

GuardLogix 5570 Standard and Conformal Coated Controllers

Features - GuardLogix 5570 Controllers

Feature	1756-L71S, 1756-L71SK, 1756-L72S, 1756-L72SK, 1756-L73S, 1756-L73SK	1756-L7SP, 1756-L7SPK
Safety communication options	Standard and safety • EtherNet/IP • ControlNet • DeviceNet	—
Network connections per network module located in the local chassis	• 1000 I/O; 528 EtherNet/IP; 512 TCP (1756-EN4TR) • 256 EtherNet/IP; 128 TCP (1756-EN2x) • 128 EtherNet/IP; 64 TCP (1756-ENBT) • 128 ControlNet (1756-CN2/B) • 100 ControlNet (1756-CN2/A) • 40 ControlNet (1756-CNB/D, 1756-CNB/E)	—
Programming languages	• For the safety task, GuardLogix controllers support Ladder Diagram only. • For standard tasks, GuardLogix controllers support: – Ladder Diagram (LD) – Structured Text (ST) – Function Block Diagram (FBD) – Sequential Function Chart (SFC)	—

Technical Specifications - GuardLogix 5570 Controllers

Attribute	1756-L71S, 1756-L71SK	1756-L72S, 1756-L72SK	1756-L73S, 1756-L73SK	1756-L7SP, 1756-L7SPK
User memory	2 MB	4 MB	8 MB	—
Safety memory	1 MB	2 MB	4 MB	Configured to match primary controller
I/O memory	0.98 MB			—
Nonvolatile memory storage	1 GB Secure Digital (SD) card (1784-SD1), ships pre-installed in the controller ⁽¹⁾			—
Digital I/O, max	128,000			—
Analog I/O, max	4000			—
Total I/O, max	128,000			—
Replacement battery	—			—
Energy storage modules	• 1756-ESMCAP capacitor energy storage module (removable, ships installed with every controller) • 1756-ESMNSE capacitor energy storage module (removable, no residual WallClockTime power backup) • 1756-ESMNRM capacitor energy storage module (non-removable, helps prevent USB connection and SD card use to help secure the controller)			• 1756-SPESMNSE capacitor energy storage module for the safety partner (removable, no residual WallClockTime power backup) • 1756-SPESMNRM capacitor energy storage module for the safety partner (non-removable, helps prevent USB connection and SD card use to help secure the controller)
Current draw @ 1.2V DC	5 mA			—
Current draw @ 5.1V DC	800 mA			—
Power dissipation	2.5 W			—
Thermal dissipation	8.5 BTU/hr			—
Isolation voltage	30V (continuous), basic insulation, USB port-to-system Compliant and tested according to IEC/UL 61010-1			—
Weight, approx	0.25 kg (0.55 lb)			—
Slot width	2 (both modules needed; each is one slot)			—
Module location	Chassis-based, any slot			Chassis slot immediately to the right of the primary controller
Chassis	1756-A4, 1756-A4K, 1756-A7, 1756-A7K, 1756-A10, 1756-A10K, 1756-A13, 1756-A13K, 1756-A17, 1756-A17K			—
Power supply, standard	1756-PA50, 1756-PA50K, 1756-PA72, 1756-PA72K, 1756-PA75, 1756-PA75K, 1756-PB50, 1756-PB50K 1756-PB72, 1756-PB72K, 1756-PB75, 1756-PB75K, 1756-PC75, 1756-PH75			—
Power supply, redundant	1756-PA75R, 1756-PA75RK, 1756-PB75R, 1756-PB75RK, 1756-PSCA2, 1756-PSCA2K			—
Wire category ⁽²⁾	3 - on USB ports			—
Temperature code	T4			—
Enclosure type rating	None (open-style)			—

(1) Larger versions may be available. See [Memory Cards on page 72](#).

(2) Use this Conductor Category information to plan conductor routing. See Industrial Wiring and Grounding Guidelines, publication [1770-4.1](#).

Environmental Specifications - GuardLogix 5570 Controllers

Attribute	1756-L71S, 1756-L72S, 1756-L73S, 1756-L7SP	1756-L71SK, 1756-L72SK, 1756-L73SK, 1756-L7SPK
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 °C ≤ Ta ≤ +60 °C (+32 °F ≤ Ta ≤ +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	No	Yes
Corrosive Atmosphere ASTM B845-97 Method H Accelerated Test (20-Day Exposure)	—	Severity Level G3 ⁽¹⁾ per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases Severity Level CX ⁽¹⁾⁽²⁾ per IEC 60721-3-3:2019, Chemically Active Substances
Vibration	IEC 60068-2-6 (Test Fc, Operating)	
Shock, operating	IEC 60068-2-27 (Test Ea, Unpackaged Shock)	
Shock, nonoperating	IEC 60068-2-27 (Test Ea, Unpackaged Shock)	
Emissions	IEC 61000-6-4	
ESD immunity	IEC 61000-4-2	
Radiated RF immunity	IEC 61000-4-3	
Conducted RF Immunity	IEC 61000-4-6 (Not applicable: USB is a temporary programming port.)	

(1) Once the factory packaging seal is broken, plugs or covers must be installed in all unoccupied ports or slots for the product to maintain its corrosive atmosphere rating.

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

Certifications - GuardLogix 5570 Controllers

Certification ⁽¹⁾	1756-L71S, 1756-L72S, 1756-L73S, 1756-L7SP 1756-L71SK, 1756-L72SK, 1756-L73SK, 1756-L7SPK
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.
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 2006/42/EC MD, compliant with: - EN 60204-1; Electrical equipment of machines - EN ISO 13849-1; Safety-related parts of control systems - EN 62061; Functional safety of safety-related control systems
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; General Requirements - EN IEC 60079-7; Potentially Explosive Atmospheres, Protection "e" - II 3 G Ex ec IIC T4 Gc - UL 22 ATEX 2817X
IECEX	IECEX System, compliant with: - IEC 60079-7; Potentially Explosive Atmospheres, Protection "e" - IEC 60079-0; General Requirements - II 3 G Ex ec IIC T4 Gc - IECEX UL 22.0062X
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 UL22UKEX2601X - 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 Regulations 2008 No. 1597 - Supply of Machinery (Safety) Regulations
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
TÜV certified for functional safety ⁽²⁾	Capable of SIL CL 3 according to IEC 61508, capable of Category 4 according to EN954-1, and capable of PLe according to ISO 13849-1 when used as described in the GuardLogix 5570 and Compact GuardLogix 5370 Controller Systems Safety Reference Manual, publication 1756-RM099 .
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) When marked. See the Product Certification website at rok.auto/certifications for Declarations of Conformity, Certificates, and other certification details.(2) When used with specified firmware revisions. See the Product Safety Certificate at the Product Certification website (rok.auto/certifications) for a full list of safety-related certifications.

GuardLogix-XT 5570 Controllers

The 1756 GuardLogix-XT™ 5570 controllers function the same way and share the same features as the traditional [GuardLogix 5570 Standard and Conformal Coated Controllers](#). The GuardLogix-XT 5570 controllers are conformal coated to add a degree of protection against harsh, corrosive gas environments. The GuardLogix-XT 5570 system can withstand temperature ranges from -25...+70 °C (-13...+158 °F). You must use a 1756-L73SXT primary controller with a 1756-L7SPXT safety partner.

Customers who previously used the LXT chassis should migrate to the K version of the chassis.

Technical Specifications - GuardLogix-XT 5570 Controllers

Attribute	1756-L73SXT	1756-L7SPXT
User memory	8 MB	—
Safety memory	4 MB	Configured to match primary controller
I/O memory	0.98 MB	—
Nonvolatile memory storage	1 GB Secure Digital (SD) card (1784-SD1), ships pre-installed in the controller ⁽¹⁾	—
Digital I/O, max	128,000	—
Analog I/O, max	4000	—
Total I/O, max	128,000	—
Energy storage modules	1756-ESMCAPXT capacitor energy storage module extreme temperature (removable, ships installed with every controller) 1756-ESMNSEXT capacitor energy storage module extreme temperature (removable, no residual WallClockTime power backup) 1756-ESMNRMT capacitor energy storage module extreme temperature (non-removable, helps prevent USB connection and SD card use to help secure the controller)	1756-SPESMNSEXT capacitor energy storage module for the safety partner extreme temperature (removable, no residual WallClockTime power backup) 1756-SPESMNRMT capacitor energy storage module for the safety partner extreme temperature (non-removable, helps prevent USB connection and SD card use to help secure the controller)
Current draw @ 1.2V DC	5 mA	
Current draw @ 5.1V DC	800 mA	
Power dissipation	2.5 W	
Thermal dissipation	8.5 BTU/hr	
Isolation voltage	30V (continuous), Basic Insulation, USB port to backplane Compliant and tested according to IEC/UL 61010-1	—
Weight, approx	0.25 kg (0.55 lb)	
Slot width	2 (need 2 modules; each uses a slot)	
Module location	Chassis-based, any slot	Chassis slot immediately to the right of the primary controller
Chassis	For extended temperature applications, use 1756-A7XT and 1756-A10XT, Series C For extended temperature and corrosive atmosphere applications, use 1756-A7ZXT and 1756-A10ZXT For low temperature and corrosive atmosphere applications only, use 1756-A4K, 1756-A7K, 1756-A10K, 1756-A13K, 1756-A17K	
Power supply, standard	1756-PAXT, 1756-PA30XT, 1756-PBXT, 1756-PB30XT	
Power supply, redundant	1756-PAXTR, 1756-PBXTR	
Wire category ⁽²⁾	3 - on USB ports	—
Temperature code	T4	
Enclosure type rating	None (open-style)	

(1) Larger versions may be available. See [Memory Cards on page 72](#).

(2) Use this conductor category information to plan conductor routing as described in the system level installation manual. See the Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

Environmental Specifications - GuardLogix-XT 5570 Controllers

Attribute	1756-L73SXT, 1756-L7SPXT
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)	-25 °C ≤ Ta ≤ +70 °C (-13 °F ≤ Ta ≤ +158 °F) When using a 1756-A7LXT chassis, the surrounding air temperature range is -25...+60 °C (-13...+140 °F) even when using an XT controller
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 H Accelerated Test (20-Day Exposure)	Severity Level G3 ⁽¹⁾ per ANSI/ISA 71.04-2013, Airborne Contaminants—Gases Severity Level CX ⁽¹⁾⁽²⁾ per IEC 60721-3-3:2019, Chemically Active Substances
Vibration	IEC 60068-2-6 (Test Fc, Operating)
Shock, operating	IEC 60068-2-27 (Test Ea, Unpackaged Shock)
Shock, nonoperating	IEC 60068-2-27 (Test Ea, Unpackaged Shock)
Emissions	IEC 61000-6-4
ESD immunity	IEC 61000-4-2
Radiated RF immunity	IEC 61000-4-3
Conducted RF Immunity	IEC 61000-4-6 (Not applicable: USB is a temporary programming port.)

(1) Once the factory packaging seal is broken, plugs or covers must be installed in all unoccupied ports or slots for the product to maintain its corrosive atmosphere rating.

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

Certifications - GuardLogix-XT 5570 Controllers

Certification ⁽¹⁾	1756-L73SXT, 1756-L7SPXT
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.
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 2006/42/EC MD, compliant with: • EN 60204-1; Electrical equipment of machines • EN ISO 13849-1; Safety-related parts of control systems • EN 62061; Functional safety of safety-related control systems
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; General Requirements • EN IEC 60079-7; Potentially Explosive Atmospheres, Protection "e" • II 3 G Ex ec IIC T4 Gc • UL 22 ATEX 2817X
IECEX	IECEX System, compliant with: • IEC 60079-7; Potentially Explosive Atmospheres, Protection "e" • IEC 60079-0; General Requirements • II 3 G Ex ec IIC T4 Gc • IECEX UL 22.0062X
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 UL22UKEx2601X • 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 Regulations • 2008 No. 1597 - Supply of Machinery (Safety) Regulations
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
TÜV certified for functional safety ⁽²⁾	Capable of SIL CL 3 according to IEC 61508, capable of Category 4 according to EN954-1, and capable of PLe according to ISO 13849-1 when used as described in the GuardLogix 5570 and Compact GuardLogix 5370 Controller Systems Safety Reference Manual, publication 1756-RM099 .
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

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(2) When used with specified firmware revisions. See the Product Safety Certificate at the Product Certification website (rok.auto/certifications) for a full list of safety-related certifications.