

MODEL 340CD OPTICAL CHOPPER with 200 mm diameter chopping disks

A complete model 340 chopper consists of a 340H head, one or more 340Dn disks, a 300CD (or 300C) controller and a 300I-B cable, all on our price list.

FEATURES

- 5 Hz – 100 Hz with 2-slot disk or 15 Hz – 250 Hz with 5-slot disk
- Large apertures: accommodate light beams to 90 mm dia with 2-slot disk and to 70 mm dia with 5-slot disk.
- 5 digit digital display of current chopping frequency
- Compact chopper head
- Photochemically etched brass blades
- Variable aperture (0% to 50% transmission) with two identical discs

Scitec Instruments Model 340CD is a high stability variable frequency optical chopper. It comprises a chopper control unit and chopping head, which is supplied with a chemically blacked photoetched disc. There is a choice between two standard discs having either 2 slots or 5 slots. These provide chopping

frequency ranges of either 5 Hz to 100 Hz or 15 Hz to 250 Hz.

The blades are made of half hard brass, which is non-magnetic. The compact chopper head may be bench bolted or optical stalk (bench rod) mounted.

The chopping frequency is set using a ten-turn potentiometer mounted on

the front panel of the control unit or by applying a voltage to the external control input. The reference output is a TTL pulse at the chopping frequency and has a constant phase relative to the chopping action.

The Model 340CD has a 5 digit led display which gives a direct read-out of the chopping frequency.

SPECIFICATIONS

Model 300CD Control Unit

- Output voltage: 15V DC maximum.
- Stability: Better than 0.01%/°C
- Frequency control: Internal-Manual control via ten turn potentiometer. External-BNC connector for 0 to 15V.
- Frequency stability: Short term - see phase jitter. Long term - Better than $\pm 0.1\%$ of maximum frequency.
- Frequency read-out: 5-digit 14 mm (0.56 in) led display with 1 Hz resolution (1 second update rate) or 0.1 Hz resolution (10 second update rate).

- Reference output: 5V HCT TTL pulse via BNC socket.
- Power requirement: 100-130V or 200-260V, 50/60Hz, 12VA.
- Dimensions: 254(W) x 76(H) x 178(D) mm.
- Weight: 2.6 kg.

Chopper Head

- Motor: 11 pole dc motor, sleeve bearings with more than 8000 hours lifetime, 0-6400 rpm reversible (no load max.); 0-3000 rpm with disc.
- Reference pick-up: IR led and phototransistor pair with Schmitt trigger.
- Dimensions: 122.0(H) x 80.0(L) x 40.0(W), without blade.

- Mounting: Optical stalk: adjustable between 6.5 and 14.0 mm in diameter. Bolts: 2 x 3 mm.

Chopper Blades

- Material: Half hard brass, 1.0 mm (0.04 in).
- Diameter: 200 mm (7 7/8 in).
- Surface Finish: Chemically blacked (gold plated as an option)
- Mark-Space Ratio: 1:1 with one blade.

OPTIONS

- Frequency Counter
If the frequency counter is not required then please order the Model 340C Optical Chopper.
- Blade Protector
It is advisable for the chopping blade to be protected by using a blade protector (Part Number 340P).
- Variable Aperture
Slot aperture can be varied from 0% to 50% by using two identical discs on the same chopping head at the same time.

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