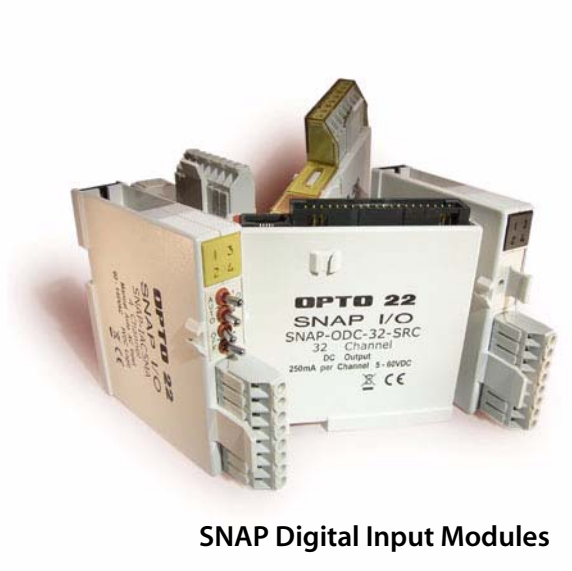
SNAP Digital Input Modules

Features

- Four channels per module
- 4,000-volt transient isolation
- Convenient pluggable wiring terminals
- Channel-specific LEDs
- Operating temperature: 0 to 70 °C
- UL and CE approved
- Accepts up to 14 AWG wire
- Factory Mutual approved (part numbers ending in FM)



SNAP Digital Input Modules

Description

Opto 22 SNAP I/O 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 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 are Factory Mutual approved.

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. The SNAP-IDC5G is ideal for detecting 48 VDC in telecom applications. The SNAP-IDC5-HT is designed for sensors that have a high leakage current.

The SNAP-IDC5-SW and SNAP-IDC5-SW-NC modules supply power to an external dry contact switch and sense

Part Numbers

Part	Description
SNAP-IAC5	SNAP 4-channel 90–140 VAC input, 5 VDC logic
SNAP-IAC5A	SNAP 4-channel 180–280 VAC input, 5 VDC logic
SNAP-IAC5MA*	SNAP 4-channel isolated 90–140 VAC/VDC input, 5 VDC logic, with manual/auto switches
SNAP-IAC5FM	SNAP 4-channel 90–140 VAC/VDC input, 5 VDC logic, Factory Mutual approved
SNAP-IAC5AFM	SNAP 4-channel 180–280 VAC input, 5 VDC logic, Factory Mutual approved
SNAP-IDC5	SNAP 4-channel 10–32 VDC input, 5 VDC logic
SNAP-IDC5D	SNAP 4-channel 2.5–28 VDC input, 5 VDC logic
SNAP-IDC5FAST	SNAP 4-channel high-speed 2.5–16 VDC input, VDC logic
SNAP-IDC5-FAST-A*	SNAP 4-channel high-speed 18–32 VDC input, 5 VDC logic
SNAP-IDC5G*	SNAP 4-channel 35–75 VAC/DC input, 5 VDC logic
SNAP-IDC5AF	SNAP 4-channel high-speed 75–140 VDC input, 5 VDC logic
SNAP-IDC5GF	SNAP 4-channel high-speed 35–75 VDC input, 5 VDC logic
SNAP-IDC5HT	SNAP 4-channel 15–32 VDC leakage-tolerant input, 5 VDC logic
SNAP-IDC5MA	SNAP 4-channel isolated high-speed 10–32 VAC/VDC input, 5 VDC logic, with manual/auto switches
SNAP-IDC5-SW*	SNAP 4-channel switch status input, normally open
SNAP-IDC5-SW-NC*	SNAP 4-channel switch status input, normally closed
SNAP-IDC5FM	SNAP 4-channel 10–32 VDC input, 5 VDC logic, Factory Mutual approved
SNAP-IDC5DFM	SNAP 4-channel 2.5–28 VDC input, 5 VDC logic
SNAP-RETN4	SNAP 4-module retention rail (OEM)
SNAP-RETN4B	SNAP 4-module retention rail, 25-pack (OEM)
SNAP-RETN6	SNAP 6-module retention rail (OEM)
SNAP-RETN6B	SNAP 6-module retention rail, 25-pack (OEM)
SNAP-FUSE4AB	SNAP 4-amp fuse, 25-pac

* UL approval pending

SNAP Digital Input Modules

SNAP-IDC5-SW and SNAP-IDC5-SW-NC Modules

Description

The SNAP-IDC5-SW and SNAP-IDC5-SW-NC modules provide four channels of contact status input. Each module supplies 15 volts of power to an external dry contact switch. The SNAP-IDC5-SW senses switch closure; the SNAP-IDC5-SW-NC senses switch opening. Each user-supplied switch is connected with two wires. Because these modules include power for the switch, they are particularly cost-effective when labor costs for wiring external power are high.

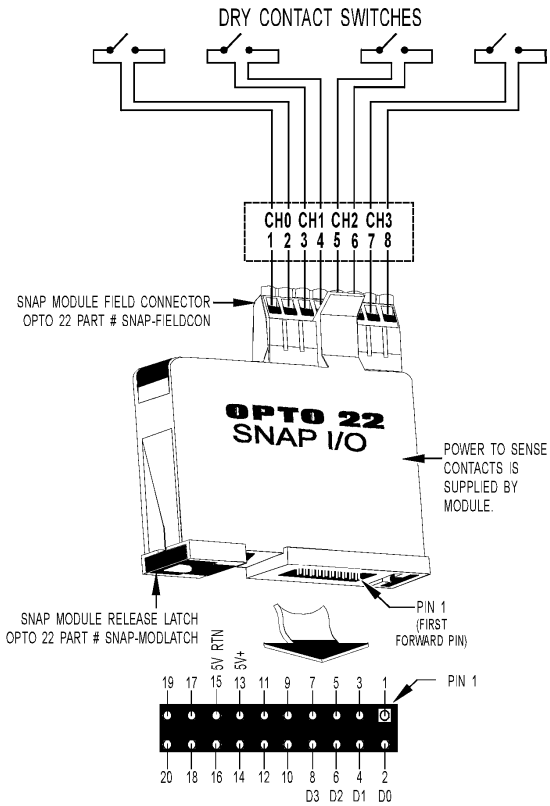
Typical switches for use with these modules are switched status sensors (level sensors, pressure indicators, etc.), magnetic reed switches (used on doors or windows for burglar alarms), snap-action micro switches, the auxilliary switches on motor starters, and most relay contacts.

CAUTION: The SNAP-IDC5-SW and SNAP-IDC5-SW-NC inputs are not intended to be used with contacts that are connected to any external user-supplied voltage or currents.

Specifications

Field Side Ratings (each channel)	
Open Circuit Voltage (Switch Open)	15 VDC typical
Short Circuit Current (Switch Closed)	7 milliamps nominal
Minimum Off Resistance	>20 K ohms
Maximum Allowable On Resistance (Wire + Contact Resistance)	500 ohms
Logic Side Ratings	
Logic Output Voltage for SNAP-IDC5-SW (normally open)	<0.5 V max. (switch closed; LED on) @ 2 mA sinking 2.7 V min. (switch open; LED off) @ 0.4 mA sourcing
Logic Output Voltage for SNAP-IDC5-SW-NC (normally closed)	<0.5 V max. (switch open; LED on) @ 2 mA sinking 2.7 V min. (switch closed; LED off) @ 0.4 mA sourcing
Maximum Operating Common Mode Voltage (Field Term to Logic Connector)	250 V
Power Requirements	5 VDC (±0.25) @ 200 mA
Module Ratings	
Number of Channels Per Module	4
Turn-on Time	5 msec
Turn-off Time	25 msec
Channel-to-channel Isolation	None
Input-to-output Isolation	1500 V AC/DC
Temperature	0 °C to 70 °C, operating -30 °C to 85 °C, storage

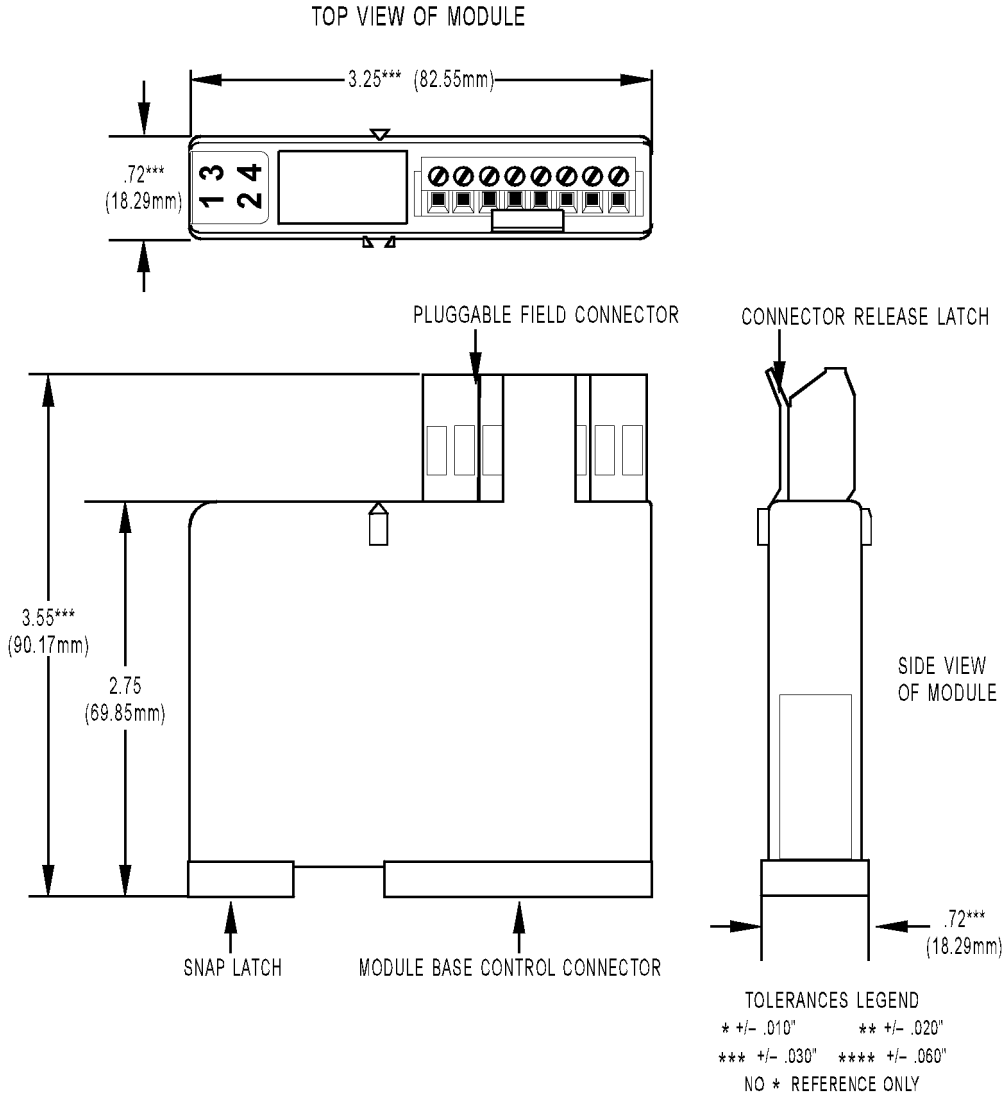
SNAP-IDC5-SW and SNAP-IDC5-SW-NC Wiring Diagram



SNAP DIGITAL MODULE BASE CONTROL CONNECTOR (BOTTOM VIEW)

Dimensional Drawing

All Modules Except MA



Dimensional Drawing

All Models

SNAP Digital Module Mounted on SNAP Rack