

# SWITCHGEAR

## KYN28-24

Armored removable  
metal closed switchgear



### Description

#### 1. Scope of application and main uses

KYN28-24 armored removable AC metal-enclosed switchgear (hereinafter referred to as switchgear) is suitable for indoor three-phase 50/60 Hz, rated voltage 24KV power systems. It is mainly used in power plants, substations, industrial and mining enterprises and high-rise buildings, as receiving and distributing electric energy and controlling, protecting and monitoring circuits.

KYN28-24 switchgear has various functions to prevent misoperation, including preventing the trolley from moving with load, preventing the grounding switch from closing the circuit breaker when it is closed, preventing the grounding switch from being closed with electricity, and preventing mistakenly entering the live compartment. KYN28-24 switchgear is equipped with ZN73 series mid-mounted high-voltage AC vacuum circuit breaker and solid-sealed vacuum switch with excellent performance. The secondary circuit of the switchgear is equipped with advanced and reliable control and protection components; The bus is insulated by heat shrinkable insulation material or epoxy coating, the electrode shape is optimized, and the cabinet structure is compact. KYN28-24 switchgear is a power distribution equipment with advanced technology, stable performance, reasonable structure, easy use, safety and reliability.

#### 2. Product reference standards

- (a) GB1984 High Voltage AC Circuit Breaker.
- (b) GB3906 3 ~ 35KV AC metal enclosed switchgear.
- (c) Common technical requirements of GB/T11022 standards for high-voltage switchgear and control equipment.
- (d) DL/T404 Indoor AC high voltage switchgear ordering technical conditions.
- (e) DL/T593 Technical guidelines for common ordering of high voltage switchgear.

#### 3. Use environmental conditions

##### ● Normal use conditions

- (a) Ambient temperature: maximum temperature: + 40 °C, minimum temperature:-15 °C, and the average value measured within 24 hours does not exceed 35 °C.
- (b) Humidity conditions are as follows:
  - the average daily relative humidity does not exceed 95%;
  - the average daily water vapor pressure does not exceed 2.2 kpa: the average monthly water vapor pressure does not exceed 1.8 kpa;Condensation occasionally occurs under such conditions;
- (c) the altitude does not exceed 1000m;
- (d) the ambient air is not significantly contaminated by dust, smoke, corrosive and/or combustible gases, vapors or salt spray;
- (e) Vibration or ground motion from outside the switchgear and control equipment is negligible;
- (f) The magnitude of electromagnetic interference induced in the secondary system does not exceed 1.6 KV.

##### ● Special conditions of use

When used under normal environmental conditions exceeding the specifications of GB/T11022, the company and users can negotiate and reach an agreement on special operating conditions exceeding the normal operating conditions. In order to prevent condensation, the switchgear is equipped with a heater. When the switchgear is in standby state, it should be put into use. When the switchgear is operating normally, attention should also be paid to putting the heater into operation.

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Technical parameter

1. Main technical parameter to see below table

No.	Name		Unit	Parameter			
1	Rated voltage		kV	24			
2	Rated frequency		Hz	50/60			
3	Rated insulation level	1min power frequency withstand voltage (effective value)	kV	Interphase	60	Insulation	79
		Lightning impulse withstand voltage (peak value)	kV	to ground	125	Fracture	145
		Power frequency withstand voltage of auxiliary control circuit	V	2000			
4	Rated current		A	630、1250、1600、2000、2500			
5	Rated short-circuit breaking current		kA	20		25	
6	Rated short-time closing current (peak value)		kA	50		63	
7	Rated short-time withstand current (4s)		kA	20		25	
8	Rated peak value withstand current		kA	50		63	
9	Rated voltage of auxiliary control circuit		V	DC or AC 110/220			
10	Protection grade			IP4X (Circuit breaker doors open or isolate compartment IP2X			
11	Overall dimension (W×D×H)		mm	800x1810x2380		1000x1810x2380	
12	Weight		kg	840~1440			

Note: The depth of the overhead inlet and outlet cabinet is 2360mm

2. Main technical parameter of ZN73-24 Vacuum circuit breaker

No.	Name		Unit	Parameter	
1	Rated voltage		kV	24	
2	Rated insulation level	1min power frequency withstand voltage (effective value)	kV	60	
		Lightning impulse withstand voltage (peak value)	kV	125	
3	Rated frequency		Hz	50/60	
4	Rated current		A	630、1250、1600、2000	630、1250、1600、2000、2500、3150
5	Rated short-circuit breaking current		kA	20	25
6	Rated short-time closing current (peak value)		kA	50	63
7	Rated short-time withstand current (4s)		kA	20	25

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8	Rated peak withstand current	kA	50	63
9	Rated single capacitor bank breaking current	kA	630	
10	Rated back-to-back capacitor bank breaking current	V	400	
11	Rated short circuit breaking current breaking cycles	cycles	50	
12	Mechanical life	cycles	20000	
13	Rated operating sequence		0-0.3s-CO-180s-CO	

### 3. Technical parameters of spring operating mechanism

No.	Name		Unit	Parameter
1	Rated operation voltage	Closing tripping coil	V	AC220、AC110、DC220、DC110
		Opening tripping coil		
2	Working current	Closing tripping coil	A	AC 220 or DC 220: 1.1 AC 110 or DC 110: 3.1
		Opening tripping coil		
3	Energy storage motor power		W	80、110
4	Energy storage motor Voltage		V	AC220、AC110、DC220、DC110
5	Motor energy storage time		S	≤ 10