

## FAR05F - July 18, 2023

Item # FAR05F was discontinued on July 18, 2023. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

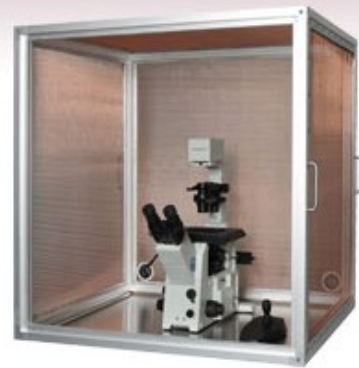
### STANDALONE FARADAY ENCLOSURE

- ▶ Shielding from Electromagnetic/Electrostatic Interference
- ▶ Shielding: 55 dB at 10 MHz
- ▶ Table or Bench Mountable



FAR05F

Typical Application



Breadboard, Microscope and Joystick Not Included

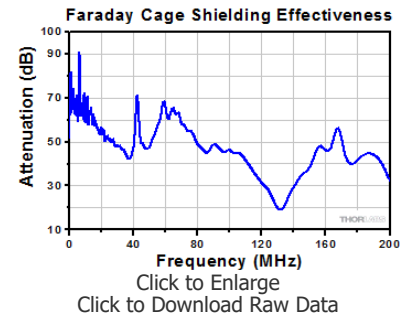
#### OVERVIEW

##### Features

- Reduces Electromagnetic Interference from Common Laboratory Items
- Compatible with Our 25 mm Construction Rails and Rail Accessories
- Includes Two Port Holes in Rear Panel for Managing Cables

Experiments in electrophysiology, confocal microscopy, and other sensitive applications often need to be shielded from external interference from electrostatic fields and electromagnetic waves generated by AM/FM radio, CRT oscilloscopes, fluorescent lights, and other common lab equipment. Thorlabs' Standalone Faraday Enclosure consists of a taut copper mesh that protects against these external sources of interference.

Additionally, the adapters sold below allow the ScienceDesk Faraday enclosure to be used with our range of 25 mm construction rails and accessories.



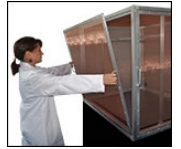
#### Standalone Faraday Enclosure

- ▶ Removable Magnetic Panels Allow for Easy Access to Setup
- ▶ Includes Two Port Holes in Rear Panel for Managing Cables



► Enclosure Design Tested by Independent Electromagnetic Compatibility (EMC) Consultants

Faraday cages minimize the influence of external electromagnetic waves on objects placed within them. Waves that are significantly longer than the mesh spacing will be blocked. Our Standalone Faraday Enclosure features a taut mesh made of Ø0.25 mm copper wire with 1.4 mm spacing. For easy access to the enclosure's interior, each of the four side panels are held in place by magnets and can be quickly removed,



Click to Enlarge  
Magnets Hold Each  
Side Panel of the  
Enclosure in Place

as shown in the photo to the right. The base plate of the Faraday enclosure includes an M3-tapped hole for attaching a user-supplied strap to ground the enclosure.

For simplified cable management, this enclosure comes with two port holes in the rear panel, each with a clearance of Ø1.75" (Ø44.4 mm). Additional port holes can be added using the PSY405 Cable Port Kit (sold below). To help further organize your workspace, our Faraday enclosure is compatible with our 25 mm construction rails via the PSY404 Rail System Adapter Kit (sold below).

Item #	Shielding Effectiveness @ 10 MHz	Outer Dimensions, Including Handles (L x W x H)	Inner Dimensions (L x W x H)	Port Hole Clearance
FAR05F	55 dB	886 mm x 1036 mm x 984 mm (34.8" x 40.7" x 38.7")	744 mm x 894 mm x 894 mm (29.3" x 35.2" x 35.2")	Ø1.75" (Ø44.4 mm)

Part Number	Description	Price	Availability
FAR05F	Freestanding Faraday Enclosure	\$2,834.71	Lead Time

### Cable Port Kit



While our Faraday enclosure offers two cable ports on its rear panel, additional ports can be added to any Faraday enclosure panel using our PSY405 Cable Port Kit. Each cable port kit enables the creation of one additional port with a clearance of Ø1.75" (Ø44.4 mm).



Click to Enlarge  
PSY405 Cable Port  
Fitted to Faraday  
Enclosure

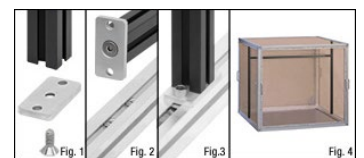
To install a new port, place one plate on either side of the enclosure's copper mesh and bolt them together. Then use a sharp blade or scalpel to cut away the mesh from the center aperture. Finally, fit the included protective rubber ring to the hole. A manual with detailed instructions is included with each cable port kit.

Part Number	Description	Price	Availability
PSY405	Faraday Cage Cable Port Kit	\$26.21	Today

### 25 mm Rail System Adapter Plate Kit



The PSY404 Adapter Plate Kit allows our range of 25 mm construction rails and accessories to be attached to the inside edge of the Faraday enclosure frame, as shown in the photo to the right. This allows custom enclosure and shelving systems to be constructed. A common application of this adapter is to construct a custom mounting structure within the Faraday enclosure that does not disturb the vibration-isolated experiment.



Click to Enlarge  
Steps to Secure a 25 mm Rail System Inside a  
Faraday Enclosure

The adapter plate kit includes two adapter plates, two countersunk 1/4"-20 screws, and two countersunk M6 screws. Each kit allows the user to attach two 25 mm construction rails to the Faraday enclosure frame or to attach one 25 mm construction rail at both ends. The inclusion of imperial and metric screws permits both imperial and metric rail systems to be constructed.

For details on how to install the rails, please see the image to the right. In Figure 1, a countersunk 1/4"-20 screw from the kit is used to attach the adapter plate to one end of a 25 mm rail. Figure 2 shows two XE25T3 Low-Profile T-Nuts (our XE25T1 Drop-In T-Nuts can also be used) slipped into the frame. In Figure 3, the T-nuts allow the adapter plate to be attached to the rail using two user-supplied 1/4"-20, 3/8" long or M6 x 1.0, 10 mm long screws. One example of a possible final arrangement is shown in Figure 4.

Part Number	Description	Price	Availability
PSY404	Faraday Enclosure Adapter Plate Kit for 25 mm Construction Rails	\$47.74	Today



## Faraday Cage Shielding Effectiveness

