



Features

- High-precision clamping voltage output
- Millisecond-level clamping response speed
- Supports wafer status monitoring with configurable detection thresholds
- Flexible configuration of clamping/declamping voltage waveforms
- Real-time monitoring of critical parameters (voltage, current, capacitance)
- Optional internal environmental temperature detection module for the controller
- Optional grounding voltage and detection module

Description

The electrostatic chuck controller is a bipolar power supply, designed as a core power control device for precision processes in semiconductors, panels, and photovoltaics.

It supports high-precision voltage regulation and real-time monitoring of critical parameters such as voltage, current, and capacitance. With millisecond-level clamping response speed, it ensures rapid positioning and release of wafers in manufacturing, etching, coating, and inspection processes.

The controller includes interfaces for communication with upper-level systems, enabling remote control of functions and real-time monitoring of operational status via command instructions.

Applications

- Semiconductor wafer processing
- Precision machining
- Scientific research and experiments

Technical Specifications

	ESCC 510	ESCC 620
Input voltage	100~264 V AC/47~63Hz	24 V DC
Input current	0.2 A	2 A
Output clamping voltage	A: 0~±500 V	A: 0~±2000 V
	B: 0~±500 V (Phase B = [-1] x Phase A)	B: 0~±2000 V (Phase B = [-1] x Phase A)
Output clamping voltage accuracy	<2%F.S.	<0.5%F.S.
Output grounding voltage	1000~4000 V	N.A.
Output grounding voltage accuracy	<5%FS	N.A.
Operating current	0~±15 mA DC	0~±7.5 mA DC
Peak current	20 mA	10 mA
Communication interface	RS-485	RS-485
Communication protocol	Modbus (RTU)	Modbus (RTU/ASCII)/customizable
Remote control interface	N.A.	DB15
Environment	Operating: 0 °C~45 °C; 25~60% HR	
	Storage: -35 °C~85 °C; 25~60% HR	
Dimensions	482.6 mm × 88.1 mm × 361.8 mm (W×H×D)	