VARIABLE LOW FREQUENCY CHOPPER
OPTICAL MODULATOR
SHUTTER / BEAM DEFLECTOR
CH-40

FEATURES AND ADVANTAGES:
* VARIABLE frequency from DC to 30 Hz
* Large aperture
* Small size/lightweight
* No radiated electromagnetic interference (EMI)
* Metal vanes are standard, mirrors, prisms, gratings, lenses or optical attachments optional

1 Available as a special order

DESCRIPTION:
The variable low frequency chopper (optical modulator)/ shutter/ beam deflector is a chopping vane mounted on a motor with a limited rotation angle. The position of the rotor follows the input current with respect to amplitude and frequency. The mechanical rotation of the vane relative to its rest position depends on the direction and the magnitude of the current in the drive coil. The chopper covers a frequency range from DC to 30 Hz. It can hold very large vanes, mirrors, gratings and other optical and electro-optical devices. The chopper is used when very low frequencies are desired. It is used for large light beam chopping or for simultaneous chopping of multiple optical beams. It is also used as a shutter. If the vane is replaced with a mirror, it is used as an optical beam deflector. The chopper/ beam deflector/ shutter comes in two versions:
1) The CH-40-LS is a low speed, wide-angle chopper
2) The CH-40-HS is a high speed, narrow angle chopper
The LFC driver is used to drive the chopper.

SPECIFICATIONS:
MECHANICAL ROTATION:
Model CH-40-LS: 24° peak to peak
Model CH-40-HS: 15° peak to peak

RESPONSE TIME:
Model CH-40-LS: About 20mSec, depending on the vane size
Model CH-40-HS: About 5mSec, depending on the vane size

DRIVE CURRENT SENSITIVITY:
Model CH-40-LS: 50mA/degree, +/-600mA max.
Model CH-40-HS: 80mA/degree, +/-600mA max.

DRIVE COIL RESISTANCE: 7 ohms
DRIVE COIL INDUCTANCE: 5mH
BACK EMF CONSTANT: .23mV/degree/second
ORDERING INFORMATION:
TYPE [CH-40]; VANE SIZE [mm]; ANGLE [P-P]
Example: PART NO. CH40-20x30x5-15. This part number specifies the model CH-40 chopper, a 20x30mm x 5mm thick vane and a 15° peak-to-peak angle.

Special configurations and elements other than specified are available as a special order. Consult factory. Drive electronics with different package, regulation and power supply options are available.

Special pricing for OEM applications.