

Optical Chopper

SR540 — Optical chopper system

- 4 Hz to 3.7 kHz chopping frequencies
- Low phase jitter
- Single and dual beam experiments
- Sum & difference reference outputs



SR540 Specifications

The SR540 chopper will handle all your optical chopping requirements — from simple measurements to dual-beam and intermodulation experiments. The SR540 has a 4-digit frequency display, front-panel frequency control, analog voltage frequency control, and two reference outputs with selectable operating modes. Two anodized aluminum blades are provided: a 5/6 slot blade for frequencies up to 400 Hz, and a 25/30 slot blade for frequencies up to 3.7 kHz. Reference outputs are provided for frequencies corresponding to each row of slots, as well as the sum and difference frequencies.

Ordering Information

SR540	Optical chopper
O5402530	25/30 dual-slot replacement blade
O54056	5/6 dual-slot replacement blade
O5405	5-slot replacement blade
O54030	30-slot replacement blade
O540RCH	Replacement chopper head

Chop frequency	4 Hz to 400 Hz (5/6 slot blade) 400 Hz to 3.7 kHz (25/30 slot blade)
Frequency stability	250 ppm/°C (typ.)
Frequency drift	<2%, 100 Hz < f < 3700 Hz
Phase jitter (rms)	0.2° (50 Hz to 400 Hz) 0.5° (400 Hz to 3.7 kHz)
Frequency display	4-digit, 1 Hz resolution and accuracy
Frequency control	10-turn pot with 3 ranges: 4 Hz to 40 Hz 40 Hz to 400 Hz 400 Hz to 3.7 kHz
Input control voltage	0 to 10 VDC for 0 to 100% of full scale. Control voltage overrides frequency dial.
Reference modes	$f_{\text{inner}}, f_{\text{outer}}, 5 \times f_{\text{outer}}, f_{\text{inner}} + f_{\text{outer}}, f_{\text{outer}} - f_{\text{inner}}$
Dimensions	Controller: 7.7" × 1.8" × 5.1" (WHD) Head: 2.8" × 2.1" × 1.0" (WHD)
Blade diameter	4.04" ± 0.002"
Cable length	6 ft.
Power	12 W, 100/120/220/240 VAC, 50/60 Hz
Warranty	One year parts and labor on materials and workmanship, 90 days on motor