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User Manual

METERS & ELECTRONICS
COIMBATORE

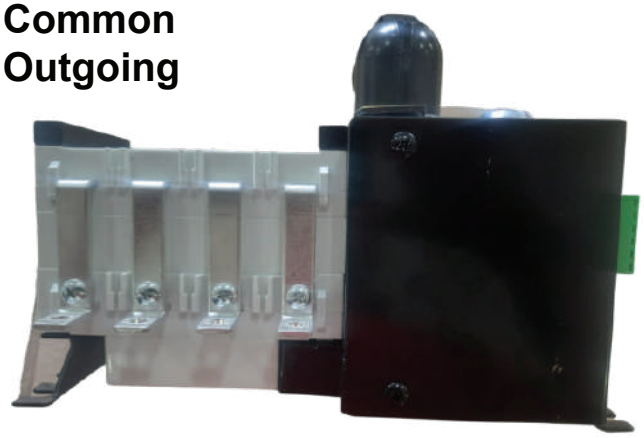
ATSGA
Automatic Transfer Switch

ATSQ1JA 100A, 160 A, 250 A

Top View

Incoming connection for 2 sources

Common Outgoing



Website : www.technometers.in

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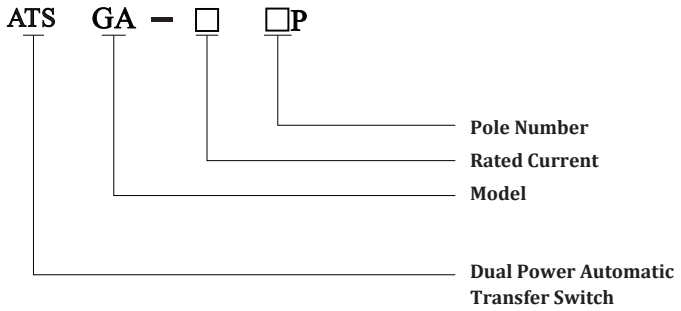
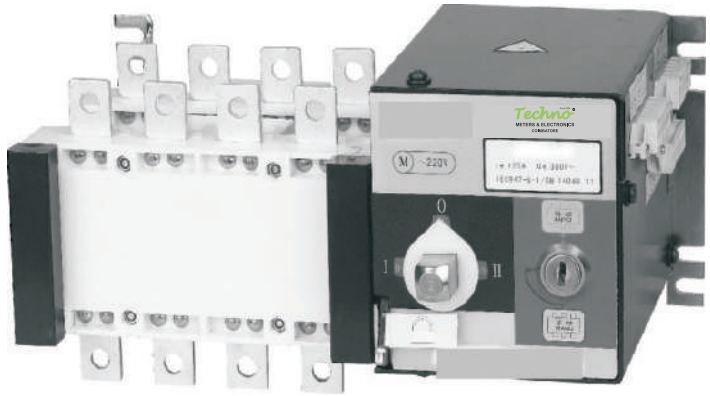
9. Note of Debug Switch

Dual Power Automatic Transfer Switch

ATSGA Automatic Transfer Changeover-Switch

1. Types and Meanings



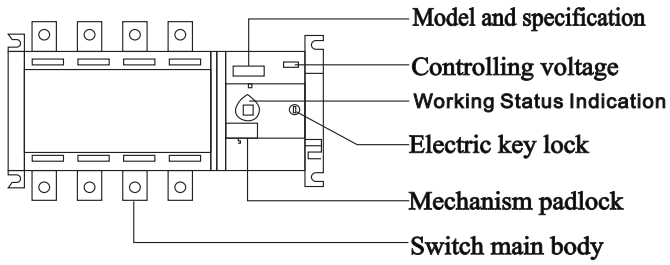


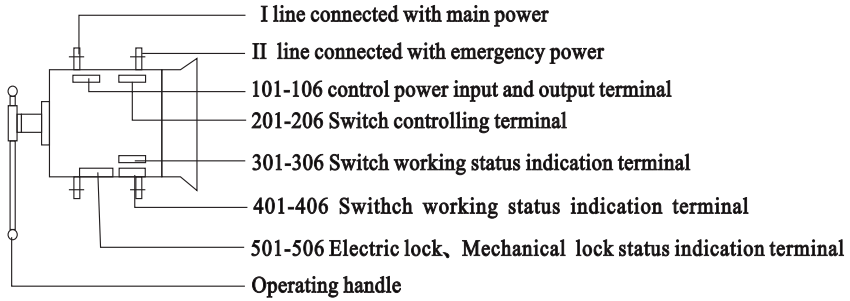
2. Main Technology Parameters

According to the Standard：IEC 60947-2-1

Rated Current Ist		100A	160A	250A	400A	630A	800A	1000A	1250A	1600A	2000A	2500A	3200A
Rated Isolation Voltage Ui		750V									1000V		
Rated Shock Withstand Voltage Uimp		8KV			12KV						12KV		
Rated Working Voltage Ue		AC400V											
Rated Working Current Ie	AC-31A	100	160	250	400	630	800	1000	1250	1600	2000	2500	3200
	AC-35A	100	160	250	400	630	800	1000	1000	1600	2000	2500	3200
	AC-33A	100	160	250	400	400	630	800	800	1000	2000	2500	3200
Rated Making Capability		10Ie											
Rated Breaking Capability		8Ie											
Rated Limited Short-Circuit Current		50KA			70KA				100KA	120KA			
Rated Short-time Withstand Current 1s		7KA	9KA		13KA		26KA		50KA				55KA
Change-over Time Ⅰ－Ⅱor Ⅱ－Ⅰ		0.6S			0.6S		1.2S				1.8S		1.2S
Control Power Supply Voltage		AC220V											
Power Consumption of Electrical Machine													
Rated Control Power	Start	325W			355W		400W	440W			600W		
	Normal	62W			74W		90W	98W			120W		
Weight（kgs） 4Pole		6.0	6.0	7.6	15.8	16.8	36	36	37	38.6	55	61	67

3.Instruction of Structure





1、Electric key lock:Control switch inside controlling line power supply,when the electric lock open,the switch could be operated automatically and remotely,then the electric lock closed,the switch could be only operated by handle.

★2、Operating handle:When opertate the switch by operating handle,the electric lock must be closed.

3、Mechanic padlock:When inspection,firstly the switch turned into the position of 0 by operation handle,then pull the padlock mechanism and close the padlock,then the inspection could be arranged:(Pull the mechanism padlock will cut off the inside controlling power supply of the switch.The switch couldn't be in electromotion position and also couldn't be manual drive.

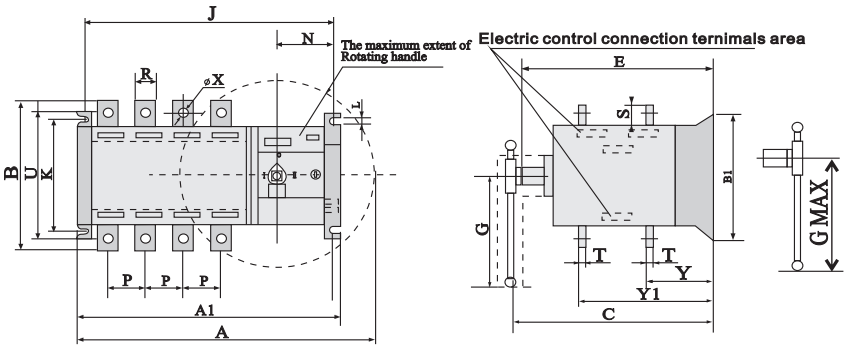
4、Position indication:Indicate the position of the switch working estate(I,0,II)

5、Controlling voltage:Switch controlling voltage grade 220VAC

6、Switch main body:The front part is I line,connecting to "Normal power";the rear part is II line,connecting to "Emergency power."

Dual Power Automatic Transfer Switch

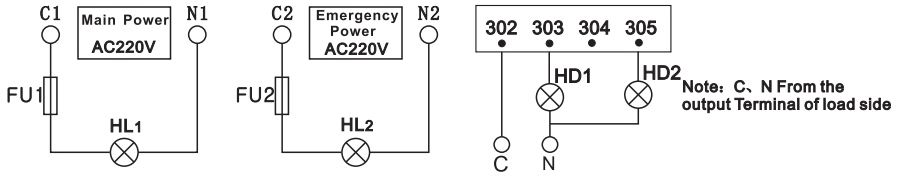
4. Installing Dimensions



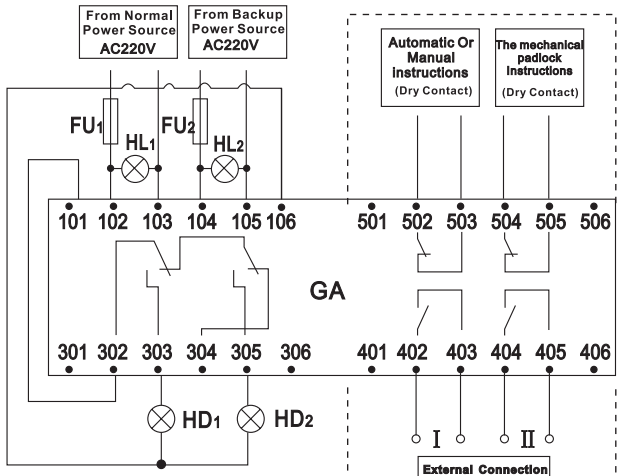
Spec.	Dimension																					
In	A	A1	B	B1	C	E	G	H	J	K	L	N	O	P	R	S	T	U	V	ΦX	Y	Y1	Z
100A/3	235	232	106	105	150	140	115	19	222	84	7	83	142.5	30	14	18	2.5	103	13	6	41.5	93	2
100A/4	280	244	107	105	150	140	115	19	226	84	7	83	142.5	30	14	18	2.5	103	13	6	41.5	93	2
160A/3	292	270	140	142	213	200	145	10	254	117	7	93	192	36	20	25	3.5	127	21	9	55.5	127	4
160A/4	360	303	140	142	213	200	145	10	285	117	7	93	192	36	20	25	3.5	127	21	9	55.5	127	4
250A/3	356	312	170	142	216	208	145	6	293	103	7	93	250	50	25	28	3.5	141	29	11	58	131	9
250A/4	420	362	180	142	216	208	145	6	343	103	7	93	250	50	25	28	3.5	141	29	11	58	131	9
400A/3	530	370	270	222	286	275	245	20	365	179	9	97	268	65	32	37	5	222	38	11	83	193	6
400A/4	590	440	270	222	286	275	245	20	425	179	9	97	328	65	32	37	5	222	38	11	83	193	6
630A/3	530	370	270	222	286	275	245	20	365	179	9	97	268	65	40	45	6	222	38	11	83	193	14
630A/4	590	440	270	222	286	275	245	20	425	179	9	97	328	65	40	45	6	222	38	11	83	193	14
800~1000A 3P	785	520	380	250	351	340	360	20	503	220	11	88	415	120	60	64	8	250	59	13	109	254	39
800~1000A 4P	1080	634	380	250	351	340	540	20	613	220	11	88	529	120	60	64	8	250	59	13	109	254	39
1250~1600A 3P	785	520	380	250	351	340	360	20	503	220	11	88	415	120	80	68	8	250	59	13	110	255	43
1250~1600A 4P	1080	634	380	250	351	340	540	20	617	220	11	88	529	120	80	68	8	250	59	13	110	255	43
2000A/3	785	535	423		560		360		408				490		80	81	10		30			113	
2000A/4	1080	650	423		560		540		523				605		80	81	10		30			113	
2500A/3	785	535	433		560		360		408				490		80	81	15		30			118	
2500A/4	1080	650	433		560		540		523				605		80	81	15		30			118	
3200A/3	785	535	443		560		360		408				490		80	81	20		30			123	
3200A/4	1080	650	433		560		540		523				605		80	81	20		30			123	

5. Usage Method

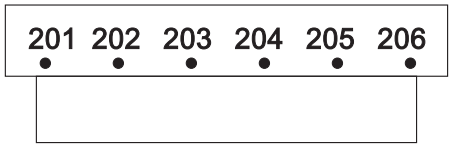
5.1 100A Type Wiring



5.2 Automatic Control Wiring



102:A Phase of Normal Power Source
103:N Phase of Normal Power Source
104:A Phase of Backup Power Source
105:N Phase of Backup Power Source

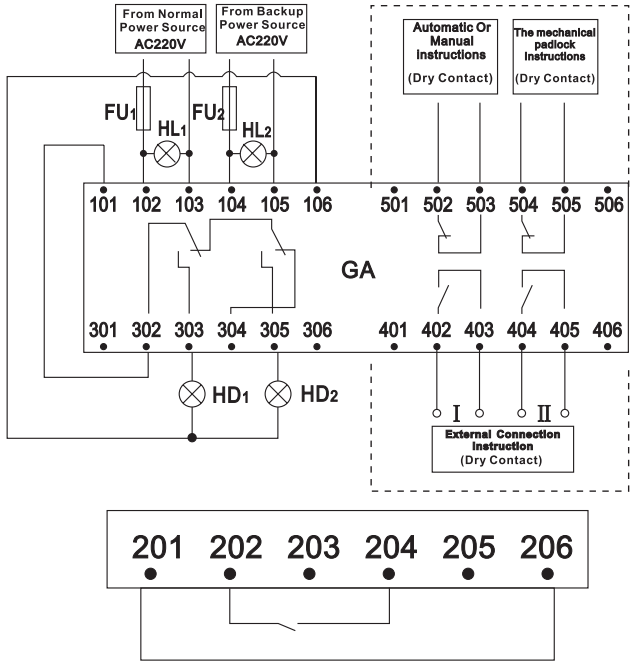


201+206 means Automatic Working Mode

- HL 1(102+103) is the indicator to show the Normal Power has electricity or not
- HL 2(104+105) is the indicator to show the Backup Power has electricity or not
- HD 1(302+303) is the indicator to show the ATS is working at the Normal Power side
- HD 2(302+305) is the indicator to show the ATS is working at the Backup Power side
- FU 1 and FU 2 are the 2A fuses
- 401-406, 501-506 are the reserved termials to customize special functions extraly

5.3 Automatic Control +Both Off Working Mode

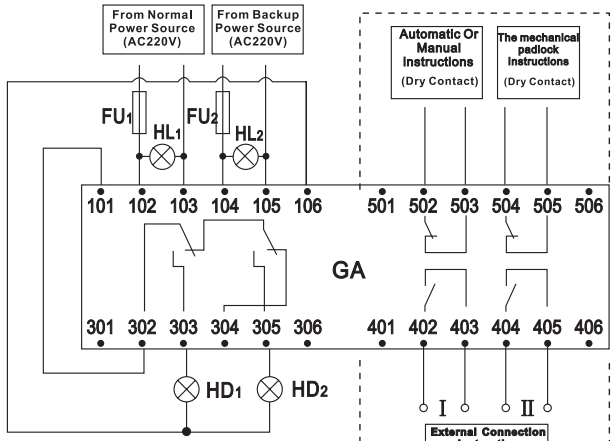
(Both power source are disconnected)



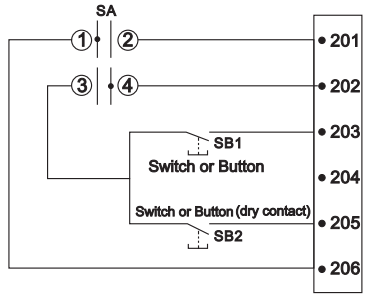
201+206 means Automatic Working Mode
202+204:To Remote Control the 2 Power Source to be disconnected
Control Button or Switch(Dry Conact)

- HL 1(102+103) is the indicator to show the Normal Power has electricity or not
- HL 2(104+105) is the indicator to show the Backup Power has electricity or not
- HD 1(302+303) is the indicator to show the ATS is working at the Normal Power side
- HD 2(302+305) is the indicator to show the ATS is working at the Backup Power side
- FU 1 and FU 2 are the 2A fuses
- 401-406, 501-506 are the reserved termials to customize special functions extraly

5.4 Automatic + Manual (Remote Control) Wiring



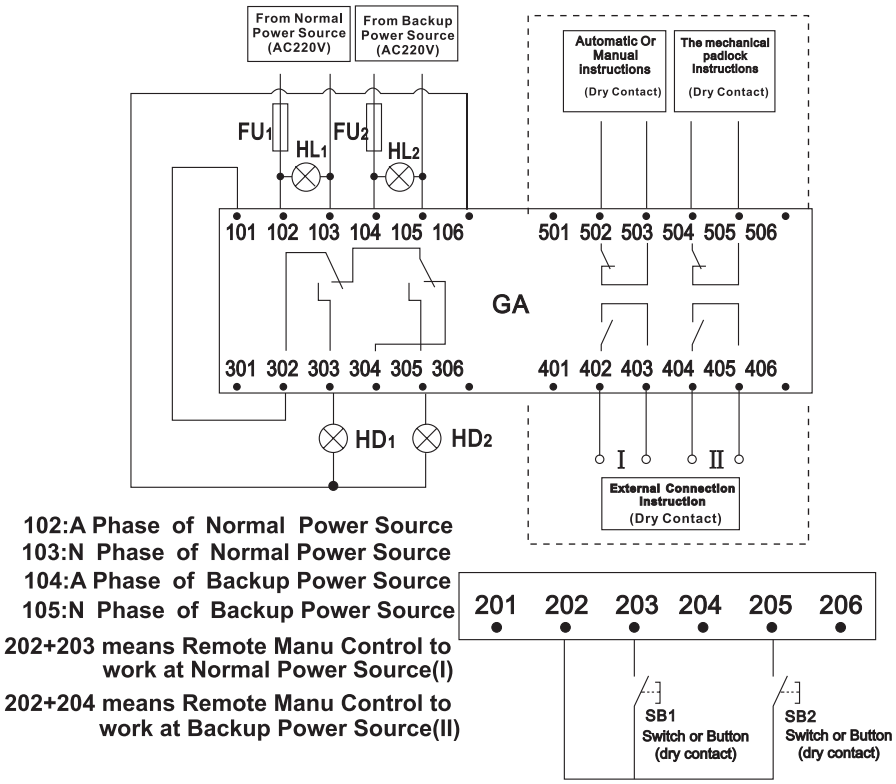
102:A Phase of Normal Power Source
103:N Phase of Normal Power Source
104:A Phase of Backup Power Source
105:N Phase of Backup Power Source



201+206 means Automatic Working Mode
202+203 means Remote Manu Control to work at Normal Power Source
202+204 means Remote Manu Control to work at Backup Power Source

- HL 1(102+103) is the indicator to show the Normal Power has electricity or not
- HL 2(104+105) is the indicator to show the Backup Power has electricity or not
- HD 1(302+303) is the indicator to show the ATS is working at the Normal Power side
- HD 2(302+305) is the indicator to show the ATS is working at the Backup Power side
- FU 1 and FU 2 are the 2A fuses
- 401-406, 501-506 are the reserved termials to customize special functions extraly

5.5 For Remote Manual Control Wiring

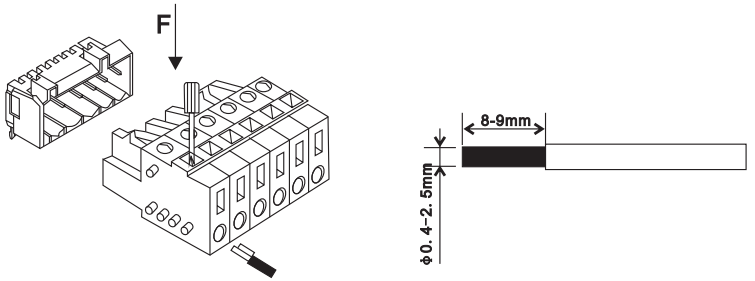


102:A Phase of Normal Power Source
103:N Phase of Normal Power Source
104:A Phase of Backup Power Source
105:N Phase of Backup Power Source
202+203 means Remote Manu Control to work at Normal Power Source(I)
202+204 means Remote Manu Control to work at Backup Power Source(II)

- HL 1(102+103) is the indicator to show the Normal Power has electricity or not
- HL 2(104+105) is the indicator to show the Backup Power has electricity or not
- HD 1(302+303) is the indicator to show the ATS is working at the Normal Power side
- HD 2(302+305) is the indicator to show the ATS is working at the Backup Power side
- FU 1 and FU 2 are the 2A fuses
- 401-406, 501-506 are the reserved termials to customize special functions extraly

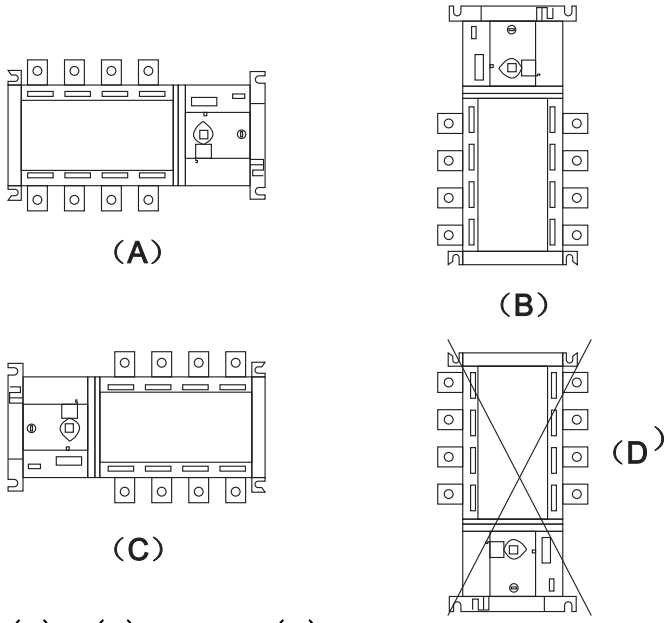
Dual Power Automatic Transfer Switch

6.Method of terminal connection



Use the screw driver use force downwards as the picture indicated direction,the line imbedding as the picture shows.

7.Correct installation method for switch



(A) (B) (C) correct (D) incorrect

8.wiring methods of switch

(Please refer to the right installation method for switch A)

1.The switch from left to right,I and II connection copper lines connected with normal power (front) and emergency power(behind) respectively with A,B,C phases

2.Controlling power origin from normal power and emergency power respectively with C and N phases.

3.I and II line controlling power AC220V connected with terminal 102~103,104~105 respectively,therein 102 and 104 are normal power and emergency power live line respective.

4.Terminal 101,106 are act as signal lamp to control power supply,therein 106 is the live line. Note:101 and 106 couldn't be connected with any other lines.

5.When above(under) input line,above(under)terminal I and II line A,B,C phases will be connected with copper lines or lines acting as output.

Dual Power Automatic Transfer Switch

9.Note of debug switch

1.Connect the normal power(I),emergency power(II) with the corresponding connecting board copper lines respectively;

①Automatic debugging

Normal power supply with electric,emergency power supply with electric,switch I line switch on

Normal power supply without electric,emergency power supply with electric,switch II switch on

Normal power supply with electric,switch I line switch on

(Refer to the switch panel white indicating arrowhead)

②Remote debugging

Press bush putton SB1,then the switch I line switch on

Press bush putton SB2,then the switch II line switch on

③Automatic/Remote(handle)debugging

When dial the function selection switch into the automatic position: the switch should act according to the ① item requirement;when dial the function selection switch into the remote (handle) position: the switch should act according to the ② item requirement;

2.When the switch in the position of switch on I line or II line,the signal lamp on the panel should indicate correspondingly.

3.After finished the debugging,close the power supply firstly,and circumgyrate the switch into"0 position" by handle.(Middle position , refer to the switch panel white indicating arrowhead).