

Optical Chopper

SE3001 - Optical Chopper System

1 Hz to 10 kHz chopping frequency



Features

- 1 Hz to 10 kHz chopping frequency range
- Frequency accuracy up to 0.5%
- Replaceable external blade
- High-quality motor with PID technology
- Standard TTL/CMOS level input & output
- Suitable for 50mm optical platforms

Overview

SE3001 optical chopper is high-precision optical equipment with its chopper frequencies from 1 Hz to 10 kHz. With the advantage of PID technology and high-quality motor, the frequency accuracy of SE3001 is up to 0.5%. SE3001 consists of a console, a chopper head and a control line. The main function of the console is to control the speed of the motor to achieve the target speed. The chopper head is mainly composed of a base and a motor with a blade.

With a 320*240 color LCD display and a control knob on the front panel, SE3001 can be set to the specific chopping frequency that users need. All the functions can be implemented by rotating and pressing the control knob. The blade of SE3001 can be replaced with different slot blade

to achieve different chopping frequency ranges. The standard blade is 10-slot blade with chopping frequency from 20 Hz to 1000 Hz. For other suitable blades and corresponding frequency ranges, please refer to the table below.

Chopper Blades & Frequencies

SE1B2 (2 slot)	1 - 200 Hz
SE1B10 (10 slot)	20 Hz - 1 kHz
SE1B15 (15 slot)	30 Hz - 1.5 kHz
SE1B30 (30 slot)	60 Hz - 3 kHz
SE1B60 (60 slot)	120 Hz - 6 kHz
SE1B100 (100 slot)	200 Hz - 10 kHz
SE1B57 (in 5 out 7 slot)	In: 10-500 Hz Out: 14-700 Hz

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Technical Specifications

➤ Specifications

Frequency Stability	250ppm/°C (typ.)
Frequency Accuracy	< 1% < 0.5% (typ.)
Frequency Resolution	1 Hz
Operating Temp.	10°C - 40°C

➤ Display

Display	2.4 inch 320*240 LCD
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➤ Input & Output

Connector	BNC
Compatibility	Standard TTL/CMOS
Voltage	0 - 5 V
Input High Level	>3.6 V
Input Low Level	<0.4 V
Min Load Resistance	500 Ω

➤ Communication

Communication Type	USB
Protocol	USB (RS232 Emulation)
Baud Rate	9600
Data Bits	8
Stop Bits	1
Parity	NONE
Handshaking	NONE

➤ Blade Slot Angle

SE1B2	90°
SE1B10	18°
SE1B15	12°
SE1B30	6°
SE1B60	3°
SE1B100	1.8°
SE1B57	36° Inner, 25.7° Outer

➤ General

Power Requirements

Voltage	100/120/220/240 VAC
Frequency	50/60 Hz
Power Consumption	<20 W

Dimensions

Width	206 mm
Depth	150 mm
Height	70 mm