

Stage Controller

Unisurface SPC-STG

SPC-STG is an advanced controller for inertial-drive piezo stages. Embedded ARM MPU achieves automatic controls and autonomous motions. Intuitive operation and advanced applications can be performed by PC.



Features

- ❑ Inertial-driving and static DC motion
- ❑ Compact feedback control
- ❑ Soft-landing
- ❑ Embedded memory keeps as-set configurations
- ❑ Stand-alone operation
- ❑ Communication with a PC through USB
- ❑ Remote operation by handsets

Applications

- ❑ Micro probers positioning
- ❑ Sample stages positioning
- ❑ Rotation stages manipulation
- ❑ Soft landing of micro probes
- ❑ Force curve measurements
- ❑ ...etc.

Output

- ❑ 6 channels
- ❑ -150V to +150V (positive terminal)
- ❑ +150V to -150V (negative terminal)
- ❑ 16 bit resolution

Signal Input

- ❑ 2 channels
- ❑ $\pm 10V$
- ❑ 12 bit resolution

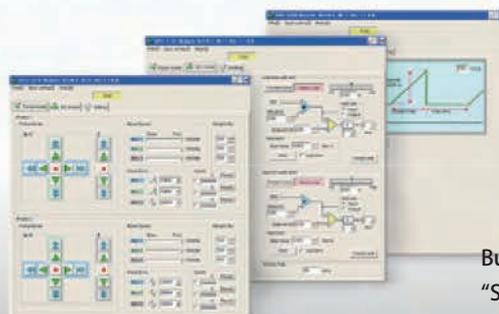
Intelligent Control

- ❑ Feedback control
- ❑ Approach motion

Accessories

- Install CD
- User's Manual
- USB Cable
- AC Cable

*Stage units are not included.



Bundled software
"SPC-STG Remote"



Option
Handset
RM10J

SPC-STG Specifications

Items		Specs	Notes
Size and Weight	Dimensions	W430 x D350 x H88 mm	EIA 19 inch rack 2U size
	Weight	Approx. 8kg	—
Power	AC Voltage	100VAC (50/60Hz)	Selectable from 110, 115, 120, 220 or 240 VAC
	Current	0.6A	—
DC Power Out*1	Connector	4 pin connector x 2	Hirose RM12BRD-4S
	Voltage	±15V	Max 30mA
Environment	Temperature	5°C to 40°C (no condensation)	Temperature Fluctuation <±2°C
	Humidity	Less than 60%	—
Drive Output	Channel	6	Positive and negative voltages for each channel
	Connector	6 pin Amphenol connector x 2	MS3102A14S-6S compatible
	Voltage Range	-150V to +150V (16bit)	—
	Polarity	Switchable	Individually switchable
Analog Input*2	Channels	2	—
	Connector	BNC (female) x 2	—
	Voltage Range	-10V to +10V (12bit)	—
Digital Input*3	Port Number	4	—
	Connector	Dsub 15 pin (female) x 1	—
	Circuit	TTL	Pulled up to +5V with 4.7kΩ inside
Inertial Driving	Pulse Type	4 types (sawtooth, parabolic, etc.)	Individual channel setting
	Frequency	1Hz, 50Hz, 100Hz, 500Hz, 1kHz	Individual channel setting
	Counting Pulse	Possible	Continuous, single-shot, any number of shots
	Pulse Height	0 to ±150V	Individual channel setting
DC Driving	Rough Range	-150V to +150V	—
	Fine Range	-15V to +15V	—
	Speed	50V/s to 1000V/s	Common for all channels
Feedback Control	Input / Output	Single input, Single output	—
	System	2 systems	Simultaneously controllable
	Driving Type	DC	—
	Control Type	3 level speed integral control	—
Approach Motion	Input / Output	Single input, Single output	—
	System	2 systems	Simultaneous control unavailable
	Driving Mode	Inertial drive	Switchable to feedback control after approaching
	Proximity Sense	Comparing signal to threshold	4 kinds comparison (UP, DOWN, UP & DOWN, SHIFT)
PC Connection	Interface	USB	USB 2.0 cable is recommended
	PC Specs	Pentium4 1GHz, 1GB RAM	—
	OS	Windows XP/7	32bit / 64bit
	Communication	USART	Virtual COM port
	Multiple Connect	Less than 8 units	Empty COM ports (below COM20) are required
Remote Control	Handset	UNISOKU handset RM10J	Connect directly to SPC-STG
	Control Pad	USB type gamepad*4	Connect to PC (SPC-STG Remote Software)

*1 Power supply for pre-amplifiers

*2 Reference signal inputs for feedback control or approaching

*3 Inputs for limit switched or external triggers

*4 Automatic shooting function or analog-mode are not supported