1756 ControlLogix Controllers

The ControlLogix® controller provides a scalable controller solution that is capable of addressing a large amount of I/O points. The ControlLogix controller can be placed into any slot of a ControlLogix I/O chassis and multiple controllers can be installed in the same chassis.

ControlLogix controllers can monitor and control I/O across the ControlLogix backplane, as well as over network links. To provide communication for a ControlLogix controller, install the appropriate communication interface module into the chassis.

1756-L7x ControlLogix Controllers Features and Specifications

Feature	1756-L71, 1756-L72, 1756-L73, L73XT, 1756-L74, 1756-L75
Controller tasks	• 32 tasks • 100 programs/task • Event tasks: all event triggers
Built-in communication ports	1 port USB[1]
Communication options	• EtherNet/IP • ControlNet • DeviceNet • Data Highway Plus™ • Remote I/O • SynchLink™ • Third-party process and device networks
USB port communication	Programming, configuration, firmware flash and on-line edits only
Controller connections supported, max	500
Network connections, per network module	• 100 ControlNet (1756-CN2/A) • 40 ControlNet (1756-CNB/D, 1756-CNB/E) • 128 ControlNet (1756-CN2/B) • 256 EtherNet/IP; 128 TCP (1756-EN2x) • 128 EtherNet/IP; 64 TCP (1756-ENBT)
Controller redundancy	Full support
Integrated motion	• SERCOS interface • Analog options (encoder input, LDT input, SSI input) • EtherNet/IP (CIP Motion)
Programming languages	• Relay ladder • Structured text • Function block • SFC

(1)   The USB port is intended for temporary local programming purposes only and not intended for permanent connection. Do not use the USB port in hazardous locations.

Table 1 - Technical Specifications - 1756-L7*x* ControlLogix Controllers

Attribute	1756-L71	1756-L72	1756-L73	1756-L74	1756-L75
User memory	2 MB	4 MB	8 MB	16 MB	32 MB
I/O memory	0.98 MB				
Optional nonvolatile memory storage	1 GB (1784-SD1 ships with every controller) 2 GB (1784-SD2)				
Digital I/O, max	128,000				
Analog I/O, max	4000				
Total I/O, max	128,000				
Energy storage module	• 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 (nonremovable, secures controller by preventing USB connection an d SD card use)				
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 type, USB port-to-system Type tested at 500V AC for 60 s				
USB port[1]	USB 2.0, full speed (12 Mbps)				
Weight, approx	0.25 kg (0.55 lb)				
Slot width	1				
Module location	Chassis-based, any slot				
Chassis	1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17				
Power supply, standard	1756-PA72, 1756-PA75, 1756-PB72, 1756-PB75				
Power supply, redundant	1756-PA75R, 1756-PB75R, 1756-PSCA2				
Wire category[2]	3 - on USB port				
North American temperature code	T4A				
IEC temperature code	T4				
Enclosure type rating	None (open-style)				

(1) The USB port is intended for temporary local programming purposes only and not intended for permanent connection. Do not use the USB port in hazardous locations.

(2) Use this conductor category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

Table 2 - Environmental Specifications - 1756-L7x ControlLogix Controllers

Attribute	1756-L71, 1756-L72, 1756-L73, 1756-L74, 1756-L75
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)
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)
Temperature, surrounding air, max	60 °C (140 °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 (45 g with SD card installed)
Emissions CISPR 11 IEC 61000-6-4	Class A
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

Table 3 - Certifications - 1756-L7x ControlLogix Controllers

Certification[1]	1756-L71, 1756-L72, 1756-L73, 1756-L74, 1756-L75
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 2004/108/EC 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)
C-Tick	Australian Radio communications Act, compliant with: AS/NZS CISPR 11; 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 X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3

(1)   When marked. See the Product Certification link at http://www.ab.com for Declarations of Conformity, Certificates, and other certification details.