

XGN2-12

箱型固定式金属开关设备

Case fixed metal enclosed switchgear

吾心求索·通享未来

得益于多年的电气产品研发和制造经验，索通电气为您提供结合了先进技术和卓越工程设计的高压开关设备；系列产品符合智能化、安全性和可靠性要求最严苛的标准。该系列能为公共配电、工业和楼宇领域提供极具成本效益的解决方案，提高竞争力。



节能型
Energy Saving



智能化
Intellectualization



易维护
Easy Maintenance



安全性
Safety

XGN2-12

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产品概述 General

XGN2-12箱型固定式金属开关设备(简称开关柜),用于额定电压为3.6、7.2、12kV三相交流50Hz系统中作为接受与分配电能之用,特别适合于频繁操作的场合,其母线系统为单母线,(并可派生出单母线带旁路和双母线结构)。

本产品符合GB3906《3~35kV交流金属封闭开关设备》、IEC60298《额定电压1KV以上52KV及以下交流金属外壳开关设备和控制设备》标准的要求。并具有两部提出的“五防”闭锁功能。

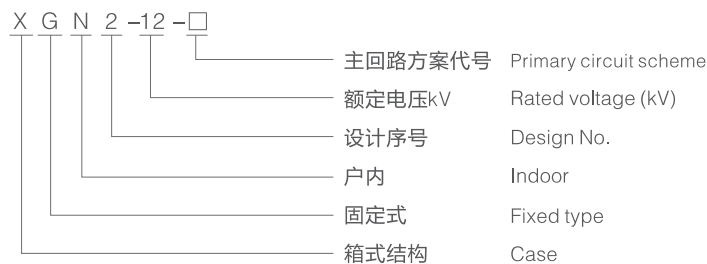
本开关柜的主开关采用ZN28A-12系列、ZN12-12系列或VS1-12系列真空断路器,配有CD17系列电磁操动机构或CT17/CT19系列弹簧操动机构,隔离开关采用GN30-12旋转式隔离开关、GN22-12大电流隔离开关系列产品。

XGN2-12 Case fixed metal enclosed switchgear (hereinafter called switchgear), is used in the system of rated voltage 3.6, 7.2, 12KV three-phase, AC50Hz, to receive and distribute electricity, especially suits for frequently switching, single busbar system (single busbar with branches or dual busbar system available).

Comply with GB3906 AC metal-enclosed switchgear and controlgear for rated voltages above 3 kV and up to and including 35 kV, IEC60298 AC metal-enclosed switchgear and controlgear for rated voltage above 1 kV and up to and including 52 kV standard. Five-prevents interlock functions provided.

The main switch of the switchgear adopted ZN28A-12, ZN12-12 or VS1-12 vacuum circuit breaker operated by CD7 electromagnetic mechanism or CT17/19 series spring mechanism, and type GN30-12 rotation type isolator or GN22-12 large current isolator

型号及含义 Model and meaning



XGN2-12

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正常使用条件 Normal service conditions

- 环境温度：上限+40°C；下限-15°C(特殊工艺下，可达-45°C)；
- 海拔高度不超过2500m(特殊工艺下，可达4000m)；
- 相对湿度：日平均不超过95%，
月平均相对湿度不超过90%；
- 地震烈度不超过8度；
- 没有火灾、爆炸危险、严重污秽、化学腐蚀及剧烈震动的场所。
- 注：超出上述正常使用条件时，用户可与制造厂协商确定。
- Ambient air temperature:
- Maximum air temperature: +40°C,
Minimum air temperature: -15°C(Under a special process, up to -45 °C);
- Altitude: ≤ 2500m(Under a special process, up to 4000m);
- Humidity:
Daily average value of relative humidity: ≤95%
Monthly average value of relative humidity: ≤90%
- Earthquake grade less than Degree 8;
- The ambient air is not significantly polluted by dust, smoke, corrosive and/or flammable gases, vapours or salt;
- Notes: If the operating conditions exceed the normal conditions, please contact our technical department.

主要技术参数 Technical specifications

开关设备技术参数 Main technical data of the switchgear		
名称 Description	单位 Unit	参数 Specifications
额定电压 Rated voltage	kV	3.6,7.2,12
额定电流 Rated current	A	630,1250,1600,2000,3150
额定短路开断电流 Rated short-circuit breaking current	kA	20,25,31.5,40
额定短路关合电流(峰值) Rated short-circuit making current	kA	40,50,80,100,40,50,80,100
额定短路动稳定电流(峰值) Rated peak withstand current (peak)	kA	40,50,80,100,40,50,80,100
额定热稳定电流 Rated short-time withstand current (rms)	kA	20,25,31.5,40
额定热稳定时间 Rated short-time withstand time	s	4
防护等级 Degree of protection		IP2X
结构型式 Structure type		单线分段及单母线带旁路 Single line sectionalization and single busbar with bypassing line
操作方式 Operation		电磁式、弹簧储能式 Electromagnetic, spring energy storage
外形尺寸 宽×深×高 Dimensions(W×D×H)	mm	1100×1200×2650(一般型 General Type)
重量 Weight	kg	1000

结构特点 Structural features

XGN2-12开关设备为金属封闭箱式结构，柜内分为断路器室、母线室、电缆室、继电器室，各室之间用钢板隔开，开关设备前后设门，离墙安装，双面维护，设有泄压通道、柜内照明、柜顶小母线。XGN2-12开关设备具有完善成熟的“机械五防”和简单明了的操作程序。

XGN2-12开关设备的主断路器采用ZN28A-12、ZN28-12、ZN63A-12等型真空断路器，也可根据需要配其他型号断路器，隔离开关采用GN30-10旋转式隔离开关和GN22-10大电流隔离开关。

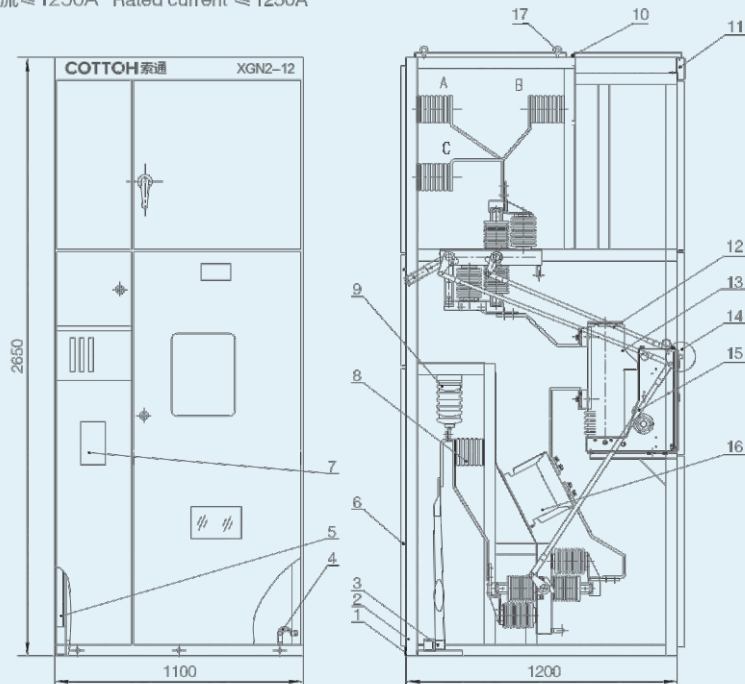
XGN2-12 switchgear for the metal closed box structure, the cabinet is divided into circuit breaker room, bus room, cable room, relay room, between the rooms separated by steel, switch equipment before and after the door, from the wall, Double-sided maintenance, with pressure relief channel, cabinet lighting, cabinet top bus. XGN2-12 switch equipment has a perfect mature "mechanical five anti" and simple and clear operating procedures.

XGN2-12 switch device main circuit breaker with ZN28A-12, ZN28-12, ZN63A-12 type vacuum circuit breaker, can also be equipped with other types of circuit breakers, isolation switch using GN30-10 rotary disconnector And GN22-10 high current isolation switch.

结构及尺寸 Structure and Dimensions

XGN2-12 外形尺寸及结构图 XGN2-12 Switchgear layout dimensions

额定电流 ≤ 1250A Rated current ≤ 1250A



- | | | | |
|---------------------------------|----------------------|---|-------------------------------------|
| 1、接地母线装配 | 6、后门联锁装配 | 11、眉头焊接 | 15、隔离开关传动装配 |
| 2、本体结构 | 7、模拟牌 | 12、带接地刀隔离开关传动装配 | 16、电流互感器 |
| 3、电缆安装 | 8、支柱绝缘子 | 13、真空断路器 | 17、吊环 |
| 4、门接地线 | 9、避雷器装配 | 14、操作联锁机构 | |
| 5、二次电缆安装 | 10、铰链 | | |
| 1. Ground bus assembly | 6. Rear Interlock | 11. Eyebrow welding | 15. Isolation switch drive assembly |
| 2. Body structure | 7. Simulation card | 12. Isolation switch with earthing switch | 16. Current transformer |
| 3. Cable installation | 8. Insulators | 13. vacuum circuit breaker | 17. Rings |
| 4. Doors earthing | 9. Arrester assembly | 14. operation interlock mechanism | |
| 5. secondary cable installation | 10. Hinge | | |

XGN2-12

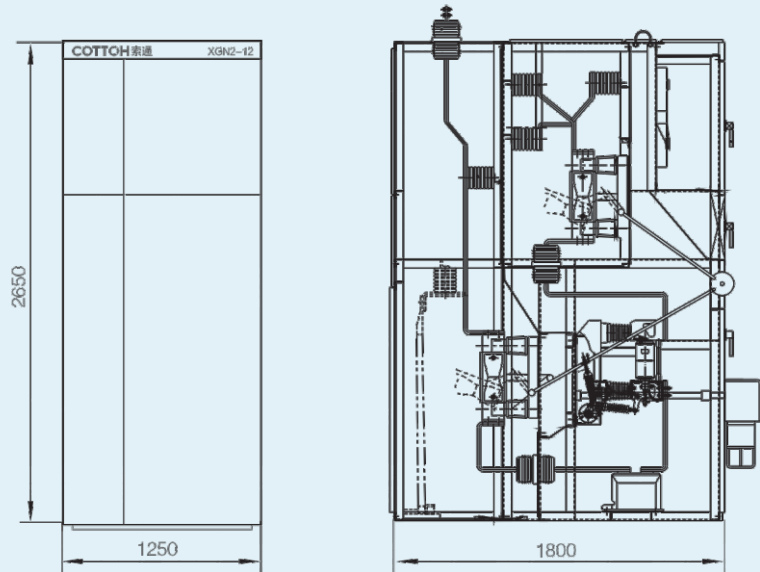
箱型固定式金属开关设备
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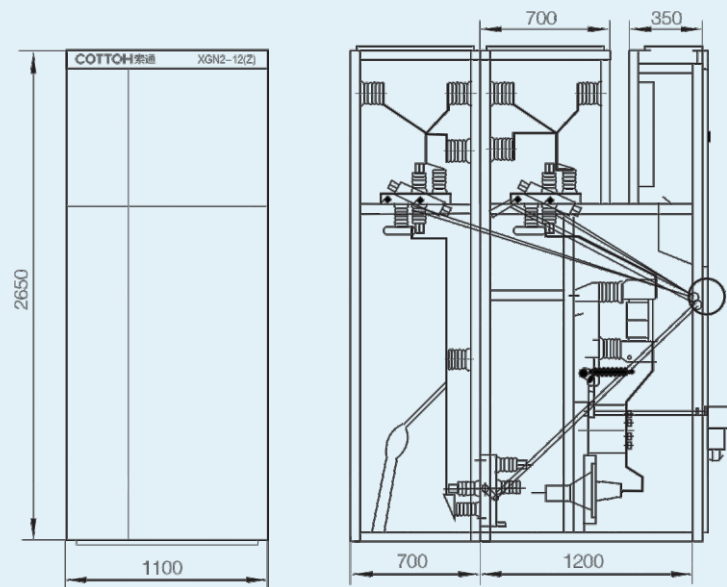
结构及尺寸 Structure and Dimensions

XGN2-12 大电流柜外形结构图 XGN2-12 High current panel structure

额定电流 $\leq 5000\text{A}$ Rated current $\leq 5000\text{A}$



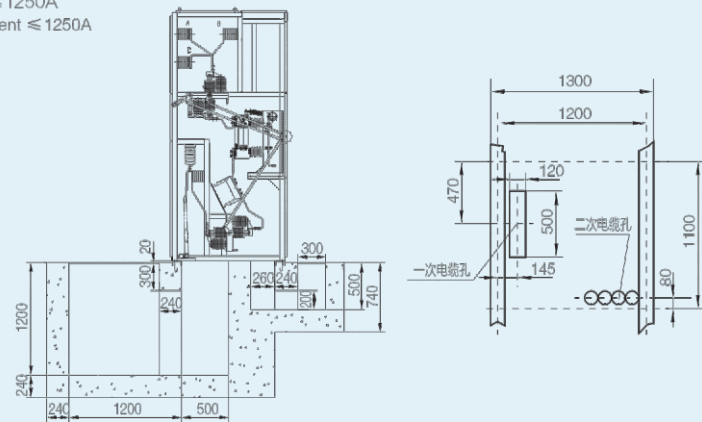
XGN2-12 旁路电缆出线柜外形结构图 XGN2-12 Bypass cable outgoing panel structure



结构及尺寸 Structure and Dimensions

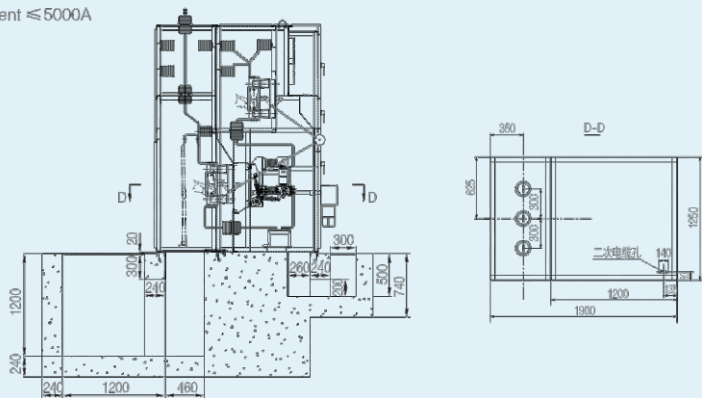
XGN2-12 型安装尺寸图 XGN2-12 Switchgear layout dimensions

额定电流 $\leq 1250A$
Rated current $\leq 1250A$

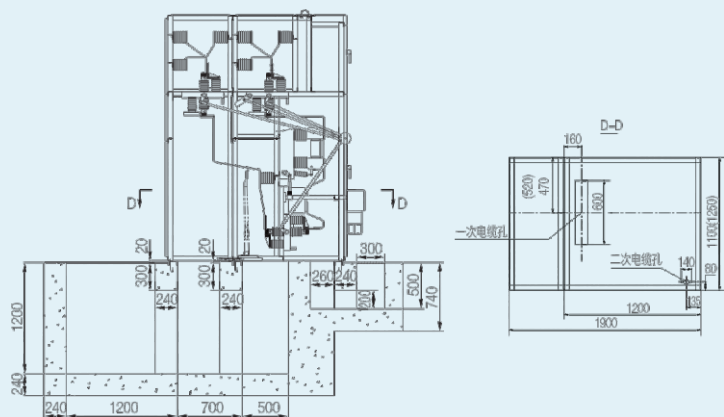


XGN2-12 大电流柜安装尺寸图 XGN2-12 High current switchgear layout dimensions

额定电流 $\leq 5000A$
Rated current $\leq 5000A$



XGN2-12 旁路电缆出线柜安装尺寸图 XGN2-12 Bypass cable outgoing switchgear layout dimensions



XGN2-12

一次线路方案 Typical primary schemes

方案号 No.	01	02	03	04	05	06
主电路方案图 Primary circuit scheme						
主要电器元件 Main components	旋转式隔离开关GN30-10D Isolation switch				1	1
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer		1	2	3	1
	真空断路器 ZN28A-12 Vacuum Circuit Breaker	1	1	1	1	1
	操动机构CD17或CT19B Actuator	1	1	1	1	1
	旋转式隔离开关GN30-10 Isolation switch	1	1	1	1	1
	接地开关JN15-10 Earthing switch	1	1	1	1	1
	带电显示装置DXN-10T Live display device	1	1	1	1	1
额定电流(A) Rated Current	630、1000、1250					
用途 Application	电缆进出线 Cable incoming/outgoing feeder					

方案号 No.	07	08	09	10	11	12
主电路方案图 Primary circuit scheme						
主要电器元件 Main components	旋转式隔离开关GN30-10D Isolation switch	1	1			
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer	2	3		1	2
	真空断路器 ZN28A-12 Vacuum Circuit Breaker	1	1	1	1	1
	操动机构CD17或CT19B Actuator	1	1	1	1	1
	旋转式隔离开关GN30-10 Isolation switch	1	1	2	2	2
	带电显示装置DXN-10T Live display device	1	1	1	1	1
	额定电流(A) Rated Current	630、1000、1250				
用途 Application	电缆进出线 Cable incoming/outgoing feeder					

一次线路方案 Typical primary schemes

方案号 No.		13	14	15	16	17	18
主电路方案图 Primary circuit scheme							
主要 电器 元件 Main components	旋转式隔离开关GN30-10D Isolation switch	1	1	1	1	2	2
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer		1	2	3		1
	真空断路器 ZN28A-12 Vacuum Circuit Breaker	1	1	1	1	1	1
	操动机构CD17或CT19B Actuator	1	1	1	1	1	1
	旋转式隔离开关GN30-10 Isolation switch	1	1	1	1		
	带电显示装置DXN-10T Live display device	1	1	1	1	1	1
额定电流(A) Rated Current		630、1000、1250					
用途 Application		架空进出线 Overhead incoming/outgoing feeder					

方案号 No.		19	20	21	22	23	24
主电路方案图 Primary circuit scheme							
主要 电器 元件 Main components	旋转式隔离开关GN30-10D Isolation switch			1	1	1	1
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer	2	3		1	2	3
	真空断路器 ZN28A-12 Vacuum Circuit Breaker	1	1	1	1	1	1
	操动机构CD17或CT19B Actuator	1	1	1	1	1	1
	旋转式隔离开关GN30-10 Isolation switch	2	2	1	1	1	1
	带电显示装置DXN-10T Live display device	1	1	1	1	1	1
额定电流(A) Rated Current		630、1000、1250					
用途 Application		架空进出线 Overhead incoming/outgoing feeder					

一次线路方案 Typical primary schemes

方案号 No.	25	26	27	28	29	30
主电路方案图 Primary circuit scheme						
主要电器元件 Main components	旋转式隔离开关GN30-10D Isolation switch			1	1	1
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer	1	2	3	1	3
	真空断路器 ZN28A-12 Vacuum Circuit Breaker	1	1	1	1	1
	操动机构CD17或CT19B Actuator	1	1	1	1	1
	旋转式隔离开关GN30-10 Isolation switch	2	2	2		
额定电流(A) Rated Current	630、1000、1250					
用途 Application	左右联络 Left (right) communicating					

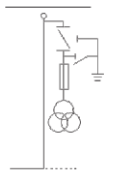
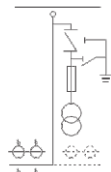

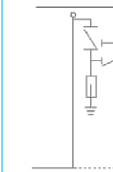
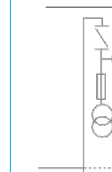

方案号 No.	31	32	33	34	35	36
主电路方案图 Primary circuit scheme						
主要电器元件 Main components	旋转式隔离开关GN30-10D Isolation switch	1	1	1		
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer	1	2	3	1	3
	真空断路器 ZN28A-12 Vacuum Circuit Breaker	1	1	1	1	1
	操动机构CD17或CT19B Actuator	1	1	1	1	1
	旋转式隔离开关GN30-10 Isolation switch	1	1	1	2	2
额定电流(A) Rated Current	630、1000、1250					
用途 Application	左右联络 Left (right) communicating					

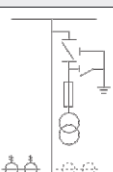
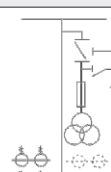
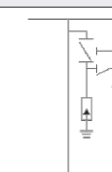
一次线路方案 Typical primary schemes

方案号 No.		37	38	39	40	41	42
主电路方案图 Primary circuit scheme							
主要 电器 元件 Main components	旋转式隔离开关GN30-10D Isolation switch	1	1	1		1	
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer	1	2	3			
	真空断路器 ZN28A-12 Vacuum Circuit Breaker	1	1	1			
	操动机构CD17或CT19B Actuator	1	1	1			
	旋转式隔离开关GN30-10 Isolation switch	1	1	1			
	高压熔断器RN2-10 High-voltage fuses						3
电压互感器JDZ-10 Voltage transformer						2	
额定电流(A) Rated Current	630、1000、1250						
用途 Application	左右联络 Left (right) communicating			母线转接 Busbar adapter	联络+PT PT & communicating feeder		

方案号 No.		43	44	45	46	47	48
主电路方案图 Primary circuit scheme							
主要 电器 元件 Main components	旋转式隔离开关GN30-10D Isolation switch	1	1	1	1		1
	高压熔断器RN2-10 High-voltage fuses	3	3	3			3
	电压互感器JDZ-10 Voltage transformer		2				2
	电压互感器JDZJ-10 Voltage transformer	3		3			
	避雷器HY5W□ Surge arrester				3		
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer		2	3			
额定电流(A) Rated Current	630、1000、1250						
用途 Application	联络+PT PT & communicating feeder			联络+避雷 Surge arrester & communicating feeder	母线转接 Busbar adapter	联络+PT PT & communicating feeder	

一次线路方案 Typical primary schemes

方案号 No.	49	50	51	52	53	54
主电路方案图 Primary circuit scheme						
主要电器元件 Main components	旋转式隔离开关GN30-10D Isolation switch	1	1	1	1	1
	高压熔断器RN2-10 High-voltage fuses	3	3	3	3	3
	电压互感器JDZ-10 Voltage transformer		2			2
	电压互感器JDZJ-10 Voltage transformer	3		3		
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer		2	3		
	避雷器HY5W□ Surge arrester				3	
额定电流(A) Rated Current	630、1000、1250					
用途 Application	联络+PT PT & communicating feeder			联络+避雷 Surge arrester & communicating feeder		联络+PT PT & communicating feeder

方案号 No.	55	56	57	58	59	60
主电路方案图 Primary circuit scheme						
主要电器元件 Main components	旋转式隔离开关GN30-10D Isolation switch	1	1	1		
	高压熔断器RN2-10 High-voltage fuses	3	3			
	电压互感器JDZ-10 Voltage transformer	2				
	电压互感器JDZJ-10 Voltage transformer		3			
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer			3		
	避雷器HY5W□ Surge arrester	2	3			
额定电流(A) Rated Current	630、1000、1250					
用途 Application	联络+PT PT & communicating feeder		联络+避雷 Surge arrester & communicating feeder			

一次线路方案 Typical primary schemes

方案号 No.		61	62	63	64	65	66
主电路方案图 Primary circuit scheme							
主要 电 器 元 件 Main c o m p o n e n t s	旋转式隔离开关GN30-10D Isolation switch	1	1	1	1	1	1
	高压熔断器RN2-10 High-voltage fuses	3	3		3	3	3
	电压互感器JDZ-10 Voltage transformer	2			2		
	电压互感器JDZJ-10 Voltage transformer		3或1			3或1	
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer			3	3	3	3
避雷器HY5W□ Surge arrester							3
额定电流(A) Rated Current	630、1000、1250						
用途 Application	PT		避雷 Surge arrester	PT+避雷 PT & surge arrester		电容器 Capacitors	

方案号 No.		67	68	69	70	71	72
主电路方案图 Primary circuit scheme							
主要 电 器 元 件 Main c o m p o n e n t s	旋转式隔离开关GN30-10D Isolation switch	1					
	高压熔断器SDFNJ-10 High-voltage fuses	3					
	电力变压器S9-10/0.4或SC-10/0.4 Transformer	1					
	电流互感器LMZ1-0.5 Current transformer	3					
	自动开关DZ20Y Molded Case Circuit Breaker	6					
	隔离开关GN22-10 Isolation switch		1	1			
	真空断路器ZN28A-12 Vacuum Circuit Breaker		1	1			
	操动机构CD17或CT19 Actuator		1	1			
电流互感器LMZB6-10 Current transformer			1				
额定电流(A) Rated Current	2000、3150						
外形尺寸(宽×深×高)(mm) Dimensions(W×L×H)	1200(1250)×1300×2650						
用途 Application	75-77组合使用,架空进线柜位于配电装置首、末端。 (75-77 combined for use. Overhead incoming panel shall mounted at the begin or end of the switchgear row)						

一次线路方案 Typical primary schemes

方案号 No.		73	74	75	76	77	78
主电路方案图 Primary circuit scheme							
主要 电器 元件 Main components	隔离开关GN22-10 Isolation switch	1	1	1	1	1	1
	真空断路器ZN28A-12 Vacuum Circuit Breaker	1	1				
	操动机构CD17、CT19B Actuator	1	1				
	电流互感器LMZB6-10 Current transformer	2	3		1	2	
额定电流(A) Rated Current		2000、3150					
外形尺寸(宽×深×高)(mm) Dimensions(WxDxH)		1200(1250)×1800×2650(2000A-31.5kA 宽度1200mm)					
用途 Application		左右联络(75-77组合使用, 架空进线柜位于配电装置首、末端方案78~81与方案82~84组合使用) Left (right) communicating((75-77 combined for use, Overhead incoming panel shall mounted at the begin or end of the switchgear row, scheme 78-81 cooperated with 82-84))					

方案号 No.		79	80	81	82	83	84
主电路方案图 Primary circuit scheme							
主要 电器 元件 Main components	隔离开关GN22-10 Isolation switch	1	1	1	1	1	1
	真空断路器ZN28A-12 Vacuum Circuit Breaker				1	1	1
	操动机构CD17、CT19B Actuator				1	1	1
	电流互感器LMZB6-10 Current transformer	1	2	3		1	2
额定电流(A) Rated Current		2000、3150					
外形尺寸(宽×深×高)(mm) Dimensions(WxDxH)		1200(1250)×1800×2650(2000A-31.5kA 宽度1200mm)					
用途 Application		左右联络(方案78~81与方案82~84组合使用) Left (right) communicating(scheme 78-81 cooperated with 82-84)					

一次线路方案 Typical primary schemes

方案号 No.		85	86	87	88	89	90
主电路方案图 Primary circuit scheme							
主要 电器 元件	隔离开关GN22-10 Isolation switch	2	2	2	2	2	2
	真空断路器ZN28A-12 Vacuum Circuit Breaker	1	1	1	1	1	1
	操动机构CD17、CT19B Actuator	1	1	1	1	1	1
	电流互感器LMZB6-10 Current transformer		2	3	4	4	5
额定电流(A) Rated Current		2000、3150					
外形尺寸(宽×深×高)(mm) Dimensions(WxDxH)		1200(1250)×1800×2650		1200(1250)×1800×2650		1200(1250)×1800×2650	
用途 Application		架空进出线(方案85~90可位配电装置任意位置) Overhead incoming/outgoing feeder (scheme 85~90 can be mounted at any position of the row)					

方案号 No.		91	92	93	94
主电路方案图 Primary circuit scheme					
主要 电器 元件	旋转式隔离开关GN30-10 Isolation switch	3	3	2	2
	电流互感器LZZBJ9-10 LZZJ-10 Current transformer	2	3	2	3
	真空断路器 ZN28A-12 Vacuum Circuit Breaker	1	1	1	1
	操动机构CD17或CT19B Actuator	1	1	1	1
额定电流(A) Rated Current		630~1250			
用途 Application		用于馈电柜作架空进出线，也可作电缆进出线 Used for Overhead incoming/outgoing in feeder panel, also for cable incoming/outgoing		专用旁路柜 Special bypassing switchgear	

一次线路方案组合示例 Application Schemes

38	44	50	32	52	26	26	53
630~1000A	630~1000A	630~1000A	630~1000A	630~1000A	630~1000A	630~1000A	630~1000A
架空进线、计量 Metering & overhead incoming feeder	架空进线、计量 Metering & overhead incoming feeder	架空进线、计量 Metering & overhead incoming feeder	架空进线、计量 Metering & overhead incoming feeder	架空进线带避雷器 Surge arrester & overhead incoming feeder	架空进线带避雷器 Surge arrester & overhead incoming feeder	架空进线带避雷器 Surge arrester & overhead incoming feeder	电缆进线带PT PT & cable incoming feeder

46	27	74	77	81	84		
630~1000A	630~1000A	2000~3000A	2000~3000A	2000~3000A	2000~3000A		
母线联络 Basbar communicating	母线联络 Basbar communicating	母线联络 Basbar communicating	母线联络 Basbar communicating	母线联络 Basbar communicating	母线联络 Basbar communicating		