



360C OEM

Ultra Miniature Optical Chopper

FEATURES

- 5Hz – 8kHz chopping frequency range
- Photochemically etched brass blades
- Ultra compact chopper head
- Low cost for OEM use

DESCRIPTION

The Scitec Instruments 360 chopping system consists of a chopping head, drive board, photochemically etched blades, and interconnecting cables. As the system is designed for OEM use, each component is available separately.

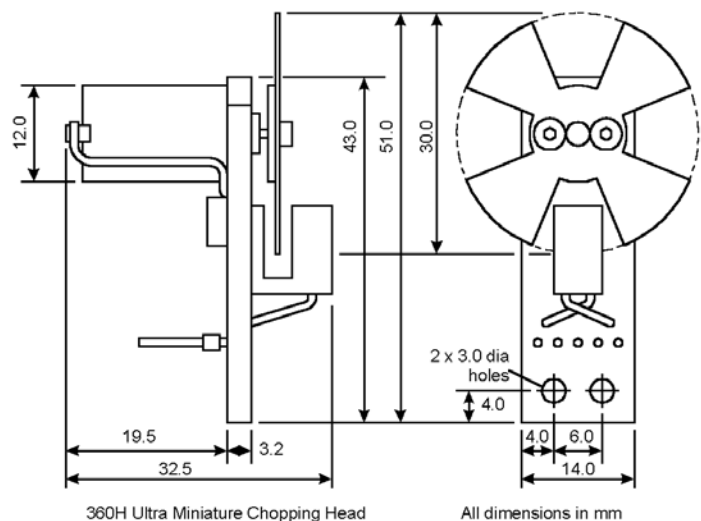
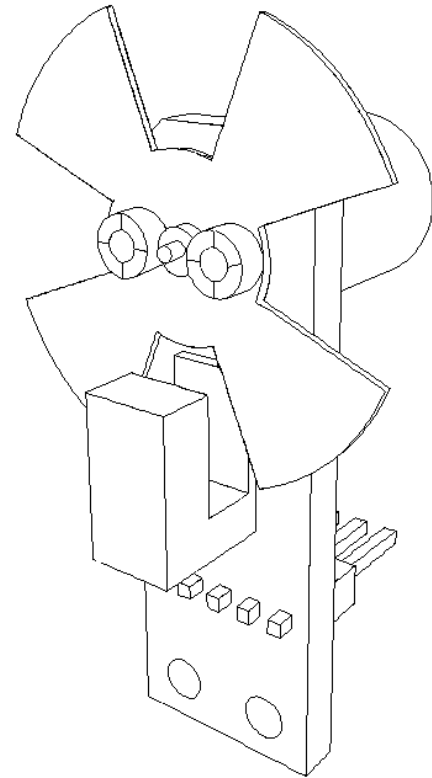
Model 360H Ultra Miniature Optical Chopper Head

The ultra-miniature chopper spins at up to 12000rpm.

Scitec Instruments Model 360H is a stable variable frequency optical chopper head. This ultra miniature chopping head has been reduced to the bare minimum.

The motor blade and optical pick-up are completely exposed, allowing maximum flexibility in beam positioning. The chopper head has two 3mm holes near its base for easy mounting.

Available separately are a range of three high accuracy chemically blacked photoetched discs. These discs are of two, four, and forty slots and allow operation over the frequency range 5Hz to 8kHz. The 360 system uses the same set of 30mm diameter discs used on the Scitec 350 system.



Boston Electronics Corporation, 91 Boylston Street, Brookline MA 02445

(800)347-5445 or (617)566-3821 * fax (617)731-0935 * choppers@boselec.com * www.boselec.com

Model 360C Drive Board

The 360C Drive Board is now available to drive the 360H ultra miniature chopping head from a wall mounted power supply.

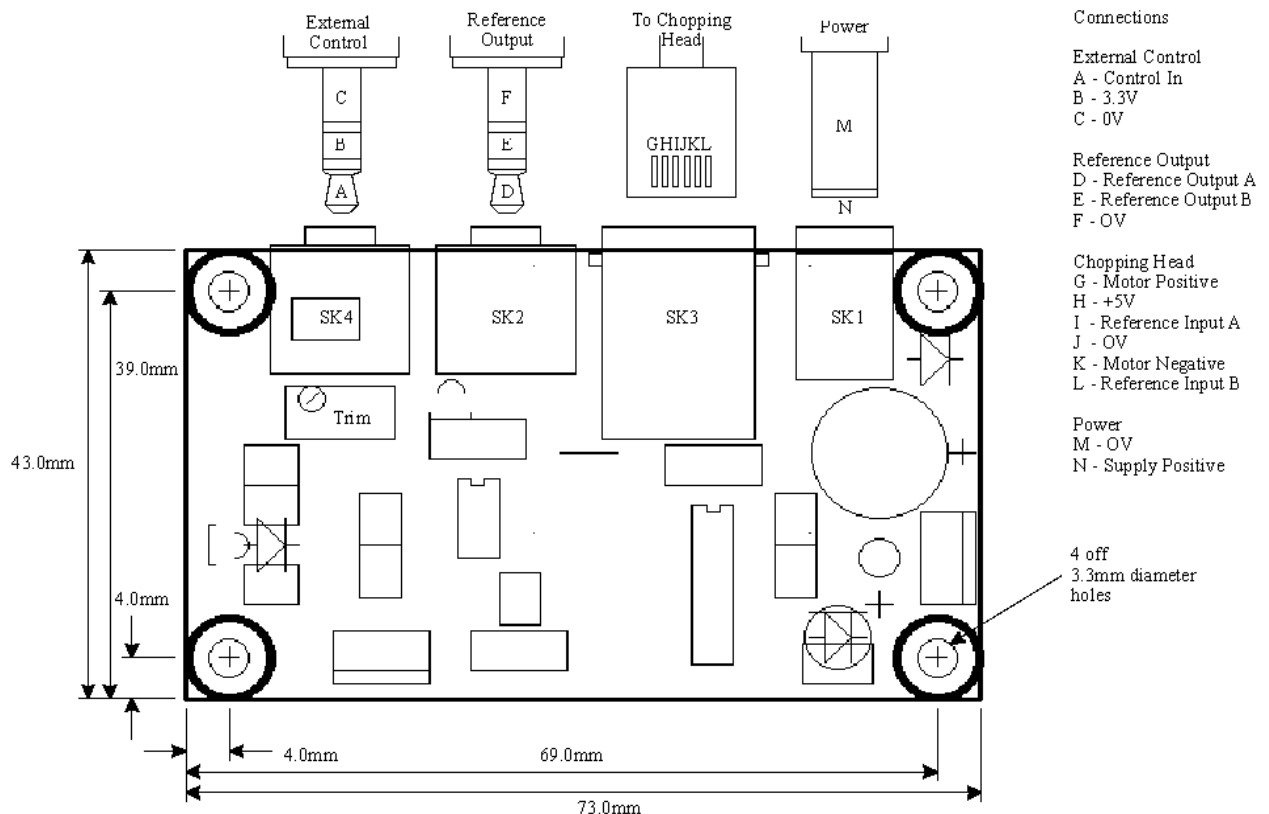
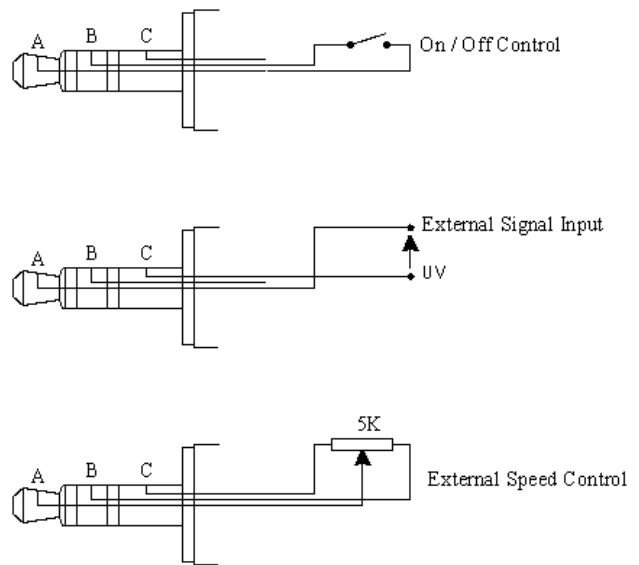
Connectors are included for connecting the drive board to the chopping head, an external control input, and to provide a reference output.

Speed control is possible on board via adjustments of a 10-turn trimpot and externally through the external control input. With this external control input it is possible to connect simply an on/off switch or a remotely mounted speed control potentiometer. Alternatively, an externally generated voltage can be used to control the speed of the motor. In this mode, the board mounted trim potentiometer is used to control the relationship between the external voltage and the chopping speed.

Circuitry is included to drive two opto-switch systems with the output being double buffered.

Customization to customer requirements is possible.

Various Methods of External Speed Control



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SPECIFICATIONS

360H Chopper Head	
Motor	7 segment DC motor, sleeve bearings with 500 to 1000 hours lifetime, 0-12000rpm reversible
Reference pick-up	IR LED and phototransistor pair with Schmitt trigger
Dimensions	43.0(H) x 30.0(L) x 14.0(W)mm without blade 50.0(H) x 32.0(L) x 37.0(W)mm with blade
Mounting	Two 3mm holes near base
Chopper Blades	
Material	Half hard brass, 0.25mm (0.01 inches) thick
Diameter	30mm (1.2 inches)
Surface Finish	Chemically blacked or gold plated
Mark-Space Ratio	1:1
Drive Board	
Power Connection	2.1mm standard power connector for a wall mounted power supply. (Note: this is the internal dimension. Also accepts 2.5mm power connector but this is not recommended.)
Dimensions	43 x 73mm
Control Input	3.5mm stereo jack plug
Voltage Supply Required	7-15V DC or 5-10V rms AC
Reference Output	3.5mm stereo jack plug. Two channels available but only one is used with the 360H chopping head.

