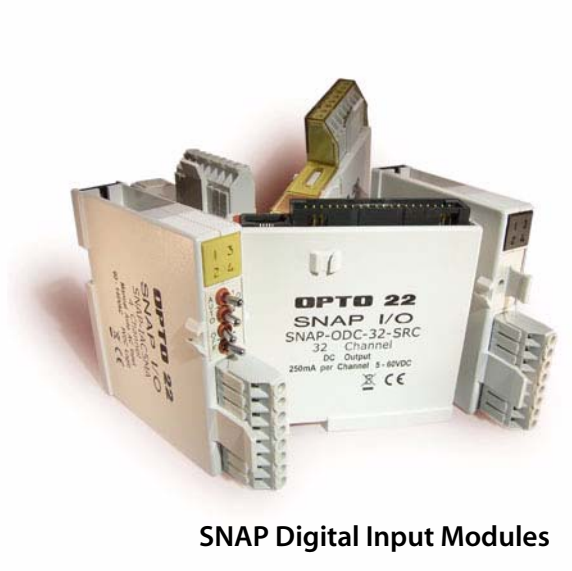
SNAP Digital Input Modules

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

Specifications: DC Input Modules

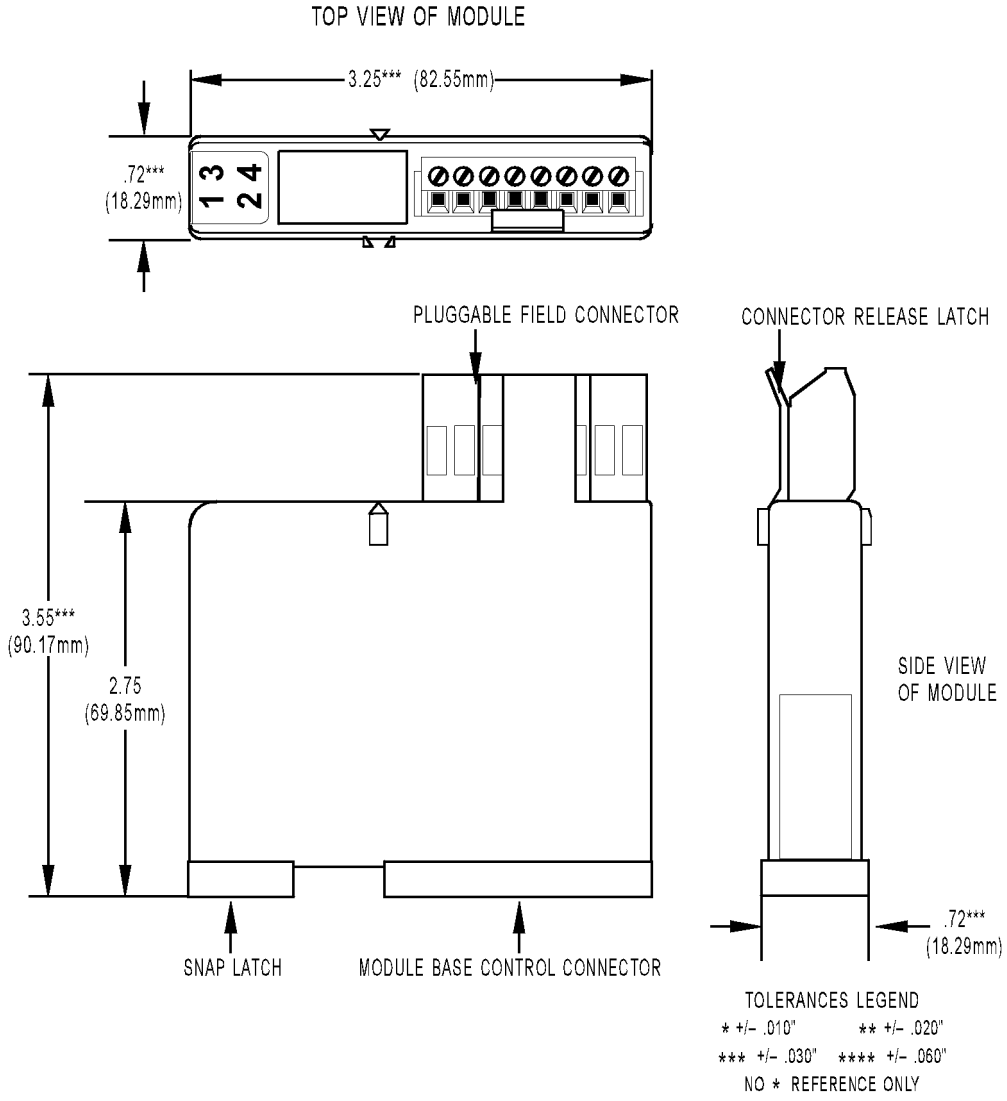
See page 7 for SNAP-IDC5-SW and SNAP-IDC5-SW-NC specifications and wiring.

	SNAP-IDC5	SNAP-IDC5D	SNAP-IDC5G	SNAP-IDC5-HT
Key Feature	--	--	--	Leakage-tolerant
Field Side Ratings (each channel)				
Nominal Input Voltage	24 VAC/VDC	5 VDC	48 VAC/VDC	24 VAC/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	10–32 VAC/VDC	2.5–28 VDC	35–75 VAC/VDC	15–32 VAC/VDC
Turn-on Voltage	10 VAC/VDC	2.5 VDC	35 VAC/VDC	15 VAC/VDC
Turn-off Voltage	3 VAC/VDC	1 VDC	7 VAC/VDC	8 VAC/VDC
Input Resistance	15 K ohms (nominal)	3 K ohms (nominal)	64 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) @ 0.4 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	<.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	5 msec	1 msec	5 msec	20 msec
Turn-off Time	15 msec	1 msec	15 msec	25 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	0 °C to 70 °C, operating -30 °C to 85 °C, storage	0 °C to 70 °C, operating -30 °C to 85 °C, storage	0 °C to 70 °C, operating -30 °C to 85 °C, storage	0 °C to 70 °C, operating -30 °C to 85 °C, storage

* At 20kHz, 5Vp-p square wave input, 50% duty cycle.
** At 20kHz, 28Vp-p square wave input, 50% duty cycle.
*** When used with an I/O processor (brain or on-the-rack controller), the processor requires 5.0 to 5.2 VDC.

Dimensional Drawing

All Modules Except MA



Dimensional Drawing

All Models

SNAP Digital Module Mounted on SNAP Rack