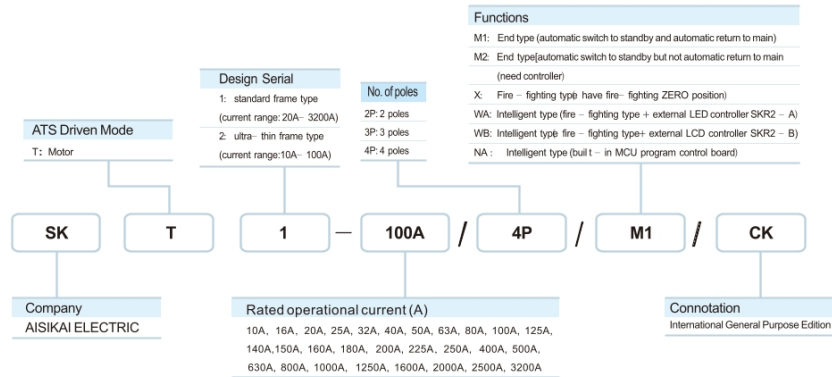
ASKQ(3200A-6300A)series ATS is a high-performance product developed by AISIKAI for low-voltage and high-current special industrial equipment, suitable for mining and oil extraction industries, and can also be used as a main power transfer switch in civil or commercial primary distribution systems.

Highest Use Category AC-33A

SKT series automatic transfer switch has reached the highest use category of AC-33A. It can cover most of the requirements of mixed loads in civil, industrial, aviation and transportation fields. Switches can be frequently switched and have a breaking and making capacity of up to 10 times the rated current, which is 67% higher than the switches of AC-33A.



SKT1, SKT2 SERIES CLASS PC AUTOMATIC TRANSFER SWITCH SELECTION TABLE (Motor Driven)



Model Description 1:

- SKT2-100A/4P/M1/CK:
1. PC class motor driven type automatic transfer switch
 2. ultra-thin frame, rated working current 100A
 3. 4 poles of copper bars
 4. end type automatic switch to standby and automatic return to main
 5. International General Purpose Edition

Model Description 2:

- SKT1-800A/3P/X/CK:
1. PC class motor driven type automatic transfer switch
 2. standard frame, rated current 800A
 3. 3 poles of copper bars
 4. fire-fighting type
 5. International General Purpose Edition

QUALIFICATION DOCUMENTS



China Compulsory Certification

Patents

ISO

CE

OVERVIEW



- SKT series double power automatic transfer switch is the most advanced third generation product. It is PC class and AC-33A use category can be frequently operated electric transfer switch. Switches are suitable for the reliable conversion of two power sources in 50/60Hz 10A-3200A low-voltage AC power distribution system. There are four working modes: automatic, electric, emergency manual and lock.

CLASSIFICATION

- **Classified by volume**
Standard type: Type 1, 20A-3200A, 5 kinds volume specification
Ultra-thin type: Type 2, 10A-100A, 1 kind volume specification
Note: Ultra-thin type is 50% smaller than the standard type.
- **Classified by functions**
M1: end type (automatic switch to standby and automatic return to main)
M2: end type (automatic switch to standby but not automatic return to main (need controller))
X: fire-fighting type (have fire-fighting ZERO position)
WA: intelligent type (fire-fighting type + external LED controller SKR2-A)
WB: intelligent type (fire-fighting type + external LCD controller SKR2-B)
N: intelligent type (built-in MCU program control board)
- **Classified by poles**
2P: 2 poles, 1 phase and 2 lines
3P: 3 poles, 3 phases
4P: 4 poles, 3 phases and 4 lines

APPLICATIONS



NORMAL OPERATIONAL CONDITIONS AND INSTALLATION METHODS

Category	Requirement
Operational temperature	Between -20°C and 45°C. The average value in 24 hours does not exceed +35°C
Operational humidity	The average humidity at +40°C shall not exceed 50% without condensation
Altitude	Lower than 2000 meters. Operation at altitude above 2000 meters requires derating
Vibration and gas	Use environment should be without strong vibration and shock, and without harmful gases that corrode metals and destroy insulation
Ambient substance	Without heavy dust, conductive particles and explosive hazardous substances
Pollution level	III
IP rating	IP 20
Storage requirements	Storage environment should be between -30°C and 70°C, dry, non-corrosive and non-oily. The maximum storage time is 1 year
Packaging	Carton packaging for 630A and below; wooden crate packaging for 800A and above
Stacking	No more than 5 layers for 630A and below; no more than 3 layers for 800A and above
Installation method	Install vertically or horizontally. Upside down installation is prohibited
Wiring method	Standard is top inlet and bottom outlet. Bottom inlet and top outlet can be customized

STANDARDS

GB/T14048.11 IEC60947-6-1

RAW MATERIAL ADVANTAGES



99.9% High Purity T2 Copper

99.9% High Purity T2 Copper

The moving and fixed contacts are made of T2 copper and the surfaces are processed with pure silver electroplating technology, so the breaking capacity is much higher than that of welded silver point switches.

Main Body Made of DMC

The main body is made of reinforced unsaturated polyester glass fiber material(DMC), which has high mechanical strength and insulation performance. It has the advantages of high strength, corrosion resistance and flame retardant than ordinary ABS.

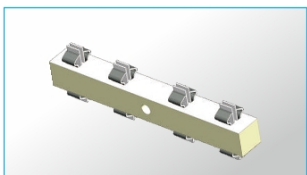
Self-recovery Drive Motor

We use polychloroprene insulated moist heat type motor or permanent magnet synchronous motor (patented technology), which has high torque, low noise, long life, and self-recovery protection against overheating and overcurrent. These motors have much better comprehensive performance than electromagnet.

Components Brand Assurance

The electronic components are made of well-known brands. The main control board is produced by the first-tier domestic electronics factory, using the three-proof process for high reliability and long service life.

STRUCTURAL DESIGN



Double-row composite contacts

Double-row composite contacts

The moving contacts are double-row composite contacts, having the twice conductive area of the single-sided contact switches.

Transverse-pull moving mechanism

The moving contacts move transversely and reciprocally, which has the advantages of zero arc and a high safety factor compared with the longitudinal separation type switches.

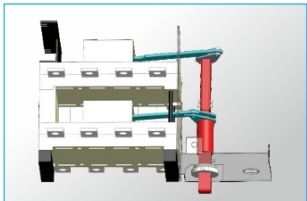
Double interlocking mechanically and electrically

The precise mechanical design ensures complete isolation between the two power supplies and the logic management of the main control board achieves the electrical interlocking.

Safety ZERO position

The whole series of products are equipped with safety ZERO position, which can cut off two power supplies at the same time. Therefore, their safety performance is superior to that of the 2-section switches.

FUNCTIONAL ADVANTAGES



Mechanical interlocks

Prevent early failures and damage to equipment

Each moving contact is reliably fixed in the base by a high-strength spring plate made of silicon manganese steel. The pressure between the moving and fixed contacts is constant during the transferring process and after closing. It effectively prevents the equipment failure due to high voltage pulses caused by contact popping or chattering (common in contactor type switches). Our switcher can be installed on frequently vibrating equipment such as diesel generators.

Load isolation function

The precise safe distance can effectively isolate power supply and load, meeting the creepage requirements. Switch has a clear indication of the on/off position and can be operated with load.

Neutral line overlapping switching

This patented feature prevents equipment damage caused by neutral line potential drift when switching (optional feature)

PERFORMANCE ADVANTAGES



超薄设计

Service life

Mechanical life: ≥12000 times Electrical life: ≥7500 times

High breaking and making capacity

10 times rated current breaking capacity, 10 times rated current making capacity, 8kV rated withstand impulse voltage, 75kA rated limit short-circuit current

High use category

AC-33A use category, which can be used for frequent operation, has a wider range of applications than AC-33B infrequent use category.

Meeting the requirements of I and II power distribution

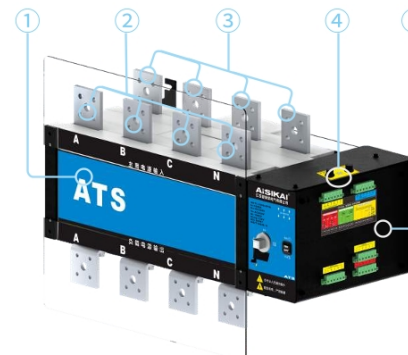
Good electrical performance can meet the technical requirements of I and II power distribution systems, and has higher shock resistance than circuit breaker type ATS to avoid tripping of the main switch due to short-circuit of a single load.

Ultra-thin volume (20A-100A)

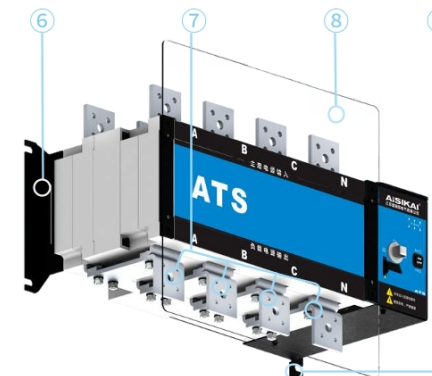
The precise mechanical design achieves an ultra-thin volume, and the assembled electrical box is only 25% the size of a floor tile (60°60).

STRUCTURE INTRODUCTION

- 1 Switch body: the standard type is top inlet and bottom outlet type
- 2 Main power input copper bars: Used for fixing the main power cables or busbars
- 3 Standby power input copper bar: Used for fixing the standby power cables or busbars
- 4 I / II fuses
- 5 Electronic control unit of transfer switch: including main control circuit board and driving motor



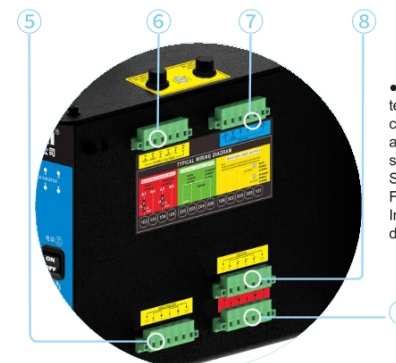
- 6 Left installation bracket: Matched with the right installation bracket for fixing the switch
- 7 Load power output one-piece copper bars, for fixing the load cables or busbars Patent No. ZL 2010 3 0242257.0 ZL 20102 0664285.6
- 8 Protective plate installation hole, for fixing the protective plate
- 9 Right installation bracket: Matched with the left installation bracket for fixing the switch



- 1 Switch position status indicator
- 2 Manual emergency handle interface: you can manually turn the switch for power supply switching in case of emergency
- 3 LED indicators, see ATS-14 for details
- 4 Electric/emergency manual mode selection button
- 5 Terminal No.5: Extension port, standard product has no signal output, optional self-start signal output, padlock indication, etc.



- 6 Terminal No.1: Electronic control unit power supply input
- 7 Terminal No.2: Transferring control signal input (passive control)
- 8 Terminal No.3: Position feedback signal output 1 (active output for M type and passive output for others)
- 9 Right installation bracket: Matched with the left installation bracket for fixing the switch



• No. 1-5 wiring terminals are configured according to the switch model. See the Terminal Functions Introduction for details.

FUNCTION CODE TABLE

Application type	End type	Fire-fighting type	Intelligent type	
Function code	M	X	W(External controller type)	N(Built-in MCU program control board)
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 switch	Y(without fault detection)	External control	Y(with three phases fault detection)	
Lock mode	Optional	Optional	Optional	Optional
Fire-fighting signal (forced to ZERO position)		Passive close signal	See ATSC-03 for details	
Main/standby power monitoring protection				
Over-voltage protection	Single phase (optional)	Single phase (optional)	Three phases(adjustable range)	Single phase (optional)
Under-voltage protection	Single phase (optional)	Single phase (optional)	Three phases(adjustable range)	Single phase (optional)
Phase loss protection			Y	
Frequency protection			See ATSC-03 for details	
Phase angle detection				
N-phase fault alarm				
Phase sequence inconsistency alarm				
Application function				
Automatic switch to standby and automatic return to main	M1(Standard products)	External control	Y	Y
Automatic switch to standby but not automatic return to main	M2(Customized)	External control	See ATSC-03 for details	
Main power supply has priority	Y	External control	Y	Y
Standby power supply has priority	0s or 2s (Under-voltage optional)	optional	Settable	
Generator self-start signal (passive)		optional	Y	
Transfer delay		External control	Adjustable	
Power failure delay setting			Y	
Power recovery delay setting			Y	
Alarm records storage			See ATSC-03 for details	
Communication			See ATSC-03 for details	
Feedback signal	AC220V(I , II)	Passiv� I , II , 0)	DC5V(I �II �0)	Passiv� I , II , 0)
Display function				
Switch position status display	External indication light	External indication light	Y	External indication light
Voltage display			See ATSC-03 for details	
Frequency display			See ATSC-03 for details	
Current display			See ATSC-03 for details	

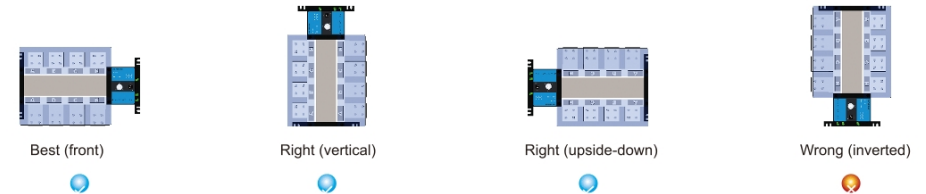
Note:W type consists of a controller with corresponding function and X type switch
Y means this function is available.

MAIN TECHNICAL PARAMETERS

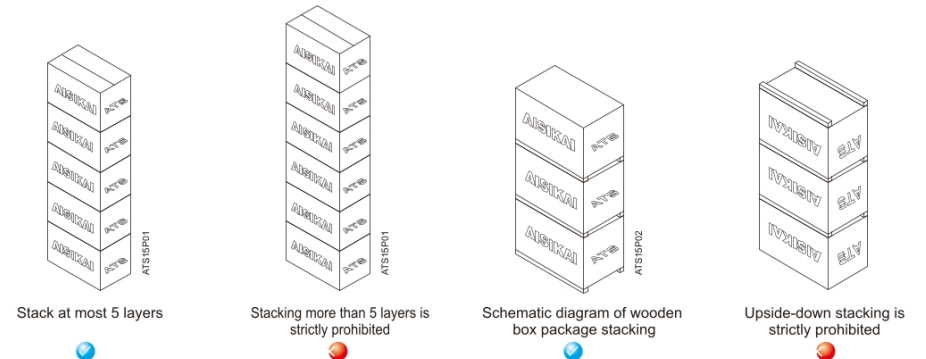
	SKT2 Series	SKT1 Series					
Frame rating current (Inm)	100A	160A	250A	630A	1600A	3200A	
Rated current (In)	100	125A 160	250	400 630	800 1000 1250 1600	2000 2500 3200	
Rated current (In)	10,16,20,25,32,40,50,63,80,100A	63,80,100,125,140,150,160A	125,140,160,180,200,225,250A	160,180,200,225,250,315,350,400,500,630A	800,1000,1250,1600A	2000,2500,3200A	
Thermal current rating (Ith)							
Rated insulation voltage of copper bar (Ui)	1000V						
Rated impulse withstand voltage (Uimp)	12KV						
Rated operational voltage of copper bar (Ue)	AC400V						
Use category	AC- 33A						
Rated operational current of copper bar (Ie)	10,16,20,25,32,40,50,63,80,100,125,140,150,160,180,200,225,250,315,350,400,500,630						800,1000,1250,1600,2000,2500,3200
Rated making capacity	10Ie						
Rated breaking capacity	10Ie						
Rated limit short- fuse for protection circuit current (Iq) circuit breaker for protection	100KA 50KA	100KA 50KA	100KA 50KA	120KA 65KA	120KA 65KA	120KA 65KA	
Transferring timeI – II 或 II – I	1.2S						
Rated operational voltage of the control power supply	AC220V special voltage DC24V, DC110V, DC220V, AC110V, AC280V)						
Start	40W			325W	355W	400W	440W
Normal	18W			62W	74W	90W	98W
Net weight(kg) 4 poles	3.5	5.3	5.5	7	17	17.5	37
							44
							98

Note: The parameters of SKT1 20A-100A are exactly same as the SKT1 125A product

SCHEMATIC DIAGRAM OF CORRECT INSTALLATION

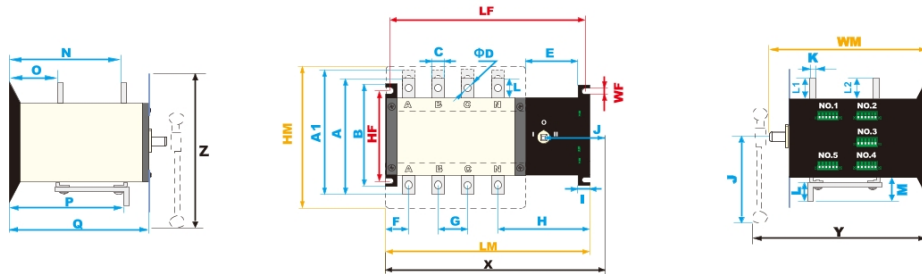


PRODUCTS STACKING REQUIREMENTS



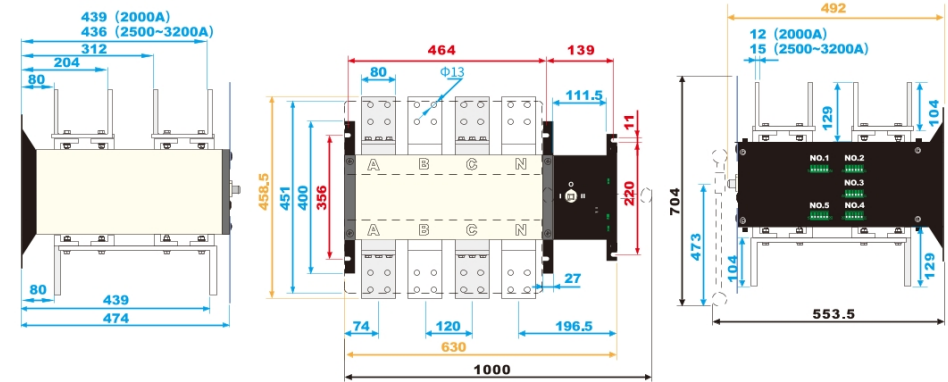
OUTLINE DRAWING 1

20A-3200A outline dimensions



OUTLINE DRAWING 2 (AUXILIARY DIMENSIONS)

2000A-3200A auxiliary outline dimensions

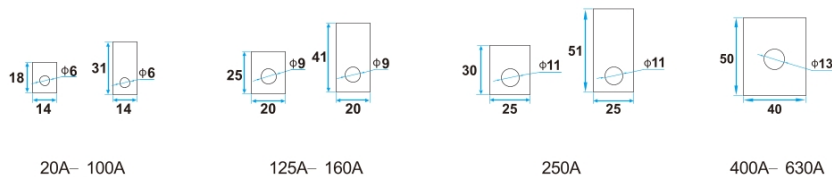


20A-1600A OUTLINE AND INSTALLATION TABLE

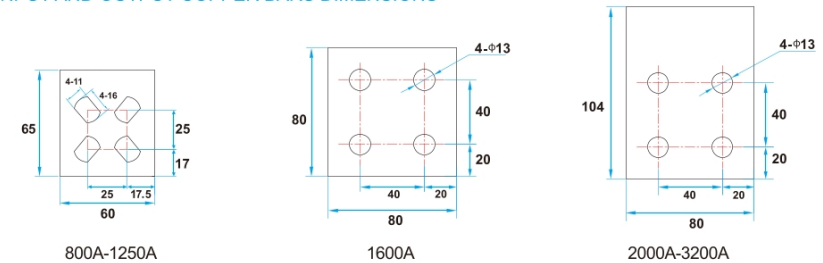
Series	Current range	Installation dimensions			Body maximum size			Other detailed dimensions of switch																Other detailed dimensions of switch																Reference dimensions		
		LF	WF	HF	LM	WM	HM	A	A1	B	C	ΦD	E	F	G	H	I	J	K	L	L1	L2	M	N	O	P	Q	X	Y	Z												
SKT2 Series	20-100A	225	6.5	84	242.5	135.5	143	115	127	107.5	14	6	102.5	19.5	30	133	14.5	142	2.5	18	18	31	26	87.5	37.5	87.5	114	303.5	171	208												
	125-160A	271	7	110	290	188	163	142	158.5	130	20	9	102.5	33	36	150	18	188.5	3.5	25	25	41	31.5	133	55.5	133	165.5	393	221	265.5												
	250A	335	7	110	351	192	200	166	187	130	25	11	103	37.5	50	163.5	18	189	3.5	30	30	51	36	136.5	57	139	169.5	452.5	227	289												
	400A	416	8	180	436	263	324	270	270	200	40	13	126	45.5	65	195.5	25	189	5	52	50	50	58	186	77	208.5	239	521.5	296	355												
SKT1 Series	630A	416	8	180	436	263	324	270	270	200	40	13	126	45.5	65	195.5	25	189	6	52	50	50	58	186	77	208.5	239	521.5	296	355												
	800A	608	11	220	633	321	451	355	355	252.5	60	11*16	120	77	120	196	27	473	8	67	65	65	88	248	104	256	298	1008	381	700.5												
	1000A	608	11	220	633	321	451	355	355	252.5	60	11*16	120	77	120	196	27	473	8	67	65	65	88	248	104	256	298	1008	381	700.5												
	1250A	608	11	220	633	321	451	355	355	252.5	60	11*16	120	77	120	196	27	473	8	67	66	65	88	248	104	256	298	1008	381	700.5												
	1600A	608	11	220	633	321	451	402	402	252.5	80	13	120	77	120	196	27	473	10	80	80	80	122	248	104	260.5	298	1008	381	700.5												

Note: X, Y and Z are the maximum width, depth and height of the switch after assembling the manual emergency handle. Depending on the angle at which the handle is mounted or the position of the moving slider, the corresponding size will be smaller than the data in the table, for reference only.
The parameters of SKT1 20A-100A are exactly same as the SKT1 125A product.

INPUT AND OUTPUT COPPER BARS DIMENSIONS



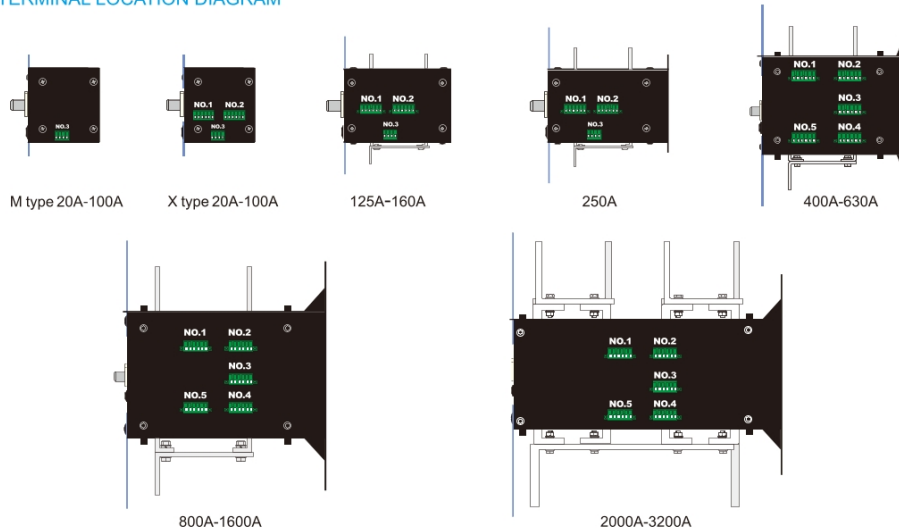
INPUT AND OUTPUT COPPER BARS DIMENSIONS



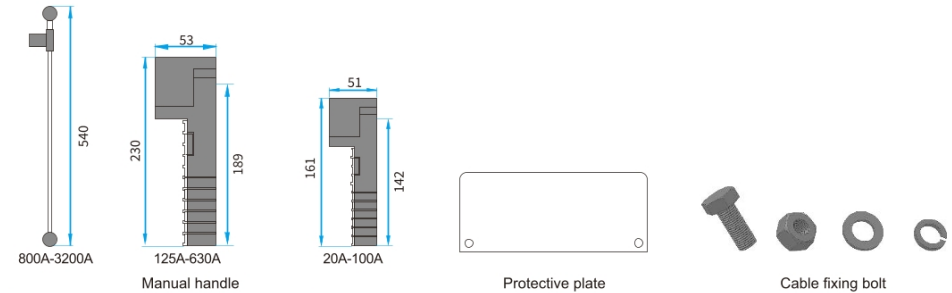
TERMINAL FUNCTIONS INTRODUCTION

Terminal Serial No	Access point serial No	Function	Instruction
Terminal No. 1	101, 106	Power supply neutral line and live line output for feedback	Active output, 1A AC220V
	102, 103	Power supply No. 1 live line and neutral line input	> 5A AC 220V
	104, 105	Power supply No. 2 live line and neutral line input	> 5A AC 220V
	201, 206	Passive control when disconnected; active control when closed	See SKT type schematic diagram for details
Terminal No. 2	202	Common terminal of external passive control signal input	Passive control signals
	203	When closed with 202, Circuit I is switched on	
	204	When closed with 202, Circuit 0 is switched on	
	205	When closed with 202, Circuit II is switched on	
	301, 306	Not used	Not assembled on 20A-250A
Terminal No. 3	302	Common terminal of passive position feedback signal output	M type is active output, the other types are passive output, see the schematic diagram for details, 1A AC 220V
	303	Closed with 302 when Circuit I is switched on	
	304	Closed with 302 when Circuit 0 is switched on	
	305	Closed with 302 when Circuit II is switched on	
	401, 406	Not used	Assembled on 400A and above
Terminal No. 4	402, 403	Closed when Circuit I is switched on	Passive 3A AC 220V
	404, 405	Closed when Circuit II is switched on	Passive 3A AC 220V
	501	Not used	Optional parts, passive 3A AC 220V
Terminal No. 5	502	Not used	
	503	Not used	
	504	Not used	Optional parts, passive 3A AC 220V
	505	Not used	
	506	Not used	

TERMINAL LOCATION DIAGRAM



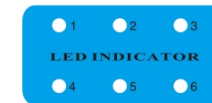
STANDARD ACCESSORIES



Current (A)	No. of wiring terminals (pieces)	No. of manual handle /material	No. of protective plate/material	No. of user manual	No.(set) and specification of cable fixing bolt
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 pc/ABS			M12*30/12
250	3	1 pc/ABS			M10*25/12
125-160	3	1 pc/ABS			M8*25/12
20-100	3(1 for M type)	1 pc/ABS			M6*20/12

INSTRUCTIONS FOR LED INDICATORS

When the light is on, it means that Circuit I control relay is normal (the relay is mounted on the internal circuit board. Only when No. 4 light is off, the No. 3 light is used for this function).

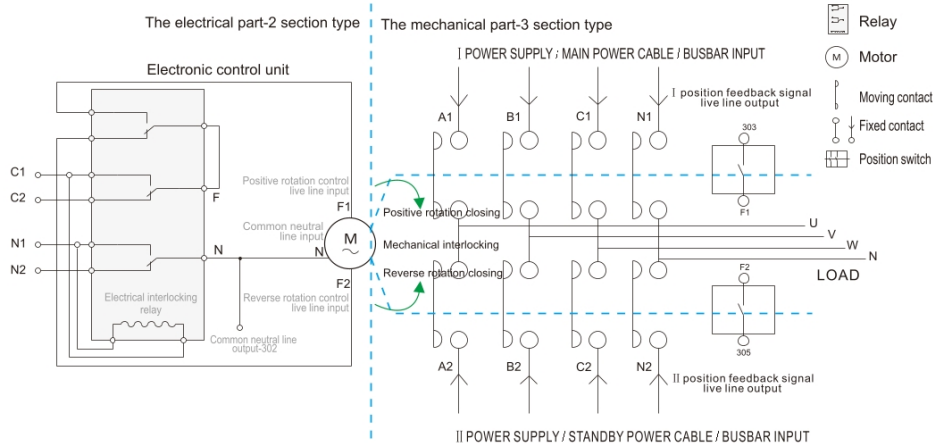


规格	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
20-250A	When the light is on, it means that there is power in the Circuit I control power supply (there is AC 220V power between the access points 102 and 103 of terminal No. 1)	When the light is on, it means that the fuse of Circuit I control power supply is working properly	When the light is on, it means that Circuit I control relay is normal (the relay is mounted on the internal circuit board.Only when No.4 light is off, the No.3 light is used for this function)	When the light is on, it means that there is power in the Circuit II control power supply (there is AC 220V power between the access points 104 and 105 of terminal No. 1)	When the light is on, it means that the fuse of Circuit II control power supply is working properly	For 125A-250A switch, when the light is on, it means that the key lock or button is in AUTO (the key lock or the button is mounted on the front panel of the switch)
400-3200A	When the light is on, it means that there is power in the Circuit I control power supply (there is AC 220V power between the access points 102 and 103 of terminal No. 1). If the light flashes, it means that the voltage is abnormal	When the light is on, it means that the key lock or button is in AUTO (the key lock or the button is mounted on the front panel of the switch)	When the light is on, it means that there is power in the Circuit II control power supply (there is AC 220V power between the access points 104 and 105 of terminal No. 1, measure voltage range AC220V ±15%). If the light flashes, it means that the voltage is abnormal	When the light is on, it means that Circuit I is closed	When the light is on, it means that both Circuit I and Circuit II are open	When the light is on, it means that Circuit II is closed

Note: SKT2 type has no LED indicator.

SKT- M TYPE AUTOMATIC TRANSFER SWITCH

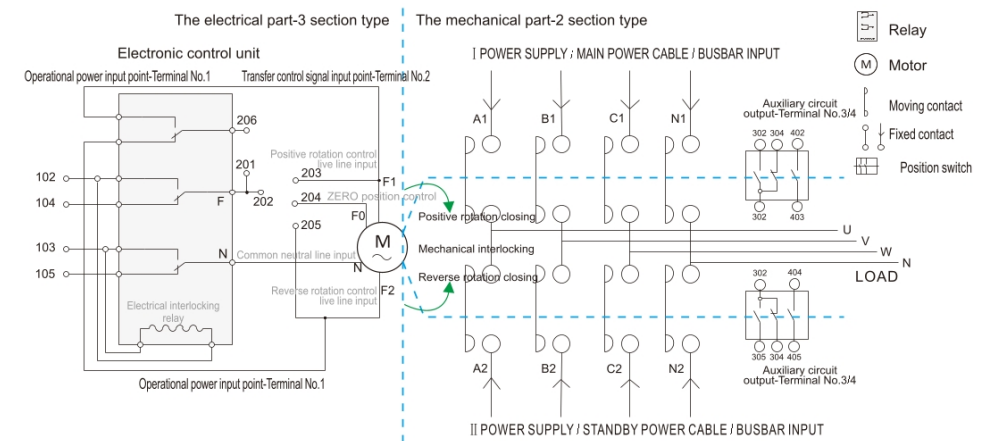
M Type Internal Schematic Diagram



• Note: The above diagram only shows the working principle and do not represent the number of internal components.

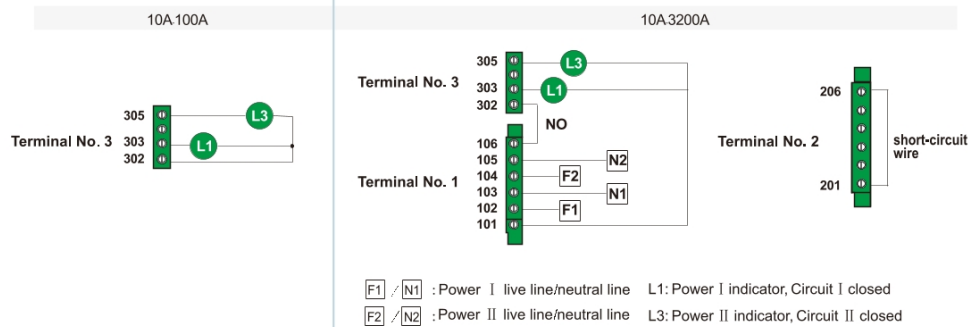
SKT-X Type Automatic Transfer Switch

X Type Internal Schematic Diagram



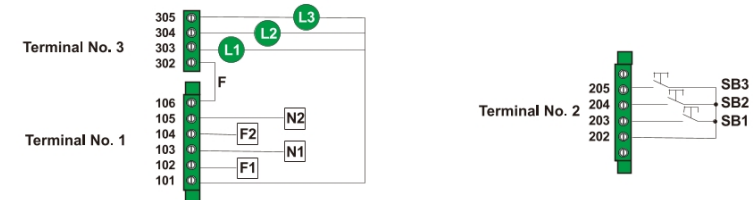
• Note: The above diagram only shows the working principle and do not represent the number of internal components.

Secondary Wiring Schematic Diagram: M Type Full-Auto Transfer (Electrical 2-Section)



Note: M1/M2 type ATS is suitable for end places without any requirement for transfer delay

Secondary Wiring Schematic Diagram: X Type Remote/External Control Transfer (Passive Control, Electrical 3-Stage)



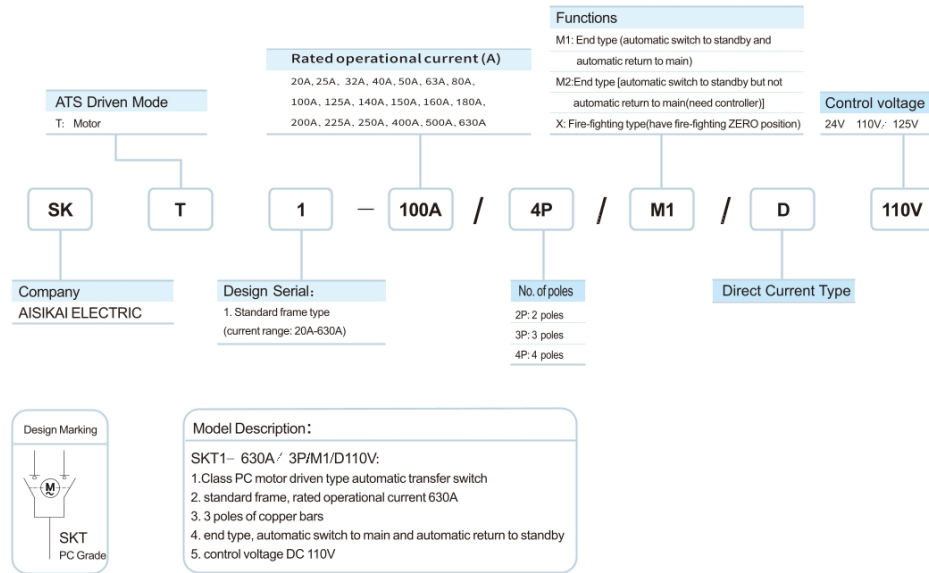
Note: X type ATS is suitable for end places with technical requirements for transfer delay, generally used in conjunction with generator sets. The passive control mode can realize two/three sections control; the active control mode can realize two-section control. Please refer to M1/M2 type 125A-3200A circuit diagram for secondary diagram.

F1 / N1 : Power I live line/neutral line
F2 / N2 : Power II live line/neutral line

L1: Power I indicator, Circuit I closed
L2: Circuit ZERO close indicator light
L3: Power II indicator, Circuit II closed
SB3: Standby power close button (Circuit II close)
SB2: Double off button (Circuit ZERO close)

SB1: Main power close button (Circuit I close)

SKT1-D DC TYPE INTELLIGENT DUAL POWER AUTOMATIC TRANSFER SWITCH (Motor Driven) SELECTION TABLE



资质文件



CCC (略)

ZL (略)

ISO

CE

OVERVIEW



- SKT series double power automatic transfer switch is the most advanced third generation product. It is Class PC and DC-33B use category can be frequently operated electric transfer switch. Switches are suitable for the reliable conversion of two power supplies in 20A-6300A DC power distribution system. There are four working modes: automatic, electric, emergency manual and lock.

CLASSIFICATION

- Classified by volume**
Standard type: type1, 3 sizes: 20A-12520A-125Ad, 125A-250A, 400A-630A
- Classified by function**

M1: end type (automatic switch to standby and

automatic return to main)

NORMAL OPERATIONAL CONDITIONS AND INSTALLATION METHODS

Category	Requirement
Operational temperature	Between -20℃ and 45℃. The average value in 24 hours does not exceed +35℃
Operational humidity	The average humidity at +40℃ shall not exceed 50% without condensation
Altitude	Lower than 2000 meters. Operation at altitude above 2000 meters requires derating
Vibration and gas	Use environment should be without strong vibration and shock, and without harmful gases that corrode metals and destroy insulation
Ambient substance	Without heavy dust, conductive particles and explosive hazardous substances
Pollution level	III
IP rating	IP 20
Storage requirements	Storage environment should be between -30℃ and 70℃, dry, non-corrosive and non-saline. The maximum storage time is 1 year
Packaging	Carton packaging
Stacking	No more than 5 layers
Installation method	Install vertically or horizontally. Upside down installation is prohibited
Wiring method	Standard is top inlet and bottom outlet. Bottom inlet and top outlet can be customized

APPLICATIONS



Civil

Commercial

Industrial

STANDARDS

GB/T14048.11 IEC60947-6-1

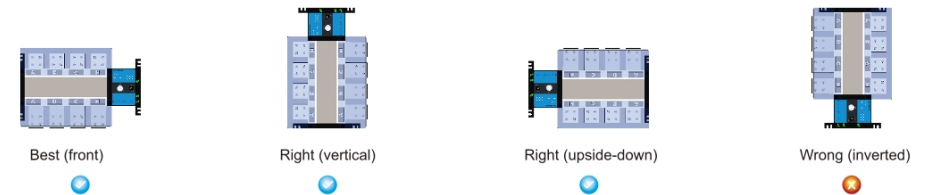
FUNCTION CODE TABLE

Application type	End type	Fire-fighting type
Function code	M	X
Structure		
Electrical two-section type	Y	
Electrical three-section type		Y
Manual three-section type	Y	Y
Control mode		
Controller manual/ automatic control		
Remote electric control (external control)		Y
Emergency manual	Y	Y
Fully automatic switch	Y(without fault detection)	External control
Lock mode	Optional	Single phase (optional)
Fire-fighting signal (forced to ZERO position)		Passive close signal
Main/standby power monitoring protection		
Over-voltage protection	Single phase (optional)	Single phase (optional)
Under-voltage protection	Single phase (optional)	Single phase (optional)
Phase loss protection		
Frequency protection		
Phase angle detection		
N-phase fault alarm		
Phase sequence inconsistency alarm		
Application function		
Automatic switch to standby and automatic return to main	M1(Standard products)	External control
Automatic switch to standby but not automatic return to main	M2(Customized)	External control
Main power supply has priority	Y	External control
Standby power supply has priority	0s or 2s (Under-voltage optional)	optional
Generator self-start signal (passive)		optional
Transfer delay		External control
Power failure delay setting		
Power recovery delay setting		
Alarm records storage		
Communication		
Feedback signal	DC125V(I , II)	Passive I , II , 0)
Display function		
Switch position status display	External indication light	External indication light
Voltage display		
Frequency display		
Current display		

MAIN TECHNICAL PARAMETERS

Thermal current rating (Ith)	125A	250A	630A
Rated operational current of copper bar (Ie)	20 25 32 40 50 63 80 100 125 140 150 160 180 200 225 250 400 630		
Rated insulation voltage of copper bar (Ui)	800V		
Rated impulse withstand voltage (Uimp)	8KV(main circuit) , 4KV control circuit)		
Rated operational voltage of copper bar (Ue)	DC125V		
Rated limit short-circuit current Iq	7KA		
Maximum peak current	11.9KA		
Use category	DC- 31B		
I ² t	148kA ² S		
SCPD	RT36		
ATSE class	Class PC		
Standards	GB/T 14048. 11-2016		

SCHEMATIC DIAGRAM OF CORRECT INSTALLATION



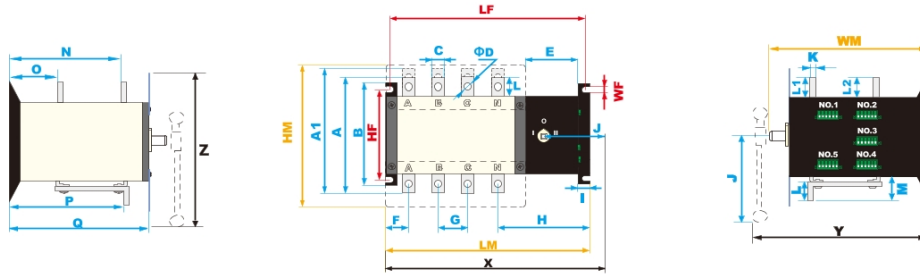
STANDARD ACCESSORIES



Current (A)	No. of wiring terminals (pieces)	No. of manual handle /material	No. of protective plate/material	No. of user manual	No.(set) and specification of cable fixing bolt
400-630	5	1 pc/ABS	2 pcs/PMMA	1 copy	M12*30/12
125-250	3	1 pc/ABS			M10*25/12
20-125	3(1 for M type)	1 pc/ABS			M8*25/12

OUTLINE DRAWING

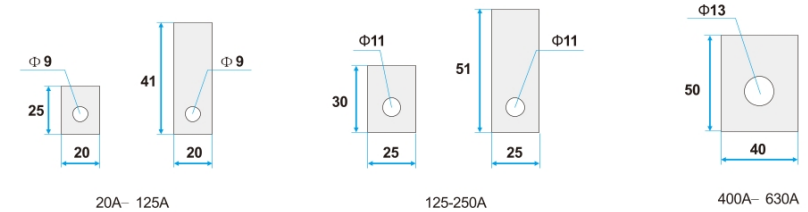
20A-630A outline dimensions



Item	Current range	125-160A	250A	400A	630A
Installation dimensions	LF	271	335	416	416
	WF	6.5	7	8	8
	HF	110	110	180	180
	LM	290	351	436	436
Body maximum size	WM	188	192	263	263
	HM	163	200	324	324
	A	142	166	270	270
	A1	158.5	187	270	270
Other detailed dimensions of switch	B	130	130	200	200
	C	20	25	40	40
	D	9	11	13	13
	E	102.5	103	126	126
	F	33	37.5	45.5	45.5
	G	36	50	65	65
	H	150	163.5	195.5	195.5
	I	18	18	25	25
	J	188.5	189	189	189
	K	3.5	3.5	5	6
	L	25	30	52	52
	L1	25	30	50	50
	L2	41	51	50	50
	M	31.5	36	58	58
	N	133	136.5	186	186
	O	55.5	57	77	77
	P	133	139	208.5	208.5
	Q	165.5	169.5	239	239
Reference dimensions	X	393	452.5	521.5	521.5
	Y	221	227	296	296
	Z	265.5	289	355	355

Note: X, Y and Z are the maximum width, depth and height of the switch after assembling the manual emergency handle. Depending on the angle at which the handle is mounted or the position of the moving slider, the corresponding size will be smaller than the data in the table, for reference only.

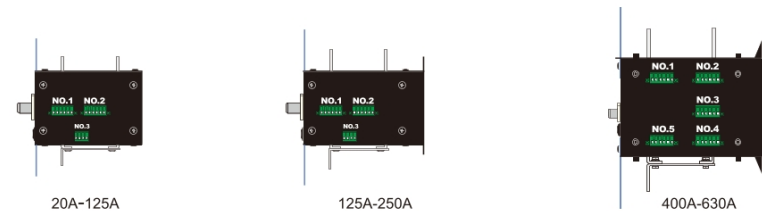
INPUT AND OUTPUT COPPER BARS DIMENSIONS



TERMINAL FUNCTIONS INTRODUCTION

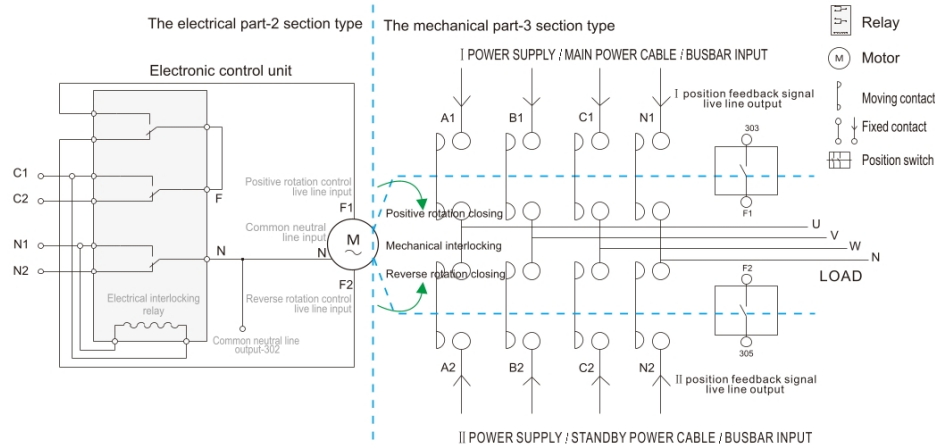
Terminal Serial No	Access point serial No	Function	Instruction
Terminal No. 1	101, 106	Power supply neutral line and live line output for feedback	Active output, 1A AC220V
	102, 103	Power supply No. 1 live line and neutral line input	> 5A AC 220V
	104, 105	Power supply No. 2 live line and neutral line input	> 5A AC 220V
	201, 206	Passive control when disconnected; active control when closed	See SKT type schematic diagram for details
Terminal No. 2	202	Common terminal of external passive control signal input	Passive control signals
	203	When closed with 202, Circuit I is switched on	
	204	When closed with 202, Circuit 0 is switched on	
	205	When closed with 202, Circuit II is switched on	
Terminal No.3	301, 306	Not used	Not assembled on 20A- 250A
	302	Common terminal of passive position feedback signal output	
	303	Closed with 302 when Circuit I is switched on	
	304	Closed with 302 when Circuit 0 is switched on	
	305	Closed with 302 when Circuit II is switched on	
Terminal No. 4	401, 406	Not used	Assembled on 400A and above
	402, 403	Closed when Circuit I is switched on	
	404, 405	Closed when Circuit II is switched on	
	501	Not used	
Terminal No. 5	502	Not used	Optional parts, passive 3A AC 125V
	503	Not used	
	504	Not used	
	505	Not used	
	506	Not used	

TERMINAL LOCATION DIAGRAM



SKT- M TYPE AUTOMATIC TRANSFER SWITCH

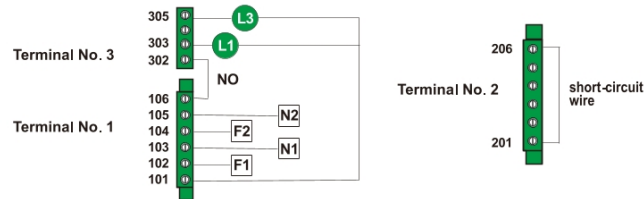
M Type Internal Schematic Diagram



Note: The above diagram only shows the working principle and do not represent the number of internal components.

Secondary Wiring Schematic Diagram: M Type Full-Auto Transfer (Electrical 2-Section)

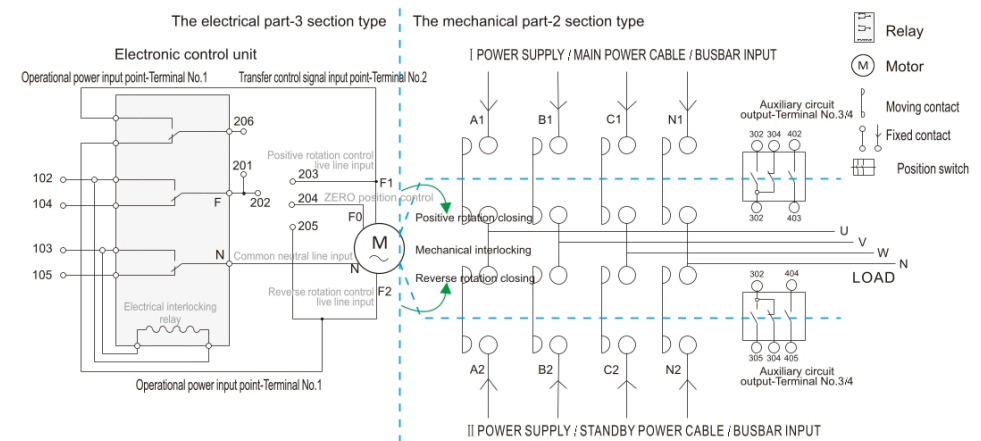
20A/630A



Note: M1/M2 type ATS is suitable for end places without any requirement for transfer delay

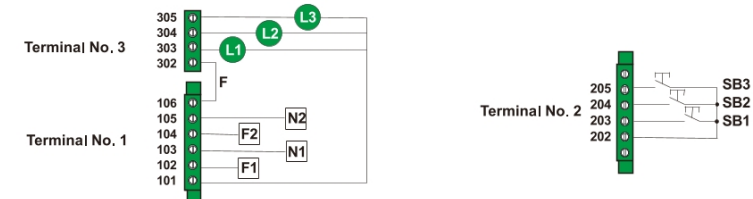
SKT- X TYPE AUTOMATIC TRANSFER SWITCH

X Type Internal Schematic Diagram



Note: The above diagram only shows the working principle and do not represent the number of internal components.

Secondary Wiring Schematic Diagram: X Type Remote/External Control Transfer (Passive Control, Electrical 3-Stage)



Note: X type ATS is suitable for end places with technical requirements for transfer delay, generally used in conjunction with generator sets. The passive control mode can realize two/three sections control; the active control mode can realize two-section control. Please refer to M1/M2 type 125A-3200A circuit diagram for secondary diagram.

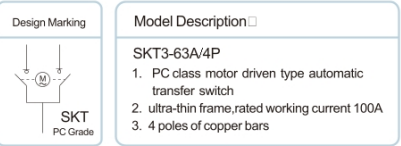
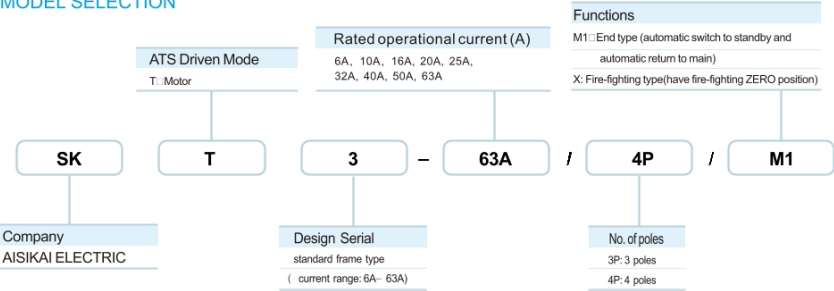
F1 / N1 : Power I live line/neutral line
F2 / N2 : Power II live line/neutral line

L1: Power I indicator, Circuit I closed
L2: Circuit ZERO close indicator light
L3: Power II indicator, Circuit II closed
SB3: Standby power close button (Circuit II close)
SB2: Double off button (Circuit ZERO close)

SB1: Main power close button (Circuit I close)

SKT3 CLASS PC INTELLIGENT DUAL POWER AUTOMATIC TRANSFER SWITCH (Motor Driven) SELCTION TABLE

MODEL SELECTION



PRODUCT FEATURES

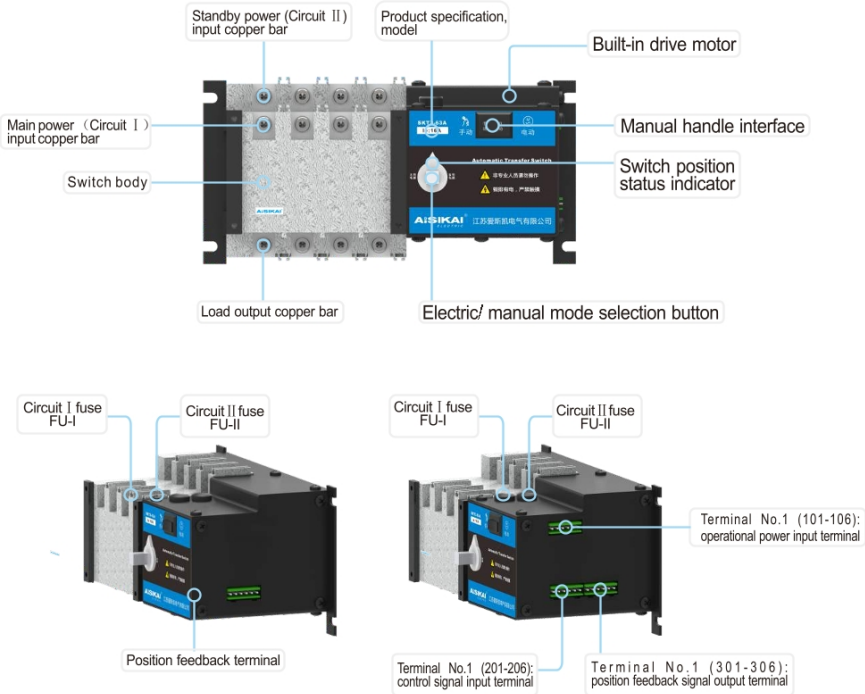
- High Safety Performance**
 Adopting the double-row composite contacts design, transverse-pull moving mechanism, micro-motor energy pre-storage and micro-electronic control technology, basically realizing zero arc (no arc distinguishing chamber); adopting reliable mechanical interlocking and electrical interlocking; adopt ZERO position technology, switches can be forced to ZERO position in case of emergency (simultaneous cut off of two power supplies); having functions like clear indication of ON/OFF, padlock, etc., realizing reliable isolation between the power and the load.
- Mechatronics Design**
 Transfer process is accurate, flexible and smooth
- Excellent Electromagnetic Compatibility**
 Strong anti-interference ability, no external interference
- Beautiful appearance, small volume and light weight
- High Automation Level**
 Switches have multiple input and output interfaces, easy to achieve remote PLC control and system automation. Switches can work without any external control units.

CLASS PC AUTOMATIC TRANSFER SWITCH SELECTION TABLE (Motor Driven)



Category	Requirement
Operational temperature	Between -20℃ and 45℃. The average value in 24 hours does not exceed +35℃
Operational humidity	The average humidity at +40℃ shall not exceed 50% without condensation derating
Altitude	Lower than 2000 meters. Operation at altitude above 2000 meters requires derating
Vibration and gas	Use environment should be without strong vibration and shock, and without harmful gases that corrode metals and destroy insulation
Ambient substance	Without heavy dust, conductive particles and explosive hazardous substances
Pollution level	III
IP rating	IP 20
Storage requirements	Storage environment should be between -30℃ and 70℃, dry, non-corrosive and non-saline. The maximum storage time is 1 year
Packaging	Carton packaging
Wiring method	Standard is top inlet and bottom outlet. Bottom inlet and top outlet is not available

STRUCTRE INTRODUCTION



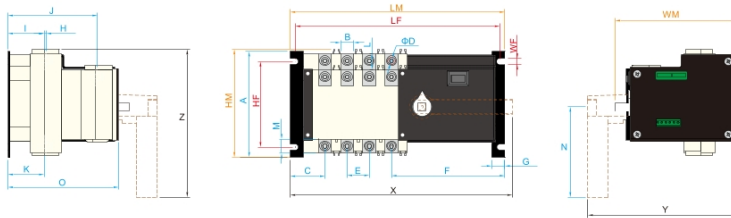
MAIN TECHNICAL PARAMETERS

Frame rating	Thermal current rating (Ith)	Rated insulation voltage (Ui)	Rated impulse withstand voltage (Uimp)	Rated operational voltage (Ue)	Rated operational current (Ie)	Rated making capacity	Rated breaking capacity	Rated limit short-circuit current	Electrical control unit operational voltage
63A	6A、10A、16A、20A、25A、32A、40A、50A、63A	800V	8kV	400V	6A、10A、16A、20A、25A、32A、40A、50A、63A	8kA	5kA/30ms	35kA	AC220V

TERMINAL FUNCTIONS INTRODUCTION

Terminal Serial No	Access point serial No	Function	Description
Terminal No. 1 (operational power input)	102、103	Power supply 1 live line and neutral line input	> 5A AC220V
	104、105	Power supply 2 live line and neutral line input	> 5A AC220V
	201、206	See Internal Schematic Diagram for details	Active control
Terminal No. 2 (control signal input)	202	Common terminal of external passive control signal input	External passive control
	203	When closed with 202, Circuit I is switched on	
	204	When closed with 202, Circuit 0 is switched on (I: II open)	
	205	When closed with 202, Circuit II is switched on	
	301、306	Optional	
Terminal No. 3 (position feedback signal output)	302	Common terminal of passive position feedback signal output	Passive output
	303	Closed with 302 when Circuit I is switched on	
	304	Closed with 302 when Circuit 0 is switched on	
	305	Closed with 302 when Circuit II is switched on	

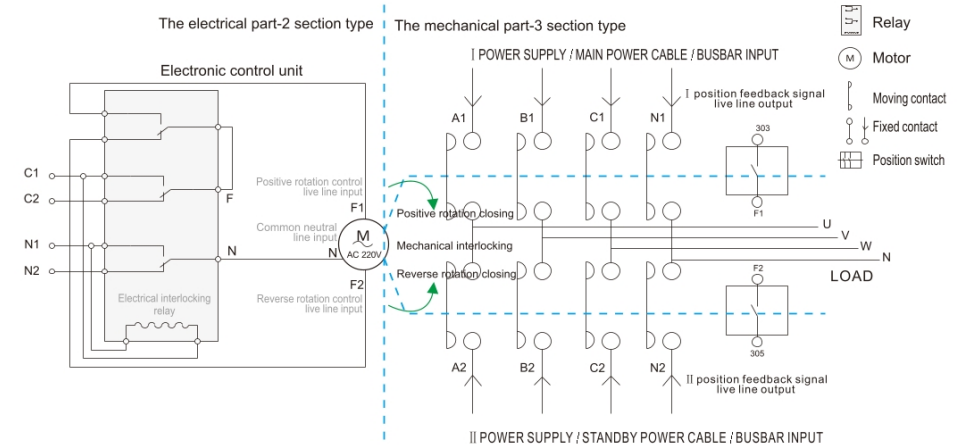
OUTLINE AND INSTALLATION DIMENSIONS



Installation dimensions			Body maximum size			Other detailed dimensions of switch																	
LF	HF	WF	LM	HM	WM	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	X	Y	Z
203	85	6	213	106	121	105	13	34.5	6	22	112.5	13	2	36	89	36	16	14	90	110	220	148	147

Note: X, Y and Z are the maximum width, depth and height of the switch after assembling the manual emergency handle.
Depending on the angle at which the handle is mounted or the position of the moving slider, the corresponding size will be smaller than the data in the table, for reference only.

M Type Switch Internal Schematic Diagram

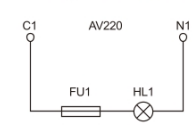


• Note: The above diagram only shows the working principle and do not represent the number of internal components.

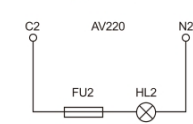
Secondary Wiring Schematic Diagram

Full-auto control transfer

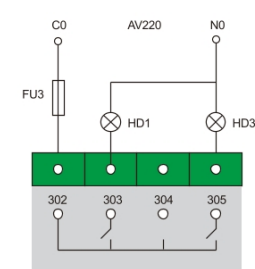
Main power (Circuit I)



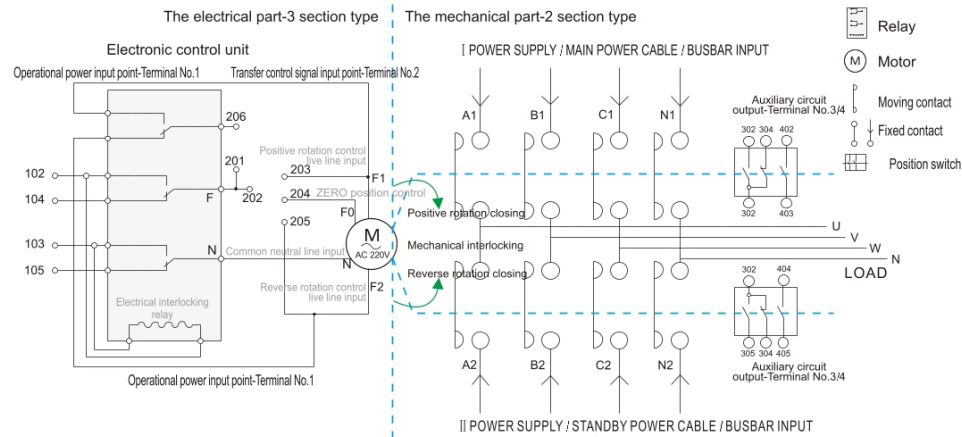
Standby power (Circuit II)



Circuit switch on indication



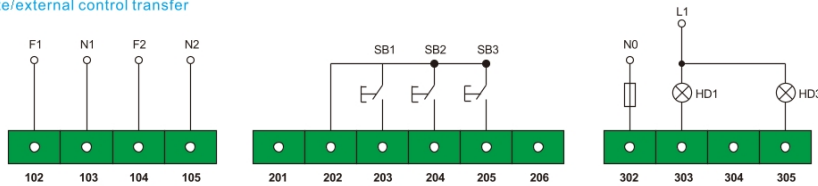
X Type Internal Schematic Diagram



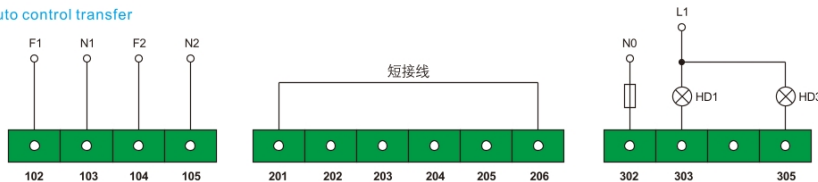
• Note: The above diagram only shows the working principle and do not represent the number of internal components.

Secondary Wiring Schematic Diagram

Remote/external control transfer



Full-auto control transfer



Note: X type ATS is suitable for end places with technical requirements for transfer delay, generally used in conjunction with generator sets.

The passive control mode can realize two/three sections control; the active control mode can realize two-section control.

F1 / N1: Main power live line/neutral line; F2/N2: Main power live line/neutral line;

HD1: indication light for main power, Circuit I closed; HD3: indication light for standby power, Circuit II closed

SB1: main power closing button (close Circuit I)

SB2: Double-off button (close Circuit 0) (force switch to fire-fighting ZERO position)

SB3: standby power closing button (close Circuit II)

SKS CLASS PC DUAL POWER MANUAL TRANSFER SWITCH

OVERVIEW

- SKS dual power manual transfer switch is Class PC and AC-33B infrequently operated electric transfer switch. Switches are suitable for the reliable manual transfer between two power supplies in 50/60Hz 20A-3200A low voltage AC power distribution systems.

SELECTION TABLE

Switch Driven Mode		No. of poles
S: Class PC manual		2P: 2 poles
		3P: 3 poles
		4P: 4 poles

SK	S	100A	4P
Company AISIKAI ELECTRIC		Rated Operation Current 20A, 40A, 63A, 80A, 100A, 125A, 160A 250A, 400A, 500A, 630A, 800A, 1000A 1250A, 1600A, 2000A, 2500A, 3200A	

Design Marking	Model Description
	SKS-800A/4P: 1. Class PC dual power manual transfer switch 2. rated operational current 800A 3. 4 poles of copper bars

PRODUCT FEATURES

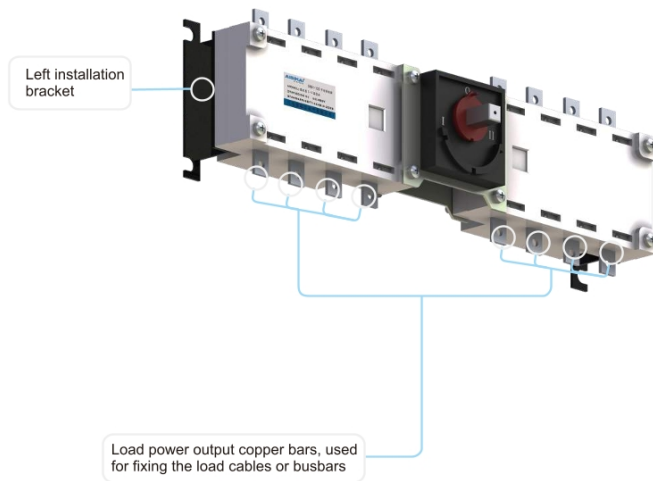
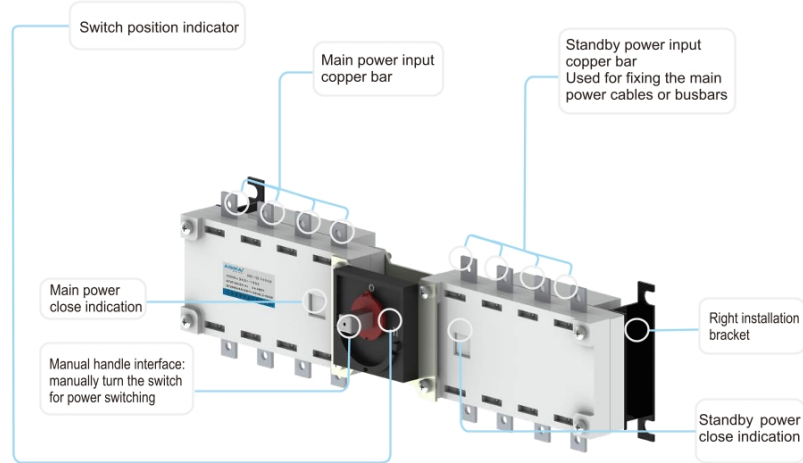
- We use composite moving contacts. The operating mechanisms have energy-storage springs and instant release acceleration mechanisms, realizing instantly making and breaking. Switches have clear indication of ON/OFF and can realize reliable isolation between the power and the load
- The shell is made of unsaturated polyester fiber, which is highly resistant to fire, pressure and temperature.
- High reliability: accurate, flexible and smooth in transfer process, service life over 10000 times
- Beautiful appearance, small volume and light weight
- In-cabinet operation mechanism and out-of-cabinet operation mechanism are available upon request

NORMAL OPERATIONAL CONDITIONS

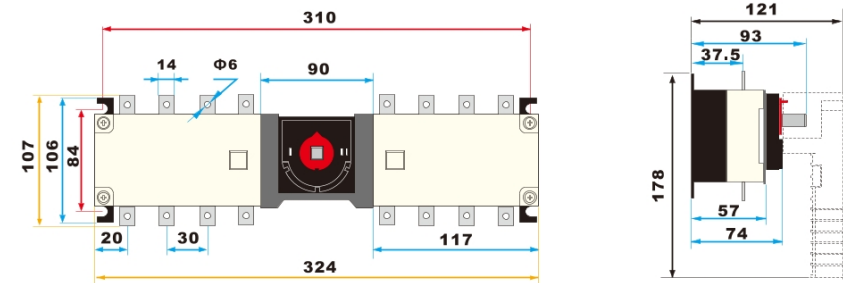
Category	Requirement
Operational temperature	Between -20℃ and 45℃. The average value in 24 hours does not exceed +35℃
Operational humidity	The average humidity at +40℃ shall not exceed 50% without condensation
Altitude	Lower than 2000 meters. Operation at altitude above 2000 meters requires derating
Vibration and gas	Use environment should be without strong vibration and shock, and without harmful gases that corrode metals and destroy insulation
Ambient substance	Without heavy dust, conductive particles and explosive hazardous substances
Pollution level	III
IP rating	IP 20
Storage requirements	Storage environment should be between -30℃ and 70℃; dry, non-corrosive and non-saline. The maximum storage time is 1 year.
Packaging	Carton packaging for 630A and below; wooden crate packaging for 800A and above
Stacking	No more than 5 layers for 630A and below; no more than 3 layers for 800A and above

Main technical parameters: the manual transfer switch and the automatic transfer switch are identical in basic structure, please refer to ATS-10 for details.

STRUCTURE INTRODUCTION (20A-100A)



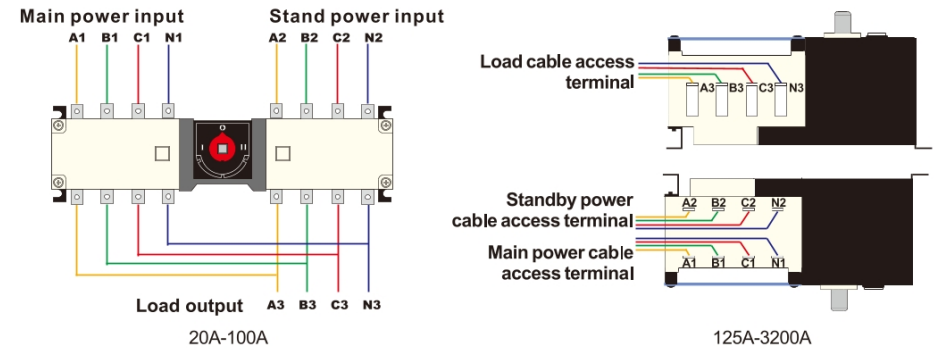
OUTLINE DIMENSIONS DIAGRAM (20A-100A)



Note: 125A-3200A manual transfer switch and 125A-3200A SKT series automatic transfer switch are identical in outline, please refer to ATS-11 for details.

TYPICAL WIRING

Primary wiring schematic diagram



Note: When installing the 20A-100A switch, first properly connect the main power and standby power input terminals. After confirming that the phase sequences of the two power supplies are consistent, connect the load outputs in parallel.