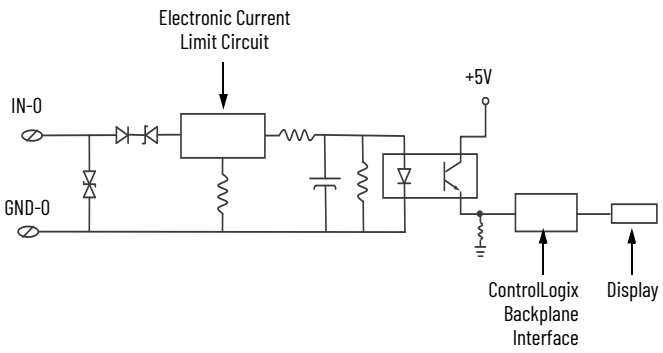
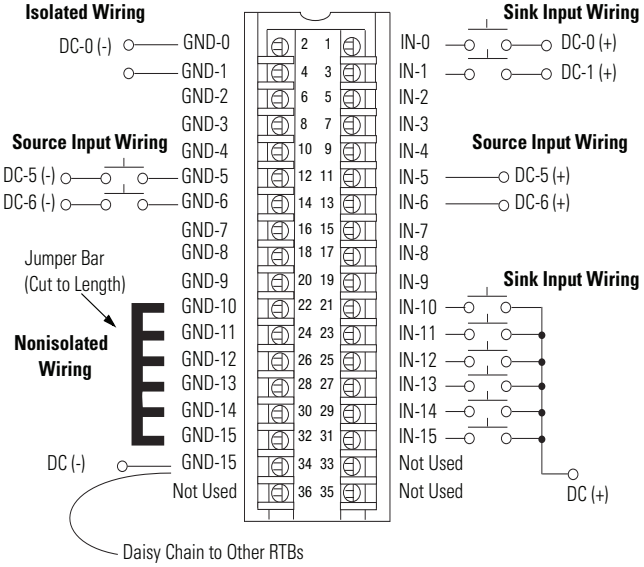
1756-IB16ISOE, 1756-IB16ISOEK

ControlLogix DC (10...55V) sequence of events input module

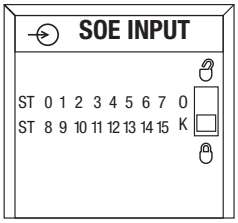
Simplified Schematic



1756-IB16ISOE, 1756-IB16ISOEK



Additional jumper bars are available as catalog number 1756-JMPR.



Technical Specifications

Attribute	1756-IB16ISOE, 1756-IB16ISOEK
Inputs	16 individually isolated, sequence of events
Voltage category	24/48V DC sink/source
Operating voltage range	10...55V DC
Input voltage, nom	24V DC
Input delay time (screw to backplane) Off to On On to Off	 Hardware delay: 10 µs nom/20 µs max + firmware scan: up to 25 µs + filter time: 0...50 ms + ASIC delay: 175 µs (FIFO) or 625 µs (Coordinated System Time per point) Hardware delay: 25 µs nom/50 µs max + firmware scan: up to 25 µs + filter time: 0...50 ms + ASIC delay: 175 µs (FIFO) or 625 µs (Coordinated System Time per point)
Current draw @ 5.1V	320 mA
Current draw @ 24V	2 mA
Total backplane power	1.7 W
Power dissipation, max	5.5 W @ 60 °C (140 °F)
Thermal dissipation	17.22 BTU/hr
Off-state voltage, max	5V
Off-state current, max	1.5 mA
On-state current, min	2.0 mA @ 9V DC
On-state current, nom	4.5 mA @ 24...31V DC
On-state current, max	5.1 mA @ 48...55V DC
Input impedance, max	10.8 kΩ @ 55V DC

Technical Specifications (Continued)

Attribute	1756-IB16ISOE, 1756-IB16ISOEK
Cyclic update time	200 µs...750 ms
Change of state	Software configurable
Time stamp of inputs	±100 µs
Isolation voltage	250V (continuous), basic(1) insulation type, outputs to backplane. 125V (continuous), basic insulation type, outputs group to group. No isolation between individual outputs.
Module keying	Electronic, software configurable
Removable terminal block	1756-TBCH 1756-TBS6H
RTB keying	User-defined mechanical
Slot width	1
Wire category	1(2)
Enclosure type	None (open-style)
Temperature code	T4
Reverse polarity protection	Yes

(1) Per IEC 61010-1 terminology, the insulation type is basic. Per older UL508 terminology, the insulation type is reinforced.
(2) 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-IB16ISOE, 1756-IB16ISOEK
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
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	2.5 kV