

Honorific customers,

Thank you for choosing the HYCQ1-16 ~ 3200A series automatic transfer switching equipment (hereinafter referred to as ATSE) produced by our company, for your safety and correct use of this product, please read this manual carefully before installation, circuit wiring, running and maintenance inspection.

Notice:

The installation, operation, using and maintenance of the equipment must be carried out by qualified professionals. The company will not be responsibility for any bad consequence caused by operations not according to the operating manual.

HYCQ1-16~3200A automatic transfer switch

Notice: non-our-company authorized personnel please don ’ t disassemble or assemble our products, to avoid unexpected equipment or personal injury.

I. Applications and operating environment

HYCQ1-16~3200A automatic transfer switch (hereinafter referred to as switch) is applicable for system of AC 50Hz, AC rated voltage up to 380V, rated current 16~3200A, to transfer between two power supplies in emergency power supply system, it will stop the power supply to loads in the course of transferring.

The switch can work reliably under the following conditions:

Altitude not exceeds 2000m;

Ambient temperature within -5℃~+40℃;

Relative air humidity not exceeds 95%;

The installation site should be free of explosive medium, and be free of gas or dust that would erode the metal or destroy the insulation;

No obvious shock, impact or vibration

No rain or snow attack;

Note: if the intended environment temperature is beyond +45℃ or in the range -5℃ ~ -45℃, user should give clear indication of the condition.

II. Structure and features

1. Structure

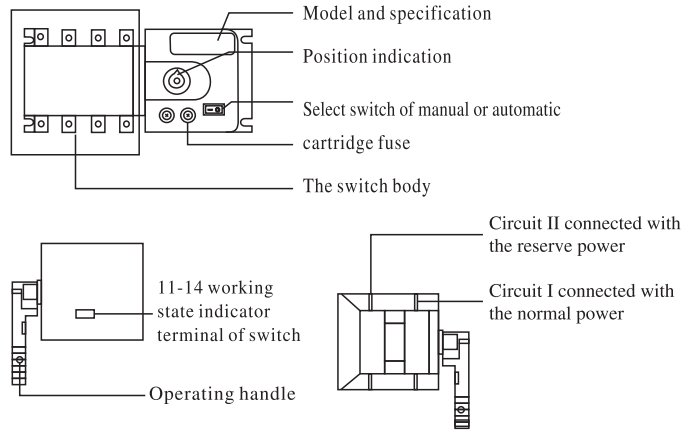
The switch is composed of the main body with enclosure made of glass fiber unsaturated polyester resin, micro motor, multi-stage speed reducer, SCM control device, etc.

V. HYCQ1-125~3200A Main parameters

1.Main parameters

Model	Rated current (A)	Rated insulation withstand voltage	Rated impulse withstand voltage	Life	Utilization category
HYCQ1-160A	16 32 40 63 80 100 125 160	500	8	10000	AC-33IB
HYCQ1-250A	200 250				
HYCQ1-630A	315 400 500 630			5500	

VI. HYCQ1-100 Structural description



2. Features

The main body of switch is equipped with acceleration mechanism for spring energy storing and instantaneous releasing, it realizes fast making and breaking operation, irrelevant to speed of any operation mode.

Three operating functions:1. manual handle operation; 2. manual remote control operation; 3. automatic control operation.

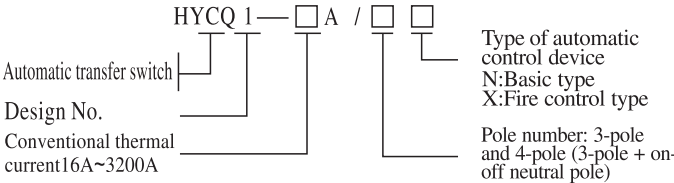
Notice: no matter in automatic control operation mode or manual remote control operation mode, the switch would be locked once the position state is changed by handle.

Lock release: 1. Power off, then power on again; 2. Pull up the padlock for 3s, then put back; 3. Set the switch in manual remote control operation mode, then press the double-breaking button.

The switch has three status positions , it can be locked with one up to three locks simultaneously when in any position.

III. Model description

HYCQ1-16~3200A Series Double power Automatic Transfer Switch

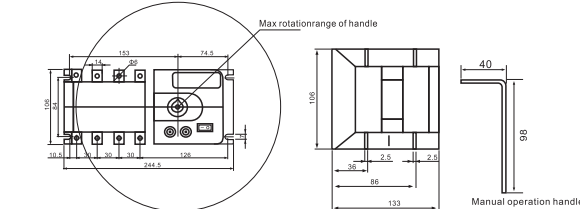


IV. Main technical parameters

In conformity with IEC 60947-6-1/GB/T14048.11-2008

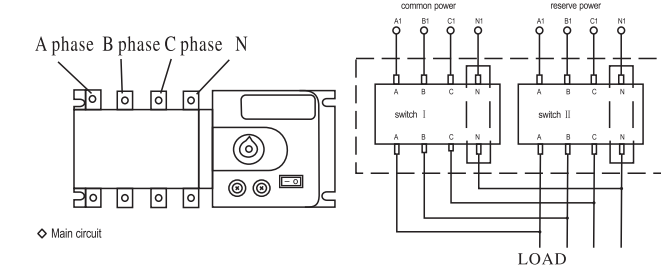
Conventional thermal current Ith	20A	40A	63A	80A	100A	125A	160A	250A	400A	630A	800A	1000A	1250A	1600A	2000A	2500A	3200A	
Rated insulation voltage Ui	690V										690V							
Rated impulse withstand voltage Uimp	8KV										12KV							
Rated operating voltage Ue	AC380V																	
Rated operating current Ie	AC46A	20	40	63	80	100	125	160	250	400	630	800	1000	1250	1600	2000	2500	3200
Rated short-time withstand current Ie	7KA				5KA		10KA	20KA		26KA		50KA		55KA				
Transfer time	≤5S																	
Control supply voltage	AC220V																	
Energy consumption of motor																		
Weight(kg)	7.0/ 3.5	7.2/ 3.5	7.2/ 3.5	7.2/ 3.5	7.5	7.5	8.5	9	16.5	17	32	36	40	49	95	98	135	

VII. HYCQ1-100 Installation dimension

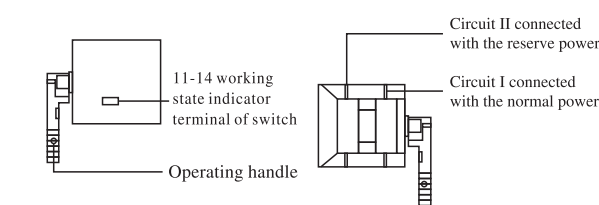


VIII. HYCQ1-100 Method of application

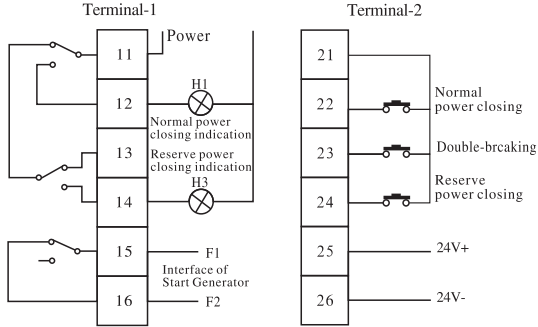
1. Main body connection mode(specialattention to the sequence of connection)



2. Typical wiring method



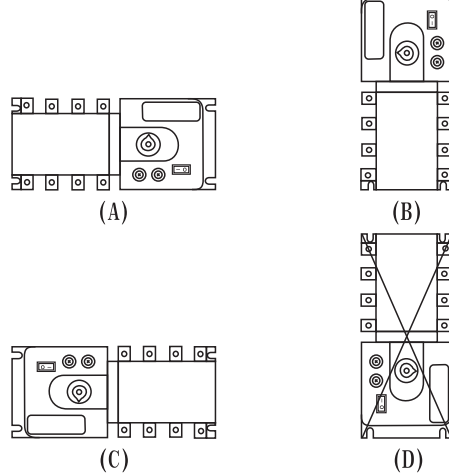
The secondary terminals ’ connection diagram HYCQ1-100



Basic type HYCQ1-100 only has terminal-1 ;

Fire control type HYCQ1-100 has terminal-1 and terminal-2

2. Correct installation methods



(A) (B) and (C) are right

(D) is incorrect

HYCQ1 Series Basic Type Wiring Method For 125A-3200A

Before installing, check whether the information in the nameplate is in conformity with the operating requirements, make sure that the switch is in the breaking position , rotate the selection key to the manual position. When the installation is finished, draw out the key and keep it well, the switch should be installed vertically.

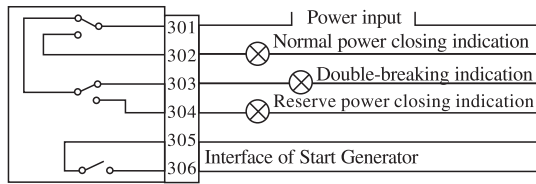
Main circuit

There are two switches in power circuit. Pay special attention to nameplate for the automatic control type of switch, connect the wires for input according to the marks and on the switch, and notice the consistency of phase sequence of input and output, and null line must be connected to N.

The switch has three status positions: switch , switch , all break .

Terminal block of control circuit

Terminal block



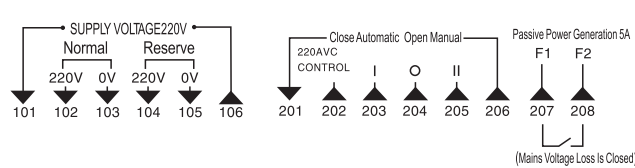
Terminalblock 3 Position indicating and null line terminal

Normal power closing: 301-302 Connect

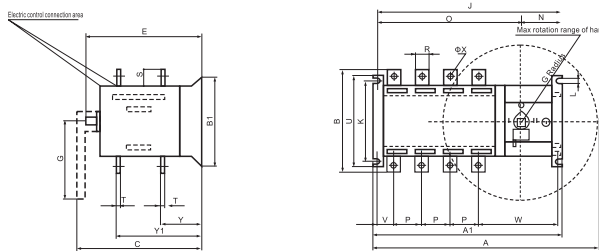
Reserve power closing: 301-304 Connect

Two-circuit breaking: 301-303 Connect

HYCQ1 Series Fire Control Type Wiring Method For 125A-3200A



IX. HYCQ1-125~3200A Outline and installation dimensions



Spes	A	A1	B	B1	C	E	G	H	J	K	L	N	O	P	R	S	T	U	V	W	ΦX	Y	Y1	Y2	Y3
125A/3	377	288.5	135		268	204.5	191		267.5	78/108	7	102.5		36	20	25	3.5	134		161.5	9	57		139	
125A/4	407	318.5	135		268	204.5	191		297.5	78/108	7	102.5		36	20	25	3.5	134	33.5	155.5	9	57		143	
160A/3	377	288.5	135		268	204.5	191		267.5	78/108	7	102.5		36	20	25	3.5	134	33.5	161.5	9	57		139	
160A/4	407	318.5	135		268	204.5	191		297.5	78/108	7	102.5		36	20	25	3.5	134	33.5	155.5	9	57		143	
200A/3	417	328.5	170		268	204.5	191		307.5	78/108	7	102.5		50	25	30	3.5	134	40	155.5	11	60		145	
200A/4	467	378.5	170		268	204.5	191		357.5	78/108	7	102.5		50	25	30	3.5	134	40	155.5	11	60		145	
250A/3	417	328.5	170		268	204.5	191		307.5	78/108	7	102.5		50	25	30	3.5	134	31	155.5	11	60		145	
250A/4	467	378.5	170		268	204.5	191		357.5	78/108	7	102.5		50	25	30	3.5	134	31	155.5	11	60		145	
400A/3	453	384.5	240		329.5	265	191		363.5	180	11	122.5		65	32	40	5	208	31	197	11	83		197	
400A/4	513	444.5	240		329.5	265	191		423.5	180	11	122.5		65	32	40	5	208	31	197	11	83		197	
630A/3	453	384.5	260		329.5	265	191		363.5	180	11	122.5		65	40	50	5	208	31	197	11	83.5		197.5	
630A/4	513	444.5	240		329.5	265	191		423.5	180	11	122.5		65	40	50	5	208	31	197	11	83.5		197.5	
800A/4	1007	633	330	250	370	321	470	65	609	220	11	85	524	120	80	65	8	60.5	188.5		107	249			
1000A/4	1007	633	330	250	370	321	470	65	609	220	11	85	524	120	80	65	8	60.5	188.5		107	249			
1250A/4	1007	633	330	250	370	321	470	65	609	220	11	85	524	120	80	65	8	60.5	188.5		107	249			
1600A/4	1007	633	330	250	370	321	470	65	609	220	11	85	524	120	80	80	15	60.5	188.5		111	253			
2000A	1007	633	455		562		470	53	467				524		80	80	15	33				147	84	147	
2500A	1007	633	455		562		470	28	467				524		120	100/15		13				152	79	152	
3200A	1007	633	505		562		470	28	467				524		120	100/15		13				152	79	152	

Note: products of 16A-160A have same shell.

Note: 202-205 need to be controlled from remote or external,

then 201 must be disconnected with 206.

201 disconnect with 206, ATS is manual remote control

201 connect with 206, ATS is automatic control.

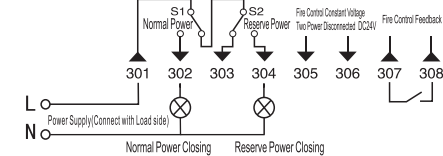
202 and 203 connected, ATS switch to I and I Closing.

202 and 204 connected, ATS switch to O, Off from I and II.

202 and 205 connected, ATS switch to II and II Closing.

207 and 208,when Normal/Main Power voltage lose or failure,

207 and 208 closed, then the ATS will give a passive signal to start generator.



S1 connect to 302,Normal Power Closing Indication ;

S1 connect to 303,Switch in O position(center or off position) ;

S1 connect to 304,Reserve power Closing indication;

305-306 when Fire control center or External Control Center give the ATS a 24VDC signal to transfer to "O"position(disconnected from both powers) ,the ATS will transfer to "O"position.

307-308,After the ATS transfer to "O"position,the ATS will give then Fire control center a feedback ,which means the ATS already transfer to "O" Position.

X. Operation and maintenance

1. Place the selection key in automatic position, it realizes remote electric operation and automatic operation control, operates three status positions, switch closes, switch opens; switch closes, switch opens; all open.

2. Place the selection key in automatic position, then the switch is in automatic operating mode, the automatic control operation can be divided into three control types: I, II, III.

Users please provide the following information:

1. Product name, model, specification and quantity.

2. If the product is intended for special installation condition or special locations, please provide corresponding technical data or settle the problem through friendly negotiation.