

SNAP Mechanical Power Relay Output Module

Features

- Four isolated channels
- Each channel switches up to 6 A at 250 VAC or 30 VDC
- Channel-specific LEDs
- Operating temperature: 0 to 70 °C

Description

The SNAP mechanical power relay output module, part number SNAP-OMR6-C, offers four channels for switching loads of up to 6 amps at 250 VAC or 30 VDC.

This module handles more current than any other SNAP output module. Each contact can carry 6 amps, and having more than one channel on at the same time does not reduce the amount of power each channel can carry.

The SNAP-OMR6-C is a form C module, so each of the four mechanical contacts can be wired as normally open or normally closed. Fusing is not provided; you must provide fusing when wiring the module.

The SNAP-OMR6-C provides channel-to-channel isolation. Because channels are not polarity sensitive, each channel can switch either AC or DC power, thus potentially reducing the number of modules needed.

In solid-state SNAP AC output modules, possible leakage current might cause an electronic input to stick in the ON state. In contrast, a channel on this mechanical power relay module presents a true open circuit when it is off. In addition, the SNAP-OMR6-C can be used exactly as a solid-state AC module is used.

NOTE: These modules may not be suitable for low-level switching.

Part of the SNAP PAC System, the SNAP-OMR6-C mounts on a SNAP PAC rack with a SNAP PAC brain or rack-mounted controller. Analog, digital, and serial I/O modules can all be on the same rack. Such an I/O unit is also well suited for PC-based control or for use as intelligent remote I/O for an Allen-Bradley PLC system.

NOTE: SNAP-OMR6-C modules manufactured prior to March 2014 have four black field wiring connectors; newer modules have a single large gray connector as shown above. Field connector wiring and module function are identical. Note torque differences in Specifications (page 3).



SNAP-OMR6-C

I/O Processor Compatibility

The SNAP mechanical power relay output module is compatible with all SNAP PAC brains and rack-mounted controllers, including both standard wired models and Wired+Wireless™ models.

Notes for legacy hardware: This module is also compatible with SNAP Ultimate, SNAP Ethernet, and SNAP Simple brains, as well as other SNAP brains such as the serial B3000 and the B3000-B. The module can also be used on B-series and M-series mounting racks.

SNAP-OMR6-A

A previous module, the form A SNAP-OMR6-A, is no longer available. Use the SNAP-OMR6-C as a pin-identical, drop-in replacement for this obsolete module.

Specifications and wiring diagrams for the obsolete SNAP-OMR6-A are included in this data sheet for reference only.

Part Number

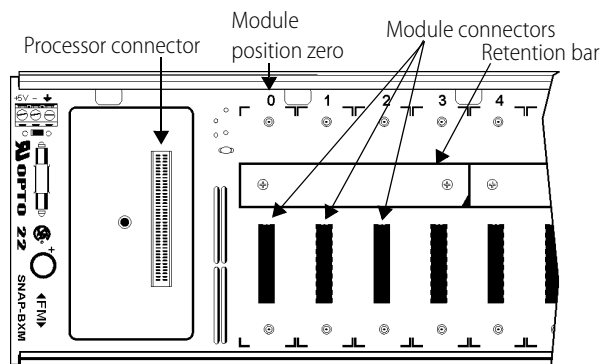
Part	Description
SNAP-OMR6-C	SNAP 4-channel Mechanical Power Relay Module, SPDT (Form C)

SNAP Mechanical Power Relay Output Module

Installation

The following diagram shows part of a SNAP mounting rack.

Modules snap securely into place in the row of connectors on the rack. Each module connector is numbered, starting with position zero.



1. Place the rack so that the module connector numbers are right-side up, with zero on the left, as shown in the diagram above. (If your rack has screw connectors, the screw connectors will be at the bottom.)
NOTE: Check the data sheet or user's guide for the brain or on-the-rack controller you are using to determine any restrictions on module placement.
2. Position the module over the module connector, aligning the small slot at the base of the module with the retention bar on the rack. When positioning modules next to each other, be sure to align the male and female module keys at the tops of the modules before snapping a module into position.
3. With the module correctly aligned, push on the module to snap it into place.
4. (Optional) Use standard 4-40 x 1/2 truss-head Phillips hold-down screws (provided) to secure both sides of each module.
CAUTION: Do not over-tighten screws. Torque for hold-down screws: 4 in-lb (0.45 N-m)
5. Follow the wiring diagrams on [page 4](#) to attach the module to field devices. Torque for connector screws: 1.7 in-lb (0.2 N-m)

Modules require a special tool (provided) for removal.

SNAP Mechanical Power Relay Output Module

Specifications

IMPORTANT: Specifications for the SNAP-OMR6-A are included for reference only. This module is no longer available.

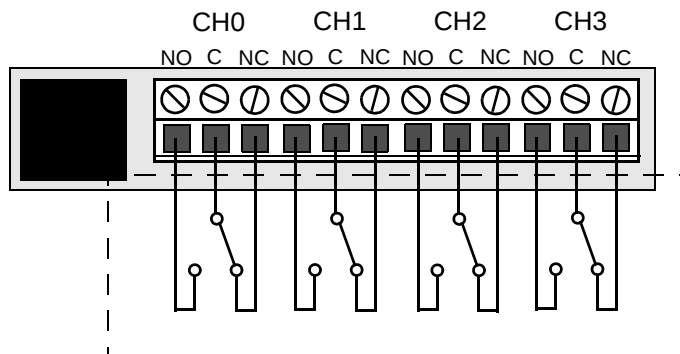
	SNAP-OMR6-C	SNAP-OMR6-A [Obsolete]
Field Side Ratings (each channel)		
Contact Configuration	Form C (SPDT, normally open or closed)	Form A (SPST, normally open)
Line Voltage - Range	0–250 VAC or 0–30 VDC	0–250 VAC or 0–30 VDC
Current Rating	6 amps switching @ 250 VAC / 30 VDC	6 amps switching @ 250 VAC / 30 VDC
Surge Current	6 amps	6 amps
Minimum Load	5 VDC, 10 mA	5 VDC, 10 mA
Contact Resistance	≤ 100 milliohms	≤ 100 milliohms
Switching Power	1500 VA / 144 W (DC)	1500 VA / 144 W (DC)
Peak Blocking Voltage	250 VAC / 30 VDC	250 VAC / 30 VDC
Channel-to-channel isolation	300 VAC (1500 Vtransient)	300 VAC (1500 Vtransient)
Logic Side Ratings		
Pickup Voltage	1 V @ 2 mA	1 V @ 2 mA
Dropout Voltage	4 VDC	4 VDC
Control Resistance	220 ohms	220 ohms
Logic Supply Voltage	5 VDC ± 0.25 VDC	5 VDC ± 0.25 VDC
Logic Supply Current	160 mA maximum	160 mA maximum
Module Ratings		
Number of Channels Per Module	4	4
Turn-on Time	8 milliseconds	8 milliseconds
Turn-off Time	8 milliseconds	8 milliseconds
Torque, hold-down screws	4 in-lb (0.45 N-m)	4 in-lb (0.45 N-m)
Torque, connector screws	Single gray connector: 5.26 in-lb (0.6 N-m) Black connectors: 1.7 in-lb (0.2 N-m)	Single gray connector: 5.26 in-lb (0.6 N-m) Black connectors: 1.7 in-lb (0.2 N-m)
Temperature	0 to 70 °C, operating -30 to 85 °C, storage	0 to 70 °C, operating -30 to 85 °C, storage
Agency Approvals	CE, RoHS, DFARS	CE, RoHS, DFARS
Mechanical Life	10 x 10 ⁶ operations	10 x 10 ⁶ operations
Operational Life	30 x 10 ³ operations	30 x 10 ³ operations
Warranty	30 months	30 months

SNAP Mechanical Power Relay Output Module

Wiring Diagrams

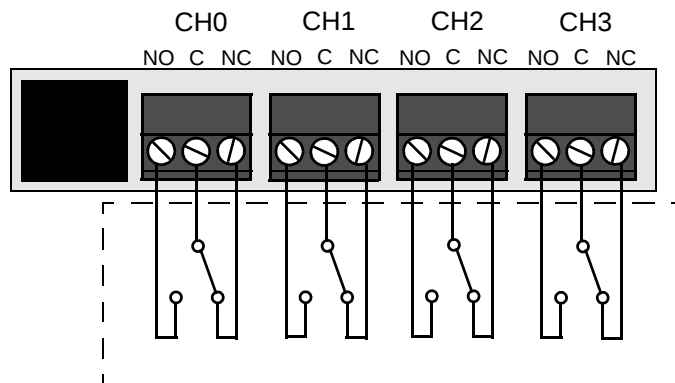
SNAP-OMR6-C and SNAP-OMR6-A Field Connections - Newer Terminal (gray)

Note: User must provide own fusing.



SNAP-OMR6-C and SNAP-OMR6-A Field Connections - Older Terminals (black)

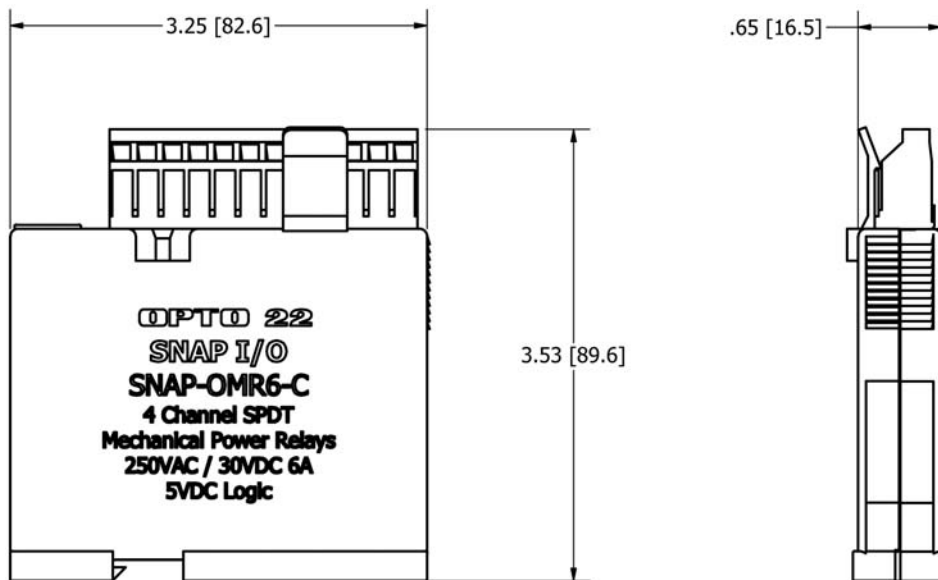
Note: User must provide own fusing.



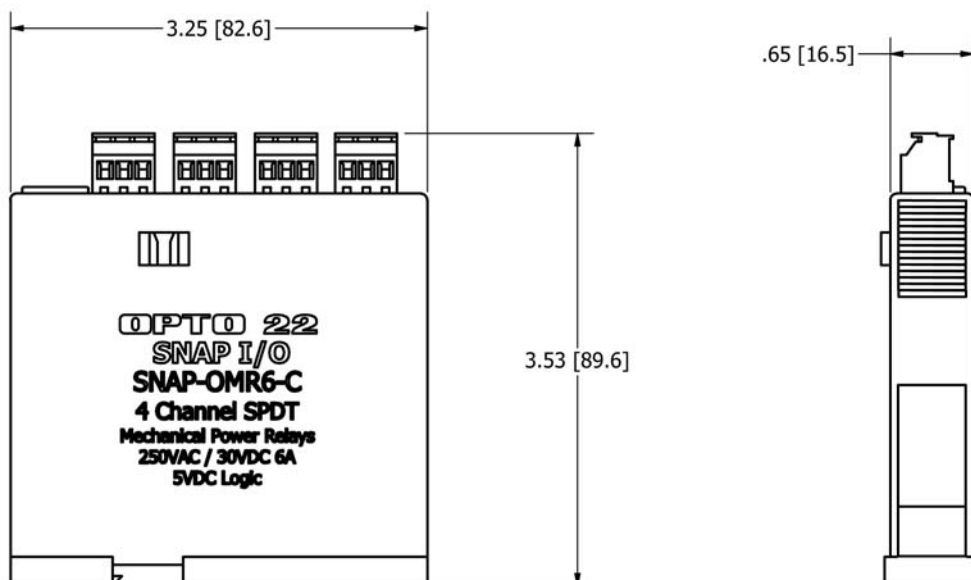
SNAP Mechanical Power Relay Output Module

Dimensional Drawings

Newer field wiring terminal: one 12-position connector

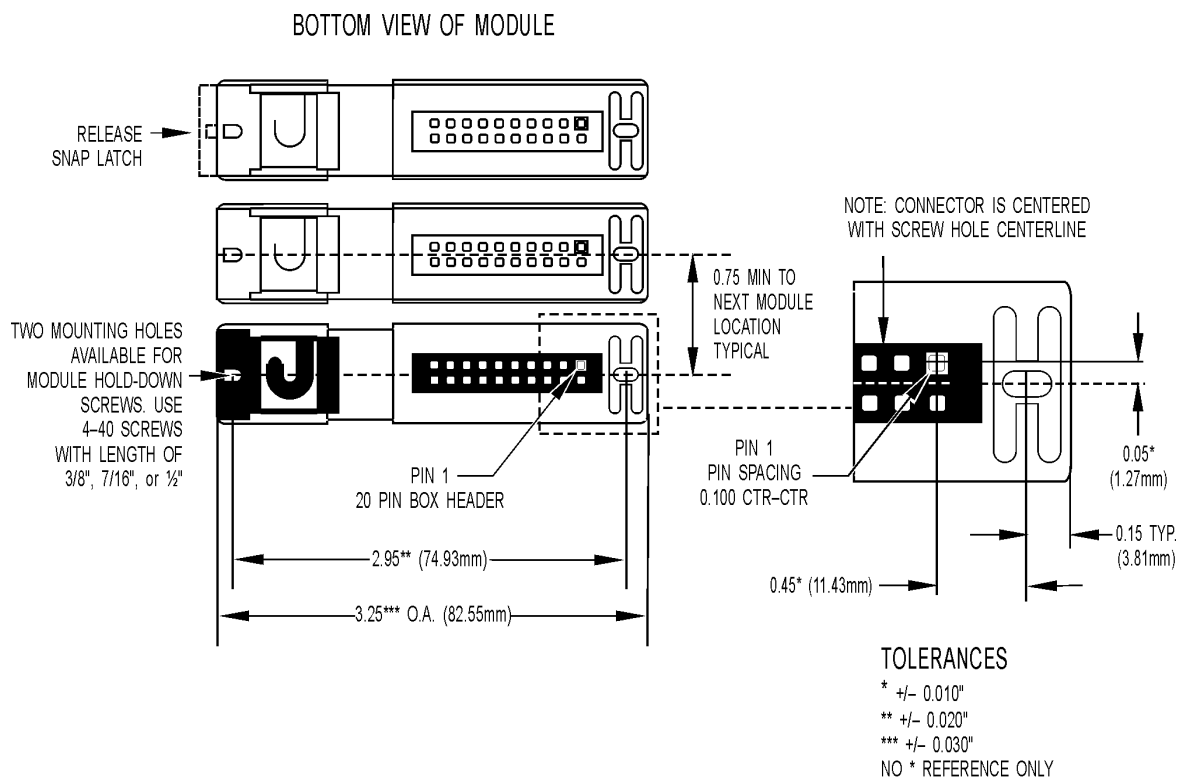


Older field wiring terminals: four 3-position connectors



SNAP Mechanical Power Relay Output Module

Dimensional Drawings (Continued)



IMPORTANT: The mounting rack connector has 24 pins; the module connector has 20 pins. The extra pins on the mounting rack connector prevent misalignment of the module during installation.

SNAP Mechanical Power Relay Output Module

Dimensional Drawings (Continued)

