

HXGN-12

固定式金属封闭开关柜（环网柜）
Fixed Type Metal-clad Switchgear (Ring Main Unit)



产品概述

HXGN-12 固定式金属封闭开关柜（以下简称为“环网柜”）系三相交流额定电压 10kV，额定功率 50/60Hz 的户内箱式交流金属封闭开关设备，适用于工厂、车间、住宅高层建筑等场所的配电系统、环网供电或双电流辐射供电系统，起接受、分配和保护作用，也适用于箱式变电站中。

环境条件

- 运行条件：户内。
- 海拔高度：≤ 1000m。
- 地震烈度：不超过 8 度。
- 污秽等级：III 级。
- 环境温度：-15℃ ~ +40℃。
- 相对湿度：日最大平均 ≤ 95%，月最大平均 ≤ 90%。
- 没有火灾、爆炸危险、严重污秽及足以腐蚀金属和破坏绝缘的气体等恶劣场所。
- 没有剧烈震动、颠簸及垂直斜度不超过 8° 的场所。

Product Summary

HXGN-12 fixed type metal-clad switchgear (Ring Main Unit) is three phase AC rated voltage 10kV, rated power 50/60Hz indoor fixed type metal-clad switchgear. It is applied to factory, plant residential area, high building and other local distribution systems, ring main unit supply or dual power radio source system. It can take effect on transmission & distribution of electric power and protection; also can be applied in tank type substation.

Environmental Conditions

- Operating Condition: Indoor.
- Altitude: No more than 1000m.
- Earthquake Intensity: No more than 8 degrees.
- Pollution Level: III.
- Ambient Temperature: No more than +40℃, No less than -15℃.
- Relative Humidity: Average humidity no more than 95% within one day, Average humidity no more than 90% within one month.
- No fire, explosion danger, serious dirt, chemical corrosion and violent vibration for product installed place.
- No violent vibration, shake and vertical slope of less than 8 degrees.

产品特点

- 开关柜柜体采用 8MF 型钢拼装而成，并用金属隔板在柜内隔成母线室、开关电缆室、仪表室。
- 柜体为组装式结构，稳固可靠，延伸组合方便。
- 负荷开关具有静触头绝缘罩，能有效防止柜内弧光短路事故，确保设备安全运行。
- 负荷开关具有独特的金属活门与接地结构，负荷开关分闸后，活门自动将断口关闭并隔开，保证开关电缆室内不带电，实现与带电主母线室隔室分隔的目的。
- 负荷开关通常采用侧装式，三相采用前后排列，柜体体积小，减少占地面积。
- 本产品采用压气式负荷开关为主元件，利用压气式原理灭弧，开断性能稳定可靠。
- 负荷开关、接地开关、熔断器为整体装配结构，具有可靠的闭锁装置，满足“五防”功能的要求。
- 为优化环网柜的运行，可以加装电动机构、通讯模块等设备，以确保对电网的远程控制和自动化管理。

Product Features

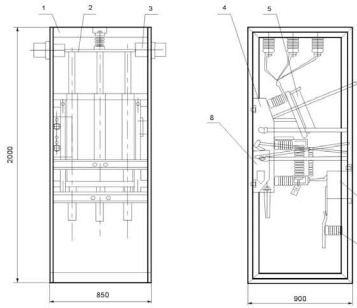
- The switch cabinet is assembled by 8MF shape steel, and divided into busbar compartment, switching cable compartment and instrument compartment by metal plate.
- The cabinet is assembling structure, which is steady and reliable, easy to extend and combine.
- The load switch has static contact insulating cover, which can effectively prevent short circuit by arc light inside the cabinet, and ensure the safe operation of device.
- The load switch has unique metal valves and ground structure. After brake breaks of load switch, the valve will automatically close and separate, ensuring that the switching cable compartment is electrically neutral, and separated with the electric main busbar compartment.
- The load switch usually uses side-installed type. Three phases are arranged in tandem. And the cabinet is small, which can reduce the floor area.
- The product uses the pressure-operated load switch as the primary component. And it uses air-compressed type principle to suppress arc, thus with a stable and reliable interruption performance.
- Load switch, ground switch and fuse protector are integrated assembly structure, with a reliable locking device, and meet the requirements of “five prevention” function.
- In order to optimize the operation of ring main unit, electrically operated mechanism, communication module, etc. can be added, to ensure the remote control of the power grid and the automatic management.

技术参数

序号 Sr.	名称 Content		单位 Unit	数值 Value
1	额定电压 Rated Voltage		kV	12
2	额定频率 Rated Frequency		Hz	50
3	额定电流 Rated Current		A	630
4	熔断器最大额定电流 Max. rated Current of Fuse		A	200
5	额定短路开断电流 Rated Short-circuit Breaking Current		kA	31.5(熔断器组) (Sets of Fuses)
6	额定峰值耐受电流 Rated Peak Withstand Current		kA	50
7	额定短时耐受电流 (4s) Rated Short-time Withstand Current(4s)		kA	20
8	额定短路关合电流 Rated Short-circuit Current		kA	50
9	接地回路 Earthed Circuit	额定短时耐受电流 (2s) Rated Short-time Withstand Current(2s)	kA	20
		额定峰值耐受电流 Rated Peak Withstand Current	kA	50
10	1min 工频耐受电压 Frequency Withstand Voltage in 1min	级间、对地 Phase, Earthed	kV	42
		隔离断口 Isolated Fracture	kV	48
11	雷电冲击耐受电压 (峰值) Lightning Impulse Withstand Voltage(Peak)	级间、对地 Phase, Earthed	kV	75
		隔离断口 Isolated Fracture	kV	85
12	5% 有功负载开断电流 5% Power Load Switch-off Current		A	31.5
13	额定配电线路闭环开断电流 Rated Distribution-circuit Sealed Breaking Current		A	630
14	额定电缆充电开断电流 Rated Cable-charging Breaking Current		A	10
15	额定开断转移电流 Rated Breaking Transfer Current	负荷开关 Load Switch	A	1300
		真空负荷开关 Vacuum Load Switch	A	3150
16	机械寿命 Mechanical Life	真空负荷开关 Vacuum Load Switch	次 /Times	10000
		接地开关 Earth Switch	次 /Times	2000
17	防护等级 Protect Degree		IP	IP3X
18	操作方式 Method of Operating		-	手动 / 电动 Manual/Motor

Technical Parameters

开关柜结构尺寸示意图



- 柜体 Cabinet
- 母线 Busbar
- 套管 Heat Shrinkable Tube
- 组合电器 Composite Apparatus
- 熔断器 Fuses
- 电流互感器 Current Transformer
- 操作显示装置 Operating Display Device
- 操作机构 Operating Mechanism

Structure Dimension and Sketch

