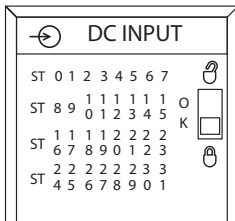
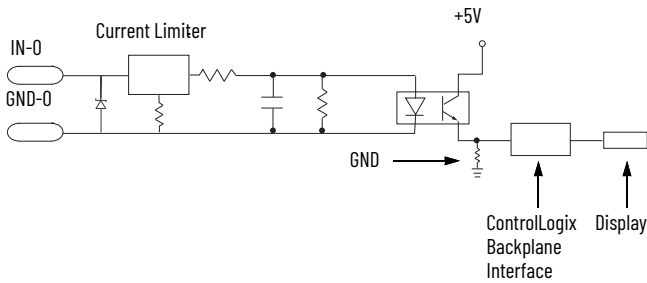


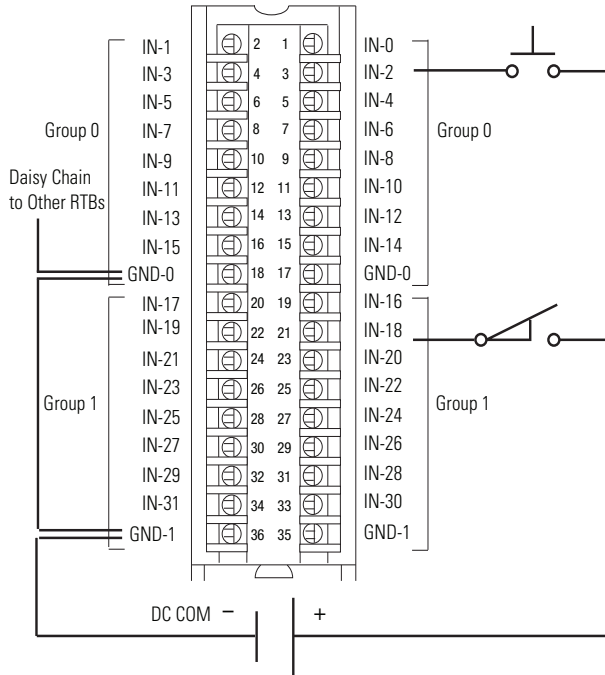
1756-IB32, 1756-IB32K

ControlLogix DC (10...31.2V) input module

Simplified Schematic



1756-IB32, 1756-IB32K



Technical Specifications

Attribute	1756-IB32, 1756-IB32K
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) Off to On	Hardware delay: 380 μ s max + filter time User-selectable filter time: 0 ms, 1 ms, or 2 ms
On to Off	Hardware delay: 420 μ s max + filter time User-selectable filter time: 0 ms, 1 ms, 2 ms, 9 ms, or 18 ms
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
Time stamp 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

Technical Specifications (Continued)

Attribute	1756-IB32, 1756-IB32K
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⁾
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-IB32, 1756-IB32K
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	3 kV

Certifications

Certification (when product is marked) ⁽¹⁾	1756-IB32, 1756-IB32K
cULus	UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.
CE	European Union 2014/30/EU EMC Directive, compliant with: • EN 61326-1; Meas./Control/Lab., Industrial Requirements • EN 61000-6-2; Industrial Immunity • EN 61000-6-4; Industrial Emissions • EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) European Union 2014/35/EU LVD, compliant with: EN 61131-2; Programmable Controllers (Clause 11)
RCM	Australian Radiocommunications Act, compliant with: EN 61000-6-4; Industrial Emissions
Ex	European Union 2014/34/EU ATEX Directive, compliant with: • EN IEC 60079-0: Explosive atmospheres - Part 0: Equipment - General requirements • EN IEC 60079-7: Explosive atmospheres - Part 7: Equipment protection by increased safety "e" • II 3 G Ex ec IIC T4 Gc • UL22ATEX2820X
IECEx	IECEx System, compliant with: • IEC 60079-0: Explosive atmospheres - Part 0: Equipment - General requirements • IEC 60079-7: Explosive atmospheres - Part 7: Equipment protection by increased safety "e" • II 3 G Ex ec IIC T4 Gc • IECEx UL 22.0065X
UKex	In conformity with the following UKex Statutory Instruments and their amendments: • Schedule 1 of the UKEX Regulation 2016 No. 1107 • Equipment protection by increased safety "e", reference certificate number UL22UKEX2602X Zone 2 classification according to UKEX Regulation 2016 No. 1107
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
EAC	Russian Customs Union TR CU 020/2011 EMC Technical Regulation Russian Customs Union TR CU 004/2011 LV Technical Regulation
UKCA	In conformity with the following UK Statutory Instruments and their amendments: • 2016 No. 1091, Electromagnetic Compatibility Regulations • 2016 No. 1101, Electrical Equipment (Safety) Regulations • 2016 No. 1107, Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations • 2012 No. 3032, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
Morocco	In conformity with the following regulations: • Arrêté ministériel n° 6404-15 du 1^{er} muharram 1437 (15 octobre 2015) Équipements électriques destinés à être utilisés sous certaines limites de tension • Arrêté ministériel n° 6404-15 du 29 ramadan 1436 (16 juillet 2015) Compatibilité électromagnétique des équipements
CCC	CCC 202012230911830, 202012230911998, 2020122309113868 CNCA-C23-01 强制性产品认证实施规则 防爆电气 CNCA-C23-01 CCC Implementation Rule Explosion-Proof Electrical Products

(1) See the Product Certification link at rok.auto/certifications for Declarations of Conformity, Certificates, and other certification details.