

218M Optical Chopper module

The 218M is the control electronics for our ever popular 218 Chopper in modular form and when it comes to optical choppers you won't find better value or performance than the Bentham 218. That's because we've concentrated on the important things like phase jitter, frequency stability and long motor life and left out some of the more esoteric features not required in most applications.

The 218M modular control unit is coupled by a 2m long lead to the chopping head. Four easily-interchangeable chopping discs are provided as standard which allow chopping frequencies in the range of 0.5Hz to 3kHz. A variable aperture 2-slot disc and higher frequency discs are also available. The chopping frequency is indicated by a digital indicating dial and a squarewave reference output suitable for use with lock-in amplifiers is provided.



Part No	Grooves/mm
Chopping Frequency:	2-slot disc 5Hz to 200Hz 5-slot disc 12.5 Hz to 500Hz 10-slot disc 25 Hz to 1kHz 30-slot disc 75 Hz to 3KHz
Phase Jitter:	2-slot disc: 0.6° pk-pk over entire frequency range. 5, 10 & 30-slot disc: 1° pk-pk over entire frequency range.
Frequency Selection:	By multi-turn potentiometer
Reference Output:	800mV positive-going wave from 200Ω. Sensed by IR LED/Photodiode mounted on chopping head.
Display:	LCD frequency display on free-standing controller turns counting dial on modular unit
External Control:	The chopping frequency can be externally controlled via a front panel socket. Maximum input is = 15V into 20kΩ.
Resolution:	1Hz with 10-slot disc.
Motor:	High quality 11-pole dc motor with precious metal commutator.
Calibration Accuracy:	± 1% for setting between 15% and 100% of full scale.
Variable Aperture:	A variable aperture 2-slot disc is available for non-even mark space modulation.
Frequency Stability:	<i>Versus Temperature:</i> Less than 0.01% change per K. <i>Versus Line Voltage:</i> Less than 0.01% change results from a change in line voltage from 190V to 265(95V to 130V)

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Dimensions

