

Specification

Item	Min	Typical	Max	Unit	Note
Input Voltage	85	220	260	V	AC RMS
Adjustable Output Voltage Range	0	—	220	V	
Adjustable Output Current Range	0	—	50	mA	
Single Channel Output Power	0	—	11	VA	
Voltage Adjusting Accuracy	1			V	
Voltage Regulation Precision	0	—	0.1	%	ΔVout/ΔVin
Output Frequency	40.0	—	400.0	Hz	
Frequency Adjusting Accuracy	0.1			Hz	
Output Waveform	Sine				
DC Control Output Current	0	—	200	mA	The maximum total output current of 4 channel is 500 mA.
DC Control Output Voltage	22	24	26	V	
Analog Control Signal	1~5			V	Remote Speed Control signal
	4~20			mA	
Digital Control Signal	24			V	Switching Signal
Adjusting Method	6			Button	
Standby Consumption	—	2.5	—	W	When stopping power output
Display Method	5			Digit	LED
Soft Startup Time	0.1	—	10.0	s	Default value: 0.5
Soft Closedown Time	0.1	—	10.0	s	Default value: 0.1
Delay Time Range	0	—	20.0	s	Default value: 0.2
Delay Time Accuracy	0.1			s	
Overheat Protection Trigger Temperature	60	—	65	°C	No Condensation
Ambient Temperature	0	25	40	°C	
Ambient Humidity	10	60	85	%	
Storage Ambient Temperature	-40	25	85	°C	

Toubleshooting Suggestions and Error Explanations

Error Code	Definition	Troubleshooting Methods
No display after power on		Make sure the power outlet is live Make sure the Input power Cable is reliably connected to the power outlet
Display normally, but no output		Make sure the Output Cable is reliably connected to the vibrator. Make sure the output voltage is not small. Make sure the Stop Indicator is not light up.
Control signal loses effectiveness		Make sure the control signal is correctly inputted. Make Sure the ground wire of the control signal is correctly connected to the controller. Make sure the Logical Relation of the control signals is set correctly as your expectation.
Display normally, no output, but sound can be heard		Adjust all parameters as this book instructed.
Channel indicator flashing	Internal channel misconnected	Disable the breakdown channel by Default settings Restoration in the Sharing Parameter Group. Contact our technical support for repairing the breakdown channel.
	Overheat	Place the controller in well ventilation environment.
	Reserve	Contact our technical support.
	Channel 1 Main Output Overcurrent	Reduce the output voltage and make sure the vibrator is not short circuit.
	Channel 2 Main Output Overcurrent	
	Channel 3 Main Output Overcurrent	
	Channel 4 Main Output Overcurrent	Reduce power consumption of the load connected to the control output, and make sure the load is not short circuit.
	Channel 1 Control Output Overcurrent	
	Channel 2 Control Output Overcurrent	
	Channel 3 Control Output Overcurrent	
	Channel 4 Control Output Overcurrent	Contact our technical support.
	Internal 24V Power Supply Error	
	RS Logical Error	Input signal 1 and Input signal 2 of the RS Flip-flop can't be active at the same time.

Features

SDVC40-XS Series controller is specially designed for driving piezo-electric vibratory feeder in automation systems. Its special features include:

Frequency Adjustment: Output frequency of the controller is 40.0 ~ 400.0 Hz.

Voltage Adjustment: Output Voltage of the controller is 0~220V.

Phase Difference Adjustment: Adjust the Phase Difference from -180° to 180° between each power output channel, when all channels power output frequency are same.

Automatic Voltage Regulation: The internal digital voltage regulation circuit can eliminate the feed speed variation caused by main voltage fluctuation.

Switch Sensor ON/OFF control: NPN / PNP Switch Sensor whose type can be recognized automatically or PLC can be connected to turn ON/OFF the controller.

Remote Speed Control: Power Output Voltage of the controller can be adjusted remotely by an external potentiometer, PLC or other equipment which provide 1~5V or 4~20mA DC signal.

Power Output ON/OFF Button: Start or stop the power output of controller on the control pannel.

Keypad Lock: Lock all buttons on the keypad to prevent misoperation by pressing the ON/OFF button and hold for 2 seconds.

Run state of output when controller is powered on: ON/OFF state of output (Power output or DC output) when controller is powered on can be adjusted.

DC Control Output: The controller can output low voltage DC signal associated with ON/OFF control of the controller to drive a solenoid valve or other external devices.

RS485 Communication: Support ASCII and RTU mode of Modbus protocol.

Control logic programable: Set control signal, control logic and time delay etc.

Protection Functions: Include Overheat, Short-circuit and Overcurrent are of Power Output and Control Output.

Default Settings Restoration: This function can help operator reset the parameters to the factory default value.

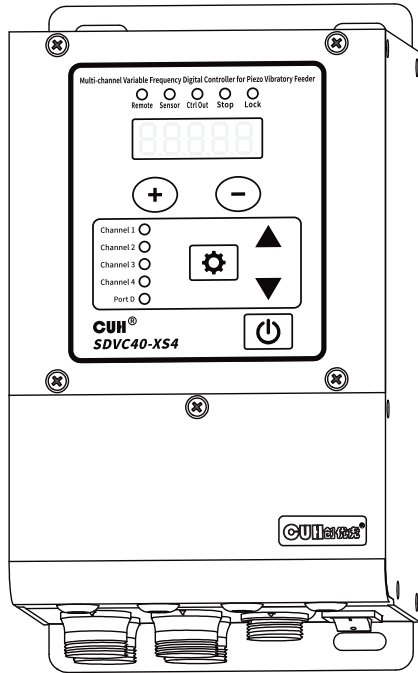
Basic operation

- [Short press] Press the button and hold less than 2 seconds and more than 0.1 second, then release it.
- [Long press] Press the button and hold more than 2 seconds, then release it.
- Long Press to enter or exit Main Output Parameter Group adjustment interface.
 - Long Press and simultaneously to enter or exit Control Output Parameter Group adjustment interface.
 - Long Press , and simultaneously to enter or exit Sharing Parameter Group adjustment interface.
 - After entering the parameter group adjustment interface, switch parameters in the parameter group by or , and adjust parameter value by or .
 - For adjusting parameter in each channel, switch to the corresponding channel interface by short press .
 - Short press to turn on/off power output rapidly.
 - Long press to lock or unlock the keypad.
 - The parameters of each channel can achieve Default Settings Restoration function respectively and the steps are as follows:
 - 1、Enter the parameter group adjustment interface which need to be restored and select the correspondent channel.
 - 2、Switch to the Default Settings Restoration parameter by .
 - 3、Press and hold until the LED screen display and release , then LED screen display CUH awhile and return to the standby interface. By this time, all parameters of corresponding parameter group have been restored to default value.



Simplified User Manual of SDVC40-XS Series

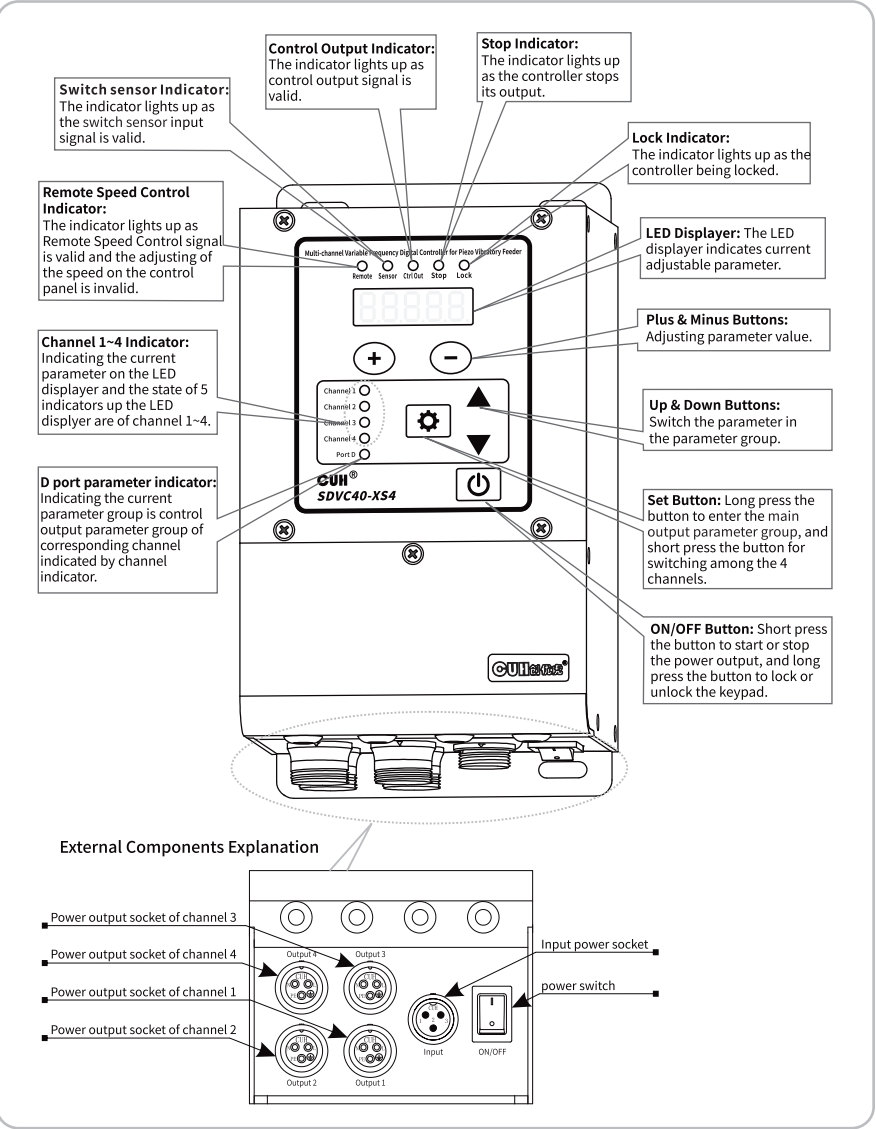
Multi-channel Digital Variable Frequency Piezoelectric Vibration Feeding Controller



Applicable controller models:
SDVC40-XS2 (50mA * 2)
SDVC40-XS3 (50mA * 3)
SDVC40-XS4 (50mA * 4)

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Indicators, buttons and external components



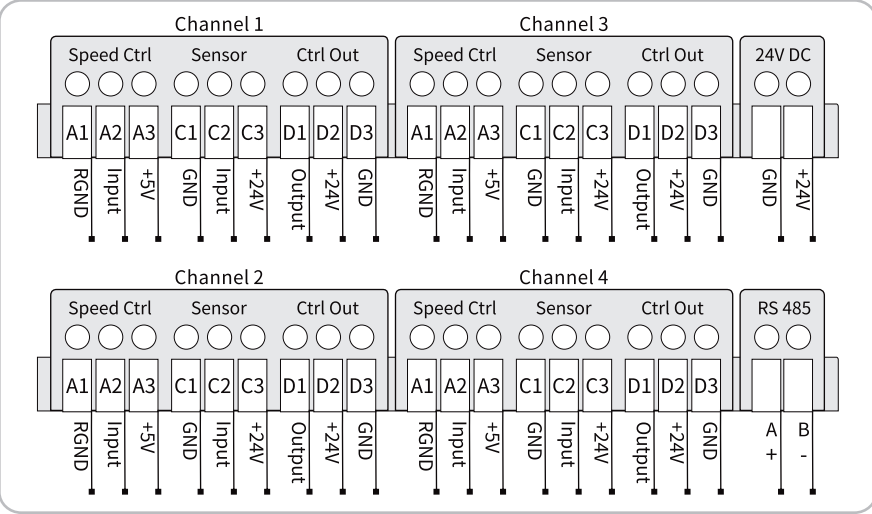
Parameter Definition

Parameter Symbol	Definition	Value Range	Default Setting
U8888	Output Voltage	0~220	150
F8888	Output Frequency	40.0~400.0Hz	50.0
t8888	Soft Startup	0.1~10.0 seconds	0.5
t8888	Soft Closedown	0.1~10.0 seconds	0.1
P8888	Phase Difference	-180°~180°	0
J8888	On Delay	0.0~20.0 seconds	0.2
L8888	Off Delay	0.0~20.0 seconds	0.2
h8888	Maximum Output Voltage	0~220V	220
88888	Default Settings Restoration for the parameter group of each channel	---	---
P8888	1st signal input source of main output logical operation unit 1st signal input source of control output logical operation unit (when D port parameter indicator lights up)	0、1、A、b、C、d、OA、Ob、OC、Od、-A、-b、-C、-d、-OA、-Ob、-OC、-Od	0
P8888	2nd signal input source of main output logical operation unit 2nd signal input source of control output logical operation unit (when D port parameter indicator lights up)	0、1、A、b、C、d、OA、Ob、OC、Od、-A、-b、-C、-d、-OA、-Ob、-OC、-Od	Main \ Control output A (A \ OA) B (b \ Ob) C (C \ OC) D (d \ Od)
n8888	Main output logical unit operation mode Control output logical unit operation mode (when D port parameter indicator lights up)	n And AND n or OR n Xor XOR n rs rs trigger	OR

Parameter Symbol	Definition	Value Range	Default Setting
J8888	Main output On Delay Control output On Delay (when D port parameter indicator lights up)	0.0~20.0 seconds	0.0
L8888	Main output Off Delay Control output Off Delay (when D port parameter indicator lights up)	0.0~20.0 seconds	0.0
F8888	Main output Mode Control output Mode (when D port parameter indicator lights up)	F dLY Delay Mode F hLD Hold Mode	Delay Mode
r8888	Control output Type (when D port parameter indicator lights up)	r nPN NPN r PnP PNP r PSL Push-pull	Push-pull
* rA888	Switch Sensor Type	rA Uto Auto rA PnP PNP	Auto
* r d888	Power-on Operation status	r d ON r d OFF r d Keep	ON
* P8888	Modbus Communication Protocol	P ASC ASC II P RTU RTU	ASC II
* P8888	Modbus Communication Address	1~31	1
* 28888	Modbus Communication Baud Rate	0.3、1.2、2.4、9.6、19.2、57.6、115.2Kbps	9.6
* C8888	Temperature	Real time temperature read-only	

Note: The parameter with * is belong to the sharing parameter group and all the 4 channel indicators are light up.
The parameter with D port parameter indicator lighting up is control output parameter group.
The other parameters are belong to main output parameter group.

Wiring ports



Input and Output Circuit Diagrams

