

GPN1-24kV Removable AC Metal-clad Enclosed Switchgear

Summary

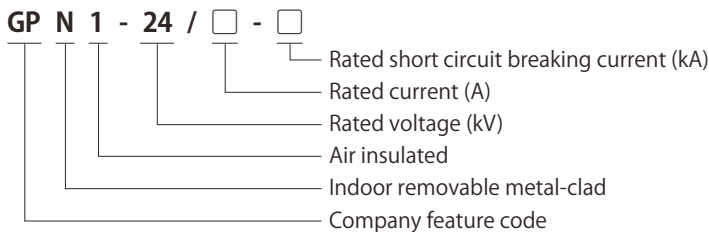
GPN1-24kV removable AC metal-clad switchgear (short for panel as below) is a new product, designed and developed by us, based on the introduction of advanced foreign design and manufacturing technology. The panel applies to 3.6~24kV, 3phase AC 50Hz or 60Hz network for receiving and distributing power energy and also for control, monitor and protection. It can be arranged for single busbar, single busbar sectionalizing system. It accords to IEC298 "AC Metal Enclosed Switch and Control Equipment above 1kV and below 52kV", IEC 694 "Standard Common Clauses for High Voltage Switchgear", GB3906 "3~35kV AC Metal Enclosed Switchgear", DL404 "Order Specification for Indoor AC High Voltage Switchgear", DIN, VDE0670 "AC Switchgear at Rated Voltage Over 1kV" and so on. It has perfect and reliable prevention function against false operation.



Ambient condition

Ambient temperature: -25°C ~ +45°C , daily average: ≤ 35°C
 Altitude: 1000m(Standard); can up to 4500m for special ordering;
 Relative humidity: daily average ≤ 95%, monthly average ≤ 90%;
 Earthquake intensity: ≤ 8 degree;
 Applicable occasions should be free from inflammables, explosives, corrosives and severe vibration.

Model and its meaning



Note: Suitable for ABB/ Siemens, Schneider etc. brands of vacuum circuit breakers.

Structure feature

The enclosure is complete made of aluminum-zinc plated steel sheet by CNC machine and multi-bending, high precise dimension, short production cycle, good mechanical strength and nice appearance. The handcart frame can sort into CB handcart, PT handcart, measuring handcart and so on. The handcart has isolating/testing position and working position in cubicle, each position is equipped with a locating device to ensure that the handcart will not move at random when in specified position. A special guide rail is installed in CB compartment for the handcart to move between isolating/testing position and working position. The movable curtain plate made of insulating sheet is installed on the back wall of handcart compartment. The busbar is led from one cubicle into another cubicle under the supporting of insulation bushing, and connects with the fixed contact box through the branch bus. The main busbar and inter busbar are round copper bars with rectangular section. Current transformer and the earthing switch can be mounted on the back wall of cable compartment. Potential transformer and the lightning arrester can be mounted inside it. The meter compartment includes relay components, meters electrified indicator and specified secondary equipments. The control circuits are laid in the neck grave with sufficient space and metal cover plate.

Technical specification

Item	Unit	Data	
Rated voltage	kV	24	
Rated frequency	Hz	50/60	
Rated current	A	630, 1250, 1600, 2500, 3150, 4000	
Rated insulation level	1min Power frequency (phase to earth / across open contacts)	kV	65
	Lightning impulse withstand voltage (phase to earth / across open contacts)	kV	125
Rated short time withstand current (4s)	kA	20, 25, 31.5	
Rated peak withstand current	kA	50, 63, 80	



Protection degree		Enclosure: IP4X, door open: IP2X
Outline dimension (width × depth × height)	mm	1000 (800) × 1820 (1500) × 2430 (2300)
Weight	kg	1200~1500

1. The short circuit capacity of CT shall be separately considered;
2. The diagram of back overhead outgoing line should have additional cubicle.

■ Technical specification of GPNV-24kV vacuum circuit breaker

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Rated voltage	kV	24	
Rated frequency	Hz	50/60	
Rated current	A	630, 1250, 1600, 2500, 3150, 4000	
Rated insulation level	1min Power frequency (phase to earth / across open contacts)	kV	65
	Lightning impulse withstand voltage (phase to earth / across open contacts)	kV	125
Rated short time withstand current(4s)	kA	20, 25, 31.5	
Rated peak withstand current	kA	50, 63, 80	
Rated symmetrical short-time breaking current	kA	20, 25, 31.5	
Rated operating sequence		O-0.3s-CO-180s-CO	
Opening time	ms	60	
Arcing time	ms	15	
Breaking time	ms	65	
Control voltage	V	~110~220	

■ Structure schematic drawing of GPN1-24kV section drawing of feeder panel

