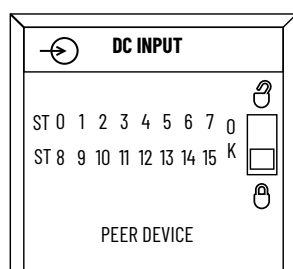
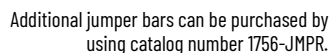
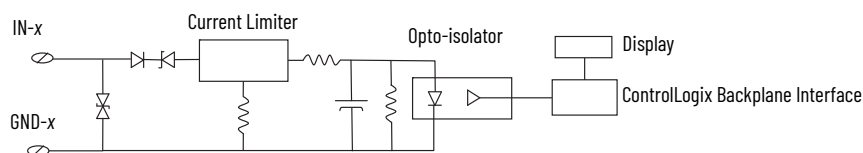


Simplified Schematic



Attribute	1756-IB16IF, 1756-IB16IFK
Inputs	16 individually isolated
Voltage category	12/24V DC sink/source
Operating voltage range	10...30V DC
Input voltage, nom	24V DC
Input delay time (screw to backplane) Off to On On to Off	14 µs nom/23 µs max + user-configurable filter time of 0...30,000 µs 14 µs nom/23 µs max + user-configurable filter time of 0...30,000 µs
Current draw @ 5.1V	275 mA

Technical Specifications (Continued)

Attribute	1756-IB16IF, 1756-IB16IFK
Current draw @ 24V	3 mA
Total backplane power	1.47 W
Power dissipation	3.8 W @ 60 °C (140 °F)
Thermal dissipation	12.97 BTU/hr
Off-state voltage, max	5V
Off-state current, max	1.5 mA
On-state current, min	2 mA @ 10V DC
On-state current, max	5 mA @ 30V DC
Input impedance, max	6 kΩ @ 30V DC
Cyclic update time	200 μs...750 ms
Change of state	Software configurable
Time stamp of inputs	± 4 μs for inputs < 4 kHz ± 13 μs for inputs > 4 kHz
Isolation voltage	250V (continuous), reinforced insulation type, inputs-to-backplane 250V (continuous), basic insulation type, input-to-input
Module keying	Electronic, software configurable
Removable terminal block housing	1756-TBCH 1756-TBS6H
RTB keying	User-defined mechanical
Slot width	1
Wire category	1 on signal ports ⁽¹⁾
Enclosure type	None (open-style)
Temperature code	T4
Reverse polarity protection	Yes

- (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

Attribute	1756-IB16IF, 1756-IB16IFK
Temperature, operating IEC 60068-2-1 (Test Ae, Operating Cold), IEC 60068-2-2 (Test Be, 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	IEC 61000-6-4
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