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ZN63S-24(VSI+)

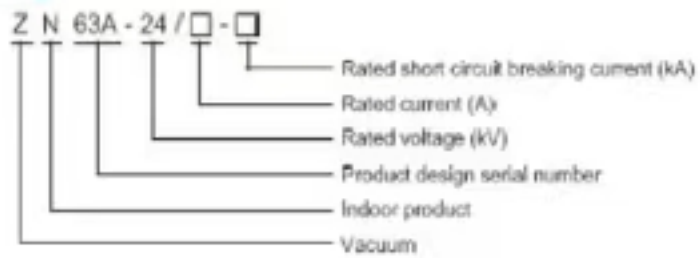
General

ZN63S-24(VSI+)indoor high voltage AC vacuum circuit breaker is a kind of indoor switchgear of electric system of 24KV.It is used as protection and control element in electric wire netting system,power equipment of industrial and mineral enterprises,Because of special advantage,vacuum circuit breaker can operate frequently or place of multi-breaking short circuit.

Vancuum circuit breaker adopts the design of integrating the operating mechanism with the breaker,available for serving as permanently installed unit,or as hand-trolley unit after equipped with underframe.

The breaker conforms to the national standards of GB1984-2003"High Voltage AC Circuit Breaker",DL/T403-2000"Technical Conditions for Ordering AC High voltage vacuum circuit breaker",DL/T403-2000"Technical Conditions for ordering 12-40.5KV High voltage vacuum circuit breaker",IEC62271:100"High voltage AC circuit breaker"and through the pattems test of quality supervision and inspection center of high voltage electrical equipments.

Type & Meaning



Normal use condition

a.Ambient temperature
Maximum:+40℃
Minimum:-15℃
b.Ambient temperature
Daily average relative humidity:≤95%
Monthly average relative humidity:≤90%
Daily average saturated vapor pressure:≤2.2×KPa
Monthly average saturated vapor pressure:≤1.8×KPa
c.Altitude:not exceeding 1000m
d.Used in the places free from any fire,explosion danger,severe pollution,chemical corrosion and intense vibration.
e.Vibration of switchgear external or land and can be ignored.

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Technical Data

Table 1 Main technical parameters

No.	Item		Unit	Value		
1	Rated voltage		KV	24		
2	Rated insulation level	1min power frequency withstand voltage	KV	65		
		Lighting impact withstand voltage(peak value)		125		
3	Rated frequency		HZ	50/60		
4	Rated current		A	630,1000,1250,1600,2000,2500		
5	Rated short circuit breaking current		KA	20	25	31.5
6	Rated short circuit making current(peak value)		KA	50	63	80
7	Rated short time withstand current		KA	20	25	31.5
8	Rated peak time withstand current		KA	50	63	80
9	Rated short circuit lasting time		s	4		
10	Rated operating sequence			O-0.3s-CO-180s-CO O-180s-CO-180s-CO		
11	Rated charge current of breaking/making cable		A	31.5		
12	Breaking time rated short circuit current		Time	50		
13	Breaking time		ms	≤80		
14	Mechanical life		Time	20000(M2 grade)		
15	Classify according to electricity life			E2 grade		
16	Classify according to capacitance			C2 grade		
17	Accumulated permitted wearing thickness of moving and static contact-head		mm	3		

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Table 2 mechanical feature parameter

No.	Item	Unit	Value
1	Open distance between contact-head	mm	14±1
2	Over travel	mm	3.5±1
3	Average switch-on speed	m/s	1.0±0.2
4	Average switch-off speed	m/s	1.3±0.2
5	Switch-on time	ms	35~70
6	Switch-off time	ms	20~50
7	Contact-head switch-on bounce time	ms	≤2
8	Different time of switch-on/off of 3 phase	ms	≤2
9	Each phase electric loop resistance	μΩ	≤50(630A)≤45(1250A)≤35(1600~2000A)
10	Center distance of phase	mm	210
11	Contact-head pressure	N	2400±200(20KA,25KA)3100±200(34.5KA)
12	Anti-rebound value of contact-head	mm	≤2.5

Table 3 mechanical feature parameter

No.	Item		Unit	Value
1	Rated operation voltage	Switch-on winding	V	AC110,AC220,
		Switch-off winding		DC110,DC220
2	Working current	Switch-on winding	A	AC220/DC220:1.1
		Switch-off winding		AC110/DC110:3.3
3	Energy storage motor power		W	70
4	Rated voltage of energy storage motor		V	DC:220/DC:110
5	Energy storage time		s	≤10

Structure of Products and Working Principle

1.General Structure of Breaker

Main parts of circuit breaker are installed in a tubular insulated cylinder,which is cast of epoxy resin with APG technology,as a result,it can effective prevent impacts to vacuum interrupter from extemal factors such as external shocks,filthy environment.Mains of circuit current path of main circuit on switch-on position of the breaker;

2.Operating mechanism

Operating mechanism is spring energy storage operating mechanism.There have a switch-on module in framework of circuit breaker,switch-off module composed by one or several of electromagnetic iron,secondary switch,installation instruction,direction Release electromagnet formed the sub-modules Gates,auxiliary switch,installation instructions and other components.front cooperation with sub-button operation manual storage holes spring energy state signs signs.