These products are obsolete.

OBSOLETE SNAP 4-CHANNEL DIGITAL I/O MODULES TECHNICAL NOTE

This technical note contains information you may need about obsolete SNAP 4-Channel Digital I/O modules you're still using. Included are part numbers, descriptions, specifications, wiring diagrams, and dimensional drawings. In most cases, these parts have been removed from data sheets because we no longer sell them.

This document includes information on the following obsolete types of SNAP 4-channel digital I/O modules:

For Help

As always, if you are using Opto 22 products and cannot find the help you need in this technical note, contact Opto 22 Product Support. Product support is free.

Phone: 800-TEK-OPTO
(800-835-6786 toll-free in the U.S. and Canada)
951-695-3080
Monday through Friday,
7 a.m. to 5 p.m. Pacific Time

NOTE: Email messages and phone calls to Opto 22 Product Support are grouped together and answered in the order received.

Email: support@opto22.com

Opto 22 website: www.opto22.com

When calling for technical support, be prepared to provide a complete description of your hardware and operating system to the Product Support engineer. This information should include:

- accessories installed
- type of power supply
- types of I/O modules and racks used
- third-party devices installed
- how the system is wired

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SNAP 4-CHANNEL DIGITAL INPUT MODULES

Opto 22 SNAP I/O 4-channel digital input modules are part of the SNAP PAC System. Optical isolation on these modules provides 4,000 volts of transient (4000 V for 1 ms) protection for sensitive control electronics from industrial field signals. Digital input modules can sense either AC or DC signals.

All SNAP 4-channel digital modules have removable top-mounted connectors to provide easy access for field wiring, and all operate on 5 VDC control logic. Each digital module features integral channel-specific LEDs for convenient troubleshooting and maintenance. Each module is factory tested twice and is UL and CE approved. In addition, part numbers ending in FM were Factory Mutual approved prior to 2024.

SNAP input modules are used to sense the on or off status for AC or DC voltages from such sources as proximity switches, push buttons, or auxiliary contacts.

SNAP racks use a retention rail locking system. Use two 4-40 by ½-inch standard machine screws to hold each module in position on the SNAP rack.

SNAP digital input modules are compatible with all SNAP PAC brains and rack-mounted controllers. These modules can also be used with legacy SNAP Ultimate, SNAP Ethernet, and SNAP Simple brains, and with other SNAP brains such as the serial B3000 and the B3000HA. They also mount on B-series, M-series, and D-series racks.

This section includes information on the following obsolete SNAP 4-channel digital input modules:

Part	Description
SNAP-IAC5FM	SNAP 4-channel 90–140 VAC/VDC input, 5 VDC logic
SNAP-IAC5AFM	SNAP 4-channel 180–280 VAC input, 5 VDC logic
SNAP-IDC5FM	SNAP 4-channel 10–32 VDC input, 5 VDC logic
SNAP-IDC5DFM	SNAP 4-channel 2.5–28 VDC input, 5 VDC logic

These products are obsolete.

MADE IN THE USA

These products are obsolete.

Specifications: SNAP 4-Channel Digital Input Modules (FM models)

	SNAP-IAC5FM [OBSOLETE]	SNAP-IAC5AFM [OBSOLETE]	SNAP-IDC5FM [OBSOLETE]	SNAP-IDC5DFM [OBSOLETE]
Wire size	22 to 14 AWG	22 to 14 AWG	22 to 14 AWG	22 to 14 AWG
Torque, hold-down screws	Not to exceed 1 in-lb (0.11 N-m)	Not to exceed 1 in-lb (0.11 N-m)	Not to exceed 1 in-lb (0.11 N-m)	Not to exceed 1 in-lb (0.11 N-m)
Torque, connector screws	5.22 in-lb (0.59 N-m)	5.22 in-lb (0.59 N-m)	5.22 in-lb (0.59 N-m)	5.22 in-lb (0.59 N-m)
Field Side Ratings (each channel)				
Nominal Input Voltage	120 VAC/VDC	240 VAC/ VDC	24 VAC/VDC	5 VDC
Channel-to-channel isolation	300 VAC (1,500 V transient)	300 VAC (1,500 V transient)	300 VAC (1,500 V transient)	300 VAC (1,500 V transient)
Input Voltage Range	90–140 VAC/VDC	180–280 VAC/VDC	10–32 VAC/VDC	2.5–28 VDC
Turn-on Voltage	90 VAC/VDC	180 VAC/VDC	10 VAC/VDC	2.5 VDC
Turn-off Voltage	35 VAC/VDC	35 VAC/VDC	3 VAC/VDC	1 VDC
Input Resistance	169 K ohms (nominal)	305 K ohms (nominal)	15 K ohms (nominal)	3 K ohms (nominal)
Logic Side Ratings				
Logic Output Voltage	<.5 V max. (on) @ 2 mA sinking 2.7 V min. (off) @ 400 mA sourcing	<.5 V max. (on) @ 2 mA sinking 2.7 V min. (off) @ 400 mA sourcing	<.5 V max. (on) @ 2 mA sinking 2.7 V min. (off) @ 0.4 mA sourcing	<.5 V max. (on) @ 2 mA sinking 2.7 V min. (off) @ 0.4 mA sourcing
Logic Supply Voltage*	5 VDC ± 0.25 VDC	5 VDC ± 0.25 VDC	5 VDC ± 0.25 VDC	5 VDC ± 0.25 VDC
Logic Supply Current	50 mA maximum	50 mA maximum	50 mA maximum	50 mA maximum
Negative True Logic Output Drive	TTL 74 Series=1 UL TTL 74LS Series=5 UL	TTL 74 Series=1 UL TTL 74LS Series=5 UL	TTL 74 Series=1 UL TTL 74LS Series=5 UL	TTL 74 Series=1 UL TTL 74LS Series=5 UL
Module Ratings				
Number of Channels Per Module	4	4	4	4
Turn-on Time	30 msec	30 msec	5 msec	1 msec
Turn-off Time	30 msec	30 msec	15 msec	1 msec
Optical Isolation (Field Side to Logic Side)	4,000 volts (transient)	4,000 volts (transient)	4,000 volts (transient)	4,000 volts (transient)
Temperature	-20 to 70 °C, operating -40 to 85 °C, storage	-20 to 70 °C, operating -40 to 85 °C, storage	-20 to 70 °C, operating -40 to 85 °C, storage	-20 to 70 °C, operating -40 to 85 °C, storage
Agency Approvals	CE, RoHS, DFARS; UKCA	CE, RoHS, DFARS; UKCA	CE, RoHS, DFARS; UKCA	CE,ATEX, RoHS, DFARS; UKCA
Warranty	Lifetime	Lifetime	Lifetime	Lifetime

*When used with an I/O processor (brain or on-the-rack controller), the processor requires 5.0 to 5.2 VDC.

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43044 Business Park Dr. Temecula, CA 92590-3614

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SUPPORT • support@opto22.com
800-835-6786 • 1-951-695-3080

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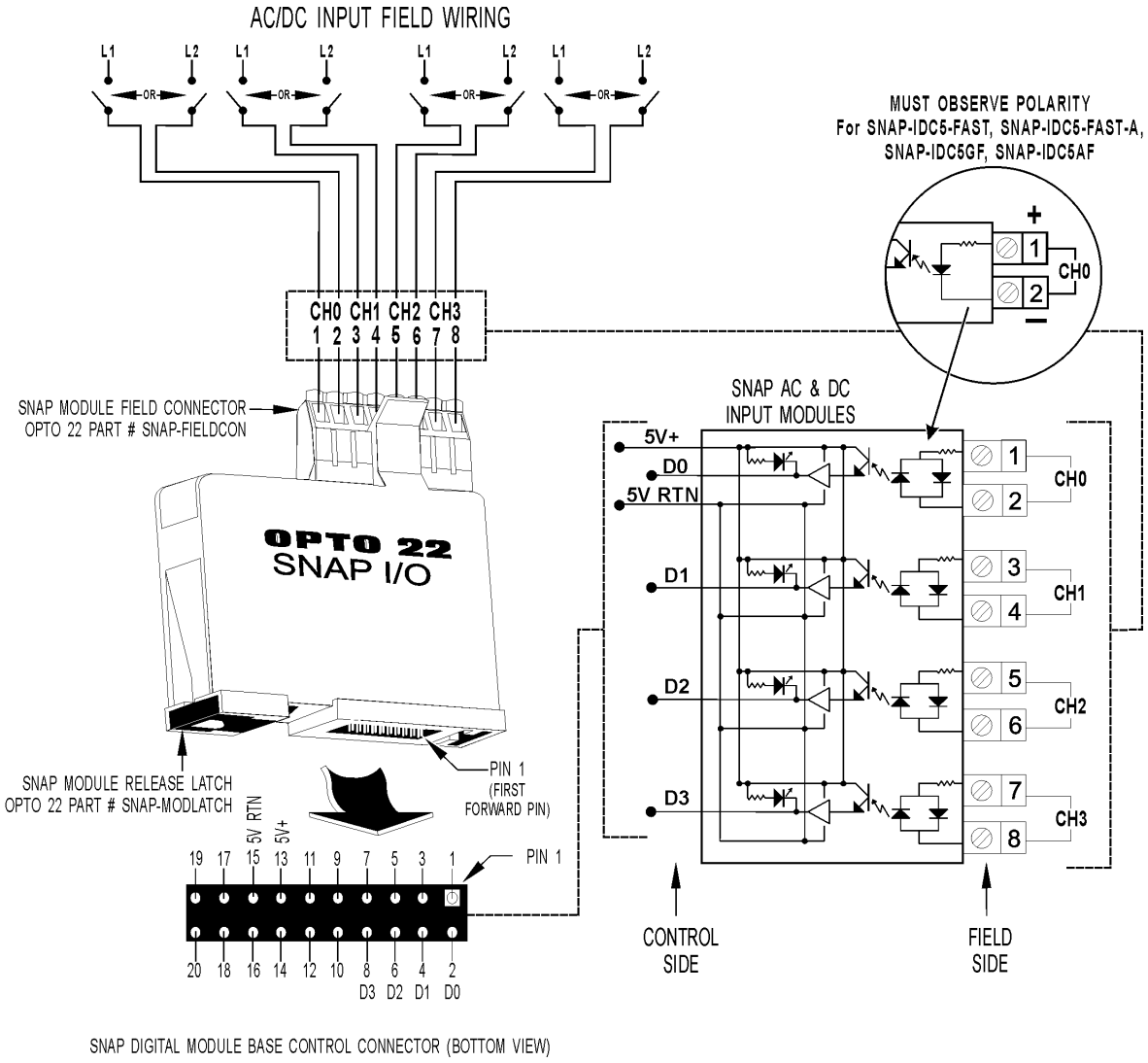
Schematics: AC and DC Input Modules



SNAP DIGITAL MODULE BASE CONTROL CONNECTOR (BOTTOM VIEW)

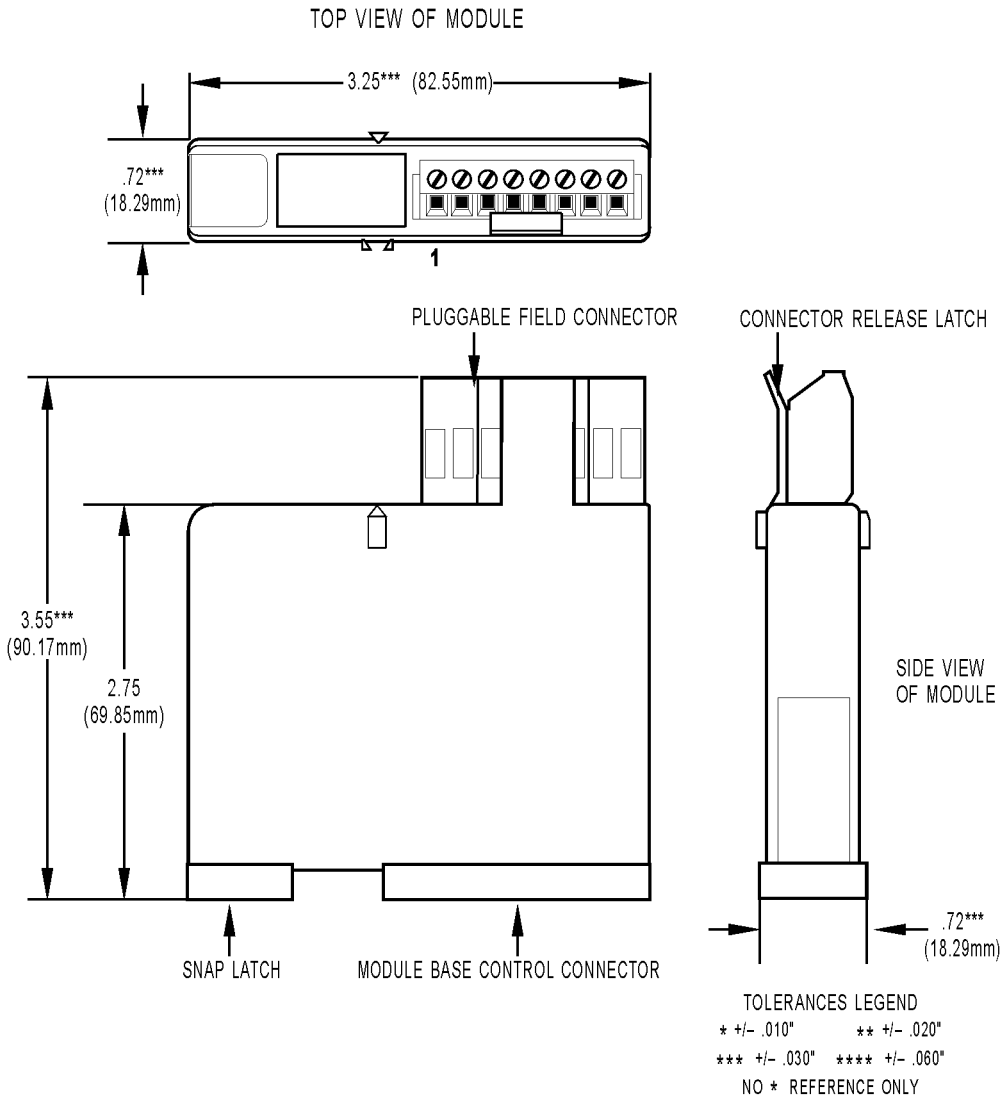
These products are obsolete.

MADE IN THE USA

These products are obsolete.

Dimensional Drawings: AC and DC Input Modules

Drawings continue on next page.



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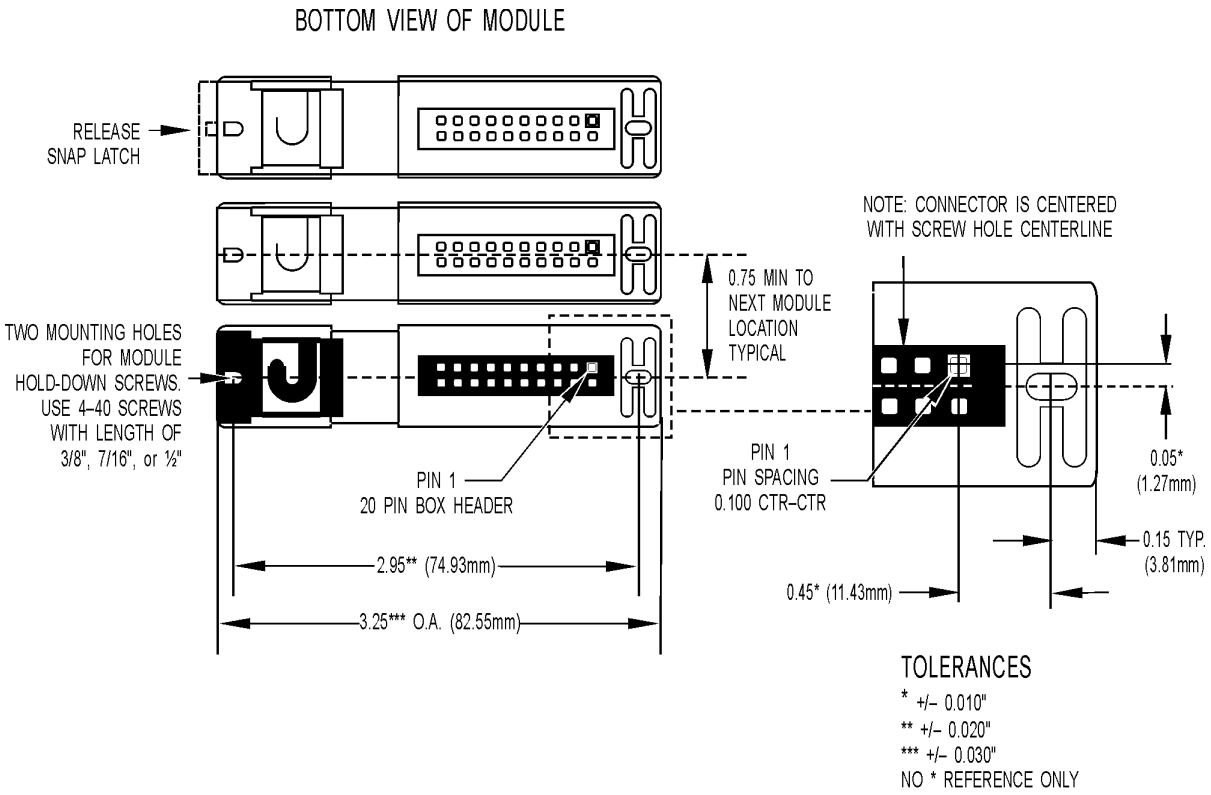
Dimensional Drawings: AC and DC Input Modules (continued)



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.

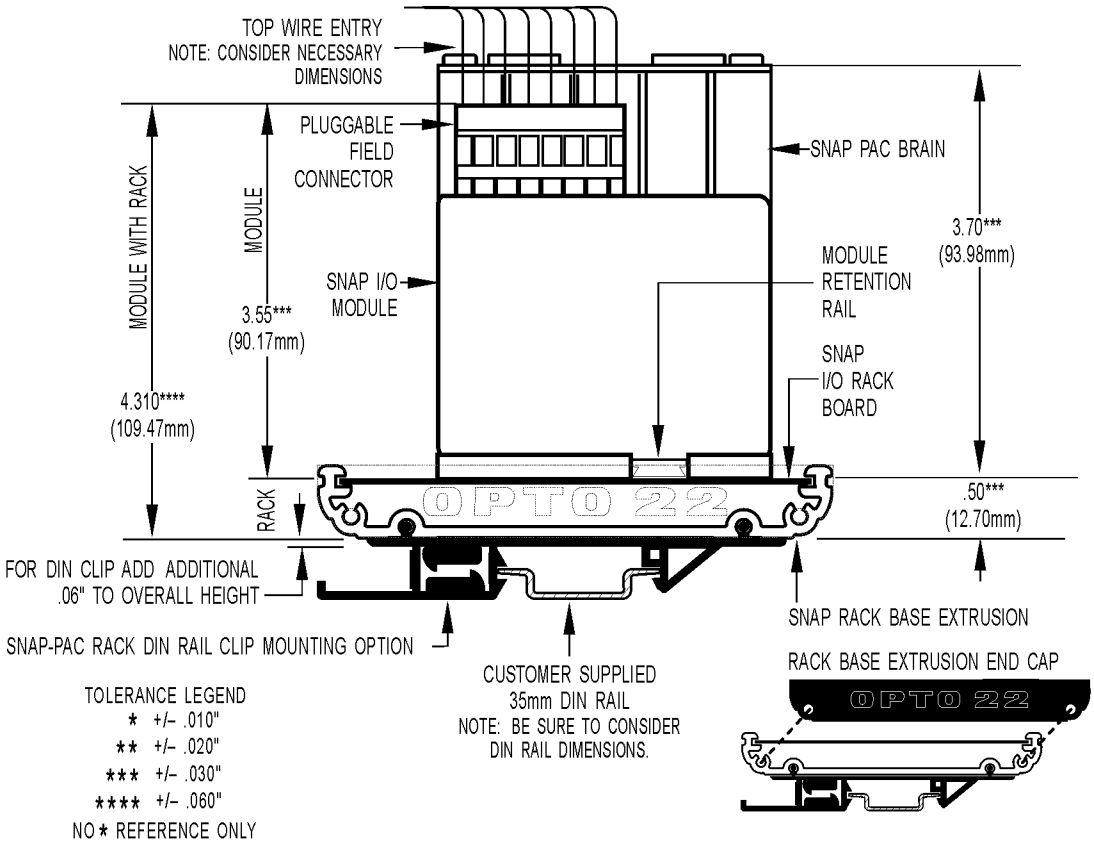
These products are obsolete.

MADE IN THE USA

These products are obsolete.

Dimensional Drawings: AC and DC Input Modules (continued)

SNAP Digital Module Mounted on SNAP Rack



SNAP 4-CHANNEL DIGITAL OUTPUT MODULES

Opto 22 SNAP I/O digital output modules are part of the SNAP PAC System.

Choose from AC or DC models. Optical isolation on all solid-state modules provides 4,000 volts of transient (4000 V for 1 ms) protection for sensitive control electronics from industrial field signals.

Most SNAP digital modules have removable top-mounted connectors to provide easy access for field wiring. All operate on 5 VDC control logic. Each digital module features integral channel-specific LEDs for convenient troubleshooting and maintenance.

Each module is factory tested twice before shipment, and most modules are UL and CE approved. In addition, part numbers ending in FM were Factory Mutual approved prior to 2024.

SNAP output modules are used to switch up to four separate AC or DC loads. Output modules that are fused use a standard fuse with a convenient handle for easy replacement. DC outputs are available in either a source or sink configuration. AC outputs are zero voltage turn on and zero current turn off for transient-free switching.

The SNAP-OAC5-iFM, SNAP-ODC5-iFM, and SNAP-ODC5A-iFM modules provide four isolated output channels.

For Ethernet-based applications requiring higher density of digital I/O points, see Opto 22 form #1556, the *SNAP High-Density Digital Module Data Sheet*.

This section includes information on the following obsolete SNAP 4-channel digital output modules:

Part	Description
SNAP-OAC5FM	SNAP 4-channel 12–250 VAC output, 5 VDC logic
SNAP-OAC5-iFM	SNAP 4-channel isolated 12–250 VAC output, 5 VDC logic
SNAP-ODC5SRCFM	SNAP 4-channel 5–60 VDC output, 5 VDC logic source
SNAP-ODC5SNKFM	SNAP 4-channel 5–60 VDC output, 5 VDC logic sink
SNAP-ODC5-iFM	SNAP 4-channel isolated 5–60 VDC output, 5 VDC logic
SNAP-ODC5A-iFM	SNAP 4-channel isolated 5–200 VDC output, 5 VDC logic

I/O Processor Compatibility

SNAP digital output modules are compatible with all SNAP PAC brains and rack-mounted controllers, including both standard wired models and Wired+Wireless™ models.

Notes for legacy hardware: SNAP digital output modules are also compatible with SNAP Ultimate, SNAP Ethernet, and SNAP Simple brains, as well as other SNAP brains such as the serial B3000 and the B3000HA. These modules can also be used on B-series and M-series mounting racks.

These products are obsolete.

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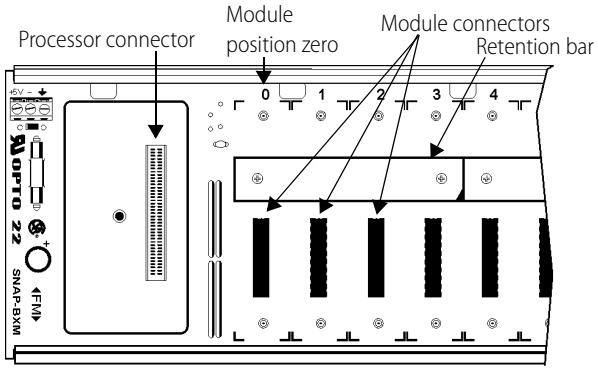
Installation

The following diagram shows part of a SNAP mounting rack. The rack is shown without screw connectors.

Modules snap securely into place in the row of connectors on the rack. Each module connector has a number. Digital output modules and other types of SNAP I/O modules are mounted on the module connectors starting at module position zero.

NOTE: Check the data sheet or user's guide for the brain or on-the-rack controller you are using to determine module features available and any restrictions on module placement.



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.)
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. Use standard 4-40 x 1/2 truss-head Phillips hold-down screws to secure both sides of each module.

   CAUTION: *Do not over-tighten screws. See Specifications.*

5. Follow the schematics beginning on page 10 to attach modules to the devices they monitor.

Note: Modules require a special tool (provided) for removal.

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Specifications: SNAP 4-OAC5-FM and SNAP-OAC5-i-FM

	SNAP-OAC5-FM [OBSOLETE]	SNAP-OAC5-i-FM [OBSOLETE]
Key Feature		Four isolated channels
Torque, hold-down screws	Not to exceed 1 in-lb (0.11 N-m)	Not to exceed 1 in-lb (0.11 N-m)
Torque, connector screws	5.22 in-lb (0.59 N-m)	5.22 in-lb (0.59 N-m)
Field Side Ratings (each channel)		
Line Voltage - Range	12–250 VAC	12–250 VAC
Line Voltage - Nominal	120/240 VAC	120/240 VAC
Current Rating 0 °C to 70 °C Ambient	3 amps per module	3 amps per module
One Cycle Surge	80 amps peak (50/60 Hz)	80 amps peak (50/60 Hz)
Minimum Load Current	20 mA	20 mA
Output Voltage Drop	1.6 volts max.@ 0.75 amps	1.6 volts max.@ 0.75 amps
Off-state Leakage at Nominal Voltage - 60 Hz	2.5 mA @ 240 VAC 1.25 mA @ 120 VAC	2.5 mA @ 240 VAC 1.25 mA @ 120 VAC
Peak Blocking Voltage	500 V	500 V
Operating Frequency	25–65 Hz	25–65 Hz
dV/ dt - Off-state	200 volts/msec	200 volts/msec
dV/ dt - Commutating	Snubbed for rated 0.5 power factor load	Snubbed for rated 0.5 power factor load
Fuse (Common to all Channels)	250 VAC - 4A 5x20 mm Fast-acting Bell Fuse Part No. BEL 5HF4 Opto 22 Part No. SNAP-FUSE4AB	Has four isolated channels. User must provide own fusing.
Channel-to-channel isolation	Not applicable	300 VAC (1500 V transient)
Logic Side Ratings		
Pickup Voltage	4 V @ 5.5 mA	4 V @ 5.5 mA
Dropout Voltage	1 VDC	1 VDC
Control Resistance	220 ohms	220 ohms
Logic Supply Voltage	5 VDC ± 0.25 VDC	5 VDC ± 0.25 VDC
Logic Supply Current	50 mA maximum	50 mA maximum
Module Ratings		
Channels Per Module	4	4
Turn-on Time	0.5 cycle maximum (zero volts crossover)	0.5 cycle maximum (zero volts crossover)
Turn-off Time	0.5 cycle maximum (zero current crossover)	0.5 cycle maximum (zero current crossover)
Isolation (Field Side to Logic Side)	4,000 volts (transient)	4,000 volts (transient)
Temperature	-20 ° to 70 °C, operating -40 ° to 85 °C, storage	-20 ° to 70 °C, operating -40 ° to 85 °C, storage
Wire size range	22 to 14 AWG	22 to 14 AWG
Agency Approvals	CE, RoHS, DFARS; UKCA	CE, RoHS, DFARS; UKCA
Warranty	Lifetime	Lifetime

These products are obsolete.

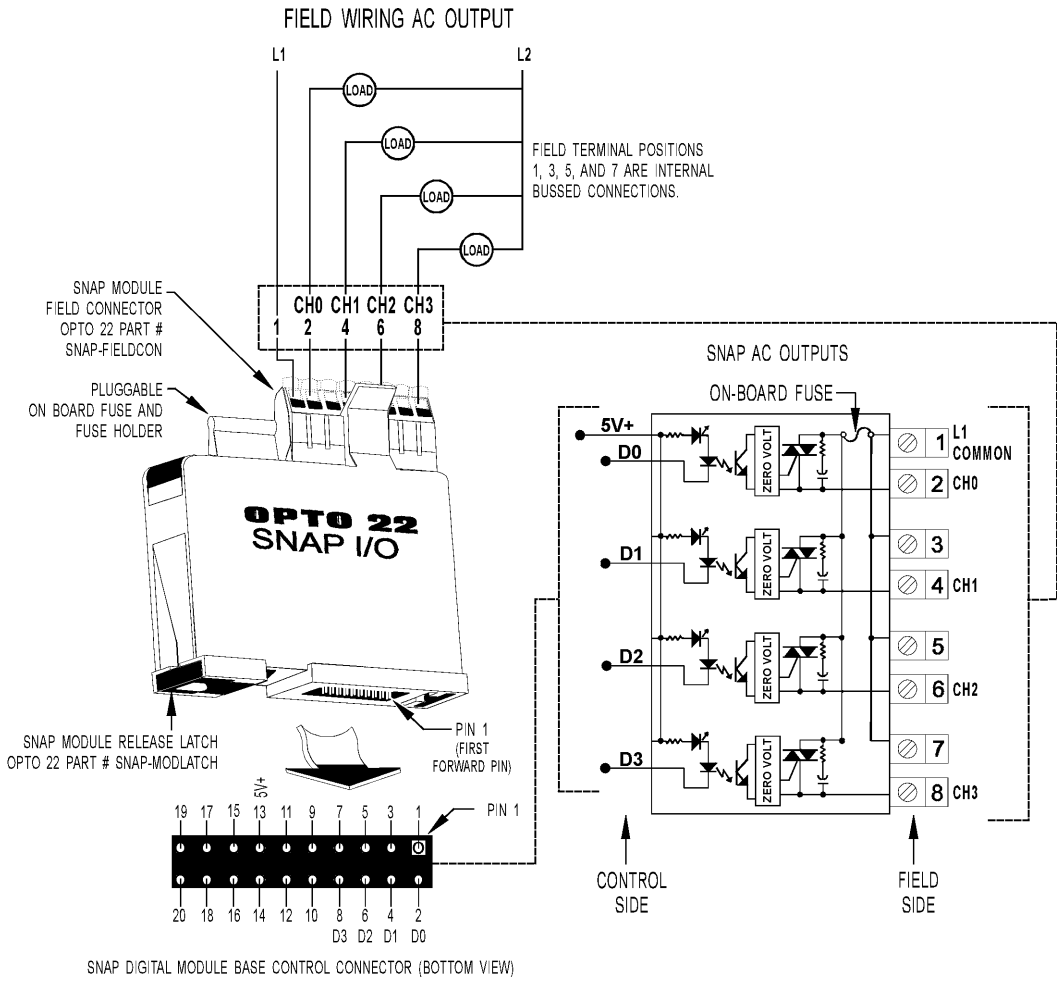
MADE IN THE USA

Schematic: SNAP-OAC5FM

SNAP-OAC5FM Output Module

Part Number	Description
SNAP-OAC5FM	4-channel AC output 12–250 VAC 5 VDC logic

Note: In hazardous locations, SNAP-OAC5FM modules must be mounted in an enclosure that meets the requirements of the National Electrical Code, ANSI/NFPA 70 and ANSI/ISA-61010-1 (82.02.01).



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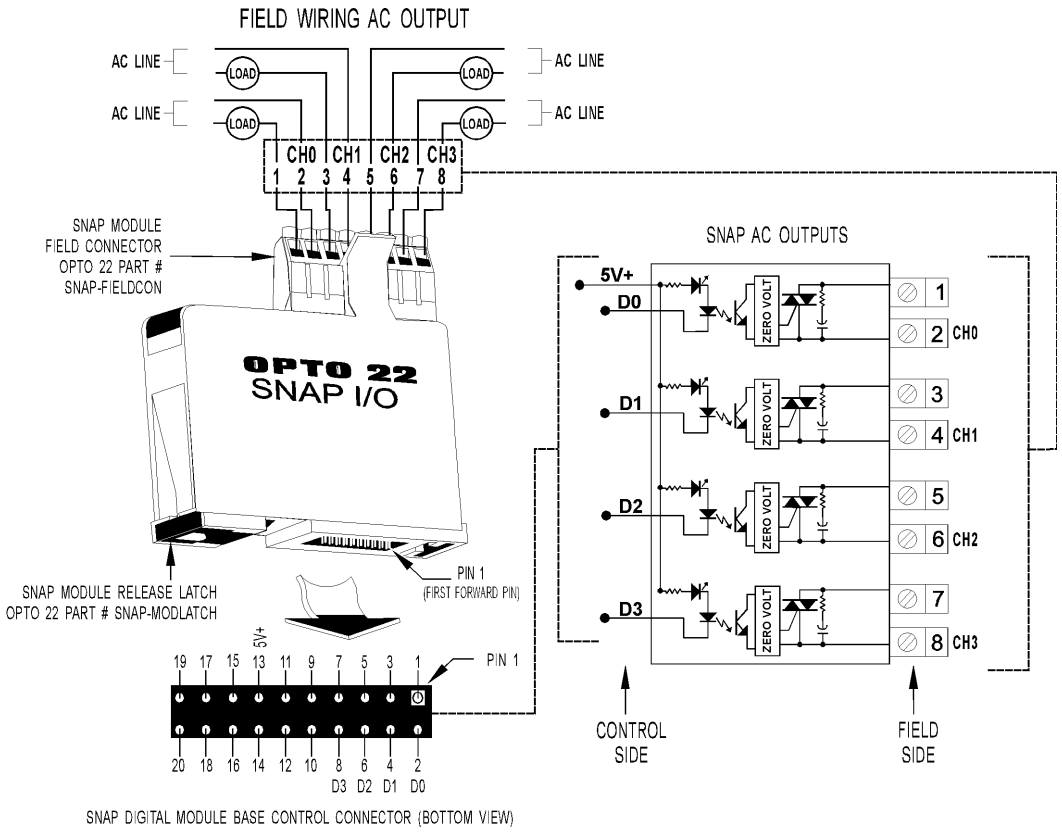
Schematic: SNAP-OAC5i-FM

SNAP-OAC5i-FM Isolated Output Module

Part Number	Description
SNAP-OAC5-iFM	4-channel isolated AC output 12–250 VAC, 5 VDC logic

Note: In hazardous locations, SNAP-OAC5-iFM modules must be mounted in an enclosure that meets the requirements of the National Electrical Code, ANSI/NFPA 70 and ANSI/ISA-61010-1 (82.02.01).



These products are obsolete.

These products are obsolete.

Specifications: SNAP-ODC5SRCFM and SNAP-ODC5SNKFM

	SNAP-ODC5SRCFM [OBSOLETE]	SNAP-ODC5SNKFM [OBSOLETE]
Key Features		
Torque, hold-down screws	Not to exceed 1 in-lb (0.11 N-m)	Not to exceed 1 in-lb (0.11 N-m)
Torque, connector screws	5.22 in-lb (0.59 N-m)	5.22 in-lb (0.59 N-m)
Field Side Ratings (each channel)		
Line Voltage - Range	5–60 VDC	5–60 VDC
Line Voltage - Nominal	5–48 VDC	5–48 VDC
Current Rating 0°C to 70°C Ambient	3 amps per module	3 amps per module
Surge Current	5 amps peak for 1 second	5 amps peak for 1 second
Minimum Load	20 mA	20 mA
Output Voltage Drop	1.6 volts max.@ 0.75 amps	1.6 volts max.@ 0.75 amps
Off-state Leakage	1 mA @ 60 VDC	1 mA @ 60 VDC
Peak Blocking Voltage	60 VDC	60 VDC
Fuse (Common to all Channels)	250 VAC - 4A 5x20 mm Fast-acting Bell Fuse Part No. BEL 5HF4 Opto 22 Part SNAP-FUSE4AB	250 VAC - 4A 5x20 mm Fast-acting Bell Fuse Part No. BEL 5HF4 Opto 22 Part SNAP-FUSE4AB
Logic Side Ratings		
Pickup Voltage	4 V @ 5.5 mA	4 V @ 5.5 mA
Dropout Voltage	1 VDC	1 VDC
Control Resistance	220 ohms	220 ohms
Logic Supply Voltage	5 VDC ± 0.25 VDC	5 VDC ± 0.25 VDC
Logic Supply Current	50 mA maximum	50 mA maximum
Module Ratings		
Number of Channels Per Module	4	4
Turn-on Time	100 usec	100 usec
Turn-off Time	750 usec	750 usec
Isolation (Field Side to Logic Side)	4,000 volts (transient)	4,000 volts (transient)
Temperature	-20 to 70 °C, operating -40 to 85 °C, storage	-20 to 70 °C, operating -40 to 85 °C, storage
Wire size range	22 to 14 AWG	22 to 14 AWG
Agency Approvals	CE, RoHS, DFARS; UKCA	CE, RoHS, DFARS; UKCA
Warranty	Lifetime	Lifetime

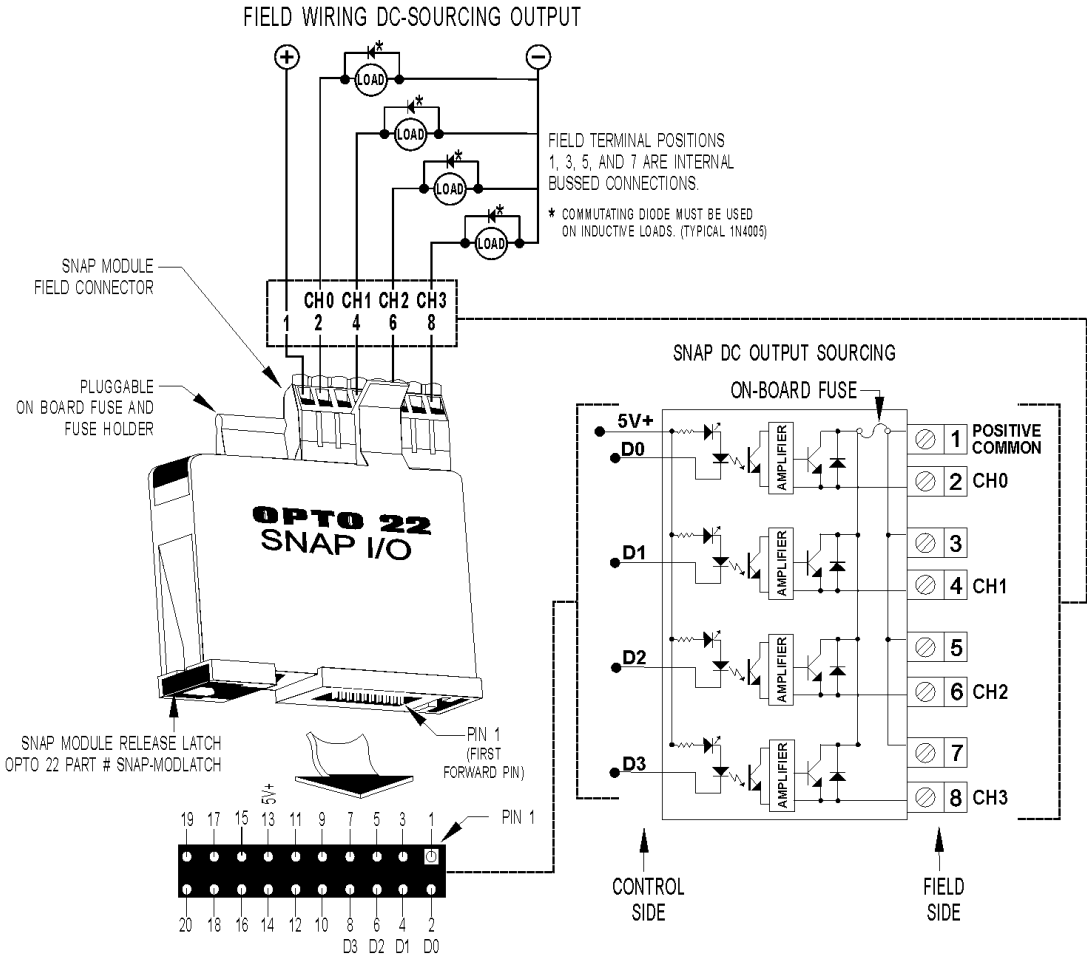
MADE IN THE USA

Schematic: SNAP-ODC5SRCFM

SNAP-ODC5SRCFM Output Module—Sourcing

Part Number	Description
SNAP-ODC5SRCFM	4-channel DC output 5–60 VDC logic source

Note: In hazardous locations, SNAP-ODCSRCFM modules must be mounted in an enclosure that meets the requirements of the National Electrical Code, ANSI/NFPA 70 and ANSI/ISA-61010-1 (82.02.01).



SNAP DIGITAL MODULE BASE CONTROL CONNECTOR (BOTTOM VIEW)

These products are obsolete.

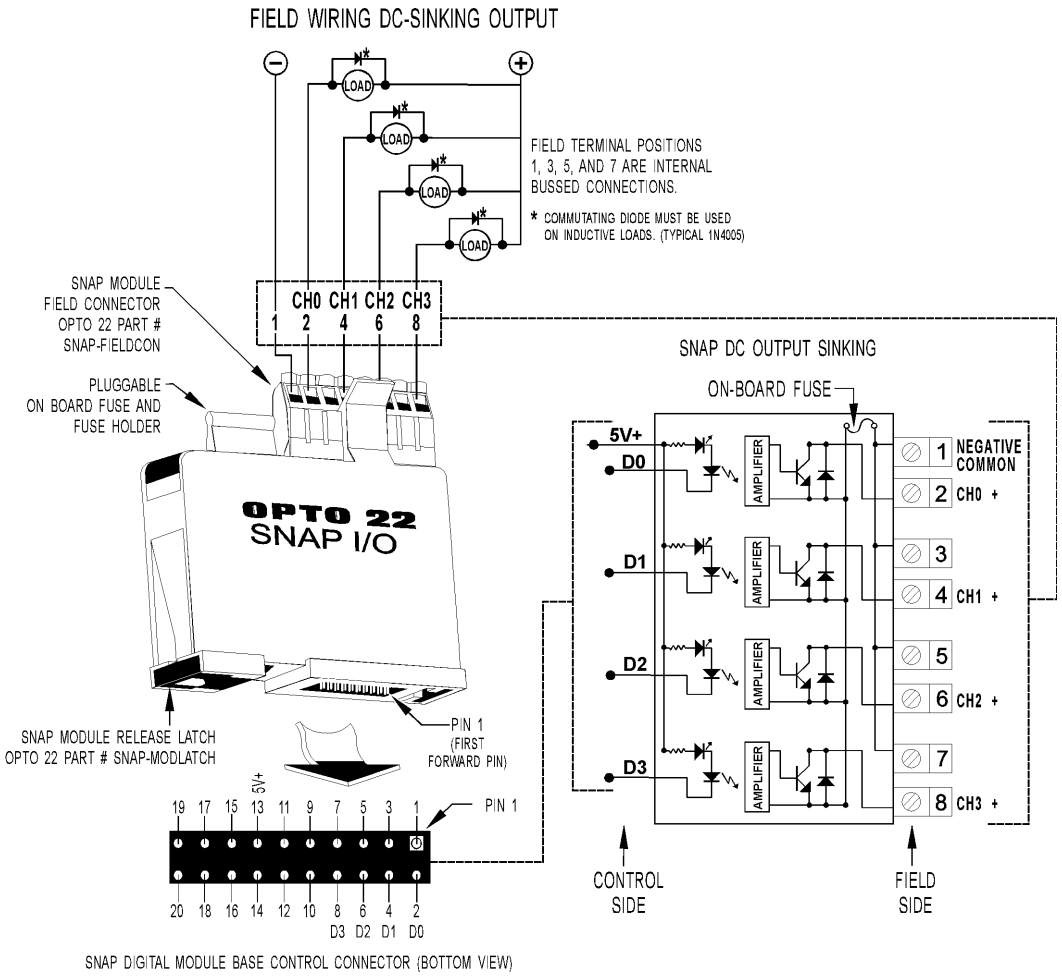
MADE IN THE USA

Schematic: SNAP-ODC5SNKFM

SNAP-ODC5SNKFM Output Module—Sinking

Part Number	Description
SNAP-ODC5SNKFM	4-channel DC output 5–60 VDC logic sink

Note: In hazardous locations, SNAP-ODC5SNKFMmodules must be mounted in an enclosure that meets the requirements of the National Electrical Code, ANSI/NFPA 70 and ANSI/ISA-61010-1 (82.02.01).



MADE IN THE USA

Specifications: SNAP-ODC5-iFM AND SNAP-OSC5A-iFM

	SNAP-ODC5-iFM [OBSOLETE]	SNAP-ODC5A-iFM [OBSOLETE]
Key Feature	Four isolated channels	Four isolated channels
Torque, hold-down screws	Not to exceed 1 in-lb (0.11 N-m)	Not to exceed 1 in-lb (0.11 N-m)
Torque, connector screws	5.22 in-lb (0.59 N-m)	5.22 in-lb (0.59 N-m)
Field Side Ratings (each channel)		
Line Voltage - Range	5–60 VDC	5–200 VDC
Line Voltage - Nominal	5–48 VDC	5–200 VDC
Current Rating 0°C to 70°C Ambient	3 amps per module	3 amps per module
Surge Current	5 amps peak for 1 second	5 amps peak for 1 second
Minimum Load	20 mA	20 mA
Output Voltage Drop	1.6 volts max.@ 0.75 amps	1.6 volts max.@ 0.75 amps
Off-state Leakage	1 mA @ 60 VDC	1 mA @ 60 VDC
Peak Blocking Voltage	60 VDC	200 VDC
Fuse (Common to all Channels)	Has four isolated channels. User must provide own fusing.	Has four isolated channels. User must provide own fusing.
Logic Side Ratings		
Pickup Voltage	4 V @ 5.5 mA	4 V @ 5.5 mA
Dropout Voltage	1 VDC	1 VDC
Control Resistance	220 ohms	220 ohms
Logic Supply Voltage	5 VDC ± 0.25 VDC	5 VDC ± 0.25 VDC
Logic Supply Current	50 mA maximum	50 mA maximum
Module Ratings		
Number of Channels Per Module	4	4
Turn-on Time	100 usec	100 usec
Turn-off Time	750 usec	750 usec
Isolation (Field Side to Logic Side)	4,000 volts (transient)	4,000 volts (transient)
Temperature	-20 ° to 70 °C, operating -40 ° to 85 °C, storage	-20 ° to 70 °C, operating -40 ° to 85 °C, storage
Wire size range	22 to 14 AWG	22 to 14 AWG
Agency Approvals	CE, ATEX, RoHS, DFARS; UKCA	CE, RoHS, DFARS; UKCA
Warranty	Lifetime	Lifetime

These products are obsolete.

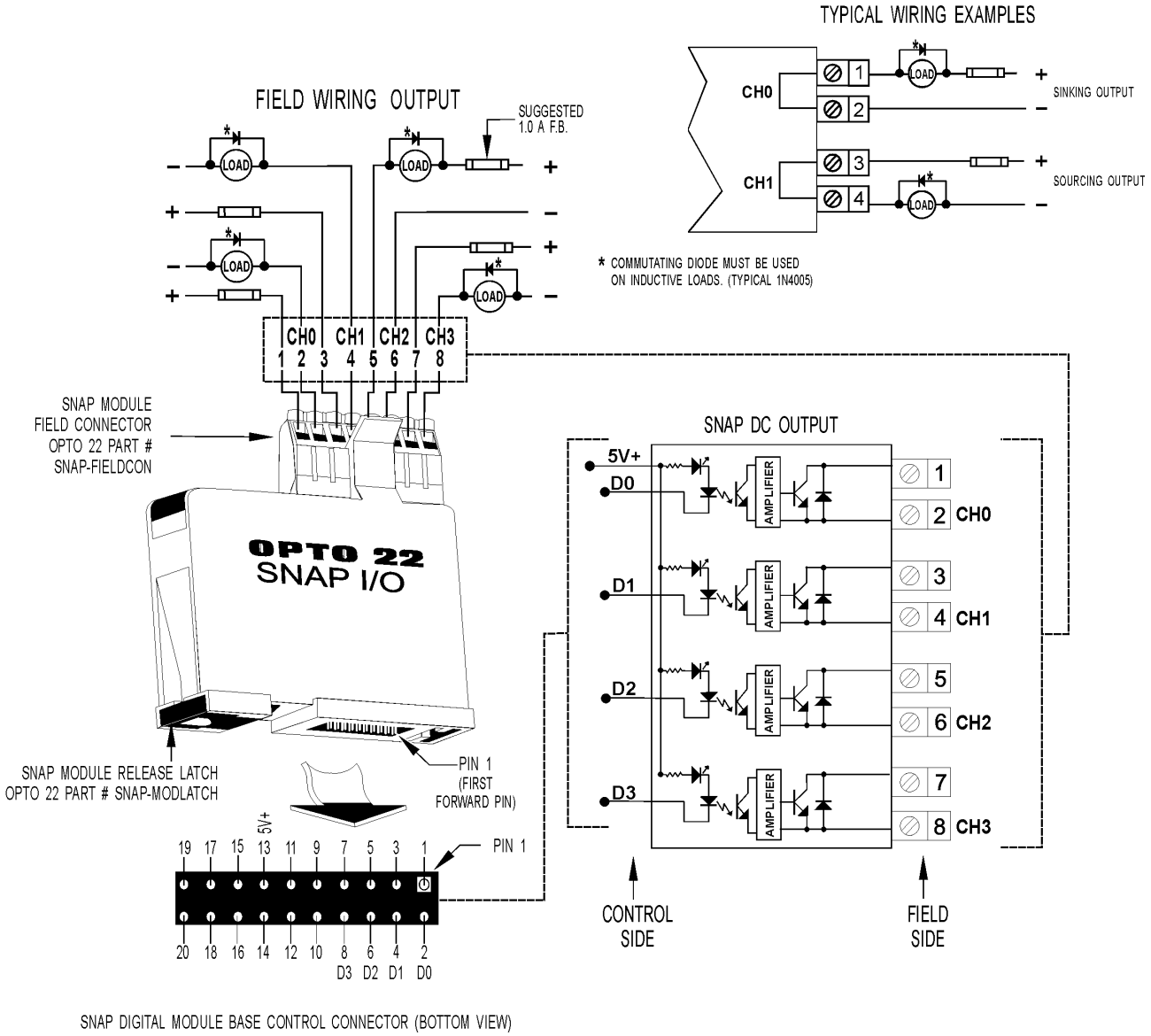
MADE IN THE USA

Schematics: SNAP-ODC5-iFM and SNAP-ODC5A-iFM

SNAP-ODC5-iFM and SNAP-ODC5A-iFM
Isolated Output ModuleS

Part Number	Description
SNAP-ODC5-iFM	4-channel isolated DC output 5–60 VDC, 5 VDC logic
SNAP-ODC5A-iFM	4-channel isolated DC output 5–200 VDC, 5 VDC logic

Note: In hazardous locations, SNAP-ODC5-iFM and SNAP-ODC5A-iFM modules must be mounted in an enclosure that meets the requirements of the National Electrical Code, ANSI/NFPA 70 and ANSI/ISA-61010-1 (82.02.01).

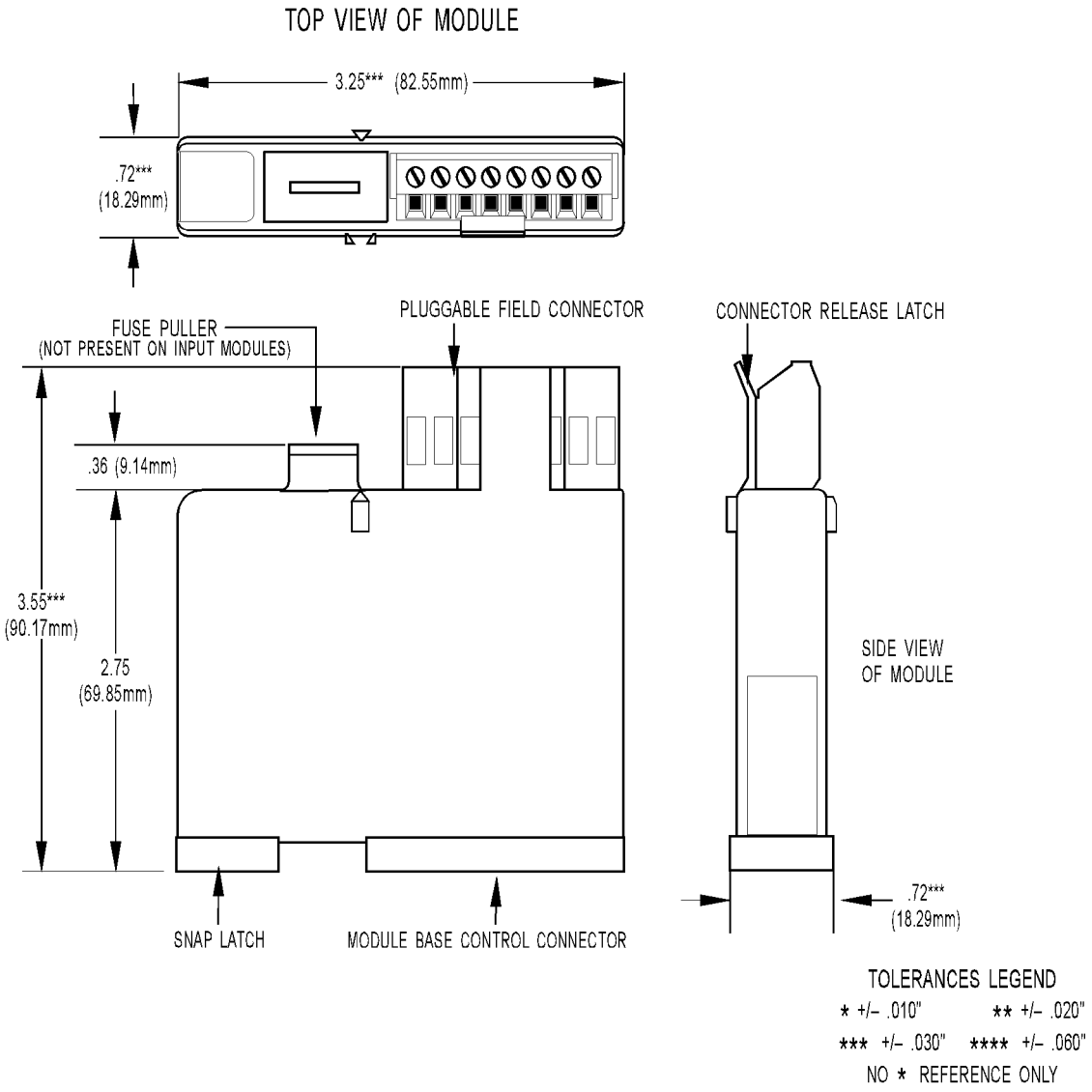


SNAP DIGITAL MODULE BASE CONTROL CONNECTOR (BOTTOM VIEW)

MADE IN THE USA

Dimensional Drawings: SNAP 4-Channel Digital Output Modules

All Models - TOP VIEW OF MODULE (Drawings continue on next page)

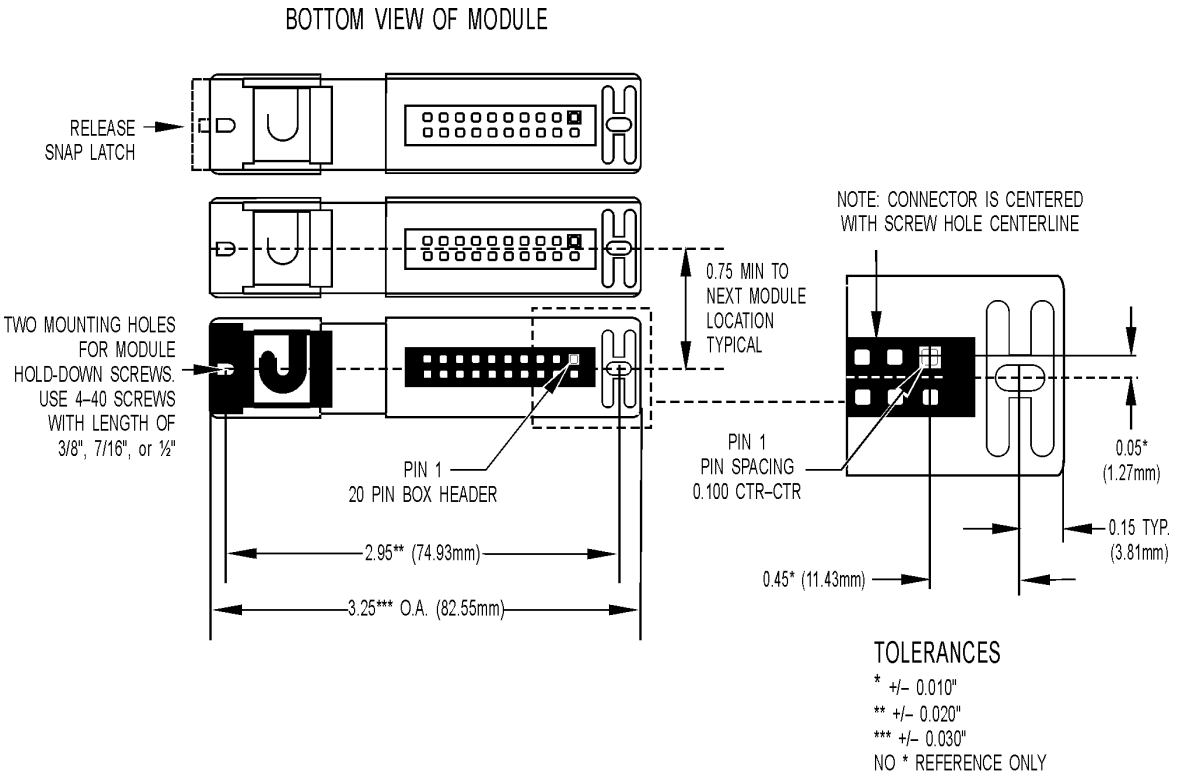


These products are obsolete.

These products are obsolete.

Dimensional Drawings: SNAP 4-Channel Digital Output Modules (continued)

All Models - BOTTOM VIEW OF MODULE

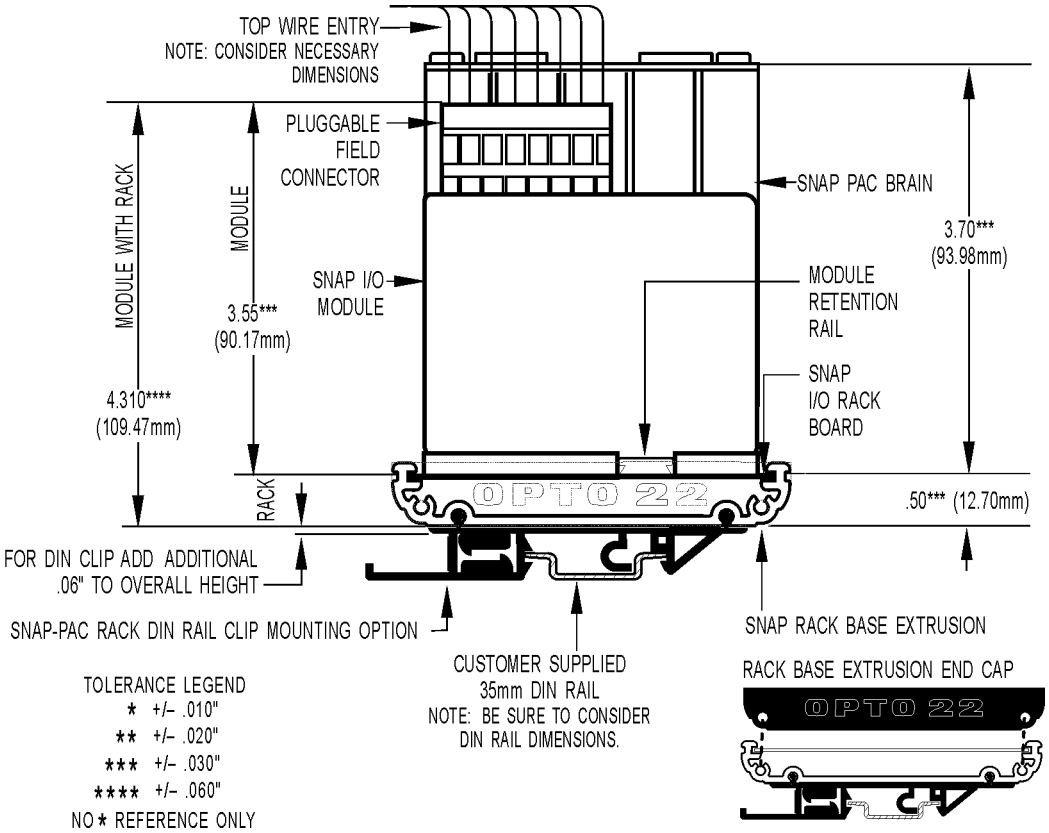


IMPORTANT: The mounting rack connector has 24 pins; the module connector has 20 pins. The extra pins on the mounting rack connector prevent misalignment of the module during installation.

Dimensional Drawings: SNAP 4-Channel Digital Output Modules (continued)

All Models - SNAP Digital Module Mounted on SNAP Rack

SNAP Digital Module Mounted on SNAP Rack



These products are obsolete.

These products are obsolete.

SNAP 4-CHANNEL DIGITAL REED RELAY MODULES

The SNAP Reed Relay modules use reed relays and do not provide optical isolation. Current rating depends on the voltage the module is used with.

Typical applications for these modules include analog signal and communication line multiplexing.

Because of their low 10 VA rating, these modules are not recommended for inductive or capacitive loads (even very small loads), because the inrush current is likely to exceed the 10 VA rating.

IMPORTANT: Applications using 120 VAC are typically NOT suited to this module. If you are considering using this module for any application other than low-voltage purely resistive loads, see the detailed notes and rating curve on the following pages, and call Pre-sales Engineering for specific guidance.

Note: For many applications a better choice is the SNAP-OMR6-C module, which can handle a full 6 A at 0–250 VAC or 0–30 VDC.

Part of the SNAP PAC System, these modules mount 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 MicroLogix™ or other RSLogix™-based PLC system, such as ControlLogix™ or CompactLogix™.

For easier, faster wiring, see SNAP TEX cables and breakout boards.

This section includes information on the following obsolete SNAP 4-channel digital output reed relay modules:

Part	Description
SNAP-ODC5RFM[a,b]	SNAP 4-channel dry contact output, normally open
SNAP-ODC5R5FM[a,b]	SNAP 4-channel dry contact output, normally closed

a. Not UL approved.
b. For use in hazardous locations, SNAP-ODC5RFM [OBSOLETE] and SNAP-ODC5R5FM [OBSOLETE] modules must be mounted in an enclosure that meets the requirements of the National Electrical Code, ANSI/NFPA 70, and ANSI/ISA-61010-1 (82.02.01).

I/O Processor Compatibility

SNAP digital output modules are compatible with all SNAP PAC controllers and SNAP PAC brains.

Notes for legacy hardware: SNAP digital output modules are also compatible with SNAP Ultimate, SNAP Ethernet, and SNAP Simple brains, as well as other SNAP brains such as the serial B3000 and the B3000HA. These modules can also be used on B-series and M-series mounting racks.

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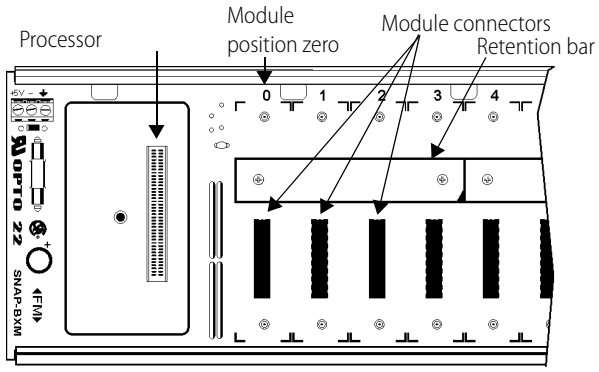
Installation

The following diagram shows part of a SNAP mounting rack. The rack is shown without screw connectors.

Modules snap securely into place in the row of connectors on the rack. Each module connector has a number. Digital output modules and other types of SNAP I/O modules are mounted on the module connectors starting at module position zero.

NOTE: Check the data sheet or user's guide for the brain or on-the-rack controller you are using to determine module features available and any restrictions on module placement.



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.)
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. Use standard 4-40 x 1/2 truss-head Phillips hold-down screws to secure both sides of each module. **CAUTION:** Do not over-tighten screws. See Specifications.
5. Follow the schematic on page 24 to attach modules to the devices they monitor.

Note: Modules require a special tool (provided) for removal.

These products are obsolete.

These products are obsolete.

Specifications: SNAP-ODC5RFM and SNAP-ODC5R5FM

	SNAP-ODC5RFM [OBSOLETE]	SNAP-ODC5R5FM [OBSOLETE]
Key Features		
Torque, hold-down screws	Not to exceed 1 in-lb (0.11 N-m)	Not to exceed 1 in-lb (0.11 N-m)
Torque, connector screws	5.22 in-lb (0.59 N-m)	5.22 in-lb (0.59 N-m)
Field Side Ratings (each channel)		
Line Voltage - Range	0–100 VDC 0–130 VAC*	0–100 VDC 0–130 VAC*
Line Voltage - Nominal	--	--
Current Rating	0.5 amps switching*	0.5 amps switching*
Surge Current	0.5 amps*	0.5 amps*
Minimum Load	0 mA	0 mA
Output Voltage Drop	0 volts	0 volts
Off-state Leakage	0 mA	0 mA
Peak Blocking Voltage	100 VDC / 130 VAC	100 VDC / 130 VAC
Fuse (Common to all Channels)	Has four isolated channels. User must provide own fusing.	Has four isolated channels. User must provide own fusing.
Logic Side Ratings		
Pickup Voltage	4 V @ 5.5 mA	4 V @ 5.5 mA
Dropout Voltage	1 VDC	1 VDC
Control Resistance	220 ohms	220 ohms
Logic Supply Voltage	5 VDC ± 0.25 VDC	5 VDC ± 0.25 VDC
Logic Supply Current	50 mA maximum	50 mA maximum
Module Ratings		
Number of Channels Per Module	4	4
Turn-on Time	500 usec	500 usec
Turn-off Time	500 usec	500 usec
Isolation (Field Side to Logic Side)	1,500 volts (transient)	1,500 volts (transient)
Mechanical Life	200,000,000 cycles	200,000,000 cycles
Temperature	-20 to 70 °C, operating -30 to 85 °C, storage	-20 to 70 °C, operating -30 to 85 °C, storage
Agency Approvals	CE, RoHS, DFARS; UKCA	CE, RoHS, DFARS; UKCA
Warranty	30 months or mechanical life, whichever comes first	30 months or mechanical life, whichever comes first

* The current of the dry contact module must not exceed 10 VA power rating under steady state or momentary in-rush conditions. For voltages at or below 20 volts, the current limit is 0.5 amps. For voltages above 20 volts, the maximum allowable current is determined by the following equation: Current Maximum = 10 VA / Voltage.

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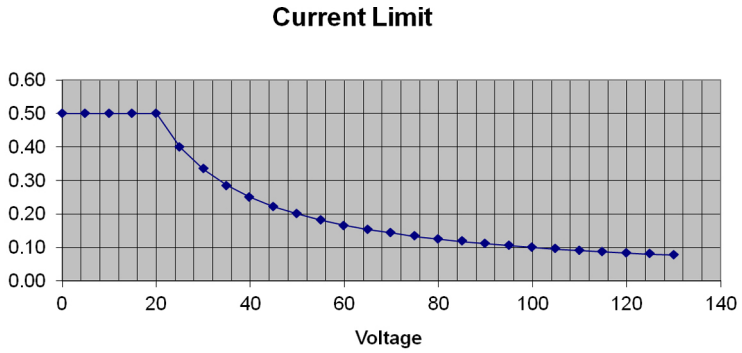
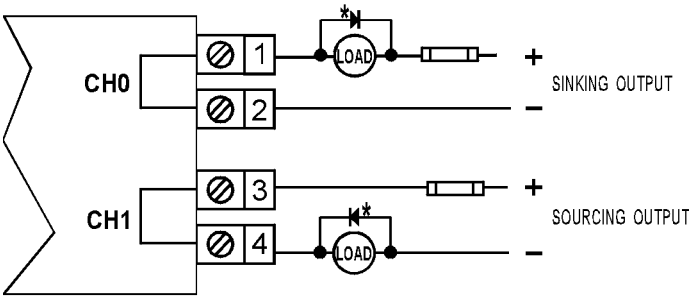
Schematic: SNAP-ODC5RFM and SNAP-ODC5R5FM

Current Limit at Key Voltages	
VDC	mA
5	500
12	500
24	416
48	206
100[1]	100

[1] Maximum DC voltage is 100 VDC.

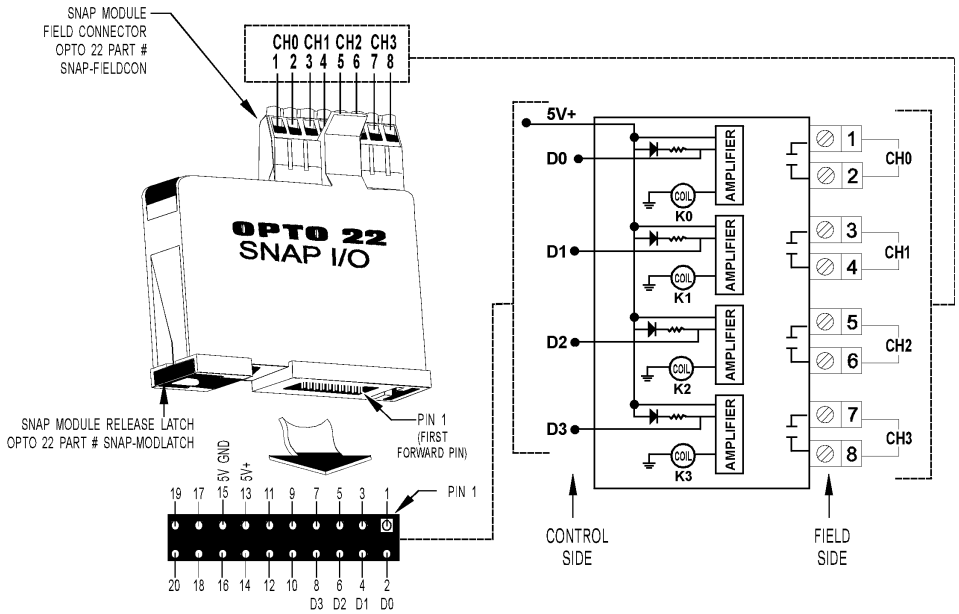


TYPICAL WIRING EXAMPLES



NOTE: * Commutating diode* must be used on inductive loads (Typical: 1N4005).

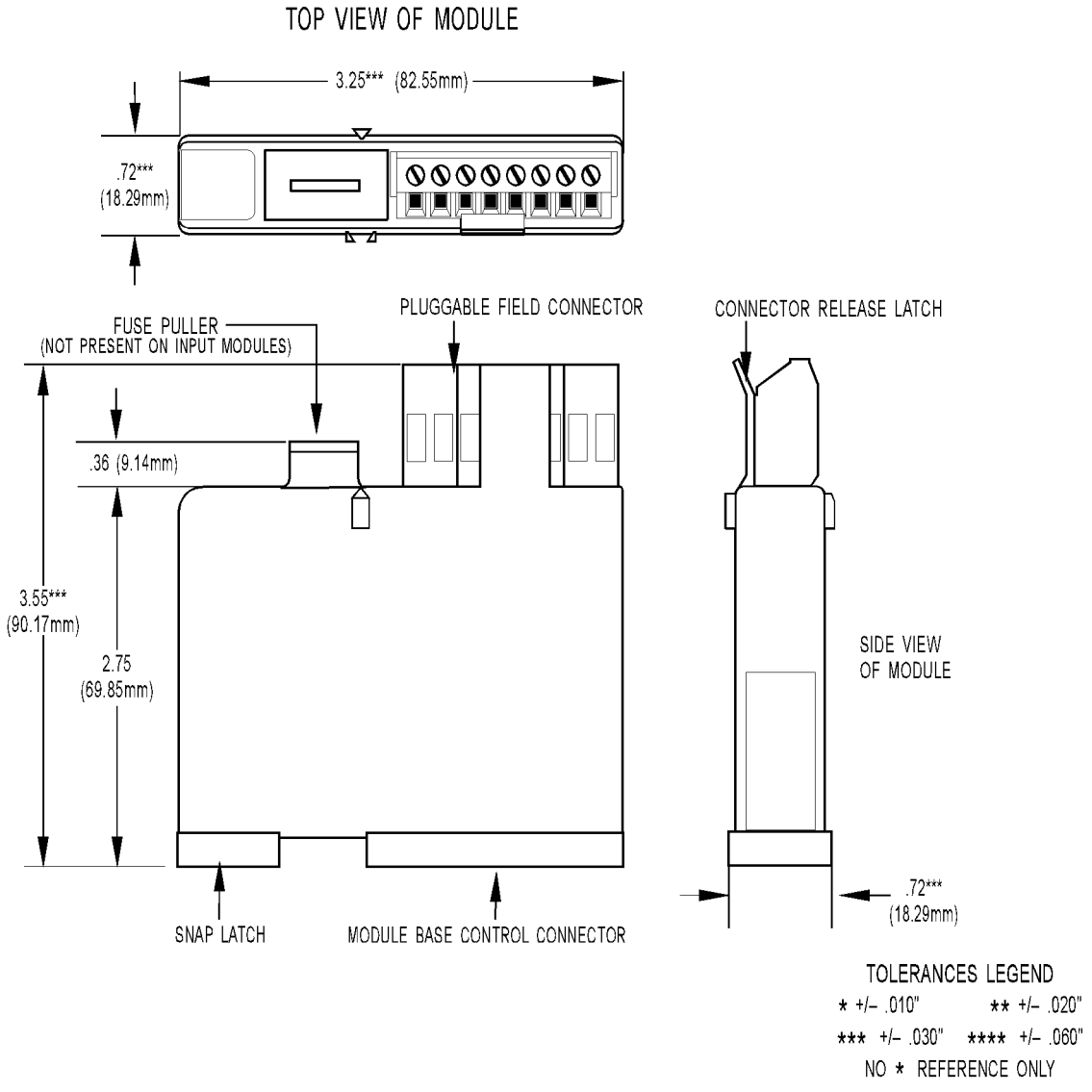
FIELD WIRING DRY CONTACT OUTPUT



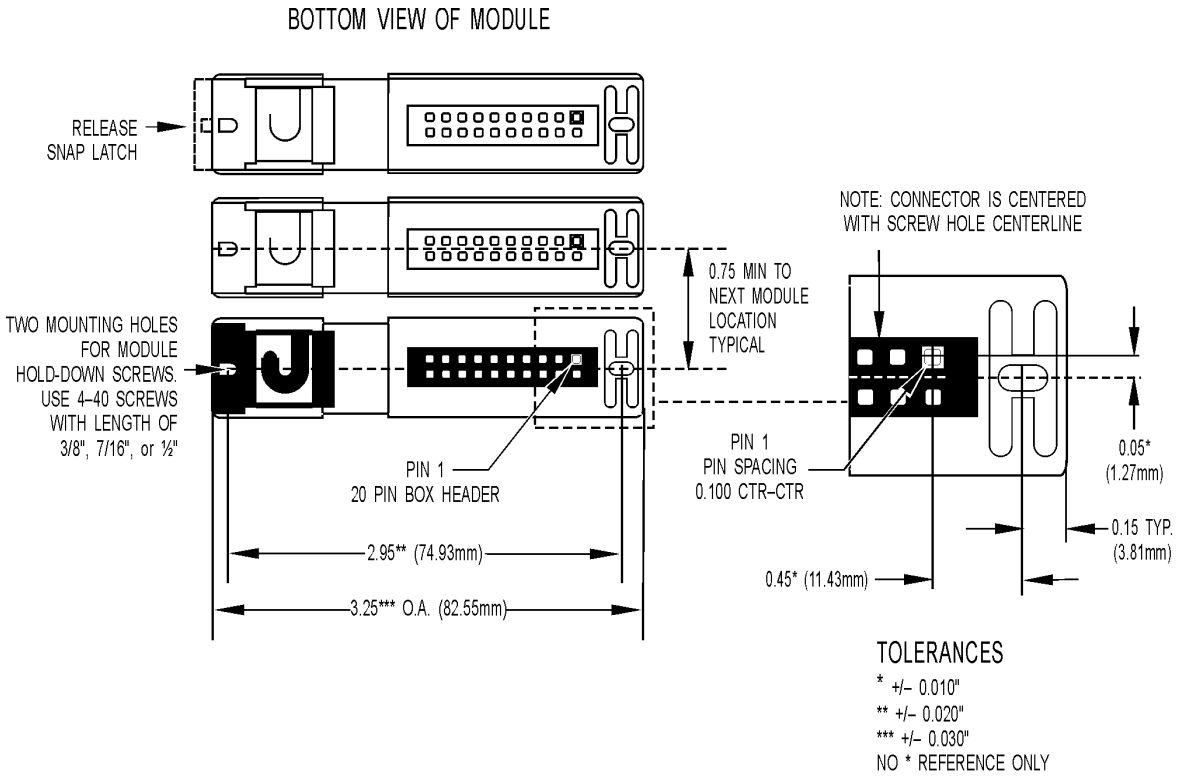
SNAP DIGITAL MODULE BASE CONTROL CONNECTOR (BOTTOM VIEW)

These products are obsolete.

Dimensional Drawings: Snap 4-Channel Digital Reed Relay Modules



Dimensional Drawings: Snap 4-Channel Digital Reed Relay Modules (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.

These products are obsolete.

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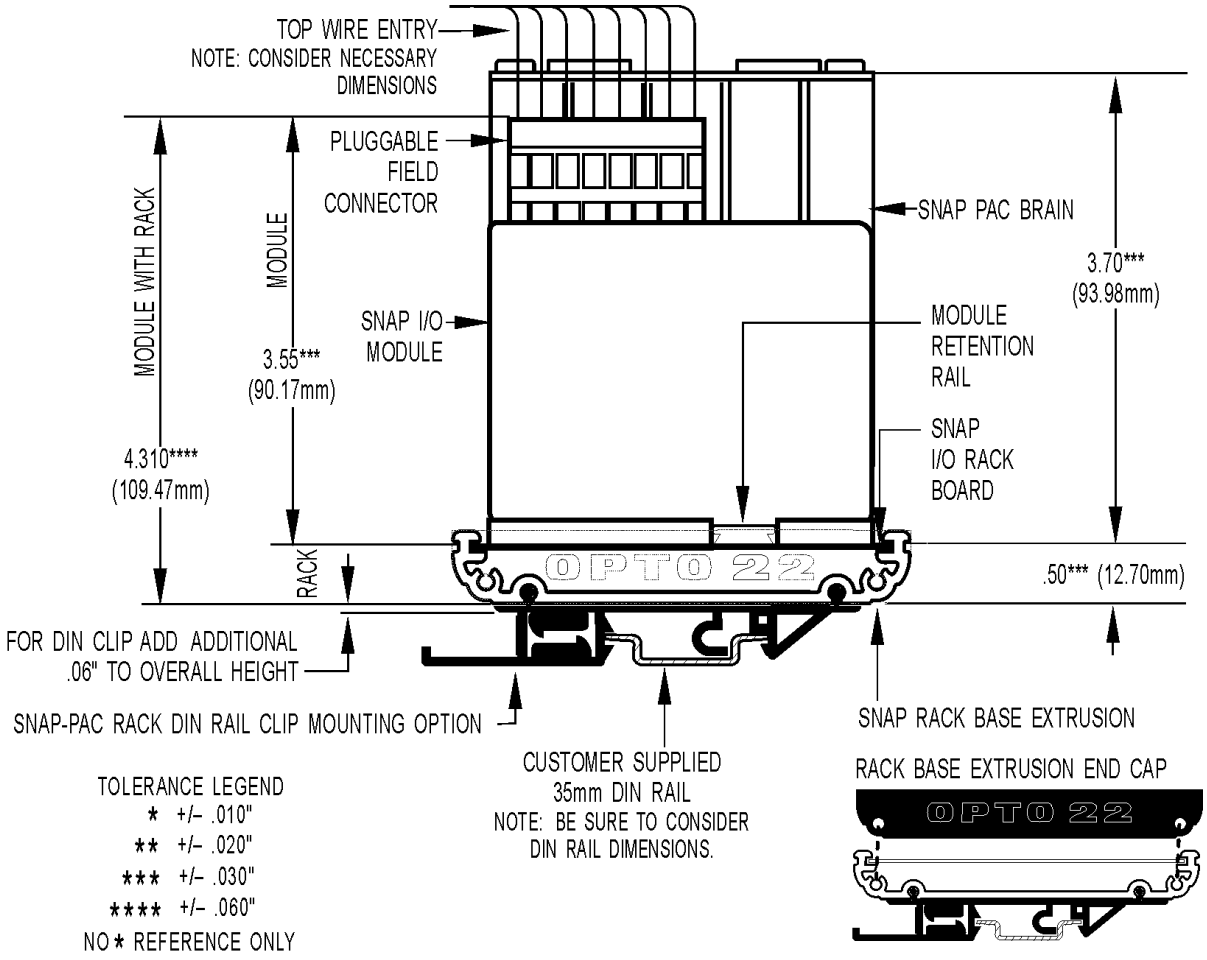
Dimensional Drawings: Snap 4-Channel Digital Reed Relay Modules (continued)

SNAP Digital Module Mounted on SNAP Rack



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