

Three station wind and solar special combination electrical appliances

HDGV-40.5
三工位风光专用组合电器



◎ 概述 Outline

运用

特别使用于风力发电机输电网络，替代负荷开关用来开断负荷电流、过载电流和短路电流。具有保护变压器过载、防止设备缺相功能所含设备 HDGV-40.5 三工位风光专用组合电器将断路器、隔离开关、接地开关、电流互感器、带电显示传感器、过电压保护器融于一体。

优势

集成度高，结构简单可靠，大幅减少事故率，真正做到免维护。

负荷标准

GB 1984 《交流高压断路器》

GB 1985 《高压交流隔离开关和接地开关》

GB/T 11022 《高压开关设备和控制设备标准的共用技术要求》

Application

Specially used in wind turbine transmission networks, it replaces load switches to disconnect load currents, overload currents, and short-circuit currents. The HDGV-40.5 three station wind and solar special combination electrical device, which has the function of protecting transformer overload and preventing equipment phase loss, integrates circuit breakers, isolation switches, grounding switches, current transformers, live display sensors, and overvoltage protectors.

Advantage

High integration, simple and reliable structure, greatly reducing the accident rate and truly maintenance free.

Load standard

GB 1984 AC high voltage circuit breaker

GB 1985 high voltage AC disconnectors and earthing switches

GB / T 11022 common technical requirements for high voltage switchgear and control equipment standards

◎ 主要技术参数 Main Technical Parameters

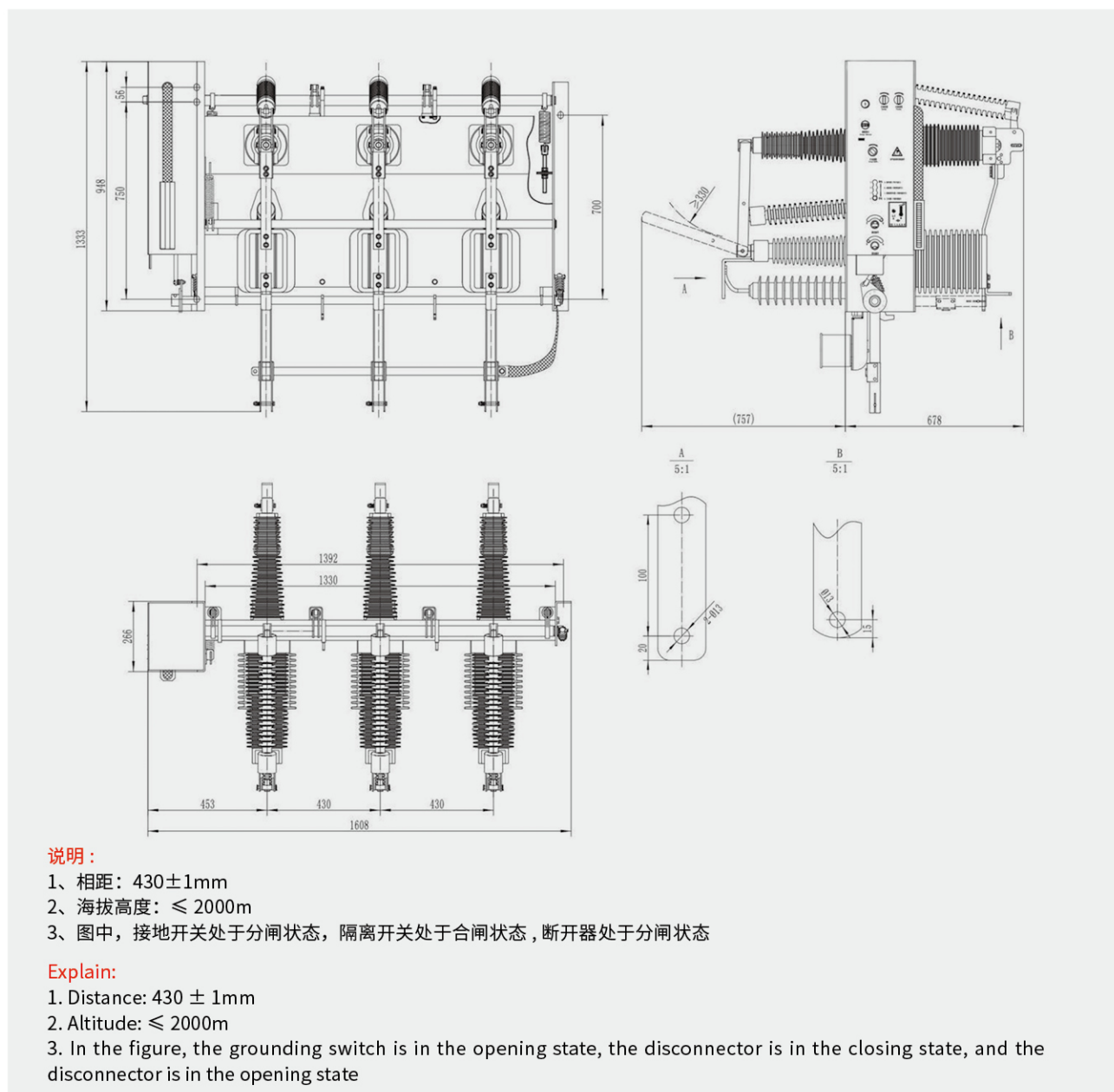
名称 Name	单位 Unit	数值 Numerical value	
额定电压 Rated voltage	kV	40.5	
额定绝缘水平 Rated insulation level	工频耐受电压 (1min) Power frequency withstand voltage (1min)	kV	95
	雷电冲击耐受电压 Lightning impulse withstand voltage	kV	185
	控制回路工频耐受电压 (1min) Power frequency withstand voltage of control circuit (1min)	kV	2
额定频率 Rated frequency	Hz	50	
额定电流 Rated current	A	630 1250	
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
额定峰值耐受电流 Rated peak withstand current	kA	63	80
额定短时耐受电流 Rated short-time withstand current	kA	25/4	31.5/4
额定断路器组关合涌流 Closing inrush current of rated breaking vessel group	kA	12.5 (频率不大于 1000HZ) 12.5 (frequency not greater than 1000Hz)	
机械寿命 Mechanical life	次	20000	
额定操作顺序 Rated operating sequence		分 -0.3s- 合分 -180s- 合分 Opening -0.3s-closing and opening-180s-closing and opening	
触头开距 Contact opening distance	mm	17~19	
合闸时间 Closing time	ms	30~70	
分闸时间 Opening time	ms	20~50	
三相分、合闸不同前期 Different stages of three-phase opening and closing	ms	≤ 2	
超行程 (触头弹簧压缩长度) Overtravel (compression length of contact spring)	mm	4±1	
触头合闸弹跳时间 Contact closing bounce time	ms	≤ 3	
平均分闸速度 Average opening speed	m/s	1.2~2.0	
平均合闸速度 Average closing speed	m/s	0.6~1.3	
触头反弹幅值 Contact rebound amplitude	m/s	≤ 3	
触头允许磨损 Allowable wear of contact	mm	3	
主回路电阻 Main circuit resistance	μΩ	≤ 180	

◎ 型号说明 Model description

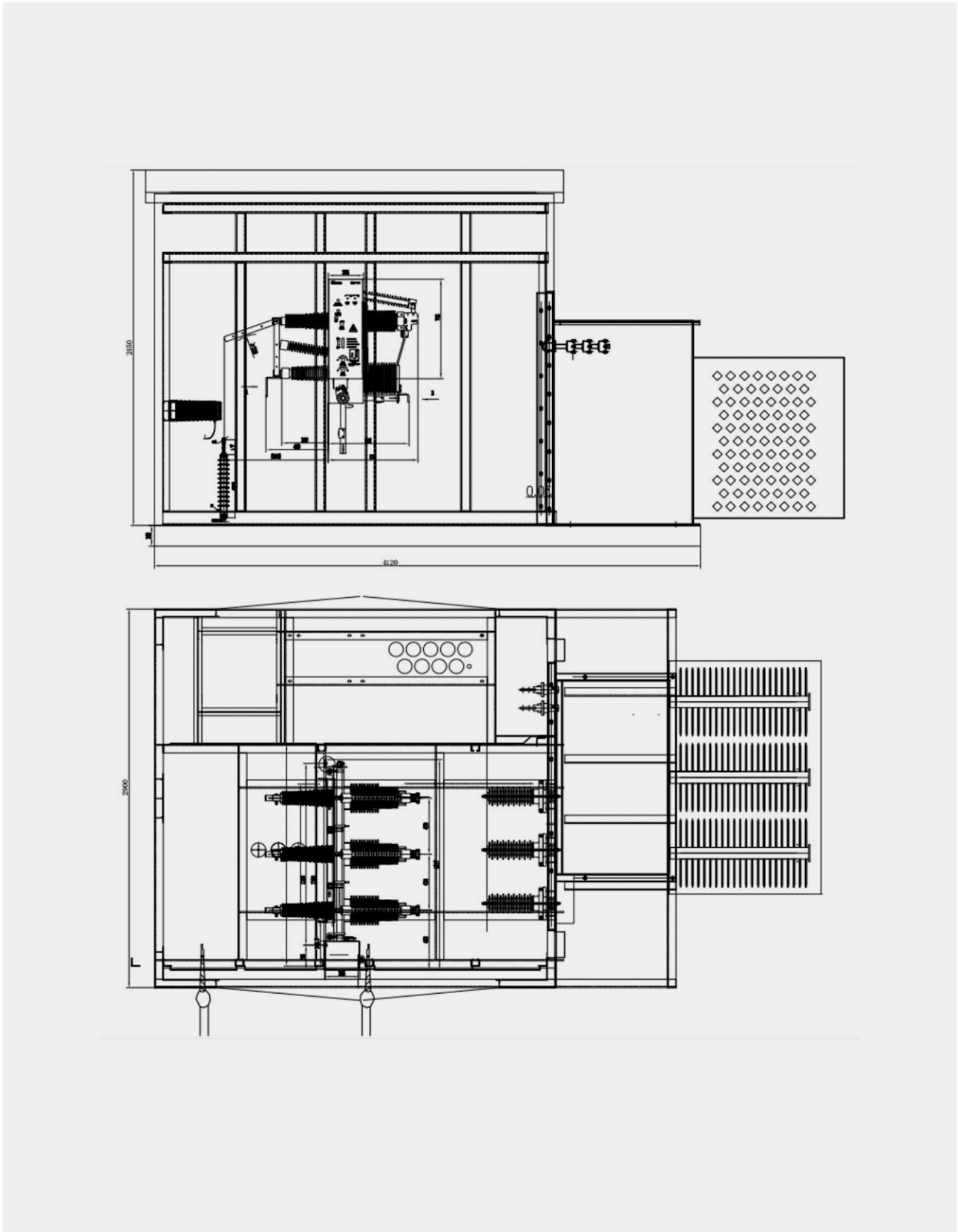
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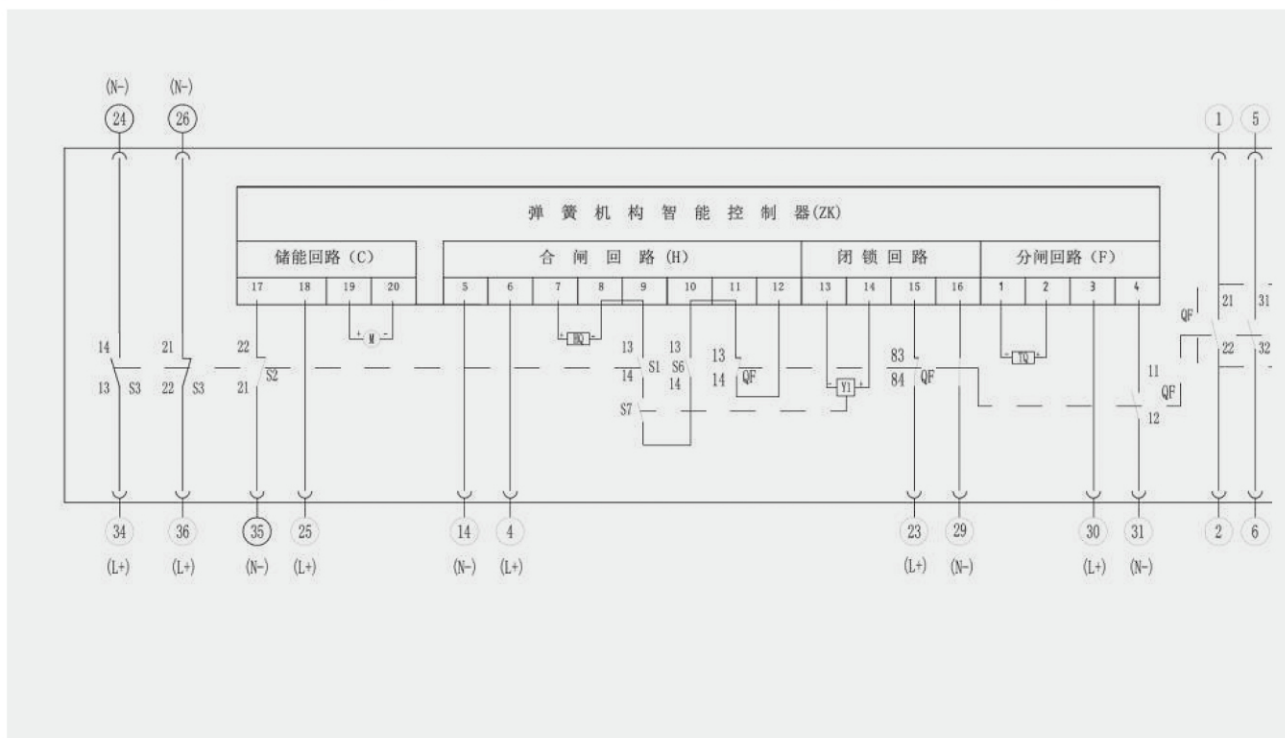
额定短路开断电流
 Rated short-circuit breaking current
 额定电流
 Rated current
 额定电压
 Rated voltage
 公司代号
 Company code

◎ 外形图 Outline drawing



© HDGV-40.5 配华式箱变示意图 Schematic diagram of Huapai style box transformer



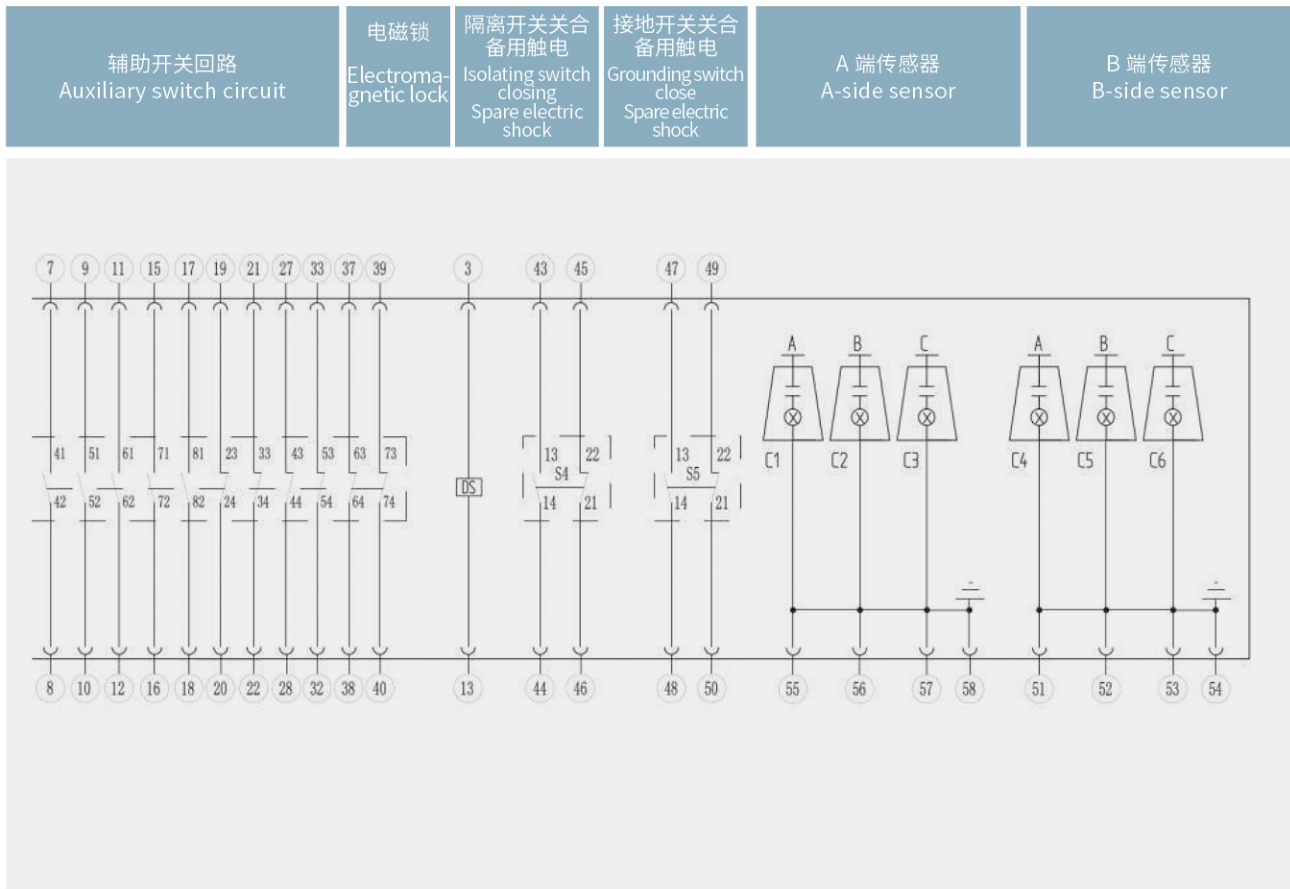


技术要求:

- 1、断路器处于分闸状态. 隔离开关分闸状态, 接地开关分闸状态。
- 2、备用触点断路器 7K7B, 隔离开关熔断器 1K1B, 接地开关 1K1B。
- 3、传感器 A、B、C 分别选用黄、绿、红 1.5mm² 多股铜导线接端子, 接地线选用 1.5mm² 多股双色铜导线, 其余选用 1.0mm² 的多股铜导线配置。
- 4、如果传感器需要接带电显示器, 请取消短接线。
- 5、防跳功能智能模块内置。

Technical requirements:

1. The circuit breaker is in the open state. The isolating switch is in the open state and the grounding switch is in the open state.
2. Standby contact breaker 7K7B, isolating switch fuse 1K1B and grounding switch 1K1B.
3. Sensors A, B and C respectively use yellow, green and red 1.5mm² multi-strand copper wires as terminals. Choose 1.5mm² multi-strand double-color copper wire as the grounding wire, and choose 1.0mm² multi-strand copper wire as the rest.
4. If the sensor needs to be connected to a live display, please cancel the short circuit.
5. The anti-jump function intelligent module is built in.



序号 Serial number	代号 Code name	名称 Name	数量 Quantity
1	HQ	合闸线圈 Closing coil	1
2	TQ	分闸线圈 Opening coil	1
3	M	储能电机 Energy storage motor	1
4	QF	辅助开关 Auxiliary switch	1
5	S1-S3	储能辅助开关 Energy storage auxiliary switch	3
6	S3-S6	行程开关 Limit switch	3
7	ZK	智能控制器 smart controller	1
8	DS	电磁锁 Electromagnetic lock	1
9	C1-C6	传感器 sensor	6
10	Y1	闭锁电磁锁 Locking electromagnetic lock	1
11	S7	闭锁电磁锁辅助开关 Locking electromagnetic lock auxiliary switch	1

