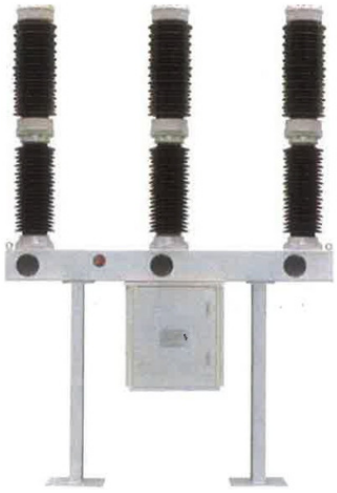
NEPEAN Power

145kV Circuit Breaker



AVAILABLE FROM NEPEAN ELECTRONICS

NEPEAN Power is a proven leader in the supply and manufacture of quality engineered solutions, products and technologies. Established in 1994, through the commitment of our dedicated team we have become a supplier of choice.

The NEPEAN Power LW36-72.5 self-energy outdoor HV AC sulfur hexafluoride circuit breaker is an outdoor three-phase porcelain column electrical equipment mainly used in AC 50Hz or 60Hz, 72.5kV electricity systems in extremely cold regions (for electric stations in general regions and -40°C extremely cold regions). This product can be operated frequently and used as a connection circuit breaker.

Features

- High performance -strong rated circulating ability: strong short circuit breaking ability at 31S0A, -40°C: 40kA.
- Long service life -electrical endurance: 31.5kAx21times (25kAx31times); mechanical life: 6000 times without maintenance and up to 10000 after simple adjustment.
- High reliability -sharing the arc extinguishing compartment structure with LW36-126; great product internal insulation redundancy; over- all cast aluminum alloy frame adopted for the spring structure; simple structure and high reliability; suitable for frequent operations.
- Reliable breaking performance.
- Reliable sealing performance; Annual leakage of SFs gas 0.5%
- Meeting the requirements of hard running environments -suitable for Class IV polluted places and -40”C~+40”C environments.
- Multi-structure forms-usually porcelain column type and handcart type.

Ordering Information

Part Number	Description

For more information please contact:
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Technical Specifications of Circuit Breaker

Rated Voltage		kV	72.5		
Rated Power Frequency Withstand Voltage (1min)	**To Earth, Between Phases**	kV	160		
	Across Open Contacts		160+42*		
Rated Lightning Impulse Withstand Voltage	**To Earth, Between Phases**		380		
	Across Open Contacts		380+59*		
Rated Frequency		Hz	50	50/60	
Rated Current		A	3150		
Rated Short-circuit Breaking Current Isc		kA	31.5	40	
Rated Short-circuit Marking Current (Peak)			80		
Rated Short-time Withstand Current			31.5		
Rated Peak Withstand Current (Peak Value)			80		
Rated Out-of-phase Breaking Current			8		
Short-line Fault Breaking Current			90%Isc, 75%Isc	90%Isc, 75%Isc	
Double Earth Fault Breaking Current			27.4	34.8	
Number of Rated Short-circuit Breaking Current		Times	21	20	
Rated Duration of Short-circuit		s	4	4	
First Pole to Clear Factor			1.5	1.5	
Rated Line Charging Breaking Current		A	10	10	
Rated Operating Sequence			0-0.3s-CO-180s-CO		
Rated SF_6 Gas Pressure/Gas Refilling Alarm Pressure/ Operation Lockout Pressure (Gauge Pressure, 20°C)		MPa	0.4/0.36/0.32	0.4/0.36/0.32	0.7/0.65/0.60
SF_6 Annual Leakage of SF_6 Gas		%	≤0.5		
SF_6 Gas Humidity Content (L/L) (20°C at handover)		L/L	≤150 x 10^{-6}		
Mechanical Endurance		Times	6000		
Opening Time		ms	≤30		
Closing-Opening Time		ms	≥70 (when running)		
Creepage Distance	**To Earth**	mm	≥2585		
	Across Open Contacts		≥2248		
Weight of SF_6 Gas Filled for One Set of CB		kg	6	6/8	
Weight of One Set of CB			1300		

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Technical Specifications of Mechanism

Energy-store Motor	Normal Voltage Range	V	85-110
	Rated Voltage		DC220/AC220
	Rated Power	W	720
Storage Time (at rated voltage)		s	≤20
Rated Voltage/Current of Opening Coil		V/A	DC110V/4A, DC220V/2A
			AC220V/5A
Auxiliary Switch	Rated Current	A	3(DC220V)/5(DC110V)
	Number of Auxiliary Contacts Normally Opened/ Normally Closed	Pair	11/11
Trip Switch	Rated Current	A	3(DC220V)/5(DC110V)
	Number of Auxiliary Contacts Normally Opened/ Normally Closed	Pair	2/2
Capacity of Terminal Carry Continuous Current		A	10
Voltage of Heater and Lighting Circuit		V	AC220
Mechanical Endurance		Times	10000

Mechanical Adjustment Parameters

Clearance Between Poles	mm	1200/1000 forhandcart type
Opening Time	ms	30±5
Closing Time		70±8
Breaking Time		≤60
Closing-Opening Time		≥70 (when running)
Opening-Closing Time		300
Non-simultaneity of three-phase opening		≤2
Non-simultaneity of three-phase closing		≤3