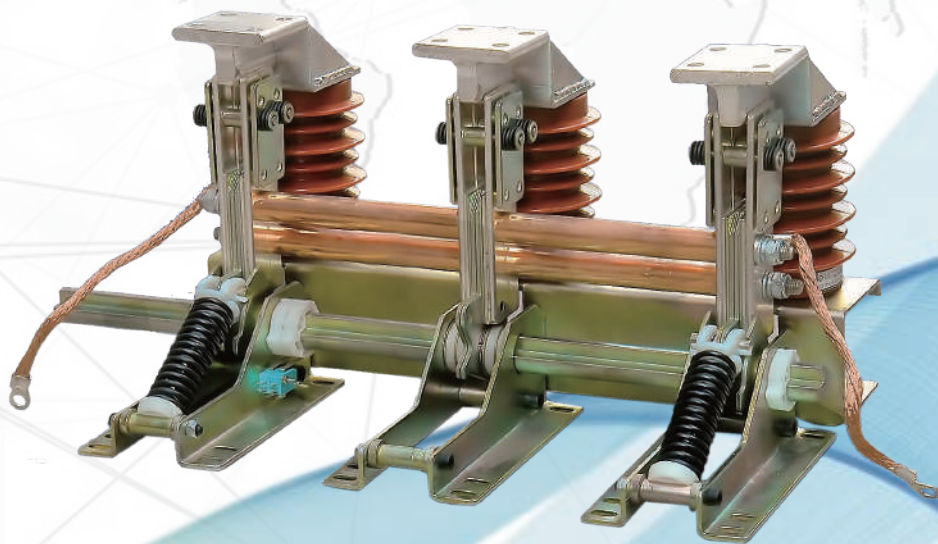


SHOW PRODUCT

Earthing switch series



12KV EARTHING SWITCH SERIES

Model No.: LYE101 Name: JN15A-12/31.5 Indoor AC high voltage earthing switch



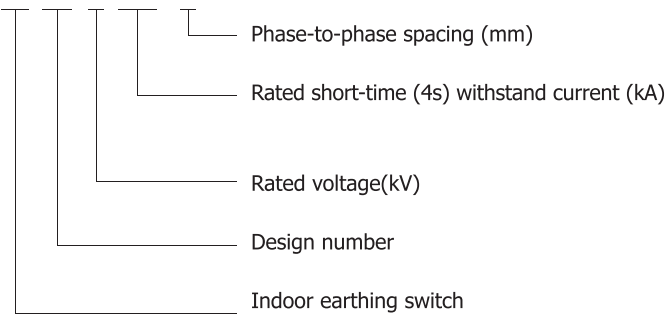
Summary:

JN15A-12/31.5 indoor AC high voltage earthing switch is an advanced level product with high-tech parameters performance. After comprehensive evaluation, it conforms to GB1985 and IEC62271 standard ,applies to power system of 3-12kV and three-phase AC 50Hz.It owns short-circuit making capacity to protect other electric equipment not being damaged.Can be used with various high voltage switchgear,also play a protective role in the high-voltage electrical equipment overhaul.

Item		Unit	Data	
Rated voltage		kV	12	
Rated short–time withstand current		kA	31.5	
Rated short–circuit duration		s	4	
Rated short–circuit making current		kA	80	
Rated peak withstand current		kA	80	
Rated insulation level	PF withstand voltage (1 min)	kV	Phase to earth Phase to phase	42
	Lightning impulse withstand voltage			75
Mechanical endurance		Time	2000	

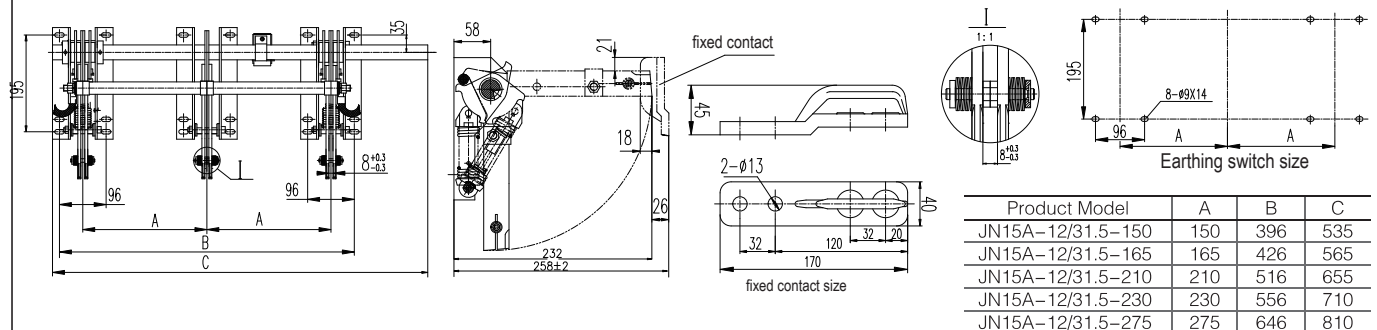
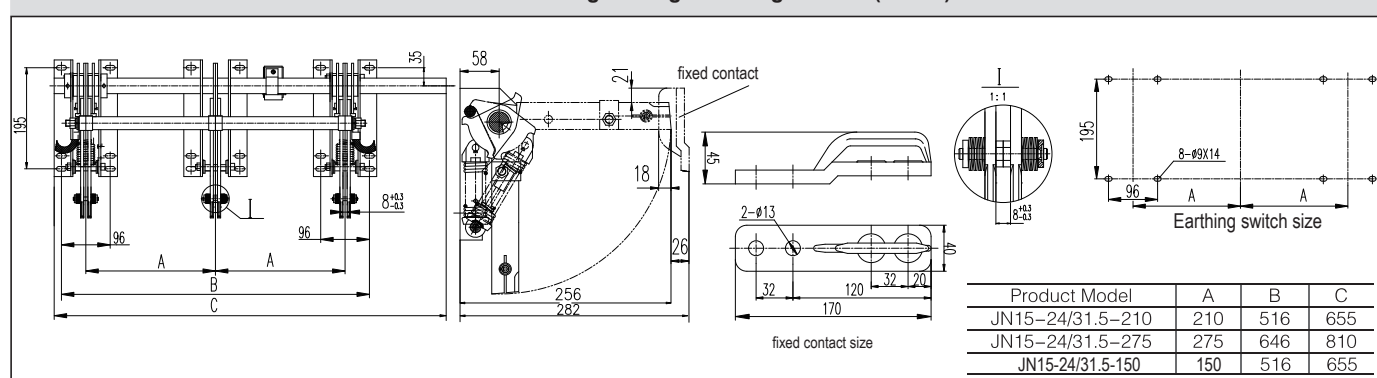
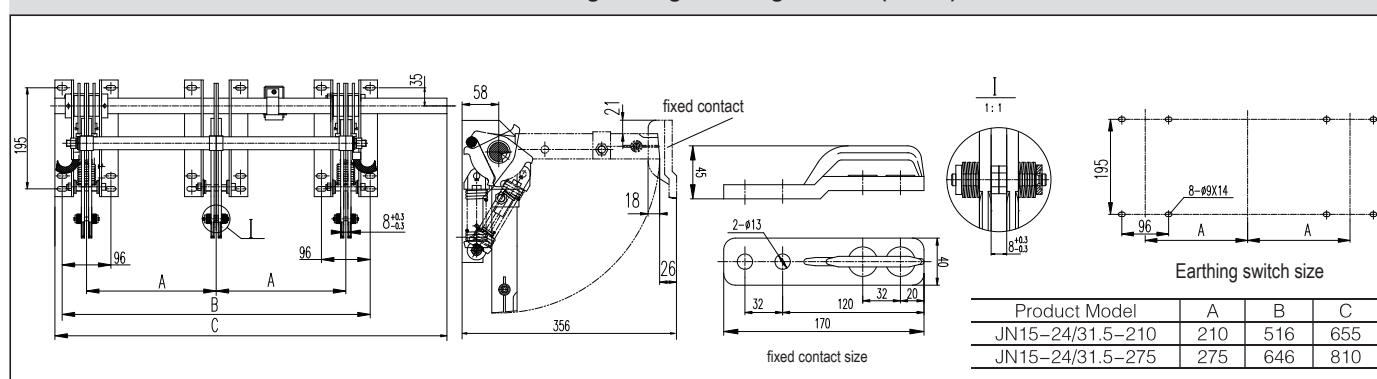
Model and meaning:

J N 15A-12 / 31.5 - □



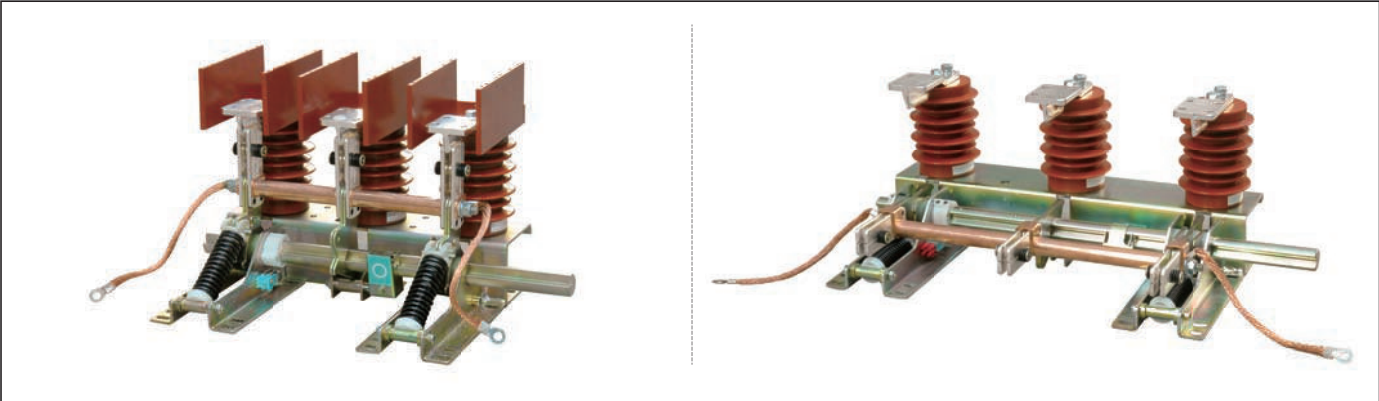
Ambient condition:

- 1.Altitude: ≤1000m
- 2.Ambient temperature: -10℃ ~+40℃
- 3.Earthquake intensity: ≤8 degree
- 4.Pollution level:II
- 5.Relative humidity: Daily average≤95%,Monthly average≤90%

Model No.: LYE101 Name: JN15A-12/31.5 Indoor AC high voltage earthing switch**Model No.: LYE101.1 Name: JN15A-24/31.5 Indoor AC high voltage earthing switch (H=282)****Model No.: LYE101.2 Name: JN15A-24/31.5 Indoor AC high voltage earthing switch (H=356)**

12KV EARTHING SWITCH SERIES

Product No.:LYE102 Name:JN15-12/31.5 Indoor AC high voltage earthing switch



Summary:

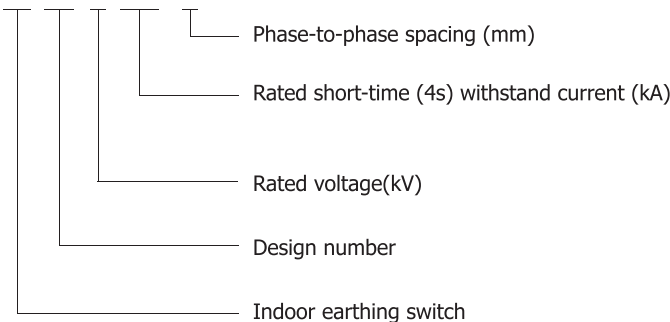
JN15-12/31.5 indoor AC high voltage earthing switch is an advanced level product with high-tech parameters performance improved on the basis of ES1 earthing switch.After comprehensive evaluation,it conforms to GB1985 AC HV disconnect switch and earthing switch and IEC129,applies to power system of 3-12kV and three-phase AC 50(60)Hz.It owns short-circuit making capacity to protect other electric equipment not being damaged.Can be used with various high voltage switchgear,also play a protective role in the high-voltage electrical equipment overhaul.

Technical Parameter:

Item		Unit	Data	
Rated voltage		kV	12	
Rated short-time withstand current		kA	31.5	
Rated short-circuit duration		s	4	
Rated short-circuit making current		kA	80	
Rated peak withstand current		kA	80	
Rated insulation level	PF withstand voltage (1 min)	kV	Phase to earth Phase to phase	42
	Lightning impulse withstand voltage			75
Mechanical endurance		Time	2000	

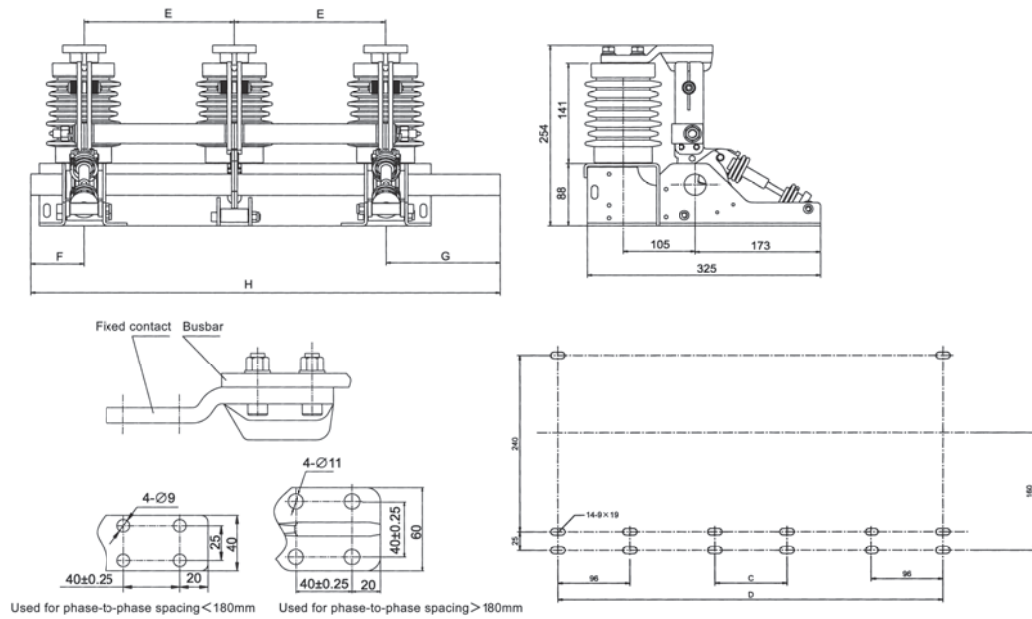
Model and meaning:

J N 15 -12 / 31.5 - □



Ambient condition:

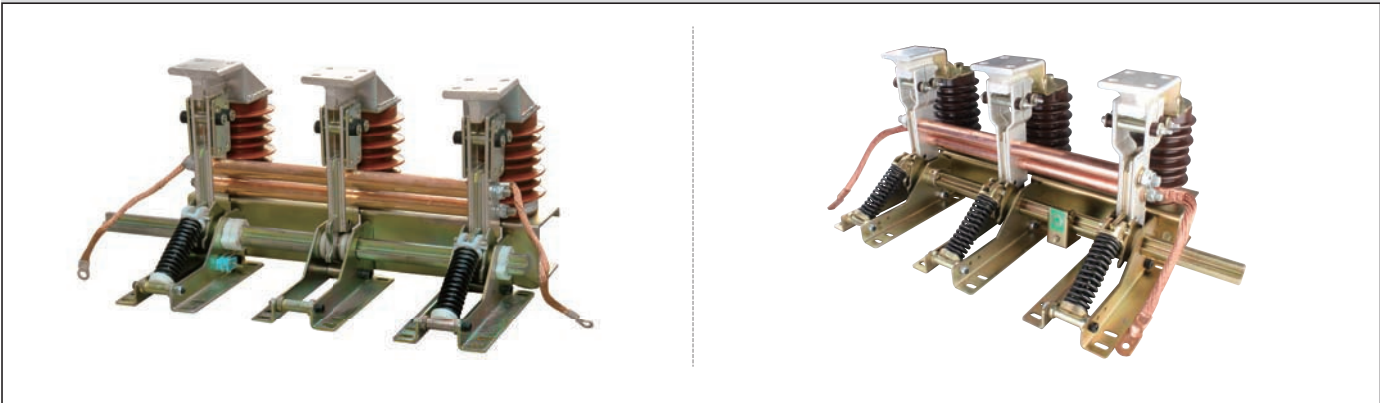
- 1.Altitude:≤1000m
- 2.Ambient temperature:-10℃ ~+40℃
- 3.Earthquake intensity: ≤8 degree
- 4.Pollution level:II
- 5.Relative humidity: Daily average≤95%,Monthly average≤90%



Product Model	E	F	G	H	D	C
JN15-12/31.5-165	165	75	160	565	426	
JN15-12/31.5-180	180	75	160	595	456	
JN15-12/31.5-200	200	75	160	635	496	
JN15-12/31.5-210	210	75	160	655	516	
JN15-12/31.5-220	220	75	160	675	536	
JN15-12/31.5-230	230	75	160	695	556	96
JN15-12/31.5-250	250	75	160	735	596	96
JN15-12/31.5-275	275	75	185	810	646	96

12KV EARTHING SWITCH SERIES

Product No.:LYE103 Name:JN17-12/40 Indoor AC high voltage earthing switch



Summary:

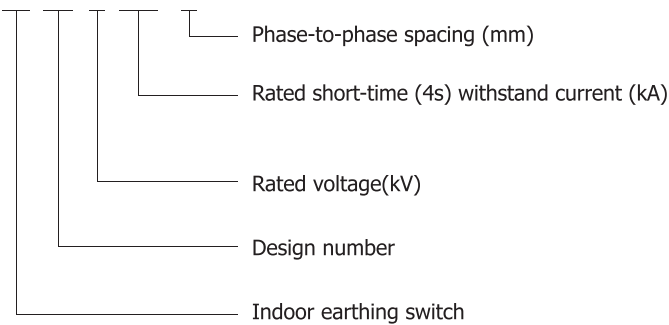
JN17-12/40 indoor AC high voltage earthing switch is an advanced level product with high-tech parameters performance.After comprehensive evaluation,it conforms to GB1985 and IEC129 standard ,applies to power system of 3-12kV and three-phase AC 50Hz.It owns short-circuit making capacity to protect other electric equipment not being damaged.Can be used with various high voltage switchgear,also play a protective role in the high-voltage electrical equipment overhaul.

Technical Parameter:

Item		Unit	Data	
Rated voltage		kV	12	
Rated short-time withstand current		kA	40	
Rated short-circuit duration		s	4	
Rated short-circuit making current		kA	80	
Rated peak withstand current		kA	80	
Rated insulation level	PF withstand voltage (1 min)	kV	Phase to earth Phase to phase	42
	Lightning impulse withstand voltage			75
Mechanical endurance		Time	2000	

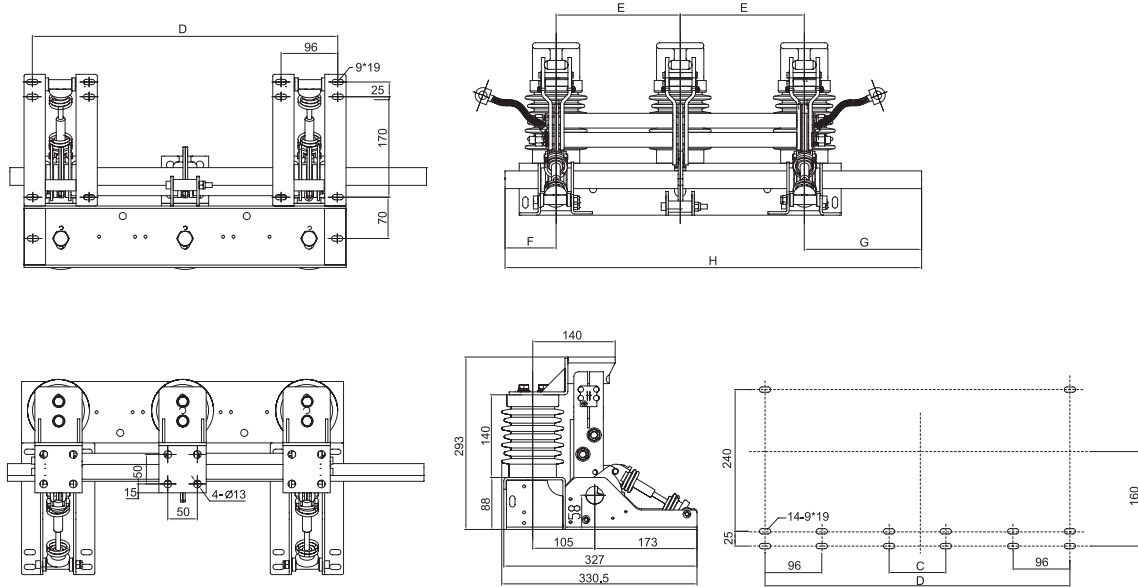
Model and meaning:

J N 17 -12 / 40 - □



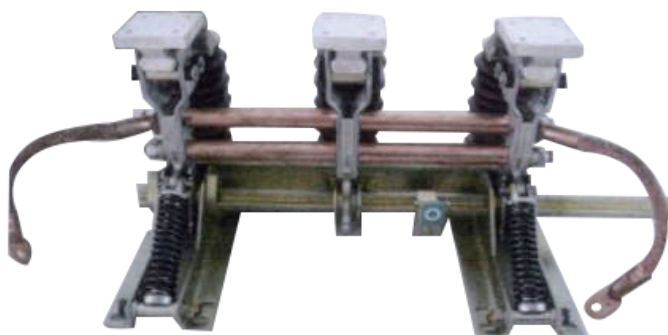
Ambient condition:

- 1.Altitude:≤1000m
- 2.Ambient temperature:-10℃ ~+40℃
- 3.Earthquake intensity: ≤8 degree
- 4.Pollution level:II
- 5.Relative humidity: Daily average≤95%,Monthly average≤90%

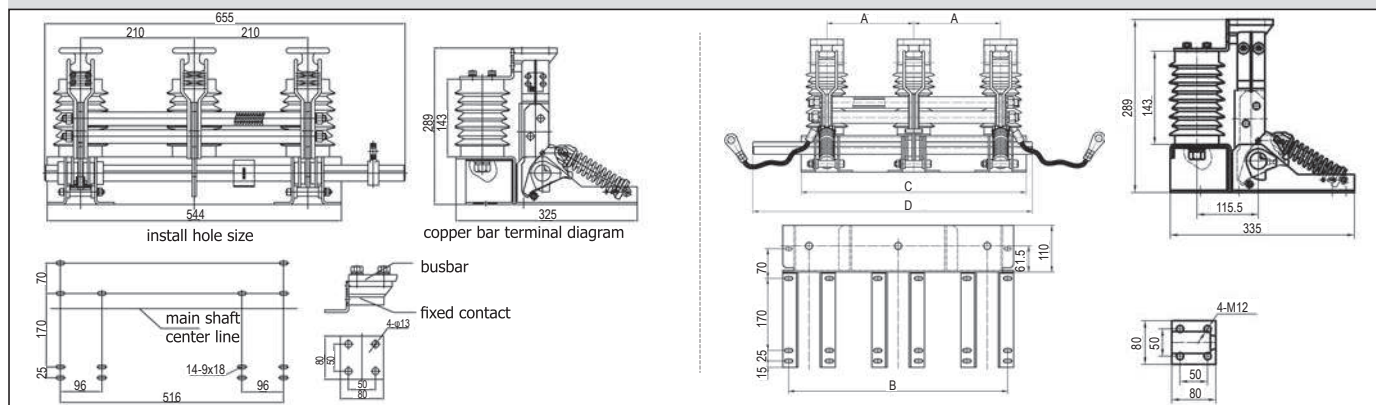


Product Model	E	F	G	H	D
JN17-12/40-210	210	50	185	655	516
JN17-12/40-220	220	50	185	675	536
JN17-12/40-230	230	50	185	695	556
JN17-12/40-250	250	50	185	735	596
JN17-12/40-275	275	50	210	810	646

12KV EARTHING SWITCH SERIES



Product No.:LYE107 Name:JN15-12/50



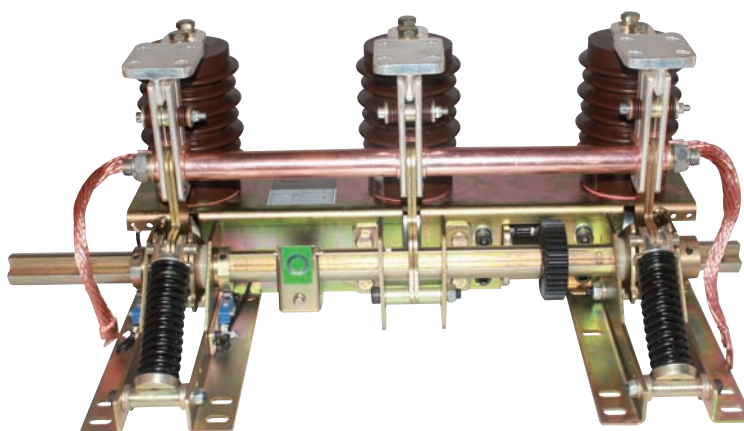
Technical requirement:

	A	B	C	D
Rated voltage	210	230	250	275
Rated short-time withstand current	516	556	596	646
Rated short-circuit duration	544	584	624	647
Rated short-circuit making current	655	695	735	810

1. Three phase rigid position's different period not more than 3mm.
2. The position of each phase skew not more than 2mm.
3. Insulation Monitori ,Power Frequency Voltage-Withstand 42kv/min
4. Each measurement of Contact Resistance not more than 60μΩ

Item	Unit	Data
Rated voltage	kV	12
Rated short-time withstand current	kA	50
Rated short-circuit duration	s	4
Rated short-circuit making current	kA	80
Rated peak withstand current	kA	80
Rated insulation level	PF withstand voltage (1 min)	kV
	Lightning impulse withstand voltage	75
Classification of mechanical life		M1
Mechanical endurance	Time	2000

12/24KV EARTHING SWITCH (MOTORIZED TYPE)



Summary:

Our company developed the motor-operated mechanism is an advanced Intelligent operation mechanism. Connecting JN15 earth switch with short-circuit capacity and fast closing mechanism compatible, capable of photosynthesis test electrical earth switch under the operating conditions, with reliable "five anti" chain

It is Meet with demand for smart grid development, To use the earth switch, It is of significance and value to apply the earth switch.

Main features:

1. Simple installation, with a combination of the main earthing switch, without changing the original install structure of earthing switch.
2. It can be achieved freely switch for manually operated and electrically operated.
3. It is safe and reliable, attempts to prevent the conversion function can be realized on control and protection for the motor.

Debug method:

After JN15-12/D31.5 electrical grounding switch is installed, according to the following steps for debugging:

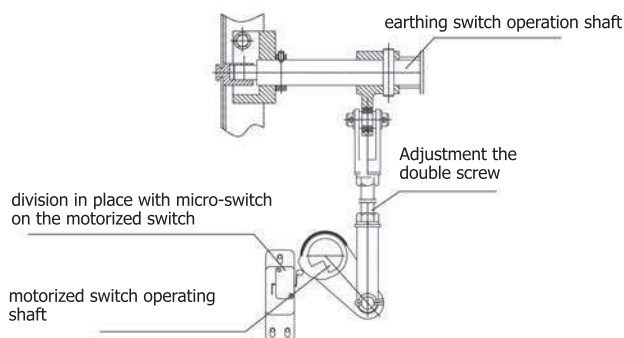
1. Read the specification of REC-10-HB switchgear electric control device. According to the wiring terminal diagram of REC-10-HB switchgear electric control device sample, connect electric earthing switch wiring terminal in accordance with the electrical diagram terminal number.
2. Motor earthing switch terminal is pluggable terminal block. When complete connection, before testing power-on, user should pull out terminal, hang measured terminal 1, 2 foot motor power. During press the switch knob of electric control device, need insure 1 foot is positive power (VDD), 2 foot is negative power (GND). If wiring is correct, then plug terminal.
3. By test, observing whether the indicator light function of REC-10-HB switchgear electric control device is correct. If not correct, please check the correctness of terminal and in place of signal source of switch opening, closing is correct or not.
4. Manual operate earthing switch opening-closing, observing whether the display of electric control device is correct. If correct, can debug by motor operation.
5. Special note of motor operation test: switchgear electric control device send instruction of earthing switch opening or closing. If the operating conditions are met, then will perform earthing switch opening or closing operation, observing

whether the mechanism rotation direction is correct. If mechanism rotation direction is opposite, user should immediately turn off the power or press the scram button on device to stop the current operation, try again after changing motor positive and negative terminals. If the operating conditions are not met, (such as the interlocking signal of control device 11 foot is not correct), control device will not work properly, the user should settle accordingly to meet the operating conditions and try again.

6. The switch off motion and the signal of the opening and closing reaching of the electric earthing switch are subject to the connect between operating shaft cam arrangement and microswitch. When electric earthing switch is connected with cabinet interlock, we should offer electric control device power supply, Combining with the control device opening and closing indicator light, manually adjust the opening and closing reaching of earthing switch (note: When the spring of earthing switch is just over dead point, the operating handle should seize up immediately.), observe whether the control device opening and closing indicator light can synchronously indicate or not. Otherwise, we should adjust the upper and lower position of twin thread screw in the interlock to make them synchronic. If interlock position error is too big to reach synchronic, we should make a fine adjustment in position between microswitch and cam, and then observe control device just to make the corresponding indicator light light.

12/24KV EARTHING SWITCH (MOTORIZED TYPE)

attached drawing:

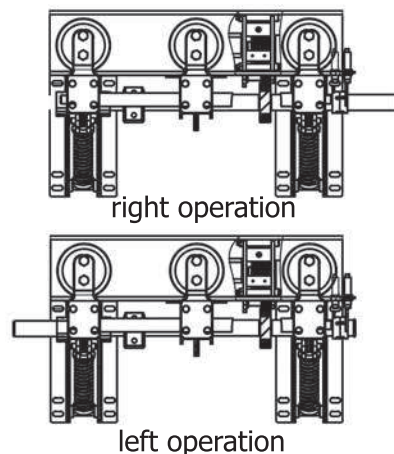


Applying Ambient condition :

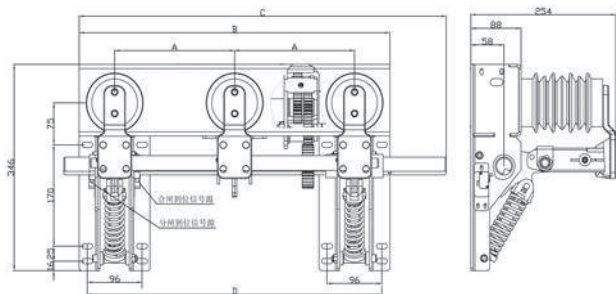
1. The height above sea level is not exceed 1000m
2. Ambient temperature :+40%,-25%
3. Earthquake intensity :not exceed 8 degrees
4. Ambient humidity :the average humidity of a day should be no more than 95%, the average pressure of month should be not more than 90%.
5. Contamination level: II

Order Information:

1. When order electrical earthing switch,shall specify whether need extended length flexible connection.
2. Whether need for auxiliary switches, auxiliary switch whether need to lead to terminals.
3. Please note that operation way of switch is arm drive or bevel gear drive.(match with chain parts)
4. Mark left or right operating direction of motor earth switch.Our company stipulate that left operating or right operation as follows.
5. The electrical devices have three options:
 - (1)ERC-10-HB-A1 is installed on the board of instrument room, is a conventional ancillary products.
 - (2)ERC-10-HB-A2 is installed in the door board of instrument room, with RS485 communication interface, is optional part.
 - (3)EPC-20-HB-A1 is installed on the guide rail in instrument room, is optional part.



JN15-12/D31.5 Motorized earthing switch Outline and installation size



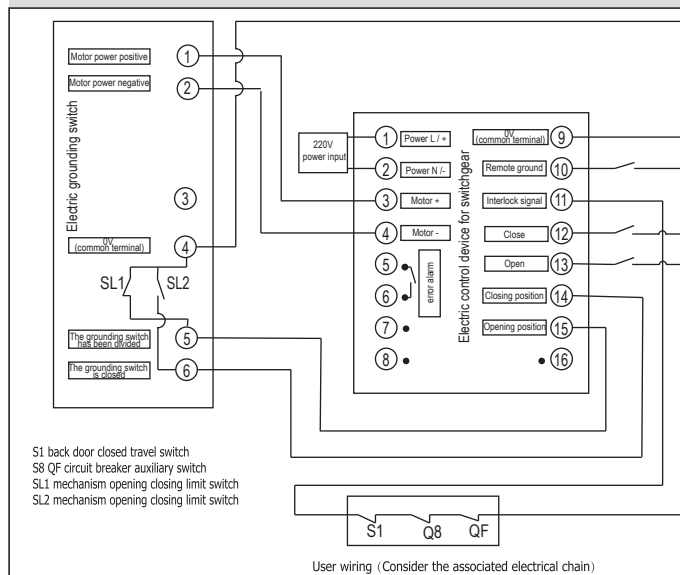
Terminal diagram

Terminal No	1	Motor power anode
	2	Motor power cathode
	3	Ov (common)
	4	Earthing switch open
	5	Earthing switch closed

Assort table

A	B	C	D
210	544	655	516
275	674	785	646

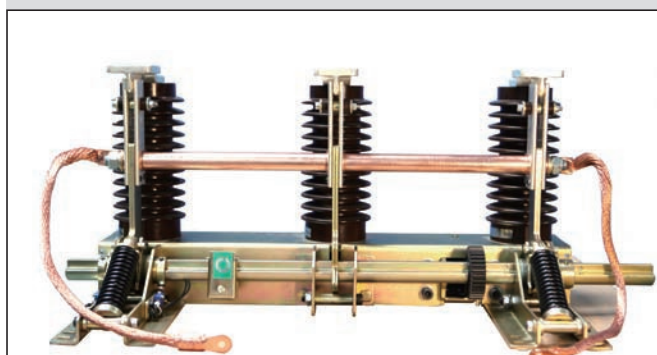
Control circuit and wiring of motorized earthing switch



Wiring instructions of motorized earthing switch

1. When switch equipment motorized control device terminal No. 3 and No. 4 corresponds to terminal No. 1 positive and No. 2 cathode, be careful not to reverse the polarity of the power supply to avoid damage to the motor. Through the debugging to observe whether the rotates direction of earthing switch operating shaft gear met the switch's opening, closing state, otherwise swap the positive and negative.
2. If operate motorized earthing switch separately(not loading), switch equipment motorized control device terminal No. 11 and No. 10(0V common terminal) short.

CONTROLLER: ERC-10-HB-A1 INSTRUCTIONS OF EARTHING SWITCH (MOTORIZED TYPE)

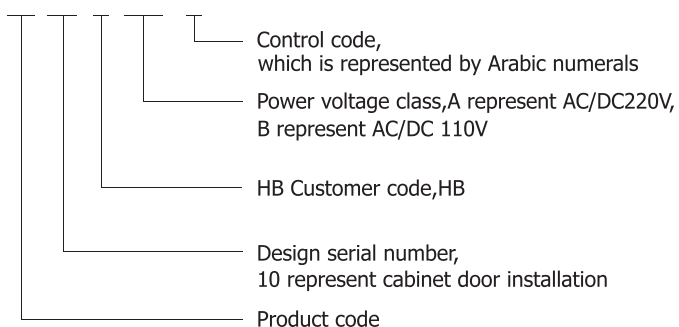


Summary:

ERC-10-HB-A1 switchgear pneumatic-electrical control device can realize control and protection of electric mechanism. The controller can brake motor, and reverse drive motor to remove the stuffy vehicle locked status when electric mechanism blocked in driving motor work, such as install is not in place or jam.

Model and meaning:

ERC - □ - □ - □ - □



Technical parameter6:

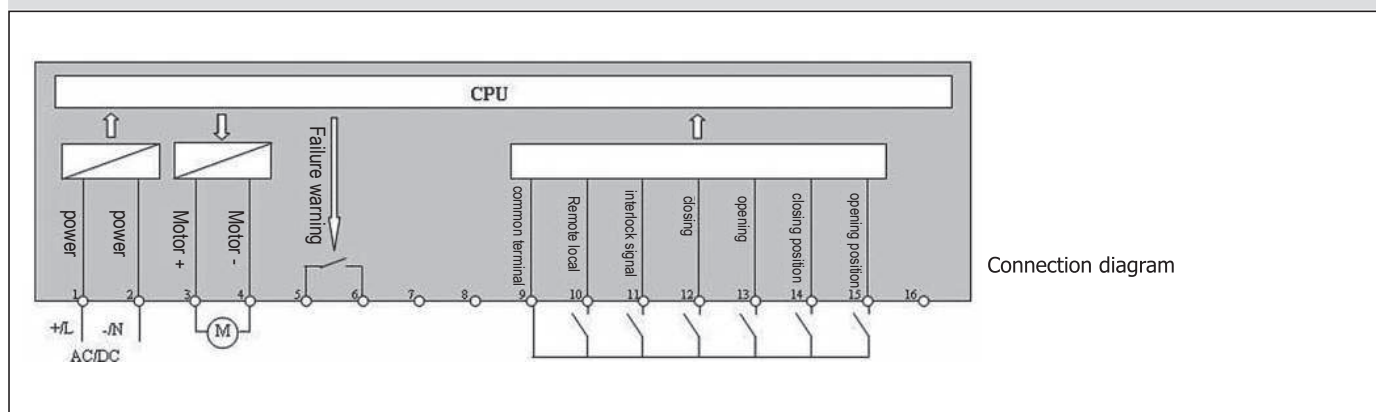
1. Supply voltage: AC/DC 220V, AC/DC 110V
2. Motor rated voltage: DC220V, DC110V
3. Max. motor rated power: Max. 300W
4. Power consumption: < 2W
5. Power frequency withstand voltage: AC2.5KV 1min
6. Output contact: 1NO, 5A, AC 250V
7. Protection level: IP20
8. Ambient temperature: -20 °C to +50°C
9. Dimension: Outline dimension Height* Width*Length=125*78*69
10. Installation method: Cabinet door installation

Instructions:

Button	Switch On	The controller allows operation, then push the button: 1. System is in standby mode, it will start the motor to the on-position. 2. System is in starting the motor to the on-position, it is not responding to the command.
	Switch Off	The controller allows operation, then push the button: 1. System is in standby mode, it will start the motor to the on-position. 2. System is in starting the motor to the on-position, it is not responding to the command
	Reset/E-stop	When controller is in protected and locked status, the red protected indicator light of the panel light up, push the button, system return to standby state. If push the button when system is in starting the motor to the on-position or off-position, it will brake motor and return to standby state immediately.
Indicator Light	Power	Power indicate function. power-on, light up, green; power-off ,blank out.
	Ready	Ready indicate function, green. Light up when ready, and blank out when unready.
	Remote	Remote operate indicate function, red. It's in remote operation mode when light up, and blank out when unready.
	On-position	Light up when electric mechanism is in on-position, red
	Off-position	Light up when electric mechanism is in off-position, red
	Accident	Light up when system is in protected and locked status, red; and blank out when reset.

1	Power+(L)	The controller power supply the positive or L
2	Power-(N)	The controller power supply the cathode or N
3	Motor+	The controller drive signal to output, connect drive motor "+"
4	Motor-	The controller drive signal to output, connect drive motor "-"
5、6	Failure warning	Normally open contacts. Open when no block and rotate.Close when block and rotate.
7、8	obligate	
9	Public terminal	Switch input signal common terminal
10	Remote / local	Short circuit when switch input to common terminal,it will be remote operation mode.Open when switch input to common terminal,it will be remote operation mode.
11	Interlock signal	Valid when switch input to public terminal is short circuit
12	Remote switch on	Valid when switch input to public terminal is short circuit
13	Remote switch off	Valid when switch input to public terminal is short circuit
14	Closing position	Valid when switch input to public terminal is short circuit
15	Opening position	Valid when switch input to public terminal is short circuit
16	obligate	

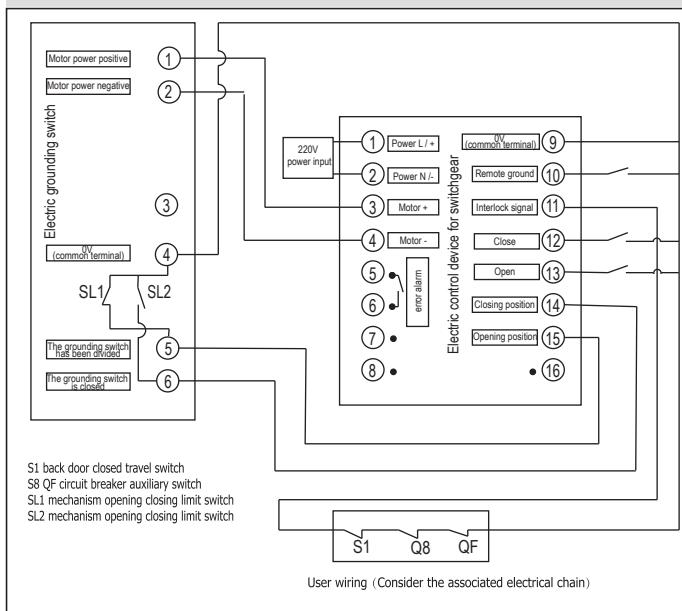
Terminal :



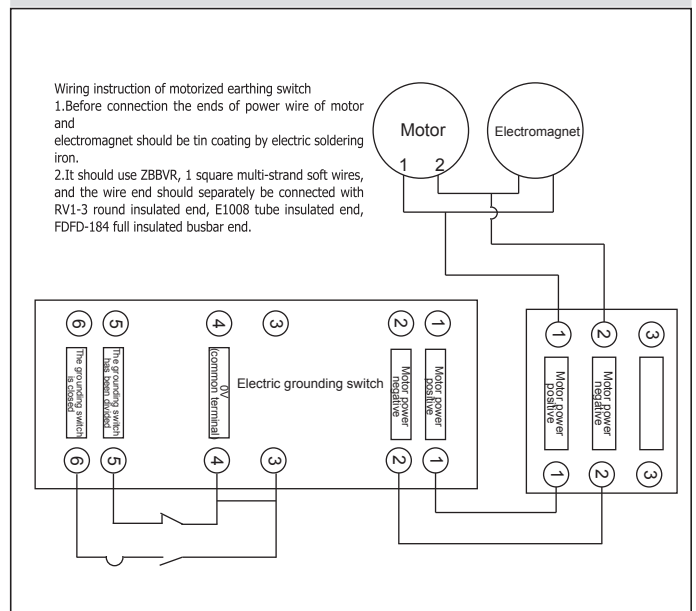
Control logic:

1. The on- off switch operation can only be allowed when the interlocking signal is working.
2. In the process of on-off switch operation, the controller shall still execute the original operation when input the on-off order.
3. In the process of on-off switch operation, the controller shall stop working when press the Reset/sudden stop button, or the interlocking signal is inoperative.
4. The controller shall delay 0.3s, stop 1s, then reverse 0.3s when electric mechanism is up to on position. If the controller has not reversed 0.3s for power failure when the mechanism reaches on position, it should reverse 0.3s again when power is normal. (It can only be operated when the earth switch is in on position)
5. When it is locked-rotor protected, the controller shall reversed 1.5s after stop operation. The setting value for locked-rotor current is tentatively 1.8A.
6. The operation is forbid within 4s upon the completion of on-off switch (including 1s reverse time).

Control circuit and wiring of motorized earthing switch

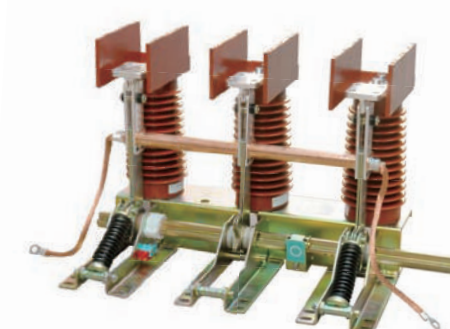
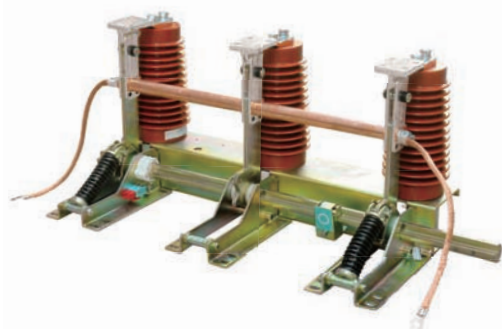


Internal wiring diagram of motorized earthing switch Motor



24KV EARTHING SWITCH SERIES

Product No.: LYE104 Name: JN15-24/31.5 Indoor AC high voltage earthing switch



Technical Parameter:

Summary:

JN15-24/31.5 indoor AC high voltage earthing switch is an advanced level product with high-tech parameters performance. After comprehensive evaluation, it conforms to GB1985 and IEC62271 standard, applies to power system of 24kV and three-phase AC 50Hz. It owns short-circuit making capacity to protect other electric equipment not being damaged. Can be used with various high voltage switchgear, also play a protective role in the high-voltage electrical equipment overhaul.

Item		Unit	Data	
Rated voltage		kV	24	
Rated short-time withstand current		kA	31.5	
Rated short-circuit duration		s	4	
Rated short-circuit making current		kA	80	
Rated peak withstand current		kA	80	
Rated insulation level	PF withstand voltage (1 min)	kV	Phase to earth Phase to phase	65
	Lightning impulse withstand voltage			125
Mechanical endurance		Time	2000	

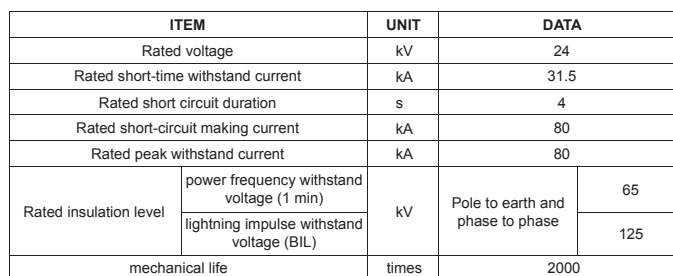
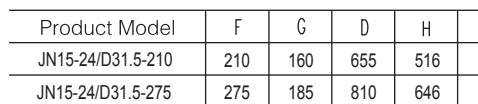
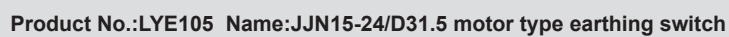
Model and meaning:

J N 15 -24 / 31.5 - □

- Phase-to-phase spacing (mm)
- Rated short-time (4s) withstand current (kA)
- Rated voltage(kV)
- Design number
- Indoor earthing switch

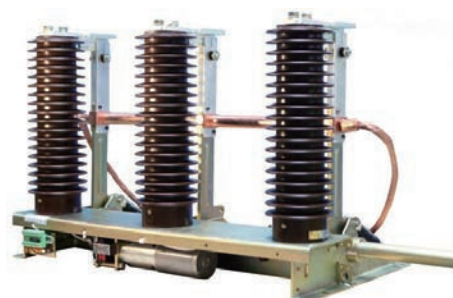
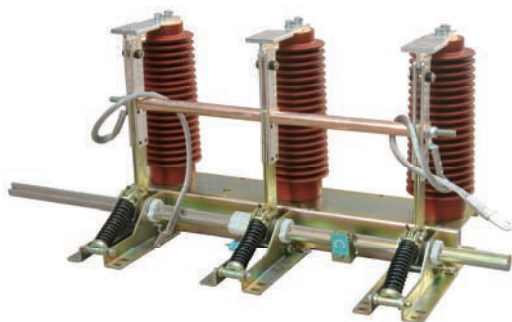
Ambient condition:

1. Altitude: ≤1000m
2. Ambient temperature: -10°C ~ +40°C
3. Earthquake intensity: ≤8 degree
4. Pollution level: II
5. Relative humidity: Daily average ≤95%, Monthly average ≤90%



40.5KV EARTHING SWITCH SERIES

Product No.:LYE105 Name:JN22B-40.5/31.5 Indoor AC high voltage earthing switch



Summary:

JN22B-40.5/31.5 indoor AC high voltage earthing switch is an advanced level product with high-tech parameters performance improved on the basis of JN22-40.5/31.5. After comprehensive evaluation, it conforms to GB1985 AC HV disconnect switch and earthing switch and IEC62271-102:2002, applies to power system of 40.5kV and AC 50Hz. Can be used with KYN61-40.5 and other types high voltage switchgear, also play a protective role in the high-voltage electrical equipment overhaul.

Technical Parameter:

Item		Unit	Data	
Rated voltage		kV	35	
Maximum voltage		kV	40.5	
Rated short–time withstand current		kA	31.5	
Rated short–circuit duration		s	4	
Rated short–circuit making current		kA	80	
Rated peak withstand current		kA	80	
Phases center distance		mm	280,300,350,400	
Rated insulation level	PF withstand voltage (1 min)	kV	Phase to earth Phase to phase	95
	Lightning impulse withstand voltage			185

Model and meaning:

J N 22B-40.5 / 31.5 - □

Phase-to-phase spacing (mm)

Rated short-time (4s) withstand current (kA)

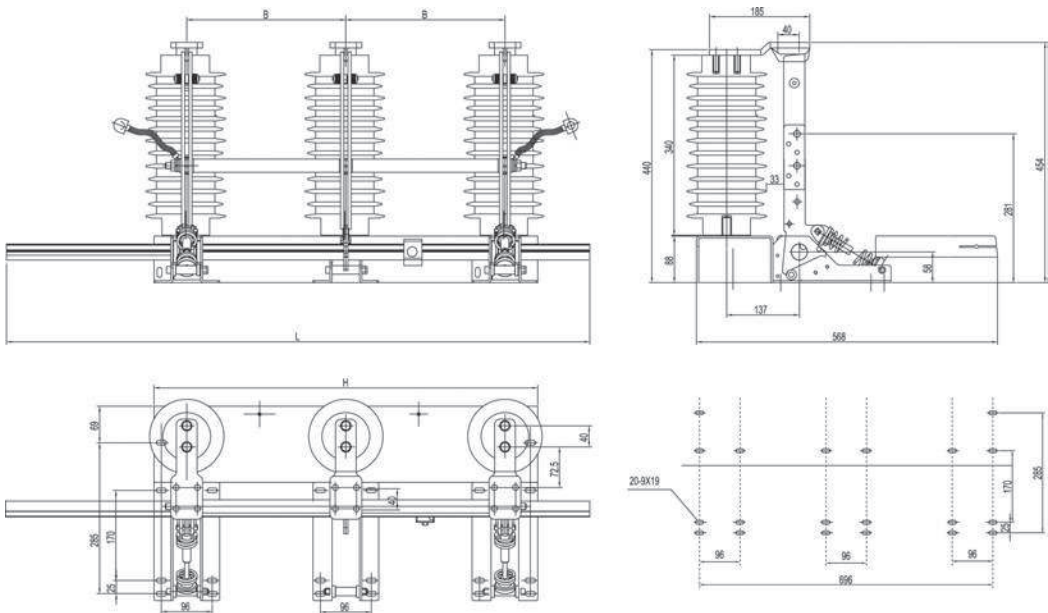
Maximum voltage(kV)

Design number

Indoor earthing switch

Ambient condition:

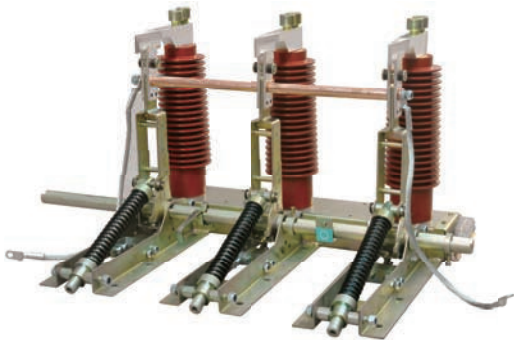
1. Altitude: $\leq 1000\text{m}$
2. Ambient temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
3. Earthquake intensity: ≤ 8 degree
4. No flood, no explosion risk, no heavy dust and shake.



B	H	L
280	750	1180
300	790	1180
350	890	1280
400	990	1374

40.5KV EARTHING SWITCH SERIES

Product No.: LYE106 Name: JN22-40.5/31.5 Indoor AC high voltage earthing switch



Summary:

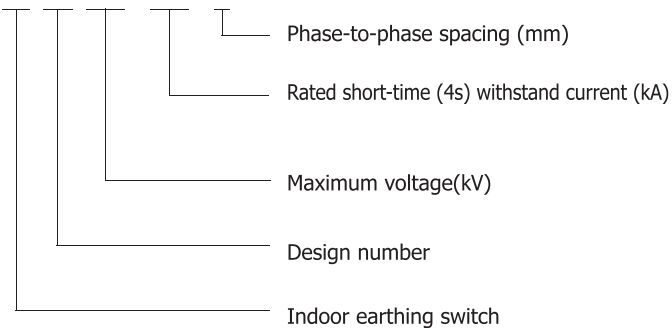
JN22-40.5/31.5 indoor AC high voltage earthing switch is an advanced level product with high-tech parameters performance. After comprehensive evaluation, it conforms to GB1985 AC HV disconnect switch and earthing switch, applies to power system of 40.5kV and AC 50Hz. Can be used with KYN61-40.5 and other types high voltage switchgear, also play a protective role in the high-voltage electrical equipment overhaul.

Technical Parameter:

Item		Unit	Data	
Rated voltage		kV	35	
Maximum voltage		kV	40.5	
Rated short–time withstand current		kA	31.5	
Rated short–circuit duration		s	4	
Rated short–circuit making current		kA	80	
Rated peak withstand current		kA	80	
Phases center distance		mm	280,300,350,400	
Rated insulation level	PF withstand voltage (1 min)	kV	Phase to earth Phase to phase	95
	Lightning impulse withstand voltage			185

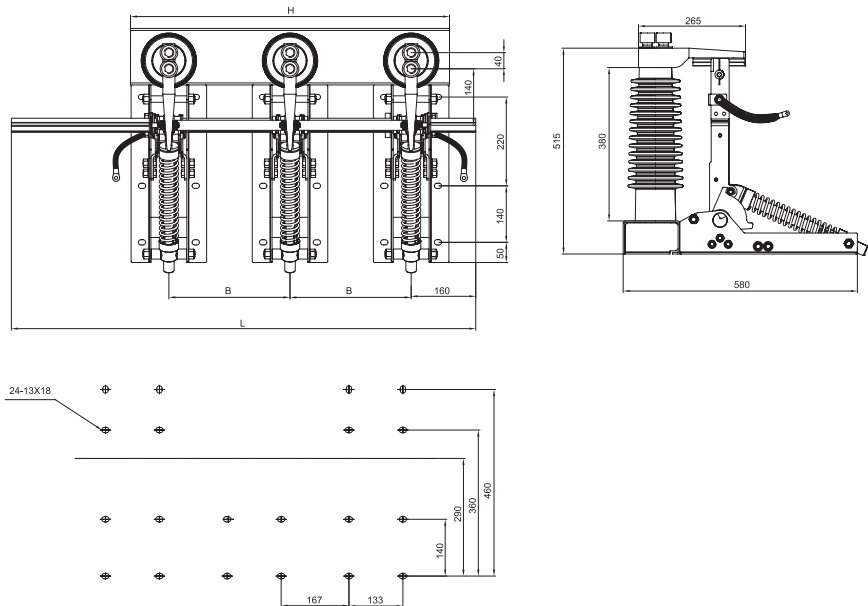
Model and meaning:

J N 22- 40.5 / 31.5 - □



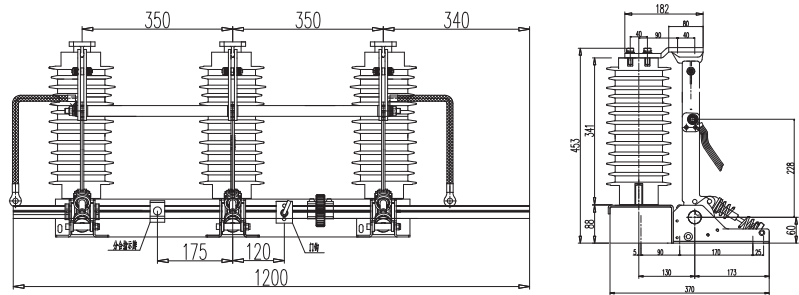
Ambient condition:

1. Altitude: $\leq 1000\text{m}$
2. Ambient temperature: $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
3. Earthquake intensity: ≤ 8 degree
4. No flood, no explosion risk, no heavy dust and shake.

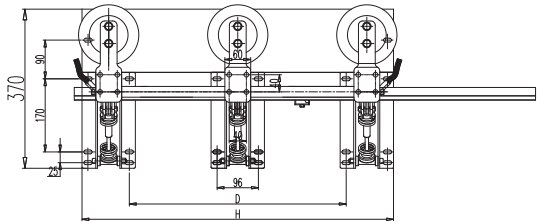


B	H	L
280	750	1180
300	790	1180
350	890	1280
400	990	1374

Product No.:LYE107 Name:JN22B-40.5/D31.5 motor type earthing switch



Product Model	E	G	D	H	L
JN22B-40.5/D31.5-280	280	410	464	684	1050
JN22B-40.5/D31.5-300	300	390	504	724	1100
JN22B-40.5/D31.5-350	350	340	604	824	1200
JN22B-40.5/D31.5-360	360	330	624	844	1200



ITEM		UNIT	DATA	
Rated voltage		kV	40.5	
Rated short-time withstand current		kA	31.5	
Rated short-circuit making current		kA	80	
Rated peak withstand current		kA	80	
Phase distance		mm	300,350,400	
Rated insulation level	power frequency withstand voltage (1 min)	kV	Pole to earth and phase to phase	95
	lightning impulse withstand voltage (BIL)			185