Technical Data

Original Instructions

1756 ControlLogix Chassis Specifications

Catalog Numbers 1756-A4/B, 1756-A4K/B, 1756-A4/C, 1756-A4K/C, 1756-A7/B, 1756-A7K/B, 1756-A7/C, 1756-A7K/C, 1756-A7XT/C, 1756-A7ZXT, 1756-A10/B, 1756-A10K/B, 1756-A10/C, 1756-A10K/C, 1756-A10XT/C, 1756-A10ZXT, 1756-A13/B, 1756-A13K/B, 1756-A13/C, 1756-A13K/C, 1756-A17/B, 1756-A17K/B, 1756-A17/C, 1756-A17K/C

The ControlLogix® system is a modular system that requires a 1756 ControlLogix chassis. The chassis are designed for only horizontal back-panel mounting. Place any module into any slot. The backplane provides a high-speed communication path between modules.

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Corrected Minimum Cabinet Size Technical Specifications	2, 4
Corrected Cabinet Clearance Spacing Requirements	6, 7
Added 1756-A7ZXT and 1756-A10ZXT chassis information	Throughout

Standard ControlLogix Chassis Specifications

The chassis backplane provides a high-speed communication path between modules and distributes power to each of the modules installed within the chassis.

Technical Specifications - ControlLogix Standard Chassis

Attribute	1756-A4, 1756-A4K	1756-A7, 1756-A7K	1756-A10, 1756-A10K	1756-A13, 1756-A13K	1756-A17, 1756-A17K
Backplane current, chassis/slot max @ 1.2V DC	1.5 A/–				
Backplane current, chassis/slot max @ 3.3V DC	4 A/4 A				
Backplane current, chassis/slot max @ 5.1V DC	15 A/6 A				
Backplane current, chassis/slot max @ 24V DC	2.8 A/2.8 A				
Power dissipation, max	4 W	4.5 W	5 W	5.4 W	6 W
Isolation voltage	Determined by installed power supply and modules				
Slots	4	7	10	13	17
Mounting method	Only horizontal				
Cabinet size (HxWxD), min	50.8 x 50.8 x 20.3 cm (20 x 20 x 8 in.)	50.8 x 61.0 x 20.3 cm (20 x 24 x 8 in.)	50.8 x 71.1 x 20.3 cm (20 x 28 x 8 in.)	50.8 x 81.3 x 20.3 cm (20 x 32 x 8 in.)	50.8 x 96.5 x 20.3 cm (20 x 38 x 8 in.)
Weight, approx	0.75 kg (1.7 lb)	1.10 kg (2.4 lb)	1.45 kg (3.2 lb)	1.90 kg (4.2 lb)	2.20 kg (4.8 lb)
Location	Panel				
Wire size	Functional earth ground - 8.3 mm^2 (8 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater Protective earth ground - 2.1 mm^2 (14 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater				
North American temperature code	T5 (Series B) T4 (Series C)				
IEC temperature code	T4	T5 (Series B) T4 (Series C)			
Enclosure type rating	None (open-style)				

Environmental Specifications - ControlLogix Standard Chassis

Attribute	Series B		Series C	
	1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17	1756-A4K, 1756-A7K, 1756-A10K, 1756-A13K, 1756-A17K	1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17	1756-A4K, 1756-A7K, 1756-A10K, 1756-A13K, 1756-A17K
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)		-25…+60 °C (-13…+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			
Conformal Coated	–	Yes	–	Yes
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		30 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			

Certifications - ControlLogix Standard Chassis

Certification[1]	Series B		Series C
	1756-A4, 1756-A4K	1756-A7, 1756-A7K, 1756-A10, 1756-A10K, 1756-A13, 1756-A13K, 1756-A17, 1756-A17K	1756-A4, 1756-A4K, 1756-A7, 1756-A7K, 1756-A10, 1756-A10K, 1756-A13, 1756-A13K, 1756-A17, 1756-A17K
c-UL-us	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.		
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations.		
CE	European Union 2014/30/EU EMC Directive (EMC), 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)		
RCM	Australian Radiocommunications Act, compliant with: EN 61000-6-4; Industrial Emissions		
Ex	European Union 94/9/EC ATEX Directive, compliant with: • EN 60079-15; Potentially Explosive Atmospheres, Protection "n" • EN 60079-0; General Requirements • II 3 G Ex nA IIC T4 Gc X		European Union 2014/34/EU Directive, compliant with: • EN 60079-7; Potentially Explosive Atmospheres, Protection "e" • EN 60079-0; General Requirements • II 3 G Ex ec IIC T4 Gc • UL22ATEX2734X
IECEx	–		IECEx System, compliant with: • IEC 60079-7; Potentially Explosive Atmospheres, Protection "e" • IEC 60079-0; General Requirements • II 3 G ec IIC T4 Gc • IECExUL22.0025X
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 UL22UKEX2451X • Zone 2 classification according to UKEx Regulation 2016 No. 1107		
UKCA	In conformity with the following UK Statutory Instruments and their amendments: • 2016 No. 1091, Electromagnetic Compatibility 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		
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3		
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		
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		

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

ControlLogix-XT Chassis Specifications

The ControlLogix-XT™ chassis support extreme temperature environments. Series C XT chassis are conformally coated for increased survivability in ISA G3 environments. ControlLogix-ZXT chassis are conformally coated to resist corrosion in ISA GX environments.

Technical Specifications - ControlLogix-XT Chassis

Attribute	1756-A7XT	1756-A10XT	1756-A7ZXT	1756-A10ZXT
Backplane current, chassis/slot max @ 1.2V DC	1.5 A/–			
Backplane current, chassis/slot max @ 3.3V DC	4 A/4 A			
Backplane current, chassis/slot max @ 5.1V DC	15 A/6 A			
Backplane current, chassis/slot max @ 24V DC	2.8 A/2.8 A			
Power dissipation, max	4.5 W	5 W	4.5 W	5 W
Isolation voltage	Determined by installed power supply and modules			
Slots	7	10	7	10
Mounting method	Horizontal only			
Cabinet size (HxWxD), min	50.8 x 71.1 x 20.3 cm (20 x 28 x 8 in.)	50.8 x 86.4 x 20.3 cm (20 x 34 x 8 in.)	50.8 x 71.1 x 20.3 cm (20 x 28 x 8 in.)	50.8 x 86.4 x 20.3 cm (20 x 34 x 8 in.)
Weight, approx	1.09 kg (2.4 lb)	1.91 kg (4.2 lb)	1.09 kg (2.4 lb)	1.91 kg (4.2 lb)
Location	Panel			
Wire size	Functional earth ground - 8.3 mm^2 (8 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater Protective earth ground - 2.1 mm^2 (14 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater			
Temperature code	T4			
Enclosure type rating	None (open-style)			

Environmental Specifications - ControlLogix-XT Chassis

Attribute	1756-A7XT, 1756-A10XT	1756-A7ZXT, 1756-A10ZXT
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)	-25...+70 °C (-13...+158 °F)	
Temperature, surrounding air max	70 °C (158 °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	Yes	
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(1) (2) per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases Severity Level CX(1) 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)	30 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	

(1) 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.
(2) Up to 2100 angstroms of film growth per 30 days of copper and/or silver reactivity.

Certifications - ControlLogix-XT Chassis

Certification[1]	1756-A7XT, 1756-A10XT, 1756-A7ZXT, 1756-A10ZXT
c-UL-us	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.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations.
CE	European Union 2014/30/EU EMC Directive (EMC), 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)
RCM	Australian Radiocommunications Act, compliant with: EN 61000-6-4; Industrial Emissions
Ex	European Union 2014/34/EU Directive, compliant with: • EN 60079-7; Potentially Explosive Atmospheres, Protection “e” • EN 60079-0; General Requirements • II 3 G Ex ec IIC T4 Gc • UL22ATEX2734X
IECEx	IECEx System, compliant with: • IEC 60079-7; Potentially Explosive Atmospheres, Protection "e" • IEC 60079-0; General Requirements • II 3 G ec IIC T4 Gc • IECExUL22.0025X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3
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 UL22UKEX2451X • Zone 2 classification according to UKEx Regulation 2016 No. 1107
UKCA	In conformity with the following UK Statutory Instruments and their amendments: • 2016 No. 1091, Electromagnetic Compatibility 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
CCC	CCC 202012230911998 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
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

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

ControlLogix Chassis Accessories

Use a slot filler module to fill empty slots.

Cat. No.	Description
1756-N2	Slot filler module for empty slots in standard ControlLogix chassis
1756-N2XT	Slot filler module for empty slots in ControlLogix-XT and ControlLogix-ZXT chassis

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at rok.auto/literature.

Resource	Description
ControlLogix System User Manual, publication 1756-UM001	Describes how to use a ControlLogix® system
ControlLogix Selection Guide, publication 1756-SG002	Provides overview of the ControlLogix system and its products.
ControlLogix Power Supplies Specifications Technical Data, publication 1756-TD005	Provides technical specifications for ControlLogix power supplies.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.