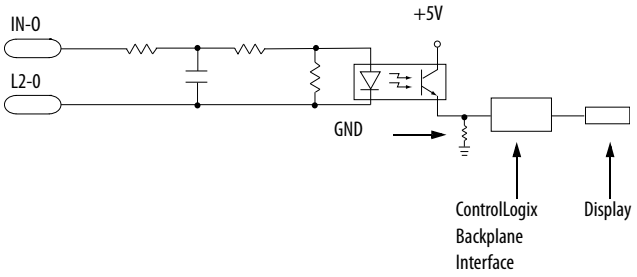
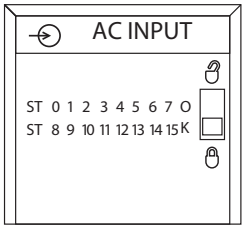
1756-IN16

ControlLogix AC (10...30V) input module

Simplified Schematic





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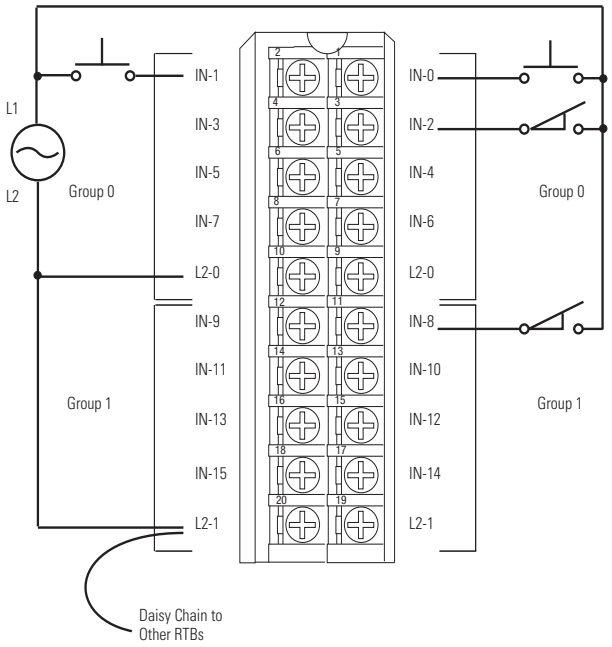

Technical Specifications - 1756-IN16

Attribute	1756-IN16
Inputs	16 (8 points/group)
Voltage category	24V AC 50/60 Hz
Operating voltage range	10…30V AC, 47…63 Hz
Input voltage, nom	24V AC 50/60 Hz
Input delay time (screw to backplane) Off to On On to Off	 Hardware delay: 10 ms max + filter time User-selectable filter time: 0 ms, 1 ms, or 2 ms Hardware delay: 10 ms max + filter time User-selectable filter time: 9 ms or 18 ms
Current draw @ 5.1V	100 mA
Current draw @ 24V	2 mA
Total backplane power	0.56 W
Power dissipation, max	5.1 W @ 60 °C (140 °F)
Thermal dissipation	17.39 BTU/hr
Off-state voltage, max	5V
Off-state current, max	2.75 mA
On-state current, min	5 mA @ 10V AC, 60 Hz
On-state current, max	1.2 mA @ 30V AC, 60 Hz
Inrush current, max	250 mA

Technical Specifications - 1756-IN16 (continued)

Attribute	1756-IN16
Input impedance, max	2.5 kΩ @ 30V AC, 60 Hz
Cyclic update time	200 µs…750 ms
Change of state	Software configurable
Time stamp of inputs	±200 µs
Isolation voltage	250V (continuous), basic insulation type, inputs-to-backplane, and input group-to-group No isolation between individual group inputs Routine tested @ 1350V AC for 2 s
Module keying	Electronic, software configurable
Removable terminal block housing	1756-TBNH 1756-TBSH
RTB keying	User-defined mechanical
Slot width	1
Wire category	1(1)
North American temperature code	T3C
IEC temperature code	T3
Enclosure type	None (open-style)

(1) Use this conductor category information for planning conductor routing as described in the system-level installation manual. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Environmental Specifications - 1756-IN16

Attribute	1756-IN16
Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	0…60 °C (32…140 °F)
Temperature, surrounding air, max	60 °C (140 °F)
Temperature, nonoperating IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock)	-40…+85 °C (-40…+185 °F)
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5…95% noncondensing
Vibration IEC 60068-2-6 (Test Fc, Operating)	2 g @ 10…500 Hz
Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	30 g
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	50 g
Emissions	CISPR 11, Class A
ESD immunity IEC 61000-4-2	6 kV contact discharges 8 kV air discharges
Radiated RF immunity IEC 61000-4-3	10V/m with 1 kHz sine-wave 80% AM from 80…2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz 3V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz