

CHAPTERS

Tables/
Breadboards

Mechanics

Optomechanic
Devices

Kits

Lab Supplies

SECTIONS

Filter Wheels

Shutter

Optical Chopper

Galvo Mirror System

Deformable Mirrors

Fast Steering Mirror

Motorized Filter Wheel (Page 1 of 2)

NEW
product



FW102C



SM1CP

- 6-Position Filter Wheel
- Accepts Ø1" Filters up to 0.25" (6.35 mm) Thick
- Programmable Filter Sequences
- SM1-Threaded (1.035"-40) Access Ports
- 30 mm Cage System Compatible
- BNC Trigger Option
 - External Trigger In (Increment Control)
 - External Trigger Out (Provision from Software)
- Bi-Directional Controls
- RS-232 and USB Interfaces
- Local or Remote Control

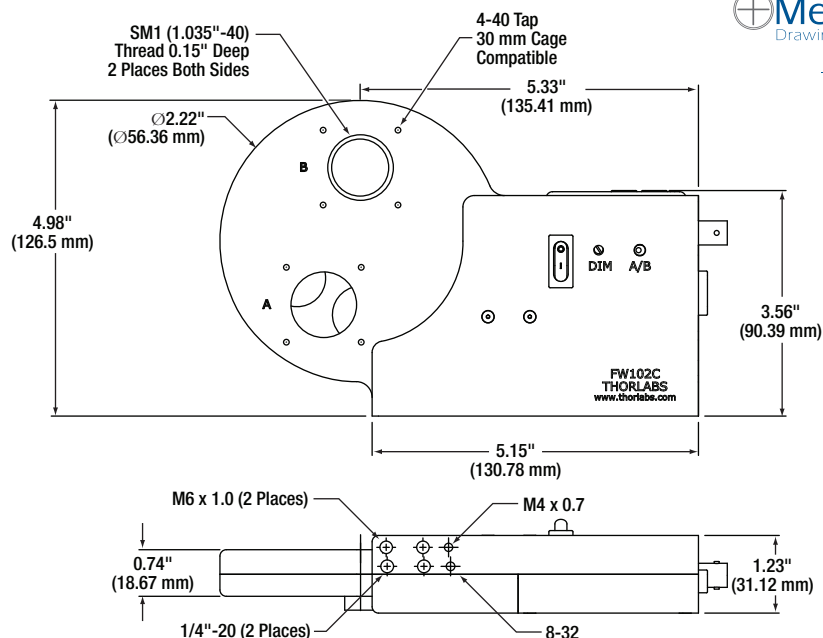
The FW102C Motorized Filter Wheel is the successor to the FW102 and FW102B motorized filter wheels. Measuring Ø4", it will accommodate up to six Ø1" filters with a maximum thickness of 0.25" (6.35 mm). The new design is driven by a highly reliable stepper motor, which provides over 2,000,000 continuous, random position changes. Under normal laboratory or manufacturing conditions, the FW102C is designed for years of use. This wheel can be incorporated into a host of automated applications in the lab or in a manufacturing environment, including color CCD photography, fluorescence microscopy, and photometry.

This filter wheel has two access ports (labeled A and B in the photograph above). A simple toggle switch allows the user to select the desired port. The included SM1CP2 port covers can be used to close off the unused port.

The FW102C comes with the filter wheel and controller unit, a simple-to-use GUI application program, a 12 Volt DC supply, and six threaded SM1RR retaining rings for securing Ø1" optics in place.

Mounting Options

The filter wheel can be directly mounted to a breadboard, or it can be post mounted using the 1/4"-20 (M6) or 8-32 (M4) mounting holes on the bottom of the unit (refer to the drawing below). The filter wheel is equipped with 4-40 taps centered around each port hole for cage system integration. In addition, the two SM1-threaded (1.035"-40) access ports provide direct compatibility with lens tube systems based on the SM1 standard.



Mechanical
Drawings Available on the
WEB

Do you need...
Bandpass Filters

See pages 808 - 811

Motorized Filter Wheel (Page 2 of 2)

FW102C
Shown with Cover
Removed



Specifications

- Access Time for Adjacent Locations: 900 ms (Typical)
- Accuracy/Repeatability: $\pm 2^\circ$
- Filter Diameters: 1"
- Filter Thicknesses: $\leq 0.25"$ (6.35 mm)

Mounting Filters

Filter exchange begins by removing the front cover from the motorized filter wheel housing by loosening the external thumb screw. Insert each filter into the numbered port of choice and secure them using the included SM1RR Retaining Rings. The filter wheel itself is also removable to facilitate single filter mounting or quick exchange of numerous filters.

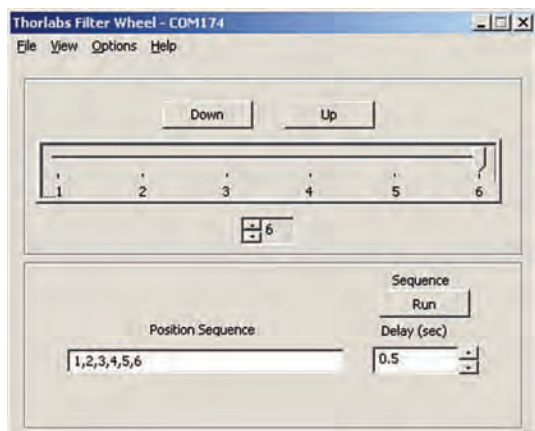
Extra Filter Wheels

For applications where many filters are needed or varying sets of filters, extra FW102W 6-Position Filter Wheels are available. Each wheel includes six SM1RR retaining rings for securing the optics.



FW102W

ITEM #	\$	£	€	RMB
FW102W	\$ 229.00	£ 164.88	€ 199,23	¥ 1,825.13



GUI Interface: Above is a screen shot of the GUI, which allows the user to set a position sequence and delay time down to 0.25 s.

Remote or Manual Operation

Filter selection can be made manually from the push buttons on the unit or remotely from a USB 2.0 interface, BNC input, or RS-232 connection. The BNC input accepts a TTL level signal to trigger the rotation of the filter wheel. An easy-to-read display indicates the filter selection; the display intensity can be adjusted via an adjuster on the front of the wheel.

Programming and Remote Control

Automation of filter sequences is available through the USB 2.0 or RS232 interface. A simple command language facilitates the filter selections and the retrieval of filter status. Sample code is provided for LabVIEW and C++ code development.

The graphical user interface (GUI) allows remote filter selection. It also allows simple filter sequences to be entered with a dwell time at each filter location that can be adjusted from 0.25 to 5 seconds. This sequence can then be run once or in a continuous loop.

ITEM #	\$	£	€	RMB	DESCRIPTION
FW102C	\$ 1,095.00	£ 788.40	€ 952,65	¥ 8,727.15	6-Position Motorized Filter Wheel for Ø1" (Ø25.4 mm) Optics