

# KYN61-40.5

## 型铠装移开式交流金属封闭开关设备 Metalclad movable 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

# KYN61-40.5

## 型铠装移开式交流金属封闭开关设备

### Metalclad movable switchgear



#### 产品概述 General

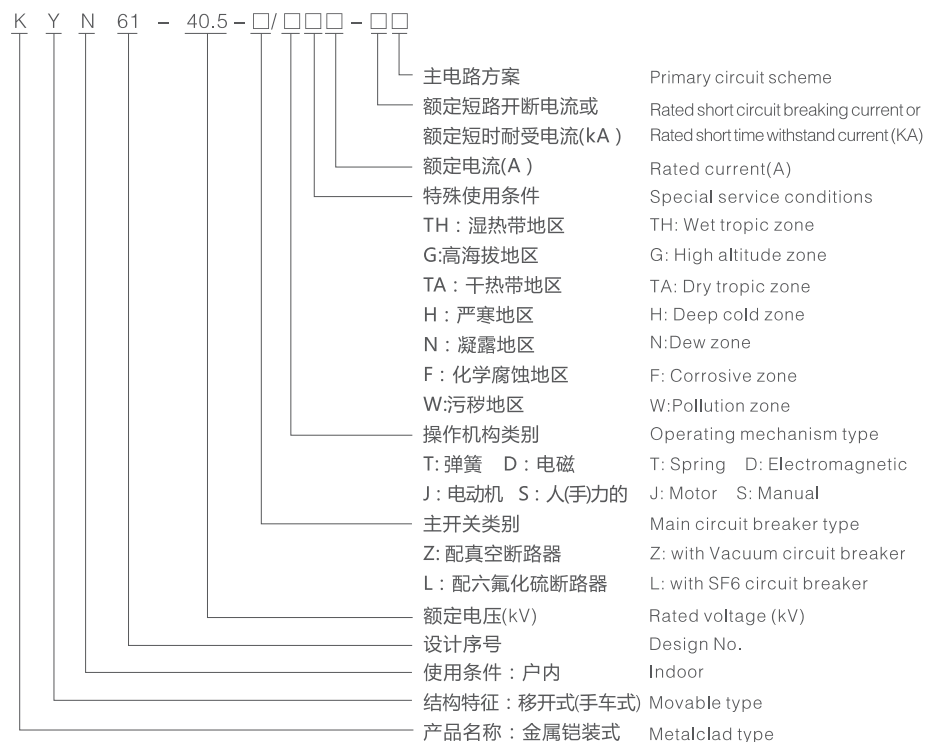
KYN61-40.5 开关设备配置性能优良的ZN85A, ZN85B真空断路器或施耐德公司SF1、SF2或ABB公司HD4或阿尔斯公司FP系列六氟化硫断路器。柜体采用组装结构,提高了外观质量和制造精度;母线采用热缩绝缘材料或环氧涂覆的绝缘手段,优化电极形状,柜体结构紧凑,并具备完善的“五防”功能。

KYN61-40.5开关设备使用在40.5kV三相交流50Hz电力系统中,作为发电厂、变电所及工矿企业的配电室接受与分配电能之用;对电路具有控制、保护和监测等功能。除广泛用于一般电力系统,还可以使用于频繁操作的场所。本产品符合GB3906《3-35kV交流金属封闭开关设备》、GB/T11022《高压开关设备和控制设备标准的共用技术要求》、IEC60298, IEC62271-200《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》、IEC60694《高压开关设备和控制设备共用条款》标准的要求。

KYN61-40.5 Switchgear installed with excellent ZN85, ZN85B vacuum circuit breaker or Schneider SF1, SF2, or ABB HD4 or ALSTOM FP series SF6 circuit breaker, switchgear body is of compartment structure with beautiful figure, its busbar covered by heat shrinkable material or epoxy resin painting, optimized polar figure, the structure is compact, complete 5-prevent provided.

KYN61-40.5 Switchgear operated in the power system of 40.5KV, three phases AC 50Hz, used to control, protect and monitor the distribution circuit of power generating plant, substation, mineral enterprises and etc to distribute electric energy. Also it can be used to switch frequently on/off the circuit. Comply with GB3906 AC metal-enclosed switchgear and controlgear for rated voltages above 3 kV and up to and including 35 kV, GB/T11022 Common specifications for high-voltage switchgear and controlgear, IEC60298, IEC62271-200 AC metal-enclosed switchgear and controlgear for rated voltage above 1 kV and up to and including 52 kV, IEC60694 Common specifications for high-voltage switchgear and controlgear standard.

#### 型号及含义 Model and meaning



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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)；
- 空气相对湿度：日平均值不大于95%，月平均值不大于90%；
- 地震烈度不超过8度；
- 不适用于有腐蚀性或可燃性气体、水蒸气等明显污染的场所。
- 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

KYN61-40.5开关柜额定参数 Main technical data of the switchgear			
名称 Description	单位 Unit	参数 Specifications	
额定电压 Rated voltage	kV	40.5	
额定电流 Rated current	A	400,630,800,1250,1600,2000	
额定短路开断电流 Rated short-circuit breaking current	kA	25,31.5	
额定短路关合电流 Rated short-circuit making current	kA	63,80	
动稳定电流(峰值) Rated peak withstand current (peak)	kA	63,80	
4s 热稳定电流(有效值) 4s Short-time withstand current (rms)	kA	25,31.5	
额定绝缘水平 Rated insulation level	雷电冲击耐压 Rated lightning impulse withstand voltage	kV	185
	主回路1min工频耐压 Rated power frequency withstand voltage(1min)		95
外形尺寸(宽×深×高) Dimensions (W × D × H)	配 with ZN85A	m	1.2×2.6×2.4
	配 with ZN85B		1.4×2.8×2.8
防护等级 Degree of protection	外壳/内部 Shell / internal	IP4X/IP2X	

## 主要技术参数 Technical specifications

真空断路器额定参数 Main technical data vacuum circuit breaker		
名称 Description	单位 Unit	参数 Specifications
额定电压 Rated voltage	kV	40.5
额定电流 Rated current	A	1250,1600,2000
额定短路开断电流 Rated short-circuit breaking current	kA	25,31.5
额定短路关合电流 Rated short-circuit making current	kA	63,80
动稳定电流(峰值) Rated peak withstand current (peak)	kA	63,80
4s 热稳定电流(有效值) 4s Short-time withstand current (rms)	kA	25,31.5
额定绝缘水平 Rated insulation level	雷电冲击耐压 Rated lightning impulse withstand voltage	185
	主回路1min工频耐压 Rated power frequency withstand voltage(1min)	95
额定频率 Rated frequency	Hz	50
额定操作顺序 Rated operating sequences		O-0.3s-CO-180s-CO
机械寿命 Mechanical endurance	次times	10000
合闸时间 Closing time	ms	50~100
分闸时间 Opening time	ms	35~60

## 结构特点 Structural features

- 它分为柜体、手车两大部分。柜结构按功能特征可分为继电器仪表室、断路器室、电缆室和母线室四部分，各部分以接地的金属隔板分隔。其外壳防护等级为IP4X；断路器室门打开，断路器手车处于断开 / 试验位置时防护等级为IP2X。
- 本开关设备具有电缆进出线、架空进出线、母线联络、隔离、电压互感器、避雷器等一次接线方案。该开关设备采用复合绝缘。主回路采用绝缘母线，相邻柜间用母线套管隔开，能有效地防止事故蔓延，同时对主母线起到辅助支撑作用。电缆室里装有电流互感器，接地开关等，宽裕的空间条件便于多根电缆的连接。
- It is divided into cabinet, hand car two parts. Cabinet structure according to the functional characteristics can be divided into relay instrument room, circuit breaker room, cable room and bus room four parts, each part of the ground metal partition separated. The protection of the enclosure IP4X; circuit breaker door open, circuit breaker in the off / test position when the protection level is IP2X.
- The switch equipment has a cable entry and exit lines, overhead inlet and outlet, bus contact, isolation, voltage transformers, arrester and other wiring program. The switchgear adopts composite insulation. The main circuit using insulated bus, adjacent cabinets with busbars separated, can effectively prevent the spread of the accident, while the main bus to play a supporting role in support. The cable compartment is equipped with current transformers, earthing switches, etc., and the space conditions allow for the connection of multiple cables.

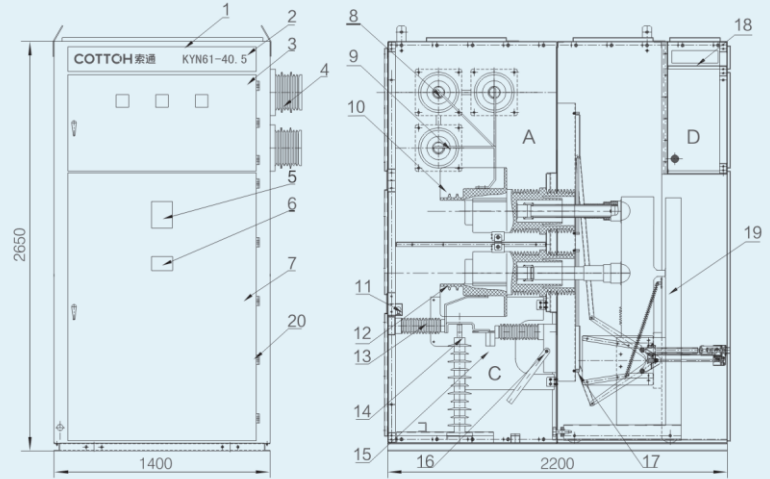
# KYN61-40.5

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Metalclad movable switchgear



## 结构及尺寸 Structure and Dimensions

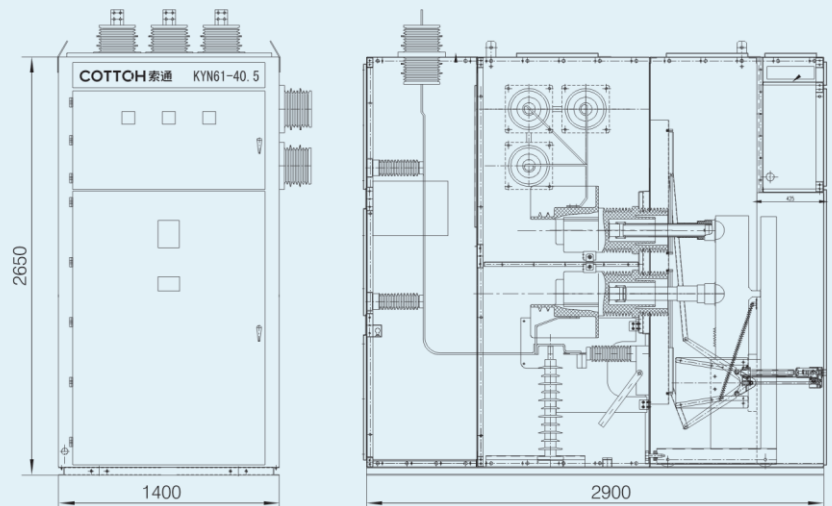
钢板结构开关设备 Steel construction switchgear panel(unit:mm)



A、母线室 B、手车室 C、电缆室 D、继电器仪表室  
A. Bus compartment B. Trolley C. Cable compartment D. Relay meters compartment

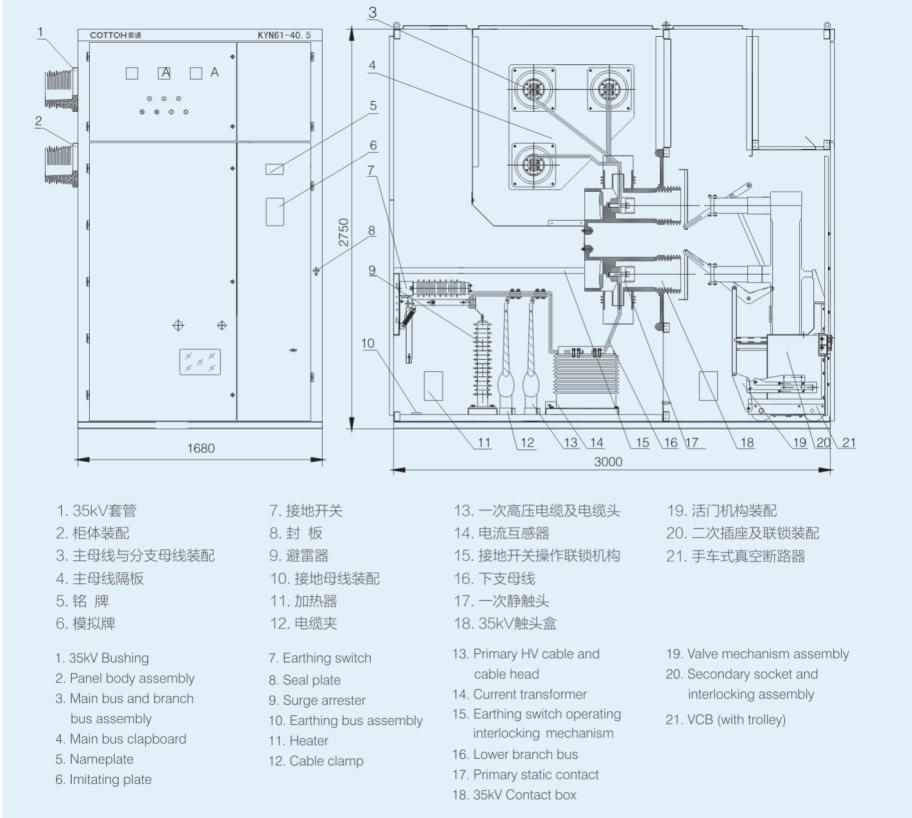
- |  |                             |                               |                       |
|--|-----------------------------|-------------------------------|-----------------------|
| 1、柜体装配                                 | 6、铭牌                        | 11、照明灯                        | 16、接地开关               |
| 2、小母线室盖板                               | 7、手车室门                      | 12、电流互感器                      | 17、活门装配               |
| 3、仪表室门                                 | 8、主母线                       | 13、绝缘子                        | 18、小母线端子              |
| 4、母线套管                                 | 9、支母线                       | 14、氧化锌避雷器                     | 19、真空断路器手车            |
| 5、模拟母线                                 | 10、触头盒                      | 15、绝缘板                        | 20、铰链                 |
| 1. Assembly                            | 6. Nameplate                | 11. Lamb                      | 16. Earthing switch   |
| 2. Mini bus compartment covering plate | 7. Trolley compartment door | 12. CT                        | 17. Valve assembly    |
| 3. Meters compartment door             | 8. Main bus                 | 13. Insulator                 | 18. Mini bus terminal |
| 4. Bus bushing                         | 9. Branch bus               | 14. Oxide zinc surge arrester | 19. VCB trolley       |
| 5. Analog bus                          | 10. Contact box             | 15. Insulating plate          | 20. Hinge             |

钢板结构带附柜(架空进线)开关设备 Steel construction switchgear with an accessory cabinet (overhead incoming feeder) switchgear(unit:mm)

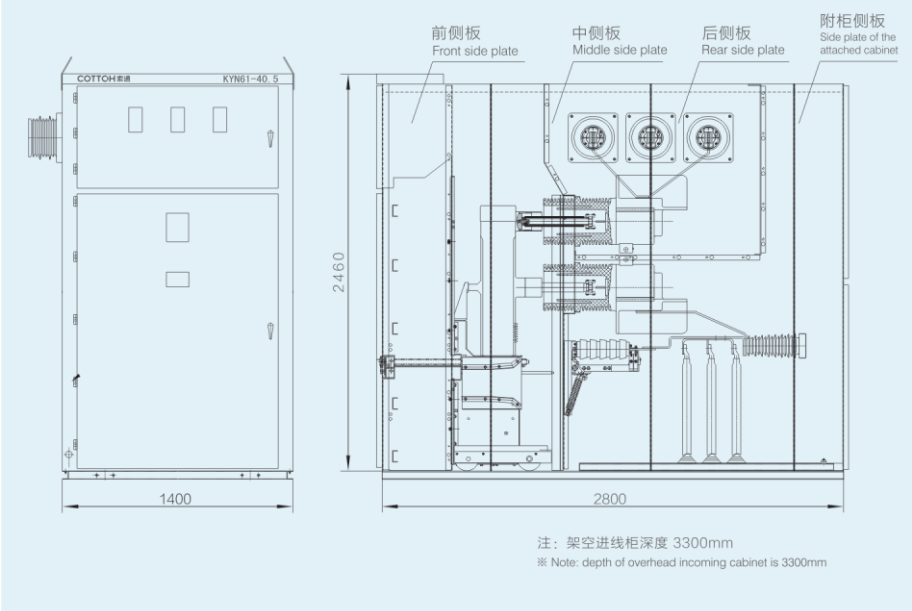


结构及尺寸 Structure and Dimensions

KYN61-40.5(1680MM宽柜型) KYN61A-40.5(1680mm wide type panel)



敷铝锌板结构带附柜开关设备 Aluminum-zinc deposited construction with and accessory cabinet switchgear(unit:mm)



# KYN61-40.5

## 一次线路方案 Typical primary schemes

方案号 No.		01~11	12~22	23~33
主电路方案图 Primary circuit scheme				
主要 电 器 设 备 Main components	电流互感器LDBJ Current transformer	0~3	0~3	0~3
	真空断路器ZN85A/ZN85B Vacuum Circuit Breaker	1	1	1
	电流互感器LZZB9/LZZB12 Current transformer	0~3	0~3	0~3
	接地开关JN□ Earthing switch	0~1	0~1	0~1
	支柱绝缘子ZNZ Insulator	0~3	0~3	0~3
	用途 Application	架空进(出)线柜 Overhead incoming/outgoing feeder	电缆进(出)线柜 Cable Incoming/outgoing feeder	左(右)联络柜 Left (right) communicating

方案号 No.		33~44	45~55	56~66
主电路方案图 Primary circuit scheme				
主要 电 器 设 备 Main components	电流互感器LDBJ Current transformer	0~3	0~3	0~3
	真空断路器ZN85A/ZN85B Vacuum Circuit Breaker	1	1	1
	电流互感器LZZB9/LZZB12 Current transformer	0~3	0~3	0~3
	接地开关JN□ Earthing switch			0~1
	支柱绝缘子ZNZ Insulator	3~9	3~9	0~3
	用途 Application	架空进线兼联络柜 Overhead incoming feeder communicating	电缆进线兼联络柜 Cable Incoming feeder communicating	架空进(出)线隔离柜 Overhead incoming/outgoing busbar riser panel

一次线路方案 Typical primary schemes

方案号 No.		67~77	78~88	89~99
主电路方案图 Primary circuit scheme				
主要 电器 设备 Main components	电流互感器LDBJ Current transformer	0~3	0~3	0~3
	真空断路器ZN85A/ZN85B Vacuum Circuit Breaker			
	电流互感器LZZB9/LZZB12 Current transformer	0~3	0~3	0~3
	接地开关JN□ Earthing switch	0~1		
	支柱绝缘子ZNZ Insulator	0~3	0~3	3~9
	用途 Application	电缆进(出)线隔离柜 Cable incoming/outgoing DS riser panel	左(右)联络隔离柜 Left (right) communicating DS riser panel	架空进线兼联络隔离柜 Overhead incoming with communicating DS riser panel

方案号 No.		100~109	110~111	112
主电路方案图 Primary circuit scheme				
主要 电器 设备 Main components	电流互感器LDBJ Current transformer	0~3		
	真空断路器ZN85A/ZN85B Vacuum Circuit Breaker	1		
	电流互感器LZZB9/LZZB12 Current transformer	0~3		
	熔断器XRNP-0.5A Fuse		2~3	3
	电压互感器JDZ9/JDZX9-35 Voltage transformer		1~2	3
	用途 Application	电缆进线兼联络隔离柜 Cable incoming with communicating DS riser panel	电压互感器柜 Voltage transformer panel	电压互感器柜 Voltage transformer panel



# KYN61-40.5

## 一次线路方案 Typical primary schemes

方案号 No.		113~116	117	118~120
主电路方案图 Primary circuit scheme				
主要 电器 设备 Main components	电流互感器LZZB9/LZZB12 Current transformer	0~3		0~3
	熔断器XRNP-0.5A Fuse	2~3		
	电压互感器JDZ9/JDZX-35 Voltage transformer	1~3		
	避雷器小车HY5WZ-51/HY5CZ□-42 Surge arresters		3个/1组	3个/1组
	用途 Application	电压互感器兼左(右)联络柜 Voltage transformer with Left (Right) communicating	避雷器柜 Surge arrester panel	左(右)联络兼避雷器柜 Left (Right) communicating with surge arrester panel

方案号 No.		121~122	123~124	125~126
主电路方案图 Primary circuit scheme				
主要 电器 设备 Main components	熔断器XRNP-0.5A Fuse	2~3	2~3	2~3
	电压互感器JDZ9/JDZX-35 Voltage transformer	1~2	1~2	1~2
	避雷器小车HY5WZ-51/HY5CZ□-42 Surge arresters	3个/1组	3个/1组	3个/1组
	用途 Application	电压互感器兼避雷器柜 Voltage transformer with surge arrester panel	电压互感器兼避雷器柜 Voltage transformer with surge arrester panel	电压互感器兼避雷器柜 Voltage transformer with surge arrester panel

一次线路方案 Typical primary schemes

方案号 No.		127~130	
主电路方案图 Primary circuit scheme		<p>The diagram shows a vertical line representing the primary circuit. At the top, there is a horizontal line with an upward-pointing arrow. Below this is a rectangular symbol representing a fuse. Further down is a circular symbol representing a transformer. Below the transformer are three vertical lines representing the three phases, each labeled with the Greek letter phi (Φ) and a hash symbol (#). At the bottom of each phase line is a circuit breaker symbol, consisting of a vertical line with a horizontal bar and a downward-pointing arrow.</p>	
主要 电 器 设 备  Main components	熔断器车XRNT-□A Fuse	3个/1组	
	变压器SC9-50KVA Transformer	1	
	电流互感器LMK Current transformer	0~3	
	空气开关NSX/C65 Air Breaker	0~6	
	用途 Application	所用变柜(50KVA及以下) Transformer (≤50KVA)	