

# **Optomechanical Chopper OMC-1**



Optomechanical Chopper OMC-1 is designed to modulate a continuous or semicontinuous optical radiation by blocking the radiation beam with an opaque metal wheel that has some slots in it.

OMC-1 consists of an optomechanical unit and a control unit. For ease of assembly, they are connected by a two-socket cable. Control unit also includes power supply.

The Chopper is equipped with a display panel and synchronization signal output (TTL, 0 – 5 V).

## Key Characteristics

### Modulation Frequency

To achieve wider frequency range, the chopper is supplied with two wheels that have different number of different-shape slots. Within each of the two ranges, the modulation frequency is controlled by varying the wheel rotation speed.

Chopper Wheel	Modulation Frequency, Hz	Modulation Frequency Stability, Hz	Modulation Frequency Selected at Power-on, Hz
CW2	5 - 80	±0.03 @ 5 Hz, ±0.3 @ 80 Hz	20
CW10	30 - 500	±0.05 @ 30 Hz, ±0.5 @ 500 Hz	100

### Electrical Parameters

Voltage, V	100 - 240
Frequency, Hz	60/50
Power consumption, W	18

### Chopper Wheel Characteristics

Name	CW2	CW10
Number of sectors	2	10
Sector angle	90°	18°
Maximum radiation beam aperture passing through a sector, mm	50.5	19.5
Wheel diameter, mm	150	
Wheel thickness, mm	0.5	
Wheel Material	Steel	

### Dimensions

Optomechanical unit, mm	150*172*80
Control unit, mm	144*105*55

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