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THORLABS

PRO8000-R42 - September 29, 2022

Item # PRO8000-R42 was discontinued on September 29, 2022. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

MODULAR TEST & MEASUREMENT PLATFORMS

- **Modular Platform for Laser Diode Testing and Operation**
- **Locally Operated Using Built-In Front Panel**
- **Fast IEEE-488 and RS232 Interfaces for Remote Control**

PRO8000
Shown with 8 Installed Modules
and Rack Mounting Adapter

Easy-to-Read Display
No PC Required for Operation

PRO800
2-Slot Benchtop Enclosure,
Shown with PRO8000-C Covers
(Sold Separately)

OVERVIEW

Features

- Universal, Modular Platform for Production and Quality Control
- Current and Temperature Controllers for Laser Diode Operation, Characterization, or Burn-In Applications
- Available Optical Modules Include WDM Laser Sources and Optical Switches
- Compact, 2-Slot Benchtop and Rack-Mountable 8-Slot Versions Available
- Remote Control via IEEE 488.2 and RS232
- Accessories Included with Chassis:
  - Power Cord
  - Manual
  - Software CD
  - LabVIEW and LabWindows/CVI Drivers

PRO8 Series Options[a]	
Laser Diode Current Controllers (Up to 8 A)	
TEC Temperature Controllers (Up to 64 W)	
Combination Laser Diode Current (Up to 1 A) & TEC Temperature Controllers (Up to 16 W)	
DWDM DFB Laser Modules[b]	
Optical Switches	
Photocurrent Measurement Module	

a. Our PRO8 Series Chassis can accommodate multiple PRO8 Series Modules, allowing for a customized telecom solution.
b. Please contact Tech Support for availability of desired wavelength.

Thorlabs' PRO8 test and measurement platforms are designed to operate electrical and optical modules for telecom testing and other applications. They control a broad family of interchangeable modular devices (see table to the right) and can be operated independent of an external computer. Three different versions are available: 2-slot benchtop (PRO800), 8-slot rack-mountable (PRO8000), and 8-slot rack-mountable for high-power applications (PRO8000-4). The 8-slot chassis options are compatible with our 19" Rack Mounting System.

Modules

The PRO8 display menu allows easy configuration of any module in the chassis. Mnemonic symbols provide user-friendly access to all operational parameters. As long as modules are not moved to different slots during power down, all settings are retained in memory and automatically recalled upon powering on the mainframe. Individual modules are automatically identified and, when selected, can be configured and controlled using the front panel controls.

To meet individual experimental needs, PRO8 chassis are made to order and custom configured with individually selected modules. Prior to placing an order, please contact Tech Support so that we can assist with determining your custom configuration. The table to the upper right lists all available modules. Customers may also order the chassis and modules separately.

Different cables are required to connect the PRO8 modules to a Thorlabs Laser Diode Mount. The cables, which have a length of 1.5 m, must be ordered separately. Pin diagrams are shown near the bottom of this page.

SPECS

Item #	PRO800	PRO8000	PRO8000-4
Number of Slots	2	8	8
Mains Switch	Key-operated		
Remote Control	Via IEEE488.2 and RS232C		
Mains Supply	100 V, 115 V, 230 V (±10%) Fixed (50 to 60 Hz)		
Maximum Power Consumption	220 VA	500 VA	800 VA
Supply Mains Overvoltage	Category II		
Operating Temperature*	0 - 40 °C		
Storage Temperature	-40 to +70 °C		
Relative Humidity	Max. 80% up to 31 °C, Decreasing to 50% at 40 °C		
Pollution Degree (Indoor Use Only)	2		
Operation Altitude	<2000 m		
Maximum Output Current per Slot	4 A	4 A	4 A
Maximum Output Current for all Slots	8 A	16 A	32 A
Warm-Up Time for Maximum Accuracy	10 min		
Dimensions (W × H × D)	232 mm × 147 mm × 396 mm (3 U)	449 mm × 147 mm × 396 mm (3 U)	449 mm × 177 mm × 456 mm (4 U)
Maximum Weight	<9 kg	<17 kg	<21 kg
Display and Operating Elements			
Display	4 × 20 Characters Alphanumeric Vacuum-Fluorescence-Display		
User Interface	Interactive Menus		
Keypad	7 Micro-Switch Keys		
Main Tuning Knob	Rotation Encoder		
Acoustic Messages	Internal Beeper: Short Tone As Confirmation, Long Tone As Warning		
Connectors on the Rear Panel			
Ground	4 mm Banana Jack		
Line	3-Pin IEC 320 with Fuse		
Remote Control	IEEE488 (24-Pin) Jack or RS-232C (9-Pin) D-Sub Jack		
Auxiliary Jack	9-Pin D-Sub (for Extensions)		
Trig In (5 V Max, TTL)	BNC		
Trig Out (5 V Max, TTL)	BNC		

*Non-condensing
(All technical data are valid at 23 ± 5 °C and 45 ±15% relative humidity)

SOFTWARE

Software for the PRO800/PRO8000 Series

Use this link to download the below software packages:

The available software is organized into the following categories:

1. **Drivers:** Instrument drivers to directly operate the device via external software to extend or adapt the functionality to user specific requirements.
2. **Utility Module:** Thorlabs Instrument Communicator 2 for instrument communication functionality.

PRO800 System with 2-Slot Benchtop Chassis

- Compact, 2-Slot, Benchtop Chassis
- Ideal for Research Applications
- Compatible with Various Temperature and Current Controllers and Optical Switches
- Dimensions (W x H x D): 232 mm x 147 mm x 396 mm (3 U Height)

Key Specifications	
Number of Slots	2
Max Power Consumption	220 VA
Max Output Current Per Slot	4 A
Max Output Current for All Slots	8 A

PRO800 Chassis with ITC8022 LD and TEC Controller and PDA8000-2 Amplifier

The PRO800 Chassis is perfect for the lab environment and can accommodate up to two modules. This made-to-order chassis can be custom configured with up to two modules that best meet individual experimental needs prior to purchase (see image at right). The chassis can also be ordered empty, without any pre-installed modules. The empty slots of the PRO800 can be covered using PRO8000-C front cover plates (sold separately below).

Part Number	Description	Price	Availability
PRO800	**2-Slot Modular Benchtop Chassis, 8 A Total Output Current**	**$2,180.18**	**Lead Time**

PRO8000 System with 8-Slot Chassis

- 8 Slot Rack-Mountable Chassis
- Ideal for Large Testing and Manufacturing Environments
- Compatible with Various Temperature and Current Controllers and Optical Switches
- Dimensions (W x H x D): 449 mm x 147 mm x 396 mm (3 U Height)

Key Specifications	
Number of Slots	8
Max Power Consumption	500 VA
Max Output Current Per Slot	4 A
Max Output Current for All Slots	16 A

PRO8000 Chassis with Modules and PRO8000-R32 Rack Mounting Handles

The PRO8000 Chassis can accept up to 8 modules and is ideally suited for the needs of large test setups. This made-to-order chassis can be custom configured with up to eight modules that best meet individual experimental needs prior to purchase (see image at right). The chassis can also be ordered empty, without any pre-installed modules. The empty slots of the PRO8000 can be covered using PRO8000-C front cover plates (sold separately below).

The higher maximum output current offered by the PRO8000-4 over the PRO8000 may be useful depending on which combination of PRO8 Series Modules are used with the platform. Please refer to the Available PRO8 Series Modules table in the *Overview* tab above to verify if the combination of modules requires the 32 A max output current offered by the PRO8000-4.

As shown in the image to the right, our PRO8000-R32 Rack-Mounting Handles (sold separately) can be attached to the chassis, allowing it to be integrated into our 19" Rack Mounting System.

Part Number	Description	Price	Availability
PRO8000	**8-Slot Modular Rack Chassis, 16 A Total Output Current**	**$2,966.31**	**Lead Time**

PRO8000-4 System for High-Power Applications with 8-Slot Chassis

- 8 Slot Rack-Mountable Chassis for High-Power Applications
- Ideal for Large Testing and Manufacturing Environments
- Compatible with Various Temperature and Current Controllers and Optical Switches
- Dimensions (W x H x D): 449 mm × 177 mm × 456 mm (4 U Height)

Key Specifications	
Number of Slots	8
Max Power Consumption	800 VA
Max Output Current Per Slot	4 A
Max Output Current for All Slots	32 A

PRO8000-4 High-Power Chassis with Modules and PRO8000-R42 Rack Mounting Handles

The PRO8000-4 Chassis can accept up to 8 modules, is ideally suited for the needs of large test setups, and meets high-power and current demands. This made-to-order chassis can be custom configured with up to eight modules that best meet individual experimental needs prior to purchase (see image at right). The chassis can also be ordered empty, without any pre-installed modules. The empty slots of the PRO8000-4 can be covered using PRO8000-C front cover plates (sold separately below).

The higher maximum output current offered by the PRO8000-4 over the PRO8000 may be useful depending on which combination of PRO8 Series Modules are used with the platform. Please refer to the Available PRO8 Series Modules table in the *Overview* tab above to verify if the combination of modules requires the 32 A max output current offered by the PRO8000-4.

As shown in the image to the right, our PRO8000-R32 Rack-Mounting Handles (sold separately) can be attached to the chasis, allowing it to be integrated into our 19" Rack Mounting System.

Part Number	Description	Price	Availability
PRO8000-4	**8-Slot Modular Rack Chassis, 32 A Total Output Current**	**$4,001.67**	**Lead Time**

PRO8 Accessories

The PRO8000-R32 and PRO8000-R42 Rack Mounting Kits contain all necessary hardware to allow the PRO8 chassis to be mounted in a 19" rack system. The kits both include two mounting handles and four screws with a 3 mm hex head. To install, remove the two side flashings on the chassis. You can then either use the included screws, or the ones that formerly secured the flashings, to secure the handles to the chassis as seen in the photo to the right. The through holes can then be used to mount the chassis in a rack system. Please note: although the PRO800 is compatible with the PRO8000-R32 Mounting Kit, it is too narrow to fit in a 19" rack system.

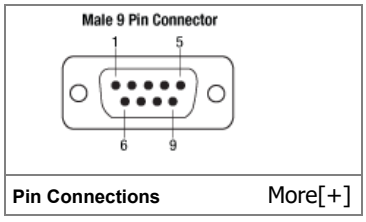
How to Attach the Rack Mounting Handles to a PRO8 Series Chassis

PRO800 Chassis with PRO8000-C Front Cover Plate and One Module

The PRO8000-C Front Cover Plate is used to protect empty slots in the PRO800, PRO8000, and PRO8000-4 chassis. To install, use the two Phillips head screws that previously attached the module to the chassis to secure the front plate to the chassis, just as if it were a module. The photo to the far right shows the PRO800 chassis with one PRO8000-C front plate

Part Number	Description	Price	Availability
PRO8000-C	**Front Cover Plate for PRO8 Series Chassis**	**$29.69**	**7-10 Days**
PRO8000-R32	**19 in. Rack Mounting Kit for PRO8000**	**$78.62**	**Lead Time**
PRO8000-R42	**19 in. Rack Mounting Kit for PRO8000-4**	**$105.98**	**Lead Time**

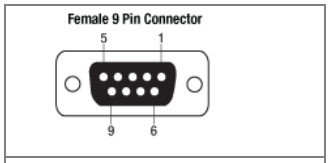
Laser Diode Current Controller Connection Cable



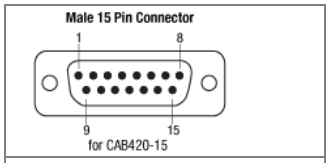
Pin Connections More[+]

Part Number	Description	Price	Availability
CAB400	**Cable; Current Controller with 9-Pin D-Sub Connector, 1.5 m**	**$80.94**	**Today**

Temperature Controller Connection Cable



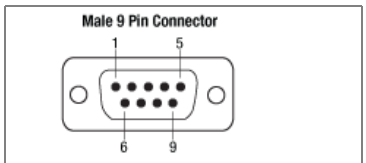
Pin Connections More[+]



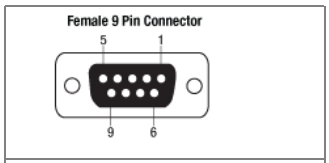
Pin Connections More[+]

Part Number	Description	Price	Availability
CAB420-15	Temperature Controller Cable with 15-Pin D-Sub Connector, 1.5 m	$85.61	Today

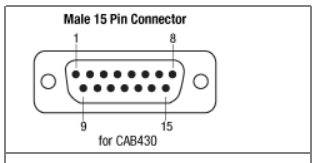
Laser Diode Current Controller and Temperature Controller Connection Cable



Pin Connections More[+]



Pin Connections More[+]



Pin Connections More[+]

Part Number	Description	Price	Availability
CAB430	Cable for a LD and TEC Controller with 15-Pin D-Sub Connector to a Laser Diode Mount, 1.5 m	$147.91	Today

PRO8000-R42