

WSK·KCS 系列无功动态调节器 (容性无触点开关)

WSK·KCS Series Reactive Dynamic Regulator(capacitive Contactless Switch)



概述 General description

本系列动态无触点开关是一种能够对电力并联电容器进行快速投切的电子型功率器件模块，其电气结构主要由大功率反并联晶闸管模块、隔离电路、触发电路、同步电路保护电路及驱动电路组成，并配有控制开关导通或截止的接线端子，控制逻辑电压 0V（截止）、12V（导通）。

本开关具有安装简单、维护方便、响应速度快、投切无涌流、工作无噪声运行稳定可靠、缺相保护等特点。是无功功率动态补偿装置用投切电容器组的理想器件。

This series of dynamic contactless switches is an electronic power device module which can switching on and off power shunt capacitors quickly. Its electrical structure is mainly composed of high-power anti-parallel thyristor module, isolation circuit, trigger circuit, synchronous circuit protection circuit and driving circuit. It is equipped with terminal to control switch on or off, and control logic voltage 0V (cut-off), 12. V (conduction).

The switch has the characteristics of simple installation, convenient maintenance, fast response, no inrush current in switching, stable and reliable operation without noise, and phase-gap protection. It is an ideal device for switching capacitor banks in reactive power dynamic compensation devices.

主要技术参数 Main technical parameters

- 额定电压：400V (230V)
- 额定频率：50Hz
- 控制容量：400V 级：1Kvar~40Kvar；230V 级：1Kvar~45Kvar

- Rated voltage: 400V (230V)
- Rating frequency: 50Hz
- Control capacity: 400V: 1Kvar~40Kvar; 230V: 1Kvar~45Kvar

使用条件 Conditions of use

- 周围空气温度：-25℃ ~+50℃，并且 24h 内其平均温度不高于 +35℃；
- 温度为 +25℃时，相对湿度短时可达 100%；
- 海拔高度不超过 2000m；
- 安装场所空气清洁，无爆炸及可燃危险品；无足以损坏绝缘及腐蚀金属的气体；无导电尘埃；无雨雪侵袭及严重霉菌存在；
- 安装场所无明显超限谐波份量存在的场合。

Ambient air temperature: - 25 +50, and within 24 hours its average temperature is not higher than + 35.

Relative humidity can reach 100% in a short time when the temperature is + 25 C.

The altitude does not exceed 2000 m.

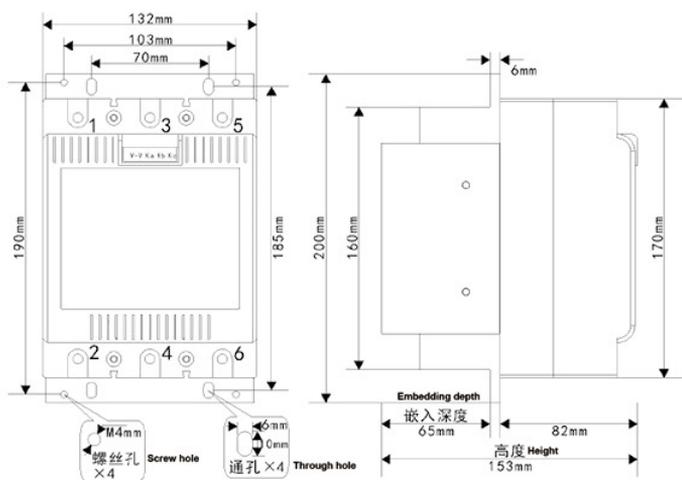
Clean air, no explosive and flammable dangerous goods, no gas enough to damage insulation and corrode metals, no conductive dust, no rain and snow invasion and serious mildew;

Where there is no obvious excessive harmonic component in the installation site.

产品选型 Product selection

型号 Type	电容类型 Capacitance type	额定电压 Rated voltage	最大驱动容量 Maximum drive Capacity
WSK-KCSIA-0.4-25kvar-L	共补 Common	线 Line 400V	25kvar
WSK-KCSIA-0.4-30kvar-L	共补 Common	线 Line 400V	30kvar
WSK-KCSIA-0.4-40kvar-L	共补 Common	线 Line 400V	40kvar
WSK-KCSIA-0.4-50kvar-L	共补 Common	线 Line 400V	50kvar
WSK-KCS3F-0.23-30kvar-L	分补 Dispersion	相 Mutually 230V	30(3 × 10)kvar
WSK-KCS3F-0.23-45kvar-L	分补 Dispersion	相 Mutually 230V	45(3 × 15)kvar

外形及安装尺寸 Outline and installation dimension

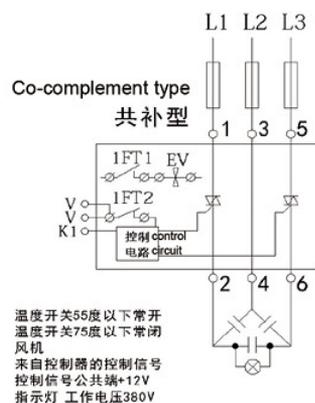


注：如用户需要连接判断开关导通与否的指示灯，应直接连接在电容器组的两端。每只可控硅两端都并联了一只 510K 的电阻，当用户使用低功耗指示灯指示开关的导通与否时，在未接电容器组的情况下应考虑此电阻的影响（在开关断开的情况下有可能使指示灯微亮），这属正常现象。用户在调试开关导通和截止时必须连接电力电容器的情况下通过测量调节器输出是否有额定电压来间接判断，由于本调节器是电子开关它不能使用万用表的短路测量档位直接测量开关的导通与否，这样的检测结果是不能作为开关是否正常工作的依据的。

Note: If the user needs to connect the indicator light to judge whether the switch is on or not, it should be directly connected to the two ends of the capacitor group. A 510K resistor is connected in parallel at both ends of each SCR. When the user uses the micro-power indicator to indicate whether the switch is on or not, the influence of this resistance should be considered in the case of not connecting the capacitor bank (the indicator may turn on slightly when the switch is off), which is a normal phenomenon. When debugging the switch on and off, users must indirectly judge whether the regulator has rated voltage by measuring the output of the regulator under the condition of connecting the power capacitor. Since the regulator is an electronic switch, it can not directly measure the switch on or off using the short-circuit measuring gear of the multimeter, such test results can not be used as the basis for the normal operation of the switch.

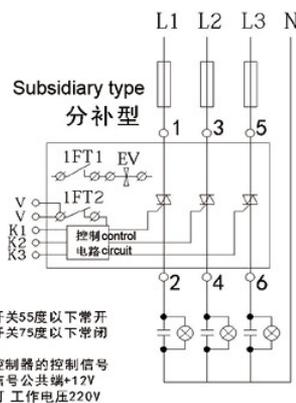
indicator to indicate whether the switch is on or not, the influence of this resistance should be considered in the case of not connecting the capacitor bank (the indicator may turn on slightly when the switch is off), which is a normal phenomenon. When debugging the switch on and off, users must indirectly judge whether the regulator has rated voltage by measuring the output of the regulator under the condition of connecting the power capacitor. Since the regulator is an electronic switch, it can not directly measure the switch on or off using the short-circuit measuring gear of the multimeter, such test results can not be used as the basis for the normal operation of the switch.

接线原理图 (一次方案) Wiring schematic diagram (primary scheme)



IFT1 温度开关55度以下常开
IFT2 温度开关75度以下常闭
EV 风机
K1 来自控制器的控制信号
V 控制信号公共端+12V
⊗ 指示灯 工作电压380V

The temperature switch is normally turned on below 55 degrees.
Temperature switch is normally closed below 75 degrees.
Fan
Control signal from controller
Control signal common end + 12V
Indicator lamp working voltage: 380V



IFT1 温度开关55度以下常开
IFT2 温度开关75度以下常闭
EV 风机
K1 K2 K3 来自控制器的控制信号
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The temperature switch is normally turned on below 55 degrees.
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Control signal from controller
Control signal common end + 12V
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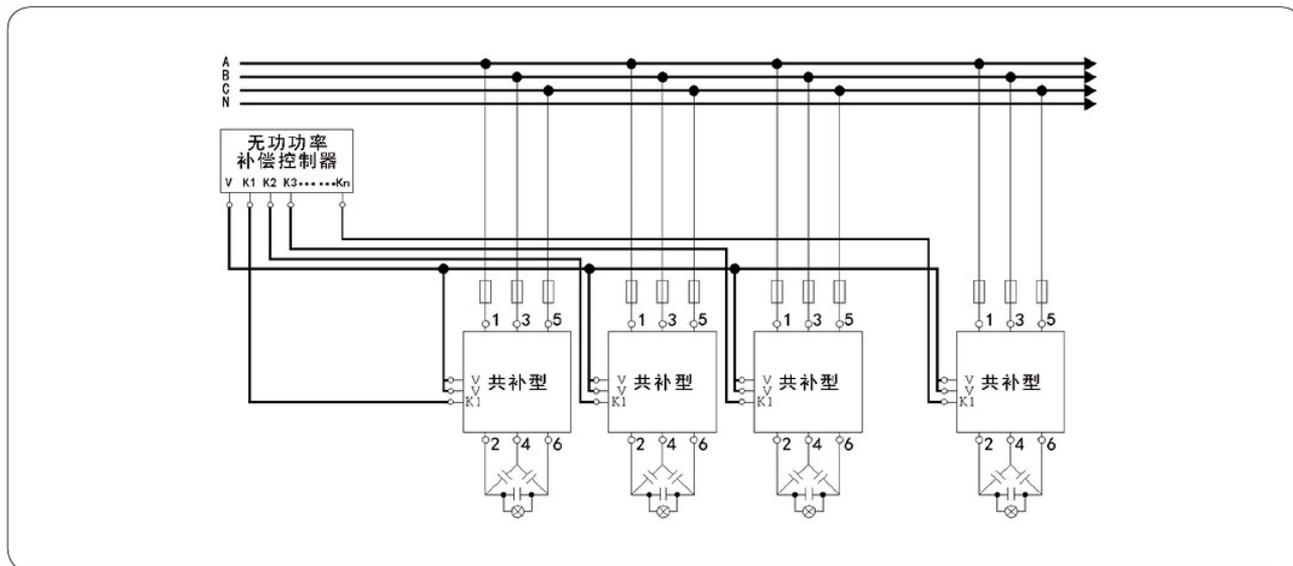


老款产品 Old products

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应用接线图 Application wiring diagram

