

## SNAP TEX MOUNTING/WIRING TOOLS AND SPARE PARTS

### Features

- > Securely mount SNAP I/O racks, controllers, and power supplies to 35mm DIN rails
- > Easily jumper 4-channel digital I/O modules
- > Commission high-density digital modules
- > Replace lost or damaged parts
- > Use legacy and current brains and mounting racks together



SNAP TEX Family

### Part Numbers

Part	Description
SNAP-PSDIN	DIN-rail adapter kit for most SNAP power supplies and controllers
SNAP-PSUDIN	DIN-rail adapter kit for large-footprint SNAP power supplies
SNAP-ROKDIN [Obsolete]	[Obsolete] DIN-rail adapter kit for SNAP-PAC-SRA or SNAP-RPSW
SNAP-S2DIN	DIN-rail adapter kit for SNAP-PAC-S2
SNAP-LCM4DIN [Obsolete]	[Obsolete] DIN-rail adapter kit for SNAP-LCM4
SNAP-CDBBDIN	DIN-rail adapter kit for classic digital brain boards (E1, B1, B5, B100)
SNAP-TEX-DRC10	SNAP PAC rack DIN-rail adapter clip, 10-pack
SNAP-TEX-RCKCAP	SNAP PAC rack connector cap, pack of 16
SNAP-TEX-REC10N	Narrow end cap for SNAP PAC racks DIN-rail assemblies, 10-pack
SNAP-TEX-REC10W	Wide end cap for SNAP PAC racks DIN-rail assemblies, 10-pack

### Other Tools and Parts

OPTOTERMINAL-G20	Operator interface for commissioning SNAP high-density digital modules
SNAP-STRAPB	Pack of 10 jumper straps for digital SNAP I/O modules
SNAP-STRAP-OMR	Jumper strap for SNAP-OMR6 modules
SNAP-WIRESTRAPB	Pack of 10 jumper connectors for digital SNAP I/O modules
SNAP-MODTOOL	SNAP I/O module removal tool, 10-pack
SNAP-FIELDCONB	SNAP module field connector, 10-pack
SNAP-RCK-B2M [Obsolete]	[Obsolete] Adapter for using legacy SNAP brain on SNAP PAC or M-series racks
SNAP-RCK-M2B	Adapter for using SNAP PAC or SNAP M brains on SNAP B-series racks
SNAP-MR10 [Obsolete]	[Obsolete] Mechanical relay replacement for breakout boards, 10 A

### DESCRIPTION

SNAP TEX mounting and wiring tools and spare parts are all part of the SNAP TEX family of wiring and mounting accessories. The parts in this data sheet are used for:

- Securely mounting SNAP I/O racks, controllers, power supplies, and other devices on DIN rails
- Wiring and commissioning SNAP I/O modules
- Replacing lost or damaged parts
- Adapting legacy parts to newer SNAP PAC parts

For cables and breakout boards in the SNAP TEX family, see the [SNAP TEX Cables and Breakout Boards Data Sheet](#) (form 1756).

### DIN-Rail Mounting Clips and Kits

Opto 22 SNAP I/O mounting racks, controllers, power supplies, breakout boards, etc. can be panel mounted or DIN-rail mounted. For DIN-rail mounting, these clips and kits adapt the bottom of the hardware to attach securely to DIN rails.

Choose the kit or clips you need based on the table on [page 2](#).

### Operator Interface for SNAP HDD Modules

The **OptoTerminal-G20** makes it easier to commission and troubleshoot SNAP high-density digital (HDD) modules such as the SNAP-IAC-16 and the SNAP-ODC-32-SRC.

The OptoTerminal-G20 displays the status of a high-density digital module's points on a two-line LCD display and can also be used to turn output points on and off. For more details, see the [SNAP High-Density Digital Modules User's Guide](#) (form 1547).

## DIN-RAIL CLIPS AND KITS

For these SNAP products		Clips needed	Use this adapter clip	Use this end cap
Power Supplies				
SNAP-PS5 SNAP-PS24	SNAP-PS5-24DC	1 kit	SNAP-PSDIN	N/A
SNAP-PS5U	SNAP-PS24U	1 kit	SNAP-PSUDIN	N/A
Controllers				
SNAP-PAC-S1 SNAP-PAC-S1-W*	SNAP-PAC-S1-FM*	1 kit	SNAP-PSDIN	N/A
SNAP-PAC-S2	SNAP-PAC-S2-W*	1 kit	SNAP-S2DIN	N/A
Mounting Racks				
SNAP-PAC-RCK4	SNAP-PAC-RCK4-FM*	2 clips	SNAP-TEX-DRC10** (10 clips in package)	SNAP-TEX-REC10W** (10 in package; use 2 per rack)
SNAP-PAC-RCK8 SNAP-PAC-RCK8-FM*	SNAP-PAC-RCK12 SNAP-PAC-RCK12-FM*	3 clips		
SNAP-PAC-RCK16	SNAP-PAC-RCK16-FM*	4 clips		
Breakout Boards				
SNAP-TEX-MR10-4*		2 clips	SNAP-TEX-DRC10** (10 clips in package)	SNAP-TEX-REC10W** (10 in package; use 2 per rack)
SNAP-TEX-MR10-16*	SNAP-TEX-MR10-16C*	3 clips		
SNAP-AIMA-HDB SNAP-AIMA-HDB-FM*	SNAP-IDC-HDB SNAP-IDC-HDB-FM*	2 clips	SNAP-TEX-DRC10** (10 clips in package)	SNAP-TEX-REC10N** (10 in package; use 2 per board)
SNAP-AIV-HDB SNAP-AIV-HDB-FM*	SNAP-TEX-32 SNAP-TEX-FB16-H*			
SNAP-UDC-HDB	SNAP-TEX-FB16-L*			
SNAP-ODC-HDB SNAP-ODC-HDB-FM*	SNAP-SCM-BB4*	3 clips		
Other SNAP Devices				
SNAP-PAC-SRA	SNAP-RPSW	1 kit	SNAP-ROKDIN*	N/A

\* OBSOLETE product, please contact Pre-Sales Engineering for more information.

\*\* Requires the black plastic extrusion that comes with new racks and boards. Older racks and boards have a light-colored plastic extrusion. The black plastic extrusion is not sold separately. It is included with a new board or rack.



SNAP-PSDIN



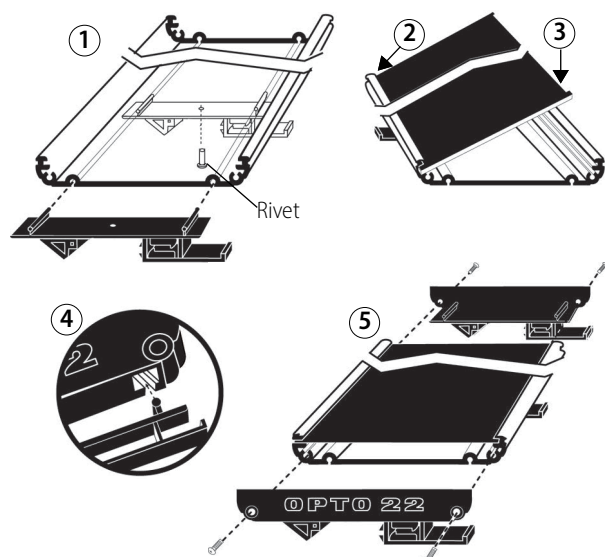
SNAP-TEX-REC10W



SNAP-TEX-DRC10

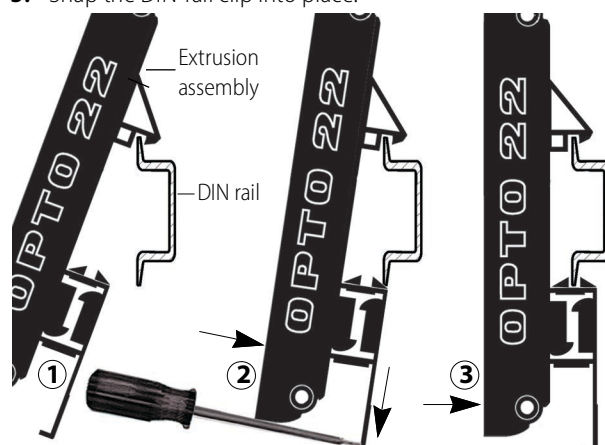
## Racks: Installing SNAP Rack DIN-Rail Clips

1. For racks with three or more clips only: Slide one DIN clip to the middle position and secure with the provided rivet. For racks with four clips, add another middle clip.
2. Insert one edge of the circuit board into the extrusion.
3. Push down hard on the other edge to snap the board into place.
4. Attach one DIN clip to each end cap using the slots in the end caps as shown.
5. Using the screws provided, secure an end cap and DIN clip assembly to each end of the extrusion.



## Attaching the Adapter Clip to a DIN Rail

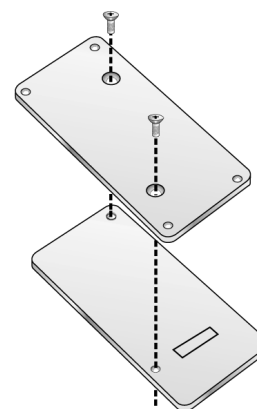
1. Hook the DIN-rail clip over the top of the DIN rail.
2. Using a screwdriver, pry open the DIN-rail clip flange at the bottom of the clip. Push the clip towards the DIN rail.
3. Snap the DIN-rail clip into place.



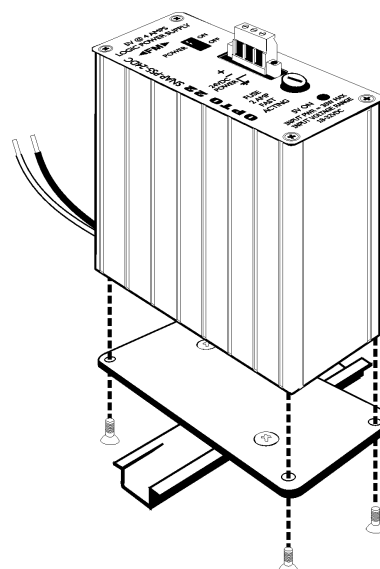
**To remove:** Use a screwdriver to pry open the DIN-rail clip flange.

## Power Supplies: Installing SNAP-PSDIN Adapters

1. Remove the four screws that fasten the panel mounting base plate to the power supply.
2. Remove the panel mounting base plate making sure to *save the screws*.
3. Using the two flat-head screws included with the kit, assemble the SNAP-PSDIN-RAIL adapter as shown.



4. Using the four screws removed in step 1, fasten the DIN-rail adapter to the power supply.
5. Mount the power supply on the DIN rail next to the rack or controller it will power.

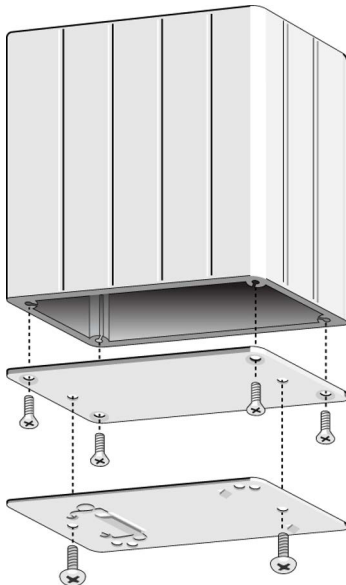


NOTE: The SNAP-PS5-24DC power supply is shown. Other power supplies have similar base plates.

## Installing the SNAP-ROKDIN [Obsolete] Adapter Kit

This adapter kit is for the SNAP-PAC-SRA arbiter or the SNAP-RPSW redundant power switch. The DIN-rail clip adds an additional 0.375 inches (0.95 cm) to the device's height. You need one adapter kit per device.

1. Turn the device over. Unscrew the four flat-head screws and remove the base plate. Save the screws.
2. Attach the new, plain base plate to the device using the saved screws.
3. Align the DIN-rail clip to the new base plate so that the spring will be at the bottom of the device when it is mounted on the DIN rail. Use the two round-head screws provided with the kit to attach the clip.



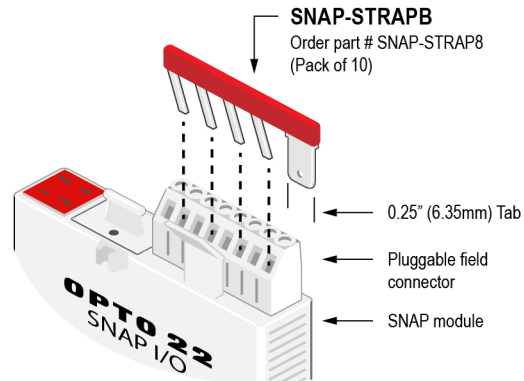
4. To mount, align the spring clip with the bottom edge of the DIN rail, push up to engage the spring, and slip the two top flanges over the top edge of the DIN rail.

## WIRING ACCESSORIES

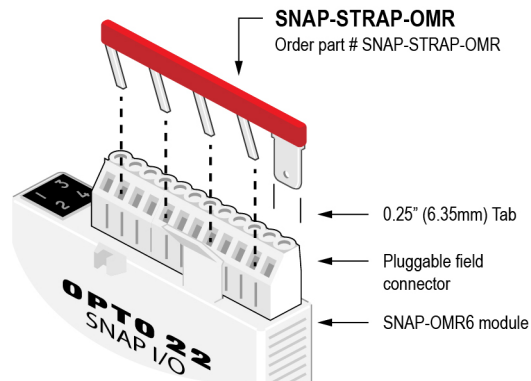
### Jumper Straps for SNAP Digital I/O

SNAP I/O module jumper straps let you easily make jumper connections on a 4-channel digital SNAP I/O module.

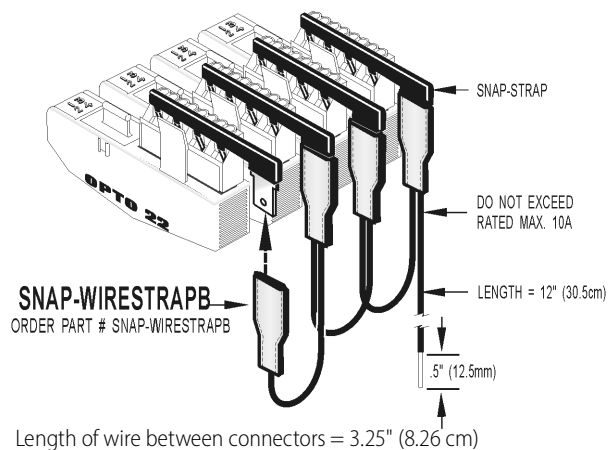
- The **SNAP-STRAPB** plugs into individual wire connections on an 8-position pluggable field connector. SNAP-STRAPs on multiple modules can be connected using the **SNAP-WIRESTRAPB**. Agency Approvals: CE ATEX, RoHS, DFARS, UKCA
- The **SNAP-STRAP-OMR** plugs into the 12-position field connectors on SNAP-OMR6 mechanical relay output modules to connect the third wire of each channel.



SNAP-STRAPB works with 8-position field connectors on many SNAP I/O modules.



SNAP-STRAP-OMR works with 12-position gray field connectors on SNAP-OMR6 modules.



For other wiring options, see the [SNAP TEX Cables and Breakout Boards Data Sheet](#) (form 1756).

## OTHER ACCESSORIES

### Connector Caps

The **SNAP-TEX-RCKCAP** slips over an empty module connector on the rack to keep it dirt- and dust-free. The flexible black plastic cap is removable at any time. Pack of 16.

### Replacement Parts

The **SNAP-FIELDCONB** replaces lost or damaged field connectors (pack of 10). The connector plugs into the top of a SNAP I/O module and is used for wiring field devices to the module. Used with most 1-, 2-, and 4-channel digital and analog modules, it accepts up to 14 AWG wire. Torque specifications for connector screws: 5.26 inch lbs (0.6 Newton m.) Agency Approvals: CE, DFARS, UKCA.

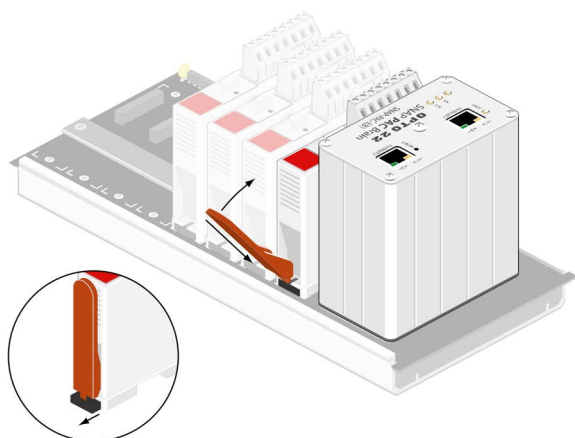
The **SNAP-MR10 [Obsolete]** is a replacement mechanical relay (10 A) and clip for SNAP-TEX-MR10-16, SNAP-TEX-MR10-16C, and SNAP-TEX-MR10-4 breakout boards. Typical life expectancy (Electrical):  $1 \times 10^5$ .

### SNAP I/O Module Removal Tool

The **SNAP-MODTOOL**, included with each I/O mounting rack, is used to remove a SNAP I/O module from the rack. If you need extra tools, order this pack of 25.

To remove a module:

1. If the modules are held in place with screws, remove them.
2. Holding the SNAP module tool (provided) as shown in the illustration below, insert it into the notch at the base of the module.
3. Squeeze the module tool against the module to open the release latch, and pull straight up on the module to remove it.



### Rack Adapters for Mixing Legacy and Current Brains and Racks

While it's always best to use brains and racks designed to work together, sometimes mixing them is temporarily necessary. Two rack adapters are available:

- **SNAP-RCK-B2M [Obsolete]** allows a legacy SNAP brain such as a SNAP-B3000-ENET (blue connector) to be used on a SNAP PAC rack or a SNAP M-series rack (black connector).
- **SNAP-RCK-M2B** allows a newer SNAP PAC brain or rack-mounted controller, such as a SNAP-PAC-EB2 or a SNAP-PAC-R1 (black connector), to be used on an older SNAP B-series rack (blue connector). Agency Approvals: DFARS, CE, and UKCA.

Please note that the adapter does not change the functionality or limitations of the older products. For example, when used with a newer brain or controller, a SNAP B-series rack is still limited to using digital modules only in its first eight slots.

For additional information, see the [SNAP PAC System Migration Technical Note](#) (form 1688) and the [Legacy and Current Product Compatibility Charts](#) (form 1693).



## PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products. Industrial automation, process control, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

### groov RIO®

*groov RIO edge I/O* offers a single, compact, PoE-powered industrial package with web-based configuration and IIoT software built in, support for multiple OT and IT protocols, and security features like a device firewall, data encryption, and user account control.

Standing alone, *groov RIO* connects to sensors, equipment, and legacy systems, collecting and securely publishing data from field to cloud. Choose a universal I/O model with thousands of possible field I/O configurations, with or without Ignition from Inductive Automation®, or a *RIO EMU energy monitoring unit* that reports 64 energy data values from 3-phase loads up to 600 VAC, Delta or Wye.

You can even write an IEC 61131-3 compliant control program to run on *groov RIO*, using CODESYS. You can also use *groov RIO* with a Modbus/TCP master or as remote I/O for a *groov EPIC* system.

### groov EPIC® System

Opto 22's *groov Edge Programmable Industrial Controller (EPIC) system* gives you industrially hardened control with a flexible Linux®-based processor with gateway functions, guaranteed-for-life I/O, and software for your automation and IIoT applications.

#### groov EPIC Processor

The heart of the system is the *groov EPIC* processor. It handles a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

In addition, the EPIC provides secure data communications among physical assets, control systems, software applications, and online services, both on premises and in the cloud. No industrial PC needed.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution color touchscreen. Authorized users can manage the system locally on the touchscreen, on a monitor connected via the HDMI or USB ports, or on a PC or mobile device with a web browser.

#### groov EPIC I/O

*groov I/O* connects locally to sensors and equipment. Modules have a spring-clamp terminal strip, integrated wireway, swing-away cover, and LEDs indicating module health and discrete channel status. *groov I/O* is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

### groov EPIC Software

The *groov EPIC* processor comes ready to run the software you need:

- Programming: Choose flowchart-based PAC Control, CODESYS Development System for IEC61131-3 compliant programs, or secure shell access (SSH) to the Linux OS for custom applications
- Node-RED for creating simple IIoT logic flows from pre-built nodes
- Efficient MQTT data communications with string or Sparkplug data formats
- Multiple OPC UA server options
- HMI: *groov View* to build your own HMI viewable on touchscreen, PCs, and mobile devices; PAC Display for a

Windows HMI; Node-RED dashboard UI

- Ignition or Ignition Edge® from Inductive Automation (requires license purchase) with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT communications

### Older products

From solid state relays, to world-famous G4 and SNAP I/O, to SNAP PAC controllers, older Opto 22 products are still supported and working hard at thousands of installations worldwide. You can count on us for the reliability and service you expect, now and in the future.

## QUALITY

Founded in 1974, Opto 22 has established a worldwide reputation for high-quality products. All are made in the U.S.A. at our manufacturing facility in Temecula, California.

Because we test each product twice before it leaves our factory rather than testing a sample of each batch, we can afford to guarantee most solid-state relays and optically isolated I/O modules for life.

## FREE PRODUCT SUPPORT

Opto 22's California-based Product Support Group offers free technical support for Opto 22 products from engineers with decades of training and experience. Support is available in English and Spanish by phone or email, Monday–Friday, 7 a.m. to 5 p.m. PST.

Support is always available on our website, including [free online training](#) at OptoU, how-to [videos](#), [user's guides](#), the Opto 22 KnowledgeBase, and [OptoForums](#).

## PURCHASING OPTO 22 PRODUCTS

Opto 22 products are sold directly and through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at **800-321-6786** (toll-free in the U.S. and Canada) or **+1-951-695-3000**, or visit our website at [www.opto22.com](http://www.opto22.com).



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