

## KYN28C-7.2/12(J.R)/31.5-40 Armoured Removed AC Metal-clad Switchgear

### Summary

KYN28C-7.2/12(J.R)/31.5-40 armoured movable AC metal-clad switchgear (short for F-C circuit panel) is refer to distribution device applies to 3.6~12kV, rated frequency 50/60Hz power system. Large rated short circuit breaking current under rated current, Widely used for electrical power, chemical and generate electricity department, etc. Flexible configure, convenient operation, security and reliability, the performance conforms to GB3906-91, IEC62271-200 standard. It applies to 1200 kW and below power factor motor or 1600 kVA or below transformer for control and protection.



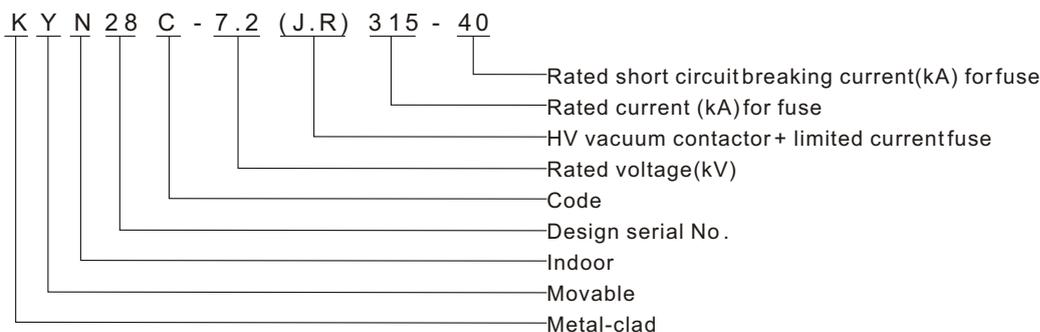
### Standard

GB/T11022	The Common Technical Clauses of HV Switchgear and Controlgear Standard
IEC62271 & GB3906	3~35kV AC Metal Enclosed Switchgear
GB 3309	The Mechanical Test of HV Switchgear at Normal Temperature
GB 311.1	Insulation Configuration of HV Distribution Equipment
GB/T16927.1	First Part in HV Test Technology: General Test
GB 15166.2	AC HV Fuse, Limited Current Fuse
GB/T14808	AC HV Contactor and Motor Starter

### Ambient condition

1. Ambient temperature: -15°C~+40°C, daily average: ≤35°C;
2. Altitude: ≤1000m;
3. Relative humidity: daily average ≤95%, monthly average ≤90%;
4. Earthquake intensity: ≤8 degree;
5. Occasions without flammable and explosive matter, without corrosive chemical and frequent severe vibration.

### Model



### Structure feature

1. The enclosure and each compartment are separated by metal sheet. The enclosure and dummy plate are made of aluminium-zinc plated steel. Associate with KYN28-12 abreast to design many kinds of schemes for distribution device according to usage. It can use with KYN96-12 parallel according to requirement.
2. Assembly structure: The enclosure is completely made of aluminium-zinc plate steel sheet after processed by CNC machine and multi-bending, then is assembled with bolts. So it has strong mechanical strength and guarantee the neatness and good appearance. Cubicle door is through plastic spray treatment to ensure good anti-impact and corrosion-proof ability.

3. Vacuum contactor and fuse are mounted on handcart, central drawout type, action of pulling and pushing depend on lead screw, low operation strength, convenient to exchange, there is guideway in the handcart compartment.
4. Busbar compartment are used for installation busbar. Main busbar gets across busbar insulating bushing to isolate the neighboring panel busbar compartment. Main virtue for design is limiting the accident and prevent from spreading to other area when break out emergency in busbar compartment.
5. Allowed CT, earthing switch, lightning arrester, heater and cable to mount in cable compartment. Equip with slotting and knock-down non metal sealed board and stainless steel.
6. Allowed relays, instruments, signal light and operating switch to mount in relay compartment. It can install small busbar compartment on the top of relay compartment according to user requirement, capacity for covering fifteen control busbar.
7. The protection of enclosure is IP4X, even if open the door, the protection class also reach IP2X, It can prevent human and outside solid from approaching living part and moving components.
8. It is normal operation when repair any compartment except main busbar compartment.
9. There is a channel on the top of circuit breaker compartment, busbar compartment, cable compartment. When occur emergency relative to circuit breaker, main busbar and cable compartment and appear arc, the gas pressure in panel will not go up until reach utmost, then metal board open automatically to release gas pressure and assure of security for human and equipments.
10. There is a secure and reliable mechanical interlock device to meet five protection in the panel.
  - 1.1.Prevent from drawing out and plugging in primary isolating contact with electric charges.
  - 1.2.Prevent from making contactor (or circuit breaker) when close earthing switch.
  - 1.3.Prevent from making earthing switch with electricity when handcart is on working position.
  - 1.4.Prevent from entering into living separation.
  - 1.5.Prevent from fault open and close contactor( or circuit breaker).
11. Equip with earthing conductor inside panel to connect whole line panel. Panel frame, door, cover board, moving curtain board and circuit breaker handcart frame all connect with earthing conductor.
12. The air clearance between electrified body or electrified to earth is not less than 100 mm, The air clearance between electrified body and insulating components inside composite insulation is not less than 30mm.
13. It need not exchange main busbar when this product combine with KYN28 series circuit breaker panel, isolating panel, PT panel and measurement panel, it can run through directly.
14. SMC or DMC insulating material.

## Technical specification

### F-C Panel technical specification

Item		Unit	Data	
Rated voltage		kV	7.2	12
Rated frequency		Hz	50/60	50/60
1 min P.F. Withstand voltage	Phase to phase, phase to earth	kV	32	42
	Across open contacts	kV	36	48
Lightning impulse withstand voltage	Phase to phase, phase to earth	kV	60(peak)	75(peak)
	Across open contacts	kV	70(peak)	85(peak)
Main busbar	Rated current	A	630~4000	
	4s rated short time withstand current	kA	40	
	Rated peak withstand current	kA	100(peak)	
F-C	Rated current	A	315	
	Rated short time withstand current	kA	40	
	Rated peak withstand current	kA	100	
	Max join current	kA	3.2	
	Rated short circuit breaking current	kA	40	
	Rated short circuit making current	kA	100	
Outline dimension(W × D × H)		mm	650 × 1500(1300,1670) × 2300	
Protection degree			IP4X(open handcart compartment door: IP2X)	

## Technical Specification for AC Vacuum Contactor

Item	Unit	Data	
		V7C(ABB)	JCZ□
Rated voltage	kV	7.2/12	7.2/12
Rated current	A	400	400
Max rated breaking current	A	5000	3200
Rated short time withstand current 4s	A	5000	5000
Max peak withstand current	kA	55(1/21 cycle)	
Rated making current	A	5000(100 time)	5000
Mechanical endurance	Mechanical holding	10,000 time	25
	Electric holding		100
Natural closing time	ms	60~90	100 ± 30
Natural opening time	ms	15~30	35 ± 10
Rated operating voltage	V	≅110 ≅220	≅110 ≅220

## Outline dimension

