CNZQ

ZQ2G
Dual power automatic switch

Product features

◇ The technology of double-row compound contact, transverse pull mechanism, micro-motor pre-storage and micro-electronic control is used to basically realize zero flashover (without arc extinguishing cover);
◇ Reliable mechanical interlocking and electrical interlocking shall be adopted, and independent load disconnector shall be adopted for the execution of non-elements, which is safe and reliable;
◇ Adopt zero-crossing technology, which can be forced to zero in case of emergency (cut off two power supplies at the same time) to meet the needs of fire linka.
◇ The switching of the load disconnector is driven by a single motor, which is reliable, stable, noiseless and with low impact;
◇ The driver motor of the operator only passes the current at the moment when the load disconnector is switched, and the steady state operation does not need to provide the working current, which saves energy significantly;
◇ The executive load disconnector is equipped with mechanical interlocking device to ensure the reliability and non-interference of common and standby power supply;
◇ With obvious on-off position indication, padlock and other functions, reliably realize the isolation between power supply and load;
◇ Good safety performance, high degree of automation, high reliability and service life of more than 8000 times;
◇ Electromechanical integration design, accurate, flexible and smooth switch conversion, international advanced logic control technology, strong anti-interference ability and no external interference;
◇ With main power on, standby power off, main power off and standby power on; The main and standby power supplies are disconnected for three stable operations (I - 0-II);
◇ It is convenient to install, and the control circuit is connected with plug-in terminals;
◇ Four operation functions: emergency manual operation, electric remote control operation, emergency disconnection operation in automatic control state, and automatic control operation.

Area of application

◇ ZQ2G series automatic conversion switch is mainly used for the load switching of AC 50Hz, rated voltage 380V, DC rated voltage 220V, rated current 16 to 3200A distribution or motor network with one main and one standby power supply or mutual standby power supply switching system as well as municipal power supply and generator set. At the same time, it can be used for infrequent connection and disconnection of circuit and line isolation.
◇ The products are widely used in power transmission and distribution systems and automation systems in important power supply places, such as fire fighting, hospitals, banks, high-rise buildings, etc., where power failure is not allowed.

Operational environment

◇ ZQ2G automatic transfer switch can work reliably under the following conditions:
a、The altitude shall not exceed 2000 meters;
b、The ambient temperature is not higher than 40 ℃ , not lower than - 5 ℃ , and the relative humidity is not more than 95%;
c、Environment without explosive dangerous medium;
d、No rain and snow attack environment;
Note: If the ambient air temperature is expected to be higher than+40 ℃ or lower than - 5℃ ~- 45℃ , the user shall explain to the manufacturer.

Intelligent performance

◇ Three stable working positions:
Normal closing: common closing, standby opening. Standby closing: common opening, standby closing. Double opening: common opening, standby opening.
◇ Two optional automatic working modes:
a、Automatic switching and self-recovery: when the standby power supply is closed and the common power supply is restored to normal, the switch will automatically switch to normal closing whether the standby power supply is normal or not.
b、Automatic switching and non-automatic recovery: when the standby power supply is closed and the common power supply is restored to normal, while the standby power supply is normal, the switch will not switch. Only when the standby power supply is abnormal, the switch will automatically switch to normal closing.
◇ Four conversion control modes:
a、Automatic control: The controller automatically switches to the appropriate working position according to the current voltage condition and the set working mode.
b、Manual control: When the power supply is normal, the switch can be switched to any working position by pressing the key.
c、Manual control: After turning the key to the manual position, the handle can be used for manual operation.
d、Remote control: switch the control switch to the required working position through remote programmable input signal or 485 communication interface.
◇ Product function: real-time monitoring and display of operating parameters, real-time switch position and alarm. Under-voltage, over-voltage and phase-loss protection function to prevent the fault power supply from supplying power to the load. Self-diagnosis and fault alarm function.
◇ Optional functions include: fire double alarm, automatic control of power generation, two sets of programmable signal output relays, power indication and communication.

ZQ2G intelligent automatic transfer switch

CNZQ®

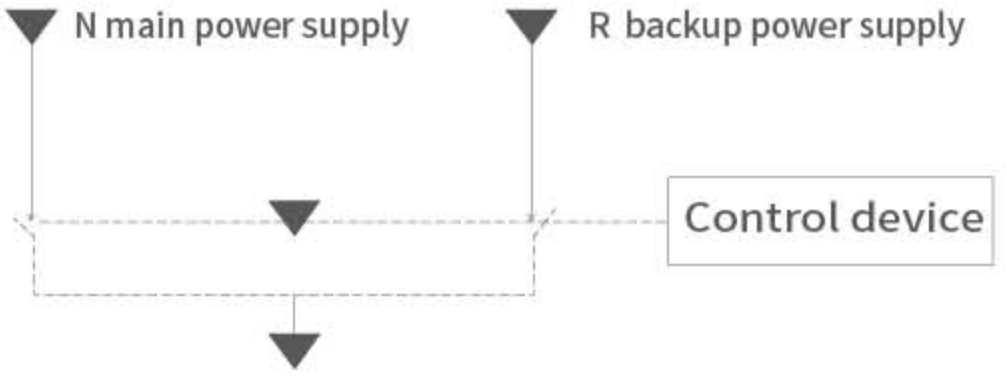
ZQ2G
Dual power automatic switch

Control and operation

◇ ZQ2G-63A~3200A Automatic Transfer Switch Control and Operation

a、The operation of the motor and gearbox directly installed in the switch is managed by the logic control board with different logic programs to ensure the position of the switch.

b、The motor is a polychloroprene insulated damp heat type motor equipped with a safety device, which trips when the temperature exceeds 110 °C and the overcurrent state. After the fault disappears, it will be put into operation automatically. The reversible reduction gear adopts straight gear.



Application scope switching between normal and emergency application scope

Emergency manual operation: when the key is turned to the manual position, use the emergency operation handle to turn 90° at each position.

Disconnect 201 and 206 through the plug-in terminal 202~205 for remote electric control.

The key is in the automatic control state ZQ2G automatic switch and automatic recovery. The commonly used switch is preferred through the plug-in terminals 102 and 103. 202 and 204 are forced to return to the "0" position remotely.

Pull up the padlock with 1 to 3 locks: keep the position to prevent the emergency handle from being put on.

CNiZQ®

ZQ2G
Dual power automatic switch

Main technical performance parameters

◇ Electrical and Mechanical Properties of ZQ2g-100a ~ 630a Series Automatic Transfer Switches

Product model			ZQ2G									
			100A					160A		250A		630A
Rated current			20A	40A	63A	80A	100A	125A	160A	200A	250A	400A	630A
Rated insulation voltage Ui(V)			500	500	500	500	500	500	500	500	500	500	500
Medium strength (v)			5000	5000	5000	5000	5000	5000	5000	5000	5000	8000	8000
Rated impulse withstand voltage UimpkV (installation category IV)			8	8	8	8	8	8	8	8	8	12	12
Rated working current Ie(A)	400V	AC-31	20	40	63	80	125	125	160	200	250	400	630
		AC-33	20	32	40	63	80	125	160	200	250	340	536
		AC-35	20	40	63	80	125	125	160	200	250	400	630
	220V	DC-31	20	40	63	80	125	.125	160	200	250	400	630
			20	32	40	63	80	125	125	160	200	315	500
		DC-35	20	40	63	80	125	125	160	200	250	400	500
Motor power P(400V)kW			10	20	25	30	32	63	80	125	132	220	280
The rated short-term withstand current ICW (Karms) is 0.1s/1s.			9/5	9/5	9/5	9/5	9/5	20/10	20/10	25/12	25/12	40/20	50/25
Rated sectioning capacity (A Rms) AC33 380V			160	320	500	640	800	1000	1000	1600	1600	3200	3200
Rated making capacity (A Rms) AC33 380V			200	400	630	800	1000	1250	1250	2000	2000	4000	4000
Rated short-circuit making capacity Icm (kA peak)			8	8	10	10	10	12	12	17	17	30	30
Mechanical life (number of cycles)			10000	10000	10000	10000	10000	10000	10000	10000	10000	5500	5500
Electrical life	CosΦ=0.65 AC33		1500	1500	1500	1500	1500	1000	1000	1000	1000	500	500
Conversion time	I -0- II or II -0- I(s)		0.5	0.5	0.5	0.5	0.5	1.0	1.0	1.1	1.1	1.2	1.2
	I -0 or II -0(s)		0.3	03	0.3	0.3	0.3	0.6	0.6	0.7	0.7	0.8	0.8
Electrical control energy consumption	24V(DC)(W)		50	50	50	50	50	75	75	75	75	90	90
	220V(AC)(W)		50	50	50	50	50	75	75	75	75	90	90
Operating torque (Nm)			15	15	15	15	15	22	22	30	30	45	45

CNZQ®

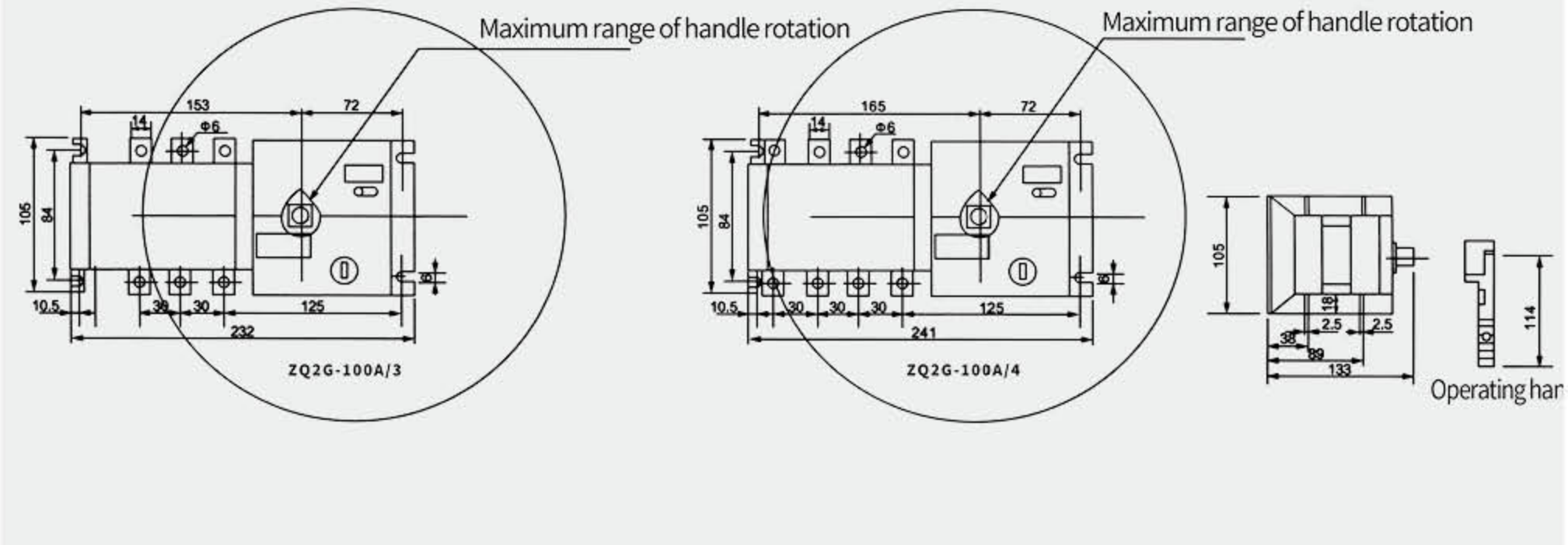
ZQ2G
Dual power automatic switch

Main technical performance parameters

◇ Electrical and mechanical properties of ZQ2G-800A~3200A series automatic transfer switch

Product model			ZQ2G						
			800A	1000A	1250A	1600A	2000A	2500A	3200A
Rated insulation voltage Ui(V)			1000V						
Rated impulse withstand voltage Uimp kV			12KV						
Rated working voltage Ui(V)			AC440V						
Rated working current Ie(A)		AC-31	800	1000	1250	1600	2000	2500	3200
		AC-33	800	1000	1000	1000	1250	1250	1250
		AC-35	800	1000	1000	1000	2000	2000	2500
Rated making capacity			10Ie						
Rated breaking capacity			100			120	80		
Rated short-term withstand current			26KA	50KA					55KA
Conversion time I -0- II or II -0- I (s)			1.2s				2.4S		
Control power supply voltage			DC24V,48V,110V, AC220V						
Motor energy consumption	Rated control voltage AC220V	Start-up	400W	400W			600W		
		Normal	90W	98W			120W		

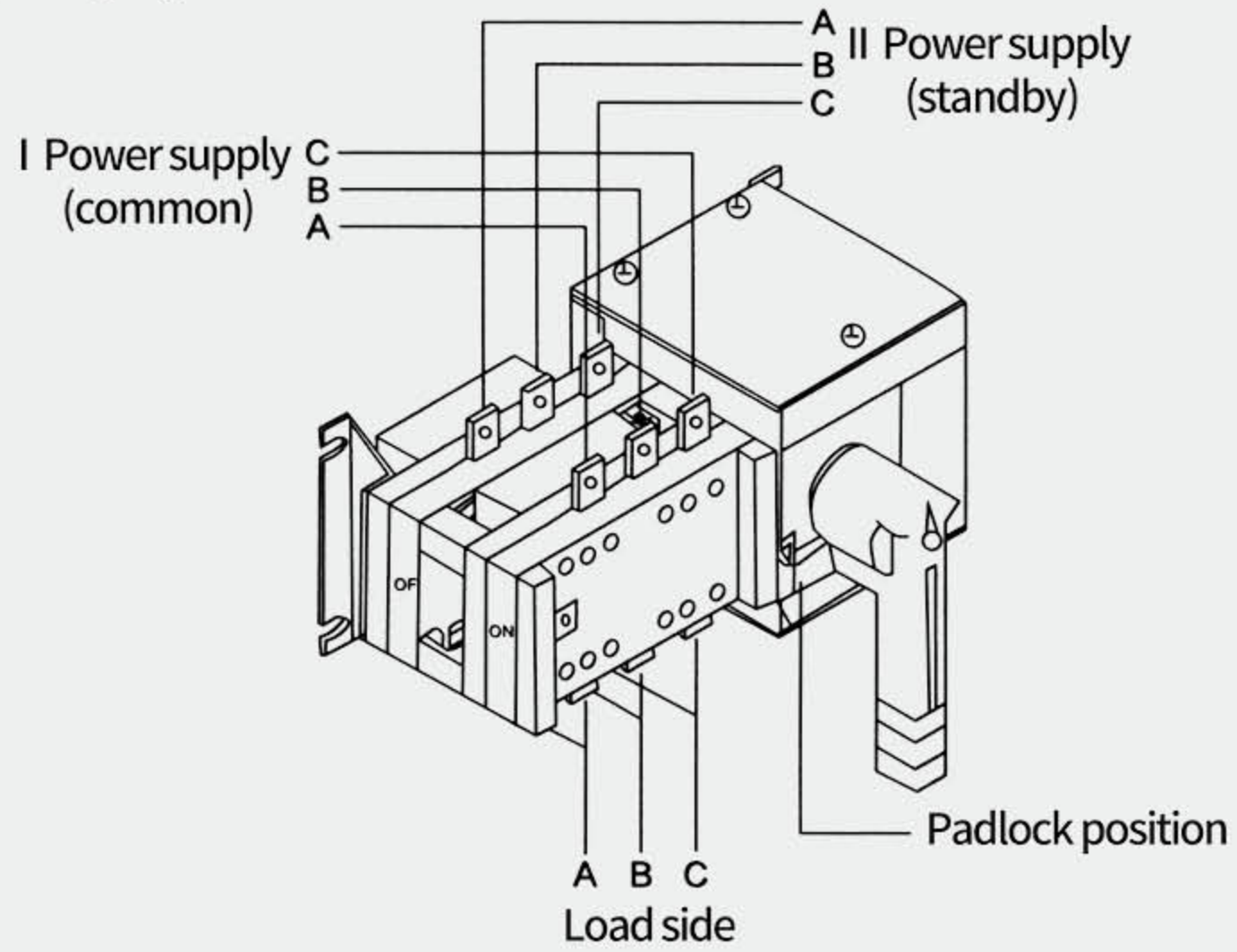
ZQ2G-100A outline and Installation Dimensions



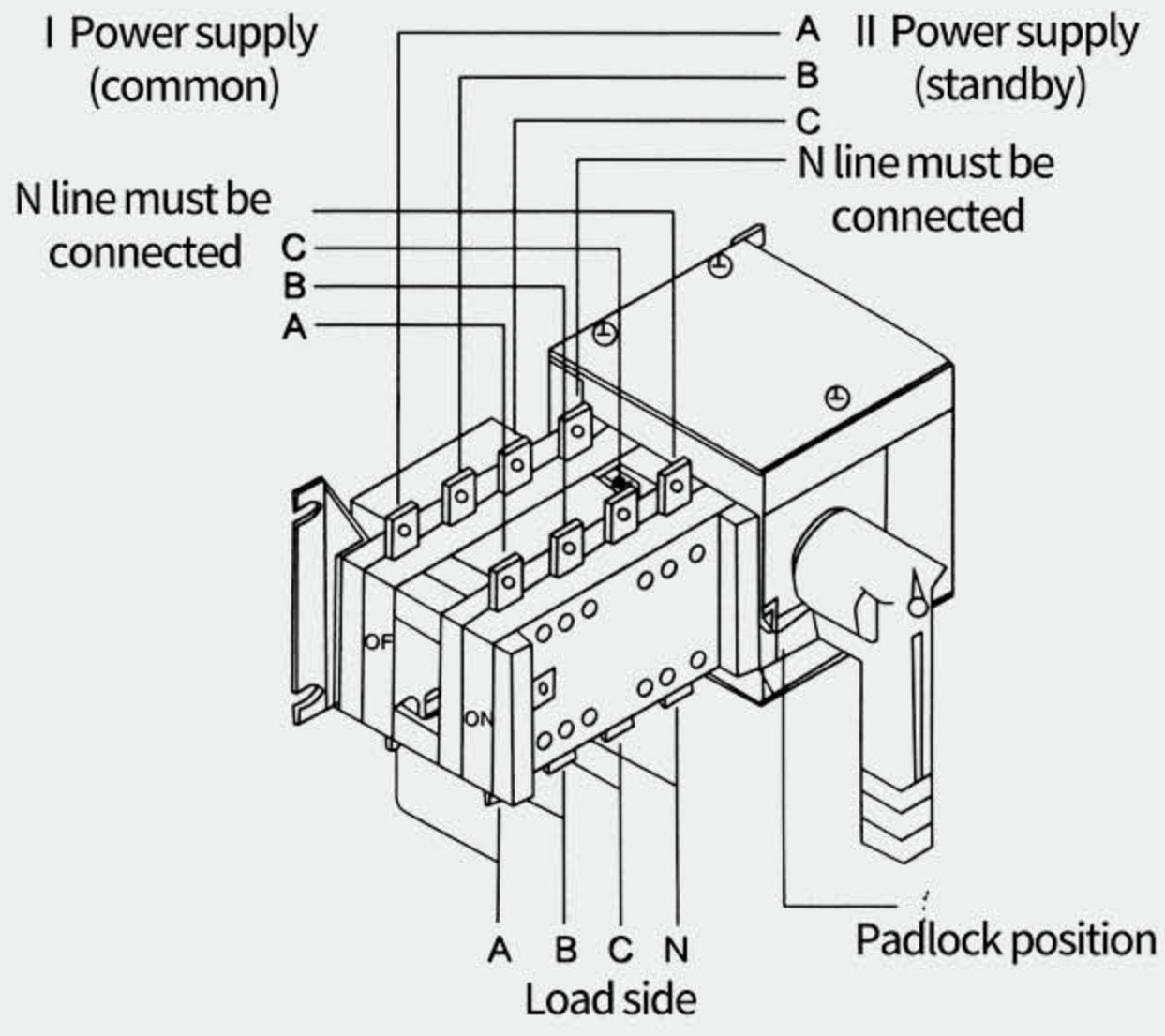
ZQ2G
Dual power automatic switch

Wiring diagram

◇ ZQ2G-125A/3 wiring diagram



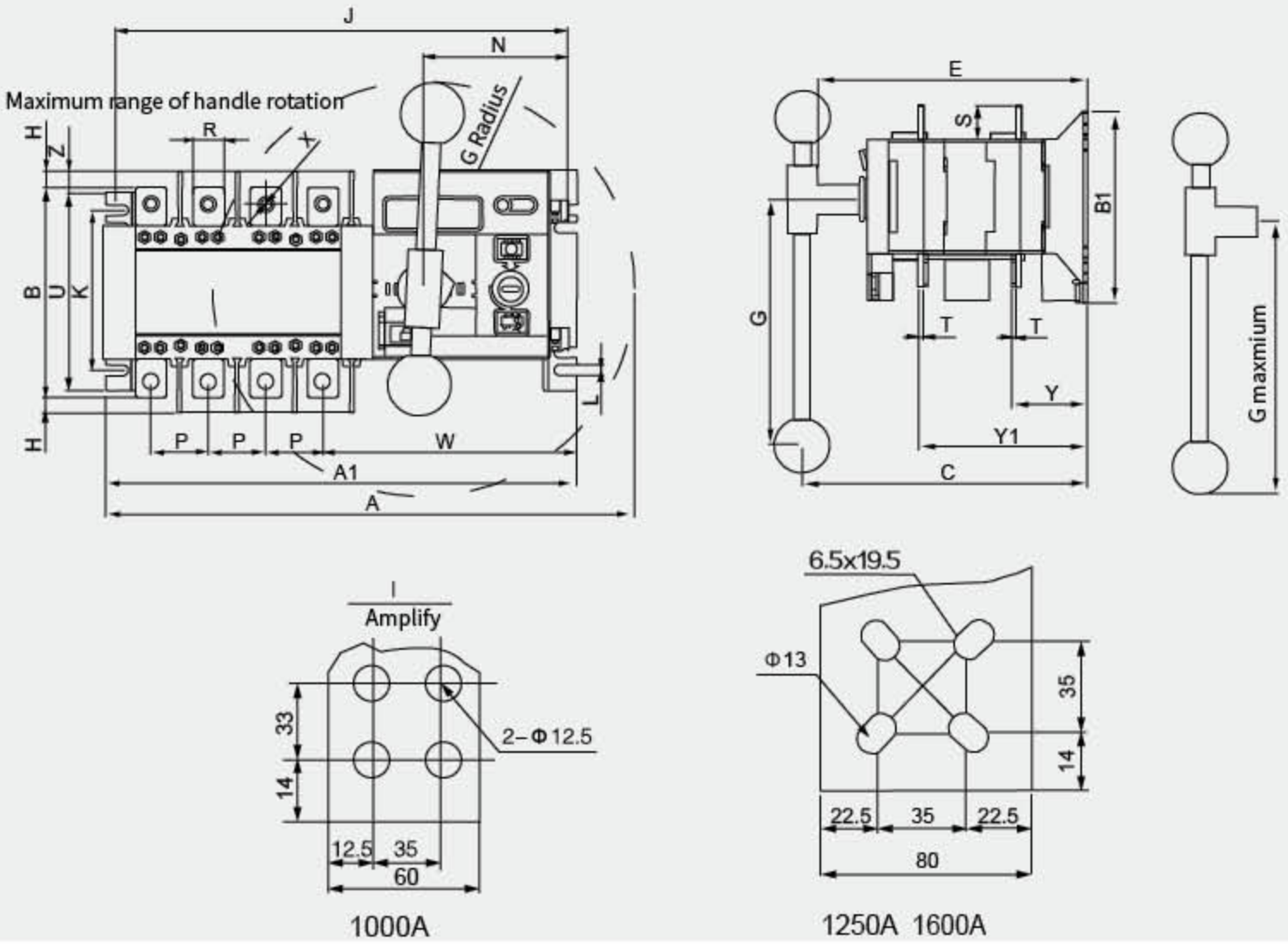
◇ ZQ2G-125A/4 wiring diagram



CNZQ®

ZQ2G
Dual power automatic switch

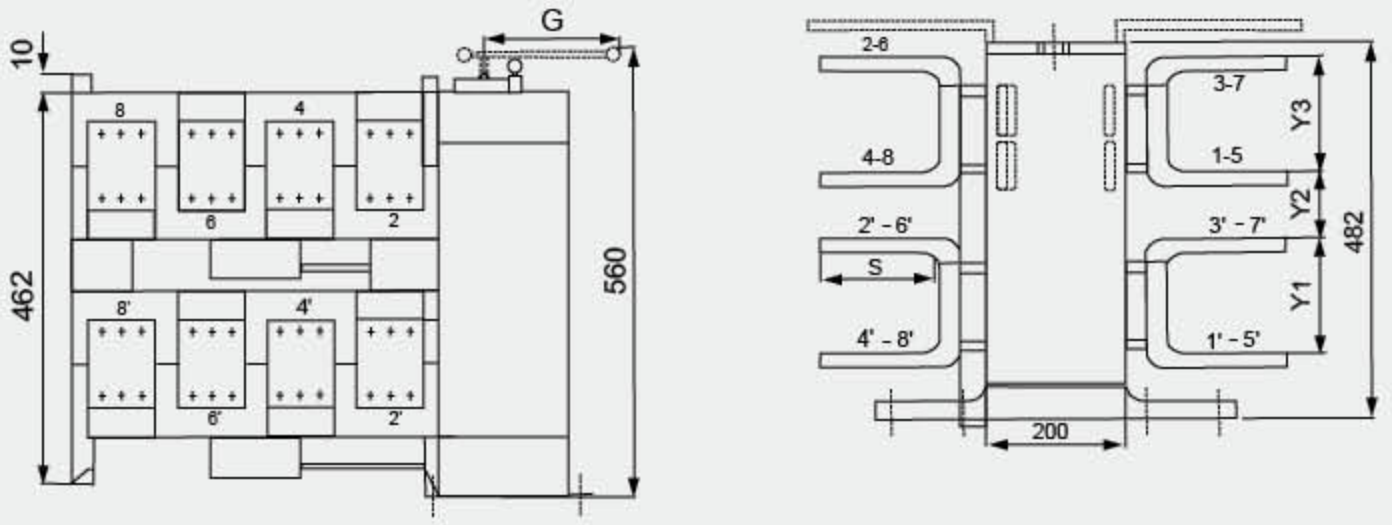
Outline and installation dimensions of ZQ2G-160A~1600A

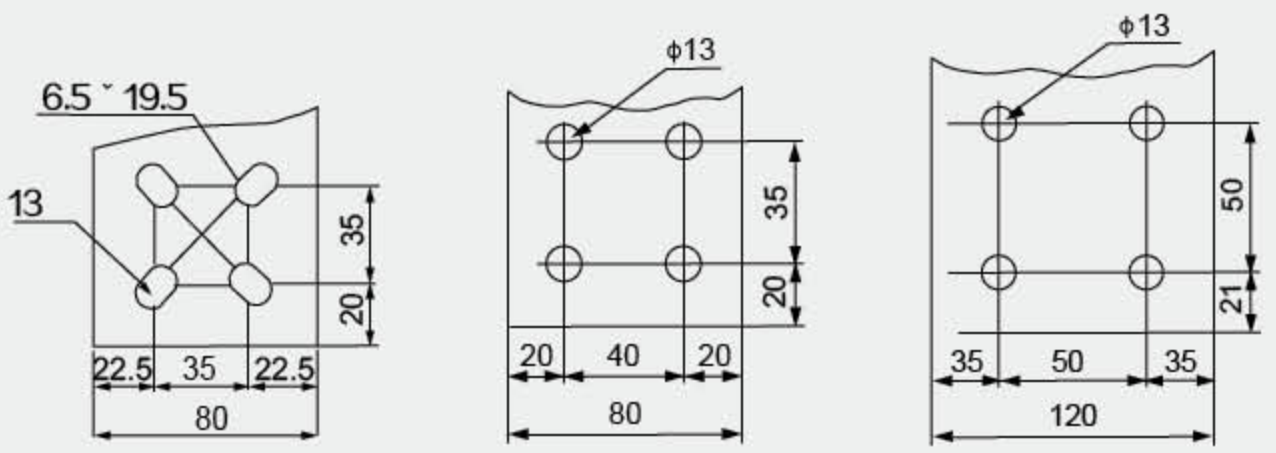


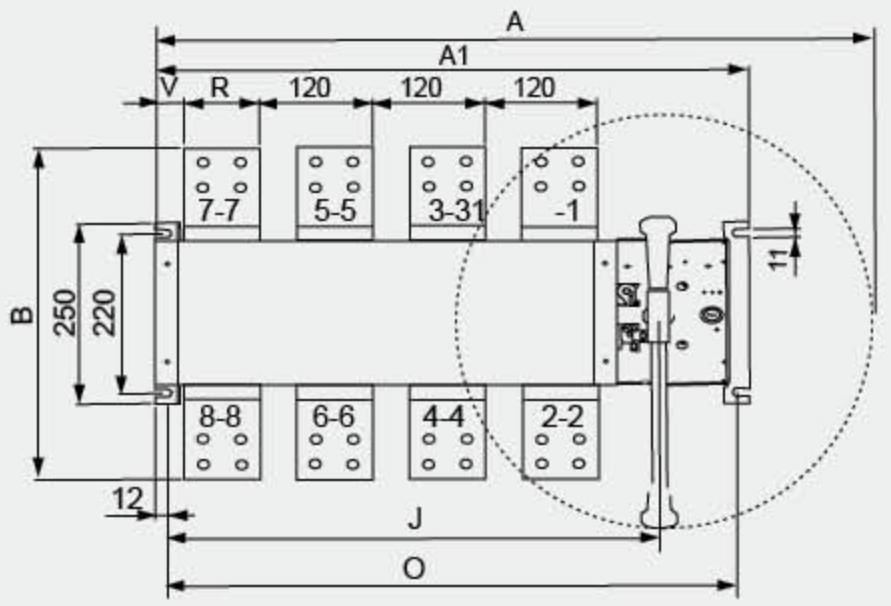
Speifications	Overall size							Switch installation									Connection terminal			
In	A	A1	B	B1	C	E	G	J	K	L	N	P	R	S	T	U	W	ΦX	Y	Y1
125A/3	292	267	146	142	230	193	145	251	102	7	91	36	20	25	3.5	126	158	9	57	127
125A/4	322	300	146	142	230	193	145	284	102	7	91	36	20	25	3.5	126	158	9	57	127
160A/3	292	267	146	142	230	193	145	251	102	7	91	36	20	25	3.5	126	158	9	57	127
160A/4	322	300	146	142	230	193	145	284	102	7	91	36	20	25	3.5	126	158	9	57	127
250A/3	356	305	179	142	230	193	145	287	102	7	91	50	25	30	3.5	135	168	11	58	130
250A/4	406	360	179	142	230	193	145	343	102	7	91	50	25	30	3.5	135	168	11	58	130
400A/3	487	375	245	220	274	263	189	356	180	9	93	65	32	39	5	220	203	11	82	186
400A/4	552	433	245	220	274	263	189	416	180	9	93	65	32	39	5	220	203	11	82	186
630A/3	487	375	265	220	274	263	189	356	180	9	93	65	40	49	5	220	203	11	82	186
630A/4	552	433	265	220	274	263	189	416	180	9	93	65	40	49	5	220	203	11	82	186
800A/3	670	515	353	250	321	306	443	495	220	11	87	120	60	54.5	8	250	207	13	107	240
800A/4	760	635	353	250	321	306	443	616	220	11	87	120	60	54.5	8	250	207	13	107	240
1000A/3	670	515	353	250	321	306	443	495	220	11	87	120	60	54.5	8	250	207	13	107	240
1000A/4	760	635	353	250	321	306	443	616	220	11	87	120	60	54.5	8	250	207	13	107	240
1250A/3	670	515	367	250	321	306	443	495	220	11	87	120	80	68	8	250	207	13	108	240
1250A/4	760	636	367	250	321	306	443	616	220	11	87	120	80	68	8	250	207	13	108	240
1600A/3	670	515	370	250	321	306	443	495	220	11	87	120	80	69	10	250	207	13	108	240
1600A/4	760	636	370	250	321	306	443	616	220	11	87	120	80	69	10	250	207	13	108	240

ZQ2G
Dual power automatic switch

Outline and installation dimensions of ZQ2G-2000A~3200A







2500A

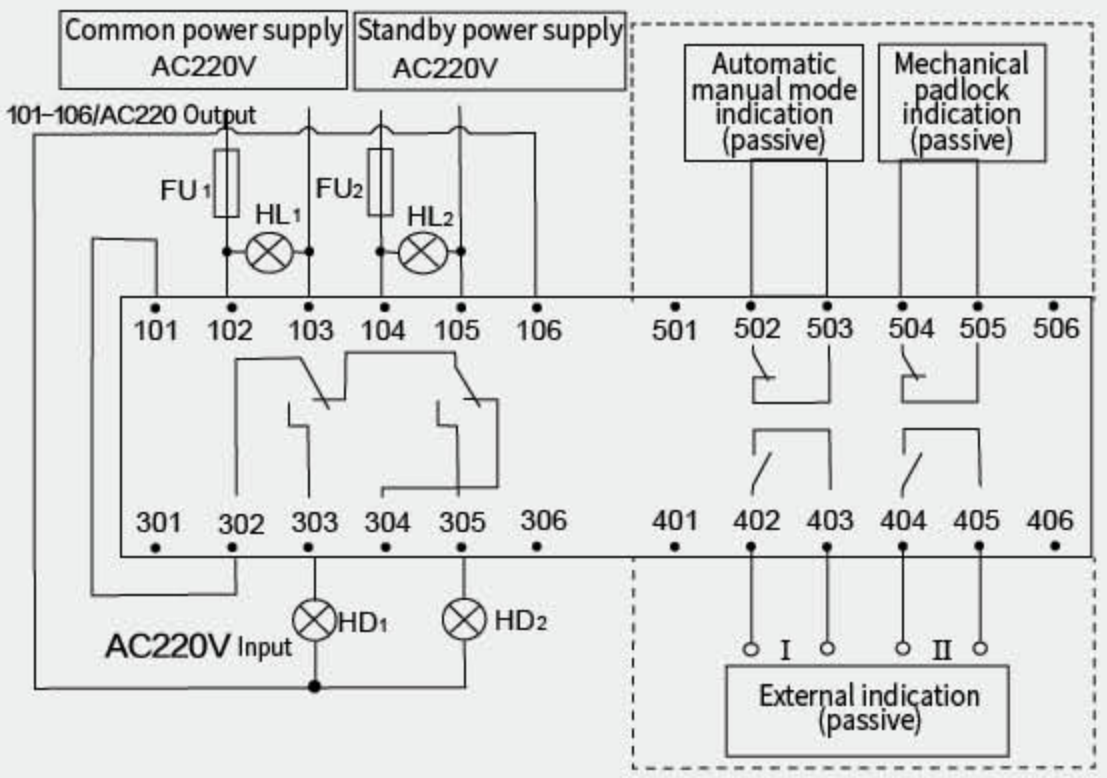
Specifications	Overall size						Switch installation									Connection terminal				
In	A	A1	B	C	E	G	J	K	L	N	P	R	S	T	U	V	Y	Y1	Y2	Y3
2000A/3	680	525	405	480	467	447	613	215	12	84.5	120	80	76	10	244	13	105	87	125	88
2000A/4	800	646	405	480	467	447	613	215	12	84.5	120	80	76	10	244	13	105	87	125	88
2500A/3	680	525	427	480	467	447	613	215	12	84.5	120	80	80	15	244	13	98	100	116	100
2500A/4	800	646	427	480	467	447	613	215	12	84.5	120	80	80	15	244	13	98	100	116	100
3200A/3	680	525	458	480	467	447	613	215	12	84.5	120	120	95	15	244	13	98	107	109	106
3200A/4	800	646	458	480	467	447	613	215	12	84.5	120	120	95	15	244	13	98	107	109	106

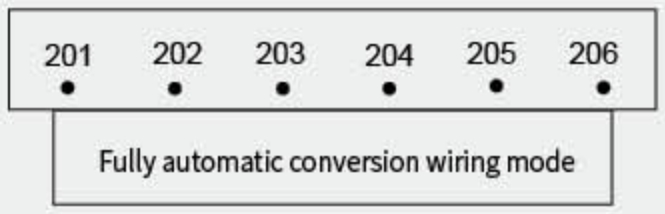
CNZQ®

ZQ2G
Dual power automatic switch

Connection mode

◆ Fully automatic wiring mode (suitable for rated current of 160A~3200A)

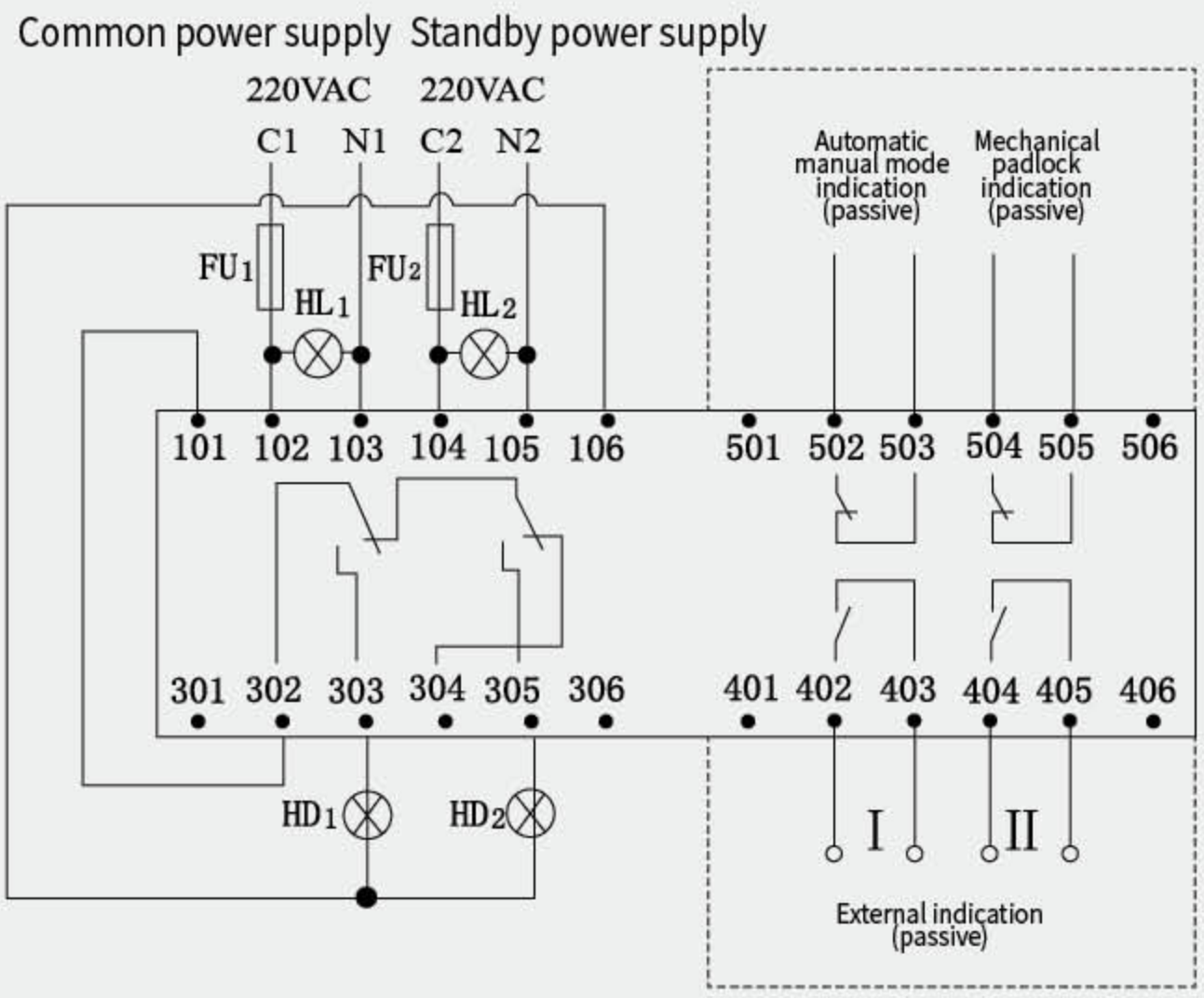


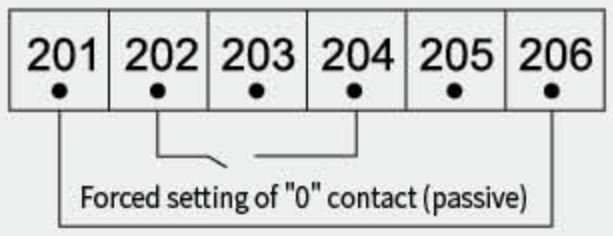


HL1 is the power indication of common power supply;
HL2 is the power indication of standby power supply;
HDI is a common power input indicator
HD2 is a common standbypower input indicator

The new FUI/FU2 is 2A fuse.
101~106, 201~206 and 301~306 are switch terminals.
401 ~ 406, 501 ~ 506 switch terminals above 1000A can be selected.

◆ 100~3200 automatic+forced "0" (both power supplies are disconnected) wiring mode.



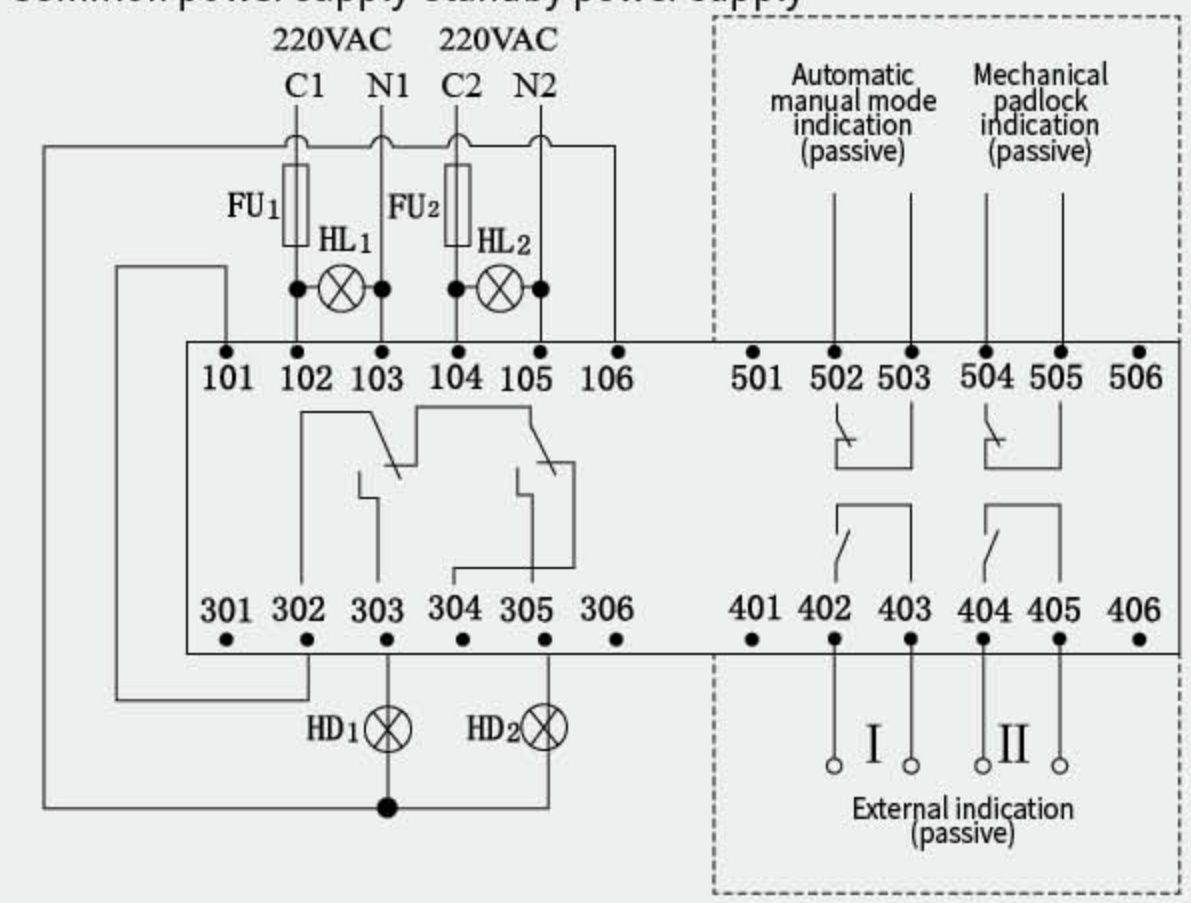


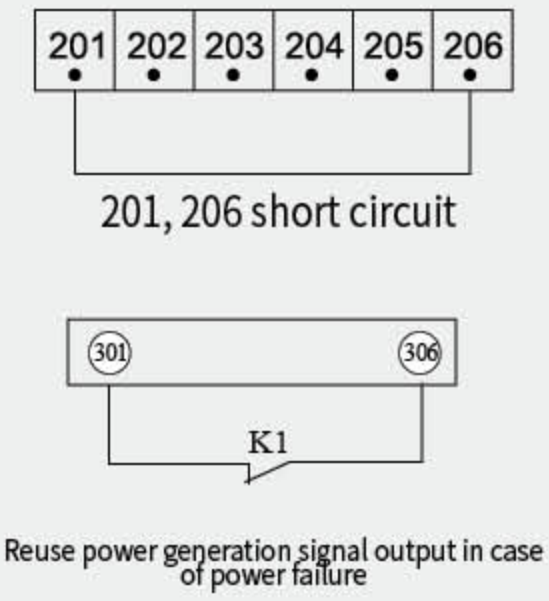
CNZQ

ZQ2G
Dual power automatic switch

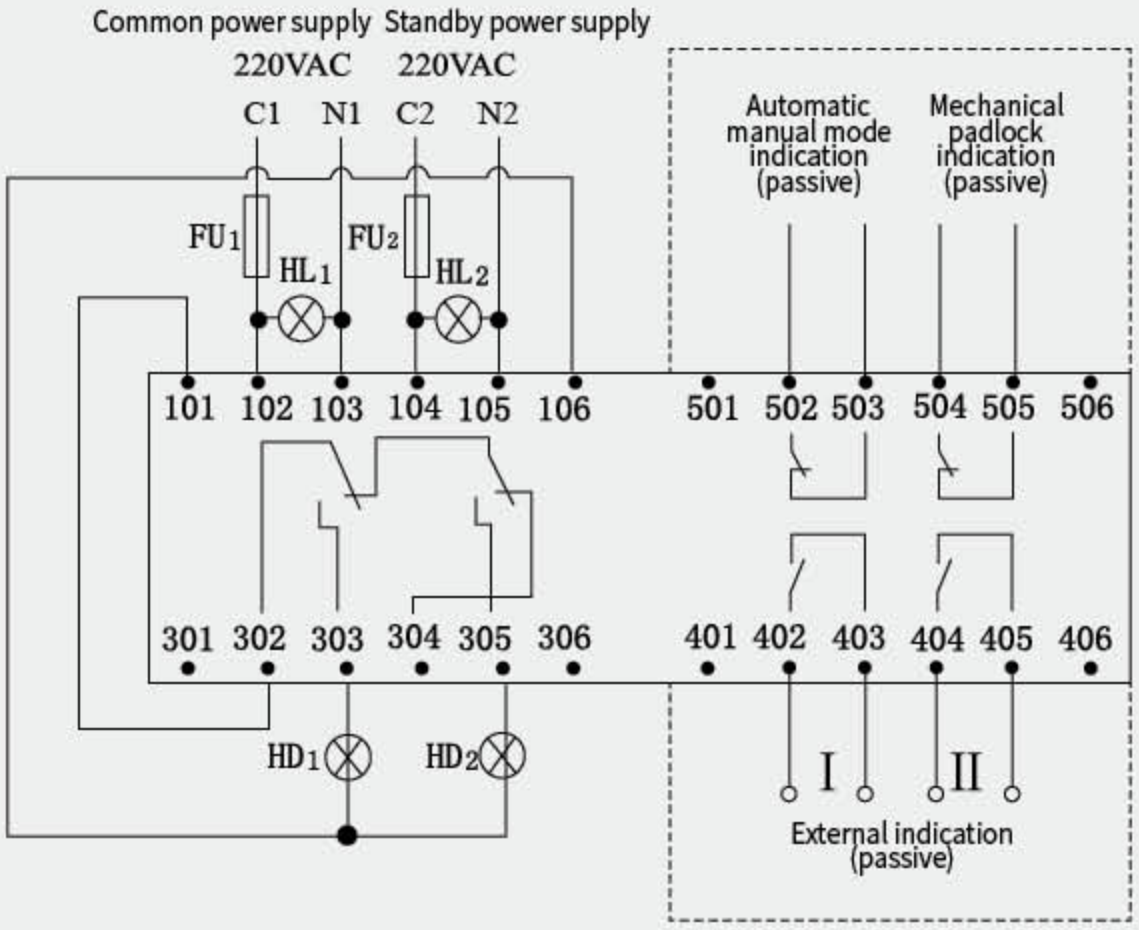
Connection mode

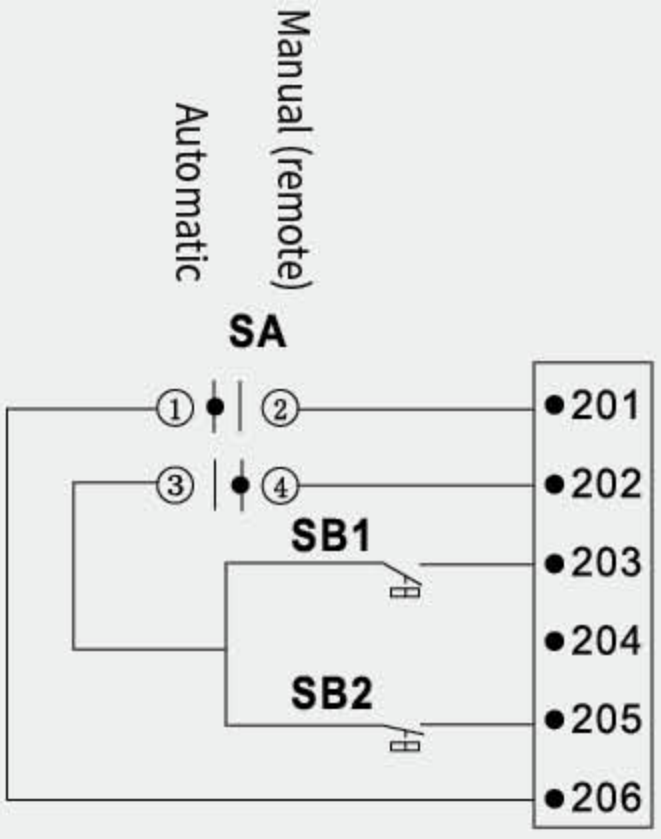
◆ 100~3200 automatic+generator signal output wiring mode





◆ Full automatic+manual (remote control) wiring mode



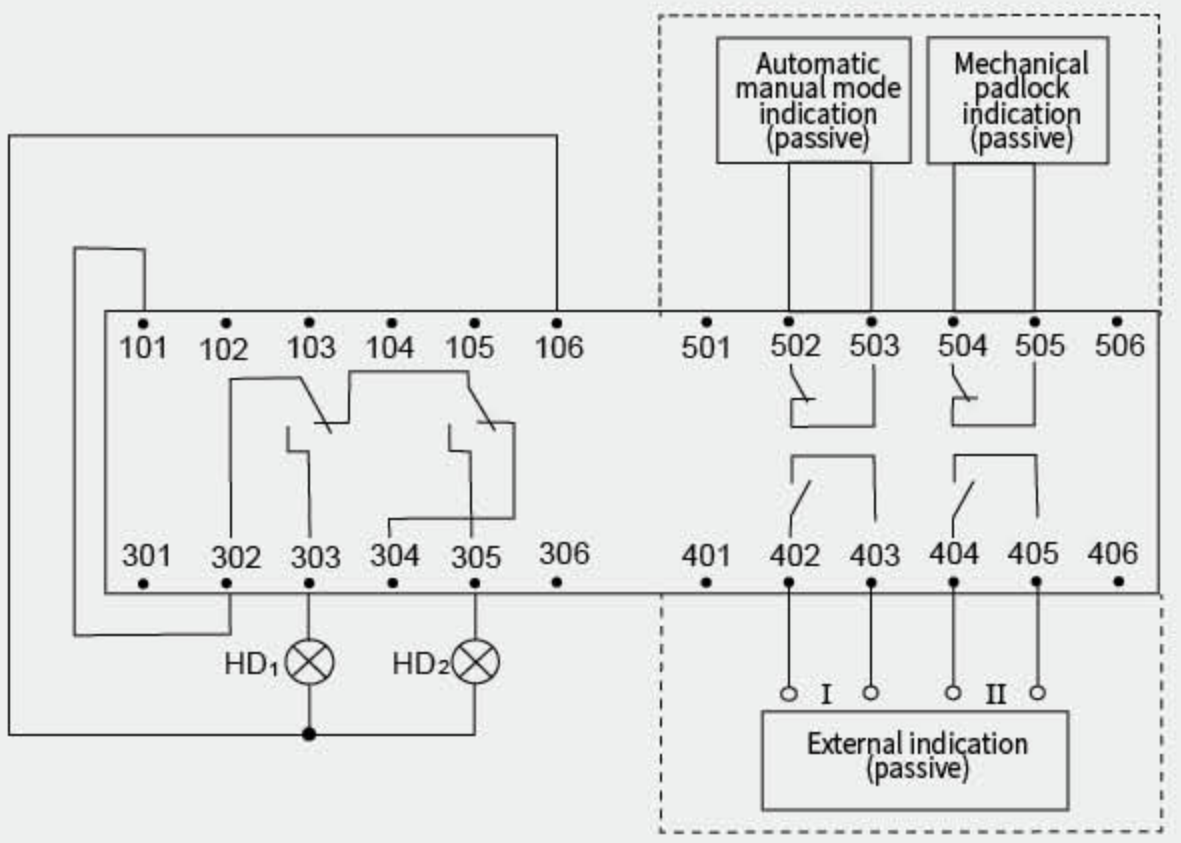


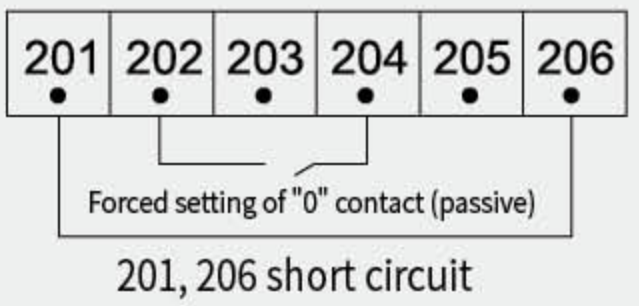
CNZQ®

ZQ2G
Dual power automatic switch

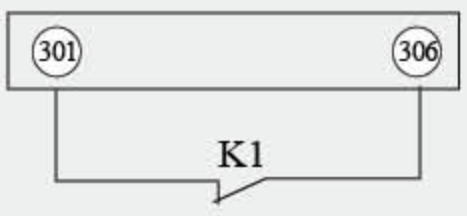
Connection mode

◆ 100~3200 wring mode with controller





201, 206 short circuit



Reuse power generation signal output in case of power failure

Note: ① The products with controller 102, 103, 104 and 105 do not need external power supply;
②401~406 and 501~506 switch terminals above 1000A can be selected.

◆ Description of letters and symbols

◇ C1 and N1 are the live line and zero line access at the common power input end, and C2 and N2 are the live line and zero line access at the standby power input end.

Hl1 and hl2 are power indication of common power supply and standby power supply respectively. HD1 and HD2 are the input indicators of common power supply and standby power supply respectively.

FU1 and FU2 are 2A fuses;

◇ 101-106 and 201-206 are secondary wiring terminals of automatic transfer switch;

◇ 301~306 are external indicator terminals of automatic transfer switch;

◇ 401-406 and 501-506 automatic transfer switch terminals are optional;

◇ Fully automatic wiring methods 201 and 206 must be short-circuited;

◇ Forced setting of "O" contact (passive) can also input DC24V power supply;

◇ K1 is the power generation signal output (when there is no power in common use);

◇ SA is the automatic/manual function selection switch, SB1 and SB2 are the common power supply and the standby power supply manual input button (passive contact).