

Table 30 - Technical Specifications - 1756-IB32

Attribute	1756-IB32
Inputs	32 (16 points/group)
Voltage category	12/24V DC sink
Operating voltage range	10...31.2V DC
Input voltage, nom	24V DC
Input delay time (screw to backplane)	Hardware delay: 380 μ s max + filter time User-selectable filter time: 0, 1, or 2 ms Hardware delay: 420 μ s max + filter time User-selectable filter time: 0, 1, 2, 9, or 18 ms
Off to On	
On to Off	
Current draw @ 5.1V	120 mA
Current draw @ 24V	2 mA
Total backplane power	0.66 W
Power dissipation, max	6.2 W @ 60 °C (140 °F)
Thermal dissipation	21.1 BTU/hr @ 60 °C (140 °F)
Off-state voltage, max	5V
Off-state current, max	2.27 mA
On-state current, min	4.8 mA @ 10V DC
On-state current, max	5.5 mA @ 31.2V DC
Inrush current, max	250 mA (decaying to < 37% in 22 ms, without activation)
Input impedance, max	5.67 k Ω @ 31.2V DC
Cyclic update time	200 μ s...750 ms
Change of state	Software configurable
Timestamp of inputs	\pm 200 μ s
Isolation voltage	250V (continuous), reinforced insulation type, inputs-to-backplane 250V (continuous), basic insulation type, 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	1756-TBCH 1756-TBS6H
RTB keying	User-defined mechanical
Slot width	1
Wire category	1 - on signal ports ⁽¹⁾
North American temperature code	T4
IEC temperature code	T4
Enclosure type	None (open-style)
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](#).

Table 31 - Environmental Specifications - 1756-IB32

Attribute	1756-IB32
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 Nonoperating 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 (IEC 61000-6-4): 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
EFT/B immunity IEC 61000-4-4	±4 kV at 5 kHz on signal ports
Surge transient immunity IEC 61000-4-5	±1 kV line-line (DM) and ±2 kV line-earth (CM) on signal ports
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz
Oscillatory surge withstand IEEE C37.90.1	3 kV