

YK-SZC-AC 伺服系统控制器 HYK-SZC-AC servo system controller

产品简介

Product overview

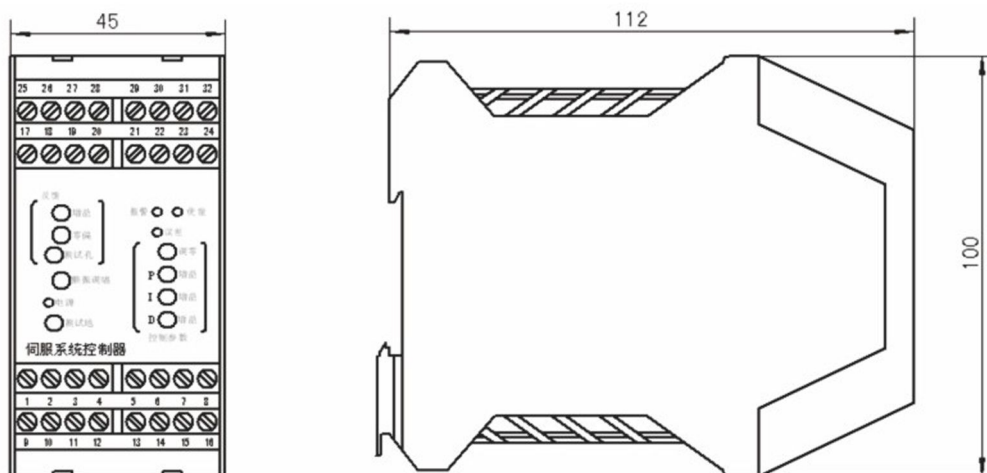
该系统控制器能对阀控油缸、阀控马达、阀控泵等执行部件进行高精度控制，通过采集阀控油缸、阀控马达、阀控泵配套传感器信号构成对位置、角位置、角速度、速度、加速度或力等物理量进行闭环控制的电液伺服系统，如：阀控油缸、阀控马达、阀控泵等。

The system controller can control the valve control cylinder, valve control motor, valve control pump and other actuating parts with high precision. The electrohydraulic servo system for closed-loop control is composed of position, angular position, angular velocity, velocity, acceleration or force and other physical quantities by collecting the signals of sensors matched with the valve control cylinder, valve control motor and valve control pump, such as valve control cylinder, valve control motor and valve control pump.



外形尺寸（单位：mm）

Outline dimensions (unit: mm)



功能特性及技术参数

Functional characteristics and technical parameters

使用条件 Service conditions	
供电 Power supply	参见型号选择的①供电 Refer to ① Power supply in model selection
连接线 Connecting wire	建议采用每根大于或等于 0.3 平方毫米屏蔽电缆 The shielded cable greater than or equal to 0.3 mm ² is recommended
环境温度 Ambient temperature	-20°C~80°C
环境湿度 Ambient temperature	35-85%RH
环境气体 Environmental gas	周围无腐蚀性气体 No corrosive gas around
电磁干扰 Electromagnetic interference	周围无强的电磁干扰波 No strong electromagnetic interference around
振动 Vibration	无剧烈振动 No violent vibration

性能 Performance		
静态 Static	线性度 Linearity	1%
	零偏 Zero bias	1%
	对称度 Symmetry	1%
	温漂 Warm-up drift	<90ppm/°C
动态 Dynamic	频宽 Band	≥200Hz 也可以根据客户特殊需要定制 ≥200Hz can also be customized according to the special needs of customers

物理特征 Physical characteristics	
重量 Weight	0.3kg
尺寸 Size	112mmX100mmX45mm

功能 Function	
输入 CMD Input CMD	参见型号选择的②控制信号 CMD Refer to ② Control signal CMD in model selection
输出 SV Output SV	参见型号选择的③控制信号 SV Refer to ③ Control signal SV in model selection
使能: Enabling: Disable-SVC	可以控制阀控电流的通断: 给 Disable-SVC Be able to control valve control current on/off: give Disable-SVC 一个 5V 信号, SV 输出断开; a 5V signal, SV output is off; Disable-SVC 接 GND 或空接时, SV 输出电流, 控制器正常工作 Disable-SVC is connected to GND or null, SV outputs current, and the controller works normally
低通滤波 Low pass filtering	可以减少干扰-80dB,根据客户要求来定截止频率 Be able to reduce -80dB disturbance; the cut-off frequency is determined as required by customers
信号调整 Signal adjustment	可以根据客户特殊需要选择 Be able to choose as required by customers
颤振 Flutter	改善伺服阀静态精度 Improve static accuracy of servo valve
调整 Adjustment	零偏 调整阀的零偏 Zero bias adjust zero bias of the valve 增益 调整阀的增益 Gain adjust gain of the valve
保护 Protection	输入级: 单向信号输入反接, 输出自动断开 Input level: reverse connection of one-way signal input, automatic output disconnection $\leq 10V$ 限压输入, $\leq 100mA$ 限流输入。 $\leq 10V$ input with limited voltage, $\leq 100mA$ input with limited current. 输出级: 1.5 倍 SV 限流输出。 Output level: 1.5 times of SV output with limited current.

接线定义

Wiring definition

标号 Label	定义 Definition	说明 Description
1	+10V	+10V 电压输出 +10V voltage output
2	GND	GND
3	GND	GND
4	DGND	屏蔽地 Shielding ground
5	CMD+	控制信号正向输入端 Positive input end of control signal
6	CMD-	控制信号负向输入端 Control negative input end of signal
7	GND	GND
8	DGND	屏蔽地 Shielding ground
9	Power-gnd	24V 电源负向输入端 Negative input end of 24V power supply
10	+24V	24V 电源正向输入端 Positive input end of 24V power supply
11	Power-gnd	24V 电源负向输入端 Negative input end of 24V power supply
12	+24V	24V 电源正向输入端 Positive input end of 24V power supply
13	+15V	+15VCC
14	-15V	-15Vcc
15	GND	GND
16	Mod if_PC	输入修正信号 Input correction signal
17	FB+	反馈信号正向输入端 Positive input end of feedback signal
18	FB-	反馈信号正向输入端 Positive input end of feedback signal
19	GND	GND
20	FK	反馈电压输出测试点 Feedback voltage output test point

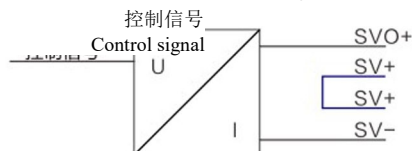
21	P	比例电路输出测试点 Proportional circuit output test point
22	I	积分电路输出测试点 Integral circuit output test point
23	D	微分电路输出测试点 Differentiating circuit output test point
24	DISABLE	使能信号输入端，控住电流的通断 Enable signal input end, control current on/off
25	SVO+	与 SV+之间串入电流表，不用时与 27 短接 The current meter is connected with SV+ in series; if it is not used, it is short-circuited with 27
26	SV-	阀控电流负向输出端 Negative output end of valve control current
27	SV+	与 SVO+之间串入电流表，不用时与 25 短接 The current meter is connected with SVO+ in series; if it is not used, it is short-circuited with 25
28	SV+	阀控电流正向输出端 Positive output end of valve control current
29	D1	误差信号正向测试端 Positive test end of error signal
30	D2	误差信号负向测试端 Negative test end of error signal
31	GND	GND
32	DGND	屏蔽地 Shielding ground

备注：(1)Disable 使能端接+5V 信号时，控制器输出断开；Disable 空接或者接地时，控制器正常输出。

Remarks: (1) When Disable enable end is connected with +5V signal, the controller output is disconnected; When Disable is of idle contact or grounded, the controller outputs normally.

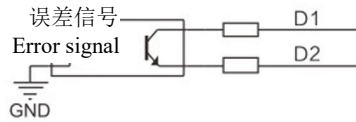
(2) SVO+为电流正常输出端 SV-为电流负向输出端，SV+与 SV+在电路内部短接，接线如图：

(2) SVO+ is normal output end of current, and SV- is negative output end of current. SV+ and SV+ are short-circuited inside the circuit, and the wiring is as below:



(3) D1 与 D2 为误差开关量信号，误差超过 10%时，D1、D2 处于导通状态。状态如图：

(3) D1 and D2 are error switching value signals. When the error exceeds 10%, D1 and D2 are in the conducting state. The state is as shown in the following figure:



型号参数选择

Model parameter selection

型号 Model	HYK-SVC-AC			
供电 Power supply	(±24VDC 供电) <input type="checkbox"/> (±24VDC power supply) <input type="checkbox"/>			
控制信号 Control signal CMD	±10V <input type="checkbox"/>	±5V <input type="checkbox"/>	+0~10V <input type="checkbox"/>	+0~5V <input type="checkbox"/>
	±7.5mA <input type="checkbox"/>	±10mA <input type="checkbox"/>	±15mA <input type="checkbox"/>	±40mA <input type="checkbox"/>
	±100mA <input type="checkbox"/>	+4~+20mA <input type="checkbox"/>	+0~+10mA <input type="checkbox"/>	
	+0~+20mA <input type="checkbox"/>	其他_____		
	Miscellaneous_____			
阀控电流 Valve control current SV	-7.5mA~+7.5mA <input type="checkbox"/>	-15mA~+15mA <input type="checkbox"/>		
	-20mA~+20mA <input type="checkbox"/>	-40mA~+40mA <input type="checkbox"/>		
	-60mA~+60mA <input type="checkbox"/>	-80mA~+80mA <input type="checkbox"/>		
	-100mA~+100mA <input type="checkbox"/>	其他_____		
	Miscellaneous_____			
可选功能要求 (此项不需要的 请打“X”) Requirements of optional functions (please tick "X", if this item is not needed)	使能 <input type="checkbox"/> 颤振 <input type="checkbox"/> 滤波 <input type="checkbox"/> Enable <input type="checkbox"/> Flutter <input type="checkbox"/> Filter <input type="checkbox"/> 伺服阀要求频宽_____ Required bandwidth of servo valve _____ 增益范围±20% <input type="checkbox"/> 或_____ Range of gains ±20% <input type="checkbox"/> or _____ 零偏范围±10% <input type="checkbox"/> 或_____ Range of zero bias ±10% <input type="checkbox"/> or _____ 信号调整 <input type="checkbox"/> _____ Signal adjustment <input type="checkbox"/> _____			
常规参数 General parameters	控制信号: ±10V; 4~20mA Control signal: ±10V; 4~20mA 阀控电流: -15mA~+15mA; -40mA~+40mA Valve control current: -15mA~+15mA; -40mA~+40mA 可选功能: 调增益范围±20% Optional function: gain range adjustment ±20% 调零偏范围±10%;含颤振 Adjustment of zero bias range± 10%; including flutter			