

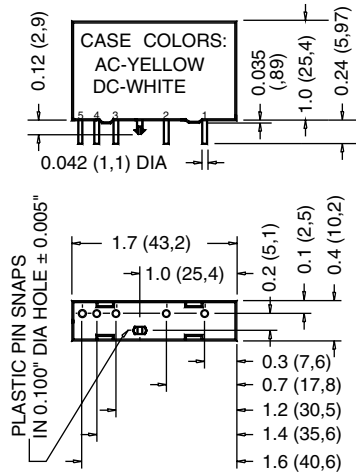
# DIGITAL I/O MODULES

## SM SERIES INPUT MODULES

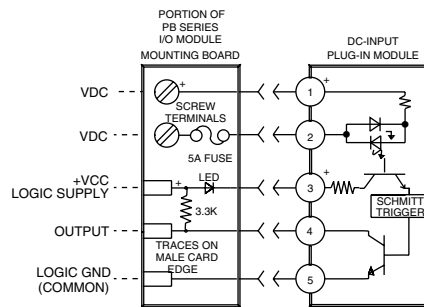
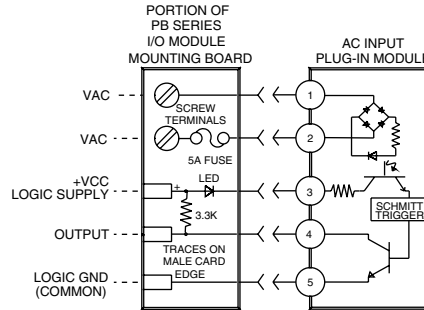


### FEATURES:

- CE Compliant
- Plug into Mounting Boards for SM or 0.6" Modules
- AC Inputs for 24 V, 120 V, 240 V
- DC Inputs for 3.3 to 32 V, 10 to 48 V
- UL Recognized (E46203)/CSA Certified (38595)
- 4 kV Optical Isolation
- Open-Collector Output
- Industry Standard Packaging



DIMENSIONS: INCHES (MILLIMETERS)  
TOLERANCE: ±0.020 (±0,50)



(EQUIVALENT CIRCUIT DIAGRAMS)

Products and specifications subject to change without notice.  
Consult factory for application assistance.

# DIGITAL I/O MODULES

## SM SERIES INPUT MODULES

### INPUT SPECIFICATIONS: (1)

Model Number	SMIAC5 SMIAC24	SMIAC5A SMIAC24A	SMIDC5 SMIDC24	SMIDC5F	SMIDC5N
<b>Parameter</b>					
Nominal Voltage	120 VAC	240 VAC	5-28 VDC	5-28 VDC	12-48 VDC
Maximum Voltage	140 VAC/VDC	280 VAC/VDC	32 VDC/VAC	32 VDC	48 VDC/VAC
Minimum Voltage	90 VAC/VDC	180 VAC/VDC	3.3 VDC/VAC	4.0 VDC	10 VDC/VAC
Input Resistance (2) (3)	28 kΩ	75 kΩ	1 kΩ	500 Ω	2 kΩ
Maximum Current (4)	5 mArms	5 mArms	34 mA	68 mA	34 mA
Drop-out Current (5)	2.0 mArms	1.5 mArms	1.0 mA	1.0 mA	1.0 mA
Allowable Current/	2.5 mArms	2.0 mArms	1.5 mA	1.5 mA	1.5 mA
Voltage for No Output (6)	50 VAC/VDC	50 VAC/VDC	2.0 VDC	2.0 VDC	4.0 VDC

### OUTPUT SPECIFICATIONS: (1)

Model Number	SMIAC5 SMIAC5A SMIDC5 SMIDC5F SMIDC5N	SMIAC24 SMIAC24A SMIDC24	Units
<b>Parameter</b>			
Nominal Logic Supply Voltage	5.0	24.0	VDC
Maximum Logic Supply Voltage	6.0	30.0	VDC
Minimum Logic Supply Voltage	3.0	20.0	VDC
Maximum Logic Supply Current (7)	16.0	16.0	mA
Maximum Logic Supply Leakage Current (8)	10.0	10.0	μA
Maximum Voltage (9)	30.0	30.0	VDC
Maximum Current (10)	50.0	50.0	mA
Maximum Leakage Current (11)	10.0	10.0	μA
Maximum Voltage Drop (12)	0.2	0.2	VDC

### GENERAL SPECIFICATIONS: (1)

Model Number	SMIAC5, SMIAC5A, SMIAC24, SMIAC24A	SMIDC5 SMIDC24	SMIDC5F	SMIDC5N	Units
<b>Parameter</b>					
Operating Temperature Range	-30 to 80	-30 to 80	-30 to 80	-30 to 80	°C
Storage Temperature Range	-40 to 100	-40 to 100	-40 to 100	-40 to 100	°C
Maximum Turn-on Time (13)	20	1.0	0.05	8.0	mSec
Maximum Turn-off Time (13)	20	1.0	0.10	7.0	mSec
Input/Output Isolation Voltage (14)	4000	4000	4000	4000	VAC
Input/Output Capacitance (typical)	8	8	8	8	pF
Line Frequency Range	47 to 63	DC	DC	DC	Hertz
Weight	.6 oz	.6 oz	.6 oz	.6 oz	

### TABLE OF MODEL NUMBER SUFFIXES IDENTIFYING OPTIONAL FEATURES

Suffix	Feature
A	High voltage versions (240 VAC for AC modules).
F	Fast-switching version of DC modules.
N	Enhanced noise immunity version of DC modules.

#### Notes:

- (1) Specifications apply to an ambient temperature of -30 to 80°C unless otherwise noted.
- (2) Resistance values for SMIAC modules are effective impedance values at 25°C.
- (3) Resistance values are +/-10% at 25°C.
- (4) Measured at maximum specified input voltage, 25°C.
- (5) Defined as the maximum current allowed through the module's input to guarantee that the output will switch from "on" to "off." Higher currents may result in the output remaining in the "on" state.
- (6) Defined as the maximum current allowed through the module's input that will not switch the module's output state from "off" to "on."
- (7) With external LED status indicator at maximum specified logic supply voltage and 25°C. 18 mA without external LED status indicator.
- (8) At maximum specified logic voltage and 25°C.
- (9) Maximum allowable applied voltage across open collector output transistor.
- (10) Maximum allowable sinking current through open collector output transistor.
- (11) At maximum output voltage and 25°C.
- (12) At maximum allowable output current and 25°C.
- (13) At nominal logic supply voltage, 25 mA output sinking current, nominal input voltage and 25°C.
- (14) At 25°C for 1 second maximum duration.

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