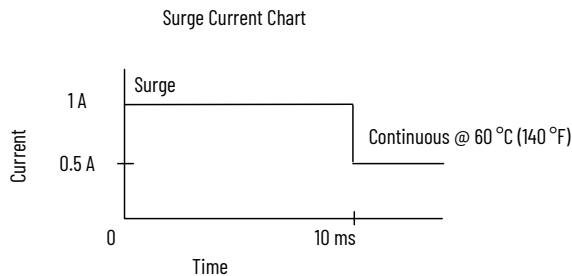
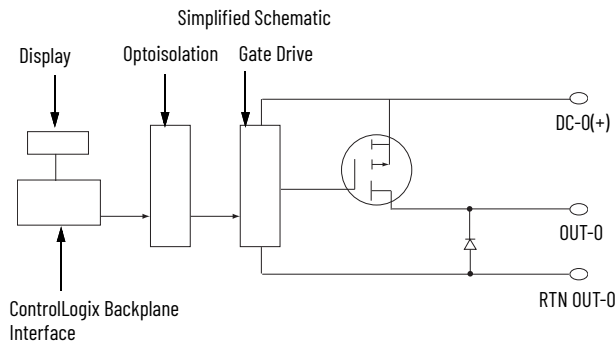
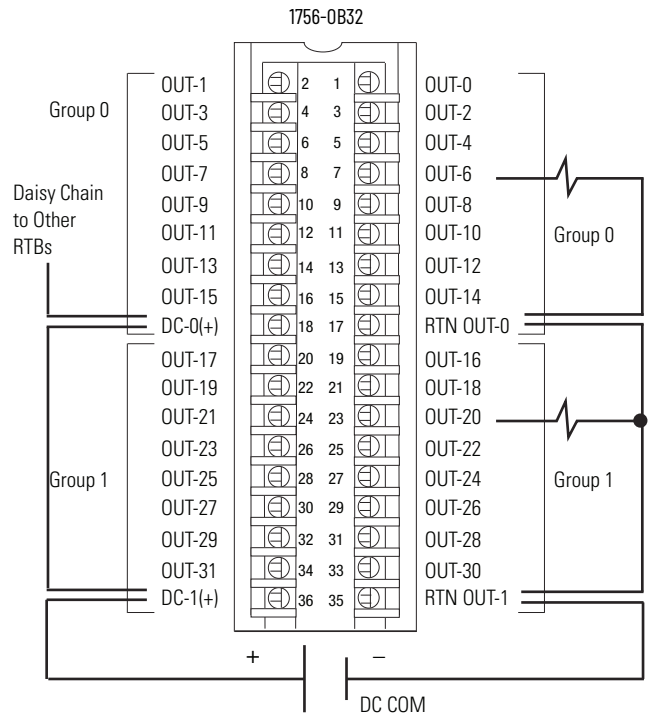


1756-OB32, 1756-OB32K, 1756-OB32XT

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



DC OUTPUT											
ST	0	1	2	3	4	5	6	7			
ST	8	9	1	1	1	1	1	1			
ST	6	7	8	9	0	1	2	3			
ST	2	2	2	2	2	2	3	3			
ST	4	5	6	7	8	9	0	1			



Technical Specifications

Attribute	1756-OB32, 1756-OB32K	1756-OB32XT
Outputs	32 (16 points/group)	
Voltage category	12/24V DC source	
Operating voltage range	10...31.2V DC	
Output delay time Off to On On to Off	60 μ s nom/1 ms max 200 μ s nom/1 ms max	
Current draw @ 5.1V	300 mA	
Current draw @ 24V	2 mA	
Total backplane power	1.58 W	
Power dissipation, max	4.8 W @ 60 °C (140 °F)	
Thermal dissipation	16.37 BTU/hr	
Off-state leakage current per point, max	0.5 mA per point	
On-state voltage drop, max	200 mV DC @ 0.5 A	
Current per point, max	0.5 A @ 50 °C (122 °F) linear derating 0.35 A @ 60 °C (140 °F)	
Current per module, max	16 A @ 50 °C (122 °F) linear derating 10 A @ 60 °C (140 °F)	
Surge current per point, max	1 A for 10 ms per point, repeatable every 2 s @ 60 °C (140 °F)	
Load current, min	3 mA per point	
Scheduled outputs	Synchronization within 16.7 s max, reference to the Coordinated System Time	
States in Fault mode per point	Hold last state, On or Off (Off is default)	
States in Program mode per point	Hold last state, On or Off (Off is default)	
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	
Fusing	Not protected. A fused IFM can be used to help protect outputs. See publication 1492-TD008 . However, the ControlLogix system has been agency certified using only the ControlLogix RTBs, that is, 1756-TBCH, 1756-TBNH, 1756-TBSH, and 1756-TBS6H. Any application that requires agency certification of the ControlLogix system that uses other wiring termination methods can require application-specific approval by the certifying agency.	
Removable terminal block	1756-TBCH 1756-TBS6H	1756-TBCHXT 1756-TBS6HXT
RTB keying	User-defined mechanical	
Slot width	1	
Wire category	1 ⁽²⁾	
Wire size	1756-TBCH	1756-TBCHXT
	Single wire connection: 0.33...2.1 mm ² (22...14 AWG) solid or stranded copper wire rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max. Do not wire more than one conductor on any single terminal. Double wire connection: 0.33...1.3 mm ² (22...16 AWG) solid or stranded copper wire rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max. Do not wire more than two conductors on any single terminal.	
	1756-TBS6H	1756-TBS6HXT
	Single wire connection: 0.33...2.1 mm ² (22...14 AWG) solid or stranded shielded copper wire rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max.	
Terminal block torque specs	1756-TBCH, 1756-TBCHXT 0.5 N•m (4.4 lb•in)	
Enclosure type	None (open-style)	
Temperature code	T4	

(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-OB32, 1756-OB32K	1756-OB32XT
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, 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	
Conformal Coated ⁽¹⁾	Yes	
Corrosive Atmosphere ⁽¹⁾ • ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	Severity Level G3 ⁽²⁾ per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases Severity Level CX ⁽²⁾⁽³⁾ per IEC 60721-3-3:2019, Chemically Active Substances	—
Corrosive Atmosphere • ASTM B845-97 Method K Accelerated Test (30-Day Exposure) • Plus additional Rockwell Automation proprietary accelerated corrosive environment test protocol for specific industries with sources of gaseous sulfur compounds.	—	Severity Level GX ⁽⁴⁾⁽⁵⁾ per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases Severity Level CX ⁽⁴⁾ per IEC 60721-3-3:2019, Chemically Active Substances
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	

(1) Only applicable to modules that end with a 'K' or 'XT'.

(2) The module and the corresponding RTB must remain installed at all times and the RTB door must remain closed, for the product to maintain its corrosive atmosphere rating.

(3) Up to 9.6 microns per year, corrosion rate of copper.

(4) Port plugs/covers must remain installed in unused ports at all times, once the XT packaging seal is broken, for the product to maintain its corrosive atmosphere rating.

(5) Up to 2100 angstroms of film growth per 30 days of copper and/or silver reactivity.

Certifications

Certification ⁽¹⁾	1756-OB32, 1756-OB32K, 1756-OB32XT
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
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 2020122309111998 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) When product is marked. See the Product Certification link at rok.auto/certifications for Declarations of Conformity, Certificates, and other certification details.