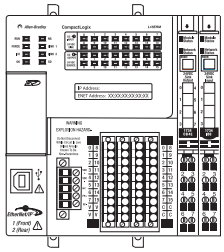
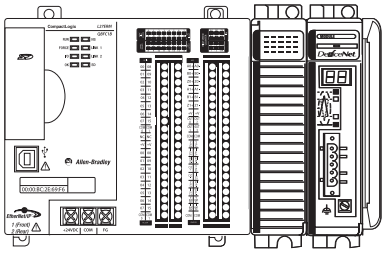
CompactLogix 5370 Controllers

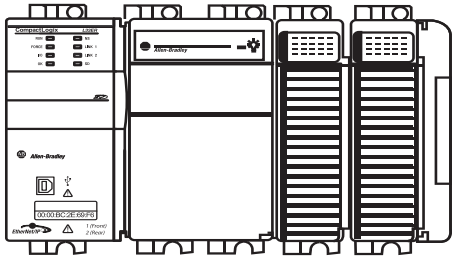
CompactLogix 5370 L1 Control System



CompactLogix 5370 L2 Control System



CompactLogix 5370 L3 Control System



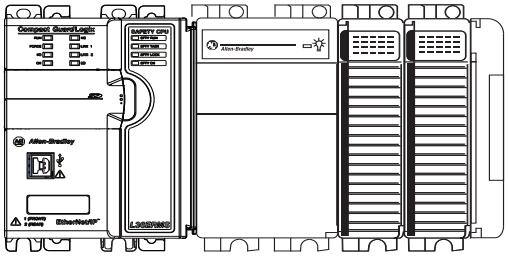
CompactLogix 5370 controllers provide scalable controller solutions to address a wide variety of applications. All CompactLogix 5370 controllers provide the following functionality:

- Two Ethernet ports
- One USB port
- Support for local expansion modules
- Control of local and distributed I/O modules
- Use of 1784-SD1 or 1784-SD2 Secure Digital (SD) card for nonvolatile memory
- A battery is no longer necessary because of the internal energy-storage solution

Some CompactLogix 5370 controllers provide the following functionality:

- Built-in power supply
- Some combination of embedded digital, analog, and high-speed counter modules
- Support for Integrated Motion over an EtherNet/IP™ network
- Access to DeviceNet® networks

Compact GuardLogix 5370 Control System



The Compact GuardLogix controller is a 1769-L3 CompactLogix controller that provides safety control to achieve SIL CL 3 according to EN62061 / EN 61511-1 / IEC 61508 and PLe according to EN ISO 13849-1. A major benefit of this system is that it's still one project; safety and standard control together.

Application	Description
SIL 1, 2, 3	The Compact GuardLogix controller system is type-approved and certified for use in safety applications up to and including SIL 3 according to IEC 61508, and applications up to and including PLe/Cat.4 according to ISO 13849-1. For more information, see these manuals: • GuardLogix 5570 and Compact GuardLogix 5370 Controllers Systems Safety Reference Manual, publication 1756-RM099 • Compact GuardLogix 5370 Controllers User Manual, publication 1769-UM002 • GuardLogix Safety Application Instruction Set Reference Manual, publication 1756-RM095

During development, safety and standard have the same rules. The following are allowed:

- Multiple programmers
- Online editing
- Forcing

Once the project is tested and ready for final validation, apply the safety application signature and safety-lock the application. This process sets the safety task to a SIL 3 integrity level. The Compact GuardLogix controller enforces the SIL 3 integrity level. When safety memory is locked and protected, the safety logic can't be modified and all safety functions operate with SIL 3 integrity. On the standard side of the Compact GuardLogix controller, all functions operate like a regular Logix controller. Thus online editing, forcing, and other activities are all allowed.

Standard logic and external devices, like HMIs or other controllers, can read safety memory with this level of integration. This level of integration removes the need to condition safety memory for use elsewhere. The result is easy systemwide integration and the ability to display safety status on displays or marquees. Use Guard I/O™ modules for field device connectivity. For safety interlocking between Compact GuardLogix controllers, use Ethernet or ControlNet® networks. Multiple Compact GuardLogix controllers can share safety data for zone to zone interlocking, or one Compact GuardLogix controller can use remote distributed safety I/O between different cells/areas.

Features - CompactLogix 5370 Controllers and Compact GuardLogix 5370 Controllers

Feature	1769-L16ER-BB1B 1769-L18ER-BB1B 1769-L18ERM-BB1B, 1769-L18ERM-BB1BK 1769-L19ER-BB1B, 1769-L19ER-BB1BK	1769-L24ER-QB1B 1769-L24ER-QBFC1B, 1769-L24ER-QBFC1BK 1769-L27ERM-QBFC1B	1769-L30ER, 1769-L30ERK 1769-L30ER-NSE 1769-L30ERM, 1769-L30ERMK 1769-L33ER, 1769-L33ERK 1769-L33ERM, 1769-L33ERMK, 1769-L36ERM, 1769-L37ERM, 1769-L37ERMK, 1769-L38ERM, 1769-L38ERMK	1769-L30ERMS 1769-L33ERMS, 1769-L33ERMSK 1769-L36ERMS 1769-L37ERMS, 1769-L37ERMSK 1769-L38ERMS, 1769-L38ERMSK
Controller tasks Continuous Periodic	32 tasks 100 programs/task			
Built-in communication ports	• Two Ethernet ports - CompactLogix 5370 controllers have two Ethernet ports. The ports carry the same network traffic as part of the embedded switch of the controller. However, the controller uses only one IP address. • One USB port (only for temporary connection).			
Communication options	EtherNet/IP	• EtherNet/IP • DeviceNet via 1769-SDN scanner		
EtherNet/IP node, max	• 1769-L16ER-BB1B: Up to 4 nodes • 1769-L18ER-BB1B, 1769-L18ERM-BB1B, 1769-L18ERM-BB1BK, 1769-L19ER-BB1B, 1769-L19ER-BB1BK: Up to 8 nodes	• 1769-L24ER-QB1B, 1769-L24ER-QBFC1B, 1769-L24ER-QBFC1BK: Up to 8 nodes • 1769-L27ERM-QBFC1B: Up to 16 nodes	• 1769-L30ER, 1769-L30ER-NSE, 1769-L30ERK, 1769-L30ERM, 769-L30ERMK, 1769-L30ERMS: Up to 16 nodes • 1769-L33ER, 1769-L33ERK, 1769-L33ERM, 1769-L33ERMK, 1769-L33ERMS, 1769-L33ERMSK: Up to 32 nodes • 1769-L36ERM, 1769-L36ERMS: Up to 48 nodes • 1769-L37ERM, 1769-L37ERMK, 1769-L37ERMS, 1769-L37ERMSK: Up to 64 nodes • 1769-L38ERM, 1769-L38ERMK, 1769-L38ERMS, 1769-L38ERMSK: Up to 80 nodes	
Controller connections	256			
Embedded I/O modules	• 16 DC digital inputs • 16 DC digital outputs	All controllers: • 16 DC digital inputs • 16 DC digital outputs Only 1769-L24ER-QBFC1B, 1769-L24ER-QBFC1BK, and 1769-L27ERM-QBFC1B: • 4 high-speed counter modules • 4 high-speed counter module outputs • 4 universal analog inputs • 2 analog output points	–	
Sockets, max	32			
Integrated Motion over an EtherNet/IP network	1769-L18ERM-BB1B, 1769-L18ERM-BB1BK: 1 or 2 axes	1769-L27ERM-QBFC1B - As many as 4 axes	• 1769-L30ERM, 1769-L30ERMK, 1769-L30ERMS: As many as 4 axes • 1769-L33ERM, 1769-L33ERMK, 1769-L33ERMS, 1769-L33ERMSK: As many as 8 axes • 1769-L36ERM, 1769-L36ERMS: As many as 16 axes • 1769-L37ERM, 1769-L37ERMK, 1769-L37ERMS, 1769-L37ERMSK: As many as 16 axes • 1769-L38ERM, 1769-L38ERMK, 1769-L38ERMS, 1769-L38ERMSK: As many as 16 axes	
Programming languages	• Relay ladder(1) • Structured Text • Function block • SFC			
Integrated safety	–			Yes

(1) The Compact GuardLogix 5370 controllers support only the relay ladder programming language in the safety task. The Compact GuardLogix 5370 controllers support all listed programming languages in the standard task.

Certifications - CompactLogix 5370 Controllers and Compact GuardLogix 5370 Controllers

<table>
<tr><th>Certification[1]</th><th>1769-L16ER-BB1B
1769-L18ER-BB1B
1769-L18ERM-BB1B, 1769-L18ERM-BB1BK
1769-L19ER-BB1B, 1769-L19ER-BB1BK</th><th>1769-L24ER-QB1B
1769-L24ER-QBFC1B, 1769-L24ER-QBFC1BK
1769-L27ERM-QBFC1B</th><th>1769-L30ER, 1769-L30ERK
1769-L30ER-NSE
1769-L30ERM, 1769-L30ERMK
1769-L33ER, 1769-L33ERK
1769-L33ERM, 1769-L33ERMK
1769-L36ERM
1769-L37ERM, 1769-L37ERMK
1769-L38ERM, 1769-L38ERMK</th><th>1769-L30ERMS
1769-L33ERMS, 1769-L33ERMSK
1769-L36ERMS
1769-L37ERMS, 1769-L37ERMSK
1769-L38ERMS, 1769-L38ERMSK</th></tr>
<tr><td>c-UL-us</td><td>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.</td><td>UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E322657.
UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E334470.</td><td colspan="2">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.</td></tr>
<tr><td rowspan="2">UKCA and CE</td><td colspan="2" rowspan="2">UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with:
EN 61131-2; Programmable Controllers (Clause 8, Zone A & B)
EN 61326-1; Meas./Control/Lab., Industrial Requirements
EN 61000-6-4; Industrial Emissions
EN 61000-6-2; Industrial Immunity</td><td rowspan="2">UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with:
EN 61131-2; Programmable Controllers (Clause 8, Zone A & B)
EN 61000-6-4; Industrial Emissions
EN 61000-6-2; Industrial Immunity</td><td>UK Statutory Instrument 2016 No. 1091 and European Union 2014/30/EU EMC Directive, compliant with:
EN 61131-2; Programmable Controllers (Clause 8, Zone A & B)
EN 61326-3-1; Meas./Control/Lab., Immunity Requirements for safety systems and functions
EN 61000-6-4; Industrial Emissions
EN 61000-6-2; Industrial Immunity</td></tr>
<tr><td>UK Statutory Instrument 2008 No. 1597 and European Union 2006/42/EC MD Directive, compliant with:
EN 61508-1...7; General requirements
EN ISO 13849-1; Safety-related parts of control systems
EN 62061; Functional safety of safety-related control systems</td></tr>
<tr><td></td><td colspan="4">UK Statutory Instrument 2012 No. 3032 and European Union 2011/65/EU RoHS Directive, compliant with:
EN IEC 63000; Technical documentation</td></tr>
<tr><td>RCM</td><td colspan="4">Australian Radiocommunications Act, compliant with:
EN 61000-6-4; Industrial Emissions</td></tr>
<tr><td>IECEx</td><td>–</td><td>IECEx System, compliant with:
IEC 60079-0; General Requirements
IEC 60079-7; Explosive Atmospheres, Protection “e”
II 3 G Ex ec IIC T4 Gc
IECEx UL 21.0112X</td><td colspan="2">–</td></tr>
<tr><td rowspan="5">Ex</td><td colspan="3">European Union 2014/34/EU ATEX Directive, compliant with:
EN 60079-0; General Requirements
EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</td><td rowspan="3">-</td></tr>
<tr><td>II 3 G Ex nA IIC T4 Gc
ITS 12 ATEX 47611X (until Rev. 3)</td><td>II 3 G Ex nA IIC T4 Gc
DEMKO 12 ATEX 1116807X (until Rev. 3)</td><td>II 3 G Ex nA IIC T4 Gc
ITS 09 ATEX 46118X (until Rev. 6)</td></tr>
<tr><td colspan="3">Or</td></tr>
<tr><td colspan="4">UK Statutory Instrument 2016 No. 1107 and European Union 2014/34/EU ATEX Directive, compliant with:
EN 60079-0; General Requirements
EN 60079-7; Potentially Explosive Atmospheres, Protection “e”</td></tr>
<tr><td>II 3 G Ex ec IIC T4 Gc
UL 21 ATEX 2603X (from Rev. 1)
UL 22 UKEX 2515X (from Rev. 0)</td><td>II 3 G Ex ec IIC T4 Gc
DEMKO 12 ATEX 1116807X (from Rev. 4)
UL 22 UKEX 2516X (from Rev. 0)</td><td>II 3 G Ex ec IIC T5 Gc
UL 21 ATEX 2603X (from Rev. 0)
UL 22 UKEX 2515X (from Rev. 0)</td><td>II 3 G Ex ec IIC T5 Gc
DEMKO 15 ATEX 1388X
UL 22 UKEX 2514X (from Rev. 0)</td></tr>
<tr><td>TÜV</td><td colspan="3">–</td><td>TÜV Certified for Functional Safety
Capable of SIL 3</td></tr>
<tr><td>Morocco</td><td colspan="4">Arrêté ministériel n° 6404-15 du 29 ramadan 1436</td></tr>
<tr><td>CCC</td><td colspan="4">CNCA-C23-01:2019 强制性产品认证实施规则 防爆电气
CNCA-C23-01:2019 CCC Implementation Rule Explosion-Proof Electrical Products
CCC: 2020122309111609, 2021122309113974, 2021312309000565</td></tr>
<tr><td>KC</td><td colspan="4">Korean Registration of Broadcasting and Communications Equipment, compliant with:
Article 58-2 of Radio Waves Act, Clause 3</td></tr>
<tr><td>EtherNet/IP</td><td colspan="4">ODVA conformance tested to EtherNet/IP specifications.</td></tr>
</table>

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

Environmental Specifications - CompactLogix 5370 Controllers and Compact GuardLogix 5370 Controllers

Attribute	1769-L16ER-BB1B 1769-L18ER-BB1B 1769-L18ERM-BB1B, 1769-L18ERM-BB1BK 1769-L19ER-BB1B, 1769-L19ER-BB1BK	1769-L24ER-QB1B 1769-L24ER-QBFC1B, 1769-L24ER-QBFC1BK 1769-L27ERM-QBFC1B	1769-L30ER, 1769-L30ERK 1769-L30ER-NSE 1769-L30ERM, 1769-L30ERMK 1769-L33ER, 1769-L33ERK 1769-L33ERM, 1769-L33ERMK 1769-L36ERM, 1769-L37ERM, 1769-L37ERMK 1769-L38ERM, 1769-L38ERMK	1769-L30ERMS 1769-L33ERMS, 1769-L33ERMSK 1769-L36ERMS 1769-L37ERMS, 1769-L37ERMSK 1769-L38ERMS, 1769-L38ERMSK	1769-L23-QBFC1B 1769-L23E-QB1B 1769-L23E-QBFC1B
Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Na, Operating Thermal Shock)	-20...+60 °C (-4...+140 °F)	0...60 °C (32...140 °F)			
Temperature, storage 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(1)		5 g @ 10...500 Hz		
Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	30 g(1)		20 g - DIN rail 30 g - Panel		
Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock)	50 g(1)(2)		30 g - DIN rail 40 g - Panel		
Emissions CISPR 11	IEC 61000-6-4				
ESD immunity IEC 61000-4-2	6 kV contact discharges 8 kV air discharges				4 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...6000 MHz				10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 10V/m with 1 kHz sine wave 80% AM from 80...2000 MHz 10V/m with 1 kHz sine wave 80% AM from 2000...2700 MHz
EFT/B immunity IEC 61000-4-4	±3 kV at 5 kHz on power ports ±3 kV at 5 kHz on signal ports ±3 kV at 5 kHz on communication ports		±3 kV at 5 kHz on communication ports	±3 kV at 5 kHz on communication ports ±4 kV at 5 kHz on Protective Earth (PE)	±2 kV at 5 kHz on power ports ±2 kV at 5 kHz on signal ports ±2 kV at 5 kHz on communication ports
Surge transient immunity IEC 61000-4-5	±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports ±1 kV line-line (DM) and ±2 kV line-earth (CM) on signal ports ±2 kV line-earth (CM) on communication ports	±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports ±1 kV line-line (DM) and ±2 kV line-earth (CM) on signal ports ±2 kV line-earth (CM) on shielded ports ±2 kV line-earth (CM) on communication ports	±2 kV line-earth (CM) on communication ports		±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports ±1 kV line-line (DM) and ±2 kV line-earth (CM) on signal ports ±2 kV line-earth (CM) on shielded ports ±2 kV line-earth (CM) on communication ports
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine wave 80% AM from 150 kHz...80 MHz				

(1) If you are mounting a CompactLogix™ 5370 L1 controller on an EN 50 022 - 35 x 15 mm (1.38 x 0.59 in.) DIN rail, you must first adhere a bumper on the back of the controller. Failure to install the bumper before mounting the controller causes the system to fail to meet this specification. For more information, see the CompactLogix 5370 Controllers User Manual, publication 1769-UM021.

(2) If you are mounting a CompactLogix 5370 L1 controller on an EN 50 022 - 35 x 15 mm (1.38 x 0.59 in.) DIN rail, the Shock, nonoperating specification = 30 g.

Technical Specifications - CompactLogix 5370 Controllers and Compact GuardLogix 5370 Controllers

Attribute	1769-L16ER-BB1B 1769-L18ER-BB1B 1769-L18ERM-BB1B,1769-L18ERM-BB1BK 1769-L19ER-BB1B, 1769-L19ER-BB1BK	1769-L24ER-QB1B 1769-L24ER-QBFC1B, 1769-L24ER-QBFC1BK 1769-L27ERM-QBFC1B	1769-L30ER, 1769-L30ERK 1769-L30ER-NSE 1769-L30ERM, 1769-L30ERMK 1769-L33ER, 1769-L33ERK, 1769-L33ERM, 1769-L33ERMK 1769-L36ERM 1769-L37ERM, 1769-L37ERMK 1769-L38ERM, 1769-L38ERMK	1769-L30ERMS 1769-L33ERMS, 1769-L33ERMSK 1769-L36ERMS 1769-L37ERMS, 1769-L37ERMSK 1769-L38ERMS, 1769-L38ERMSK
User memory	• 1769-L16ER-BB1B: 384 KB • 1769-L18ER-BB1B, 1769-L18ERM-BB1B, 1769-L18ERM-BB1BK: 512 KB • 1769-L19ER-BB1B, 1769-L19ER-BB1BK: 1 MB	• 1769-L24ER-QB1B, 1769-L24ER-QBFC1B, 1769-L24ER-QBFC1BK: 750 KB • 1769-L27ERM-QBFC1B: 1 MB	• 1769-L30ER, 1769-L30ER-NSE, 1769-L30ERK, 1769-L30ERM, 1769-L30ERM: 1 MB • 1769-L33ER, 1769-L33ERK, 1769-L33ERM, 1769-L33ERM: 2 MB • 1769-L36ERM: 3 MB • 1769-L37ERM, 1769-L37ERMK: 4 MB • 1769-L38ERM, 1769-L38ERMK: 5 MB	• 1769-L30ERMS: 1 MB standard + 0.5 MB safety • 1769-L33ERMS, 1769-L33ERMSK: 2 MB standard + 1 MB safety • 1769-L36ERMS: 3 MB standard + 1.5 MB safety • 1769-L37ERMS, 1769-L37ERMSK: 4 MB standard + 1.5 MB safety • 1769-L38ERMS, 1769-L38ERMSK: 5 MB standard + 1.5 MB safety
Optional nonvolatile memory	1784-SD1 card with 1 Gb of available memory (shipped with controller) 1784-SD2 card with 2 Gb of available memory (available for separate ordering)			
Number of local expansion modules, max[1]	• 1769-L16ER-BB1B: 6 - 1734 POINT I/O™ modules • 1769-L18ER-BB1B, 1769-L18ERM-BB1B, 1769-L18ERM-BB1BK, 1769-L19ER-BB1B 1769-L19ER-BB1BK: 8 - 1734 POINT I/O modules	4 - 1769 Compact I/O™ modules	• 1769-L30ER, 1769-L30ER-NSE, 1769-L30ERK, 1769-L30ERM, 1769-L30ERMK, 1769-L30ERMS: 8 - 1769 Compact I/O modules • 1769-L33ER, 1769-L33ERK, 1769-L33ERM, 1769-L33ERMK, 1769-L33ERMS, 1769-L33ERMSK: 16 - 1769 Compact I/O modules • 1769-L36ERM, 1769-L36ERMS: 30 - 1769 Compact I/O modules • 1769-L37ERM, 1769-L37ERMK, 1769-L37ERMS, 1769-L37ERMSK: 31 - 1769 Compact I/O modules • 1769-L38ERM, 1769-L38ERMK, 1769-L38ERMS, 1769-L38ERMSK: 31 - 1769 Compact I/O modules	
Number of I/O module banks, max	–	1	3	
Current draw @ 5V DC, controller power	1 A	• 1769-L24ER-QB1B: 1.54 A • 1769-L24ER-QBFC1B, 1769-L27ERM-QBFC1B: 1 A Values rated at these ambient temperatures: 40 °C (104 °F), 55 °C (131 °F), 60 °C (140 °F).	500 mA	850 mA
Current draw @ 24V DC, controller power	–	• 1769-L24ER-QB1B: 0.95 A • 1769-L24ER-QBFC1B, 1769-L27ERM-QBFC1B: 0.8 A Values rated at these ambient temperatures: 40 °C (104 °F), 55 °C (131 °F), 60 °C (140 °F).	225 mA	700 mA
Current draw @ 24V DC, field power, max	3 A - Combined total for all devices that draw current from field power connections Input: 5 mA Output: 500 mA	–		
Power dissipation, max	11.5 W	• 1769-L24ER-QB1B: 12 W • 1769-L24ER-QBFC1B, L27ERM-QBFC1B: 21 W	4.5 W	6.5 W
Isolation voltage	50V (continuous), Basic Insulation Type Tested at 500V AC for 60 s, System to Field	30V (continuous), Basic Insulation Type, USB to system, Ethernet to system and Ethernet to Ethernet Type tested at 500V AC for 60 s		50V, Basic Insulation Type Tested at 500V AC for 60 s, System to Communication ports.
Short circuit protection, field power	Internal fuse, Non-replaceable	–		
Recommended external short circuit protection, field power	User-provided 4...5 A @ 3.15...5.5 A^2t fuse	–		
Weight, approx	0.66 kg (1.5 lb)	• 1769-L24ER-QB1B: 0.63 kg (1.39 lb) • 1769-L24ER-QBFC1B, 1769-L27ERM-QBFC1B: 0.9 kg (1.9 lb)	0.31 kg (0.68 lb)	0.54 kg (1.18 lb)
Module width	100.00 mm (3.94 in.)	• 1769-L24ER-QB1B: 115.00 mm (4.53 in.) • 1769-L24ER-QBFC1B and 1769-L27ERM-QBFC1B: 140 mm (5.51 in.)	55.00 mm (2.17 in.)	89.00 mm (3.50 in.)
Module location	DIN rail mount	DIN rail or panel mount		
Panel-mount screw torque	—	1.1...1.8 N•m (10...16 lb•in) - use M4 or #8 screws		
Embedded power supply	24V DC input, isolated	24V DC Input, isolated	1769-PA2, 1769-PB2, 1769-PA4, 1769-PB4	

Technical Specifications - CompactLogix 5370 Controllers and Compact GuardLogix 5370 Controllers (Continued)

Attribute	1769-L16ER-BB1B 1769-L18ER-BB1B 1769-L18ERM-BB1B,1769-L18ERM-BB1BK 1769-L19ER-BB1B, 1769-L19ER-BB1BK	1769-L24ER-QB1B 1769-L24ER-QBFC1B, 1769-L24ER-QBFC1BK 1769-L27ERM-QBFC1B	1769-L30ER, 1769-L30ERK 1769-L30ER-NSE 1769-L30ERM, 1769-L30ERMK 1769-L33ER, 1769-L33ERK, 1769-L33ERM, 1769-L33ERMK 1769-L36ERM 1769-L37ERM, 1769-L37ERMK 1769-L38ERM, 1769-L38ERMK	1769-L30ERMS 1769-L33ERMS, 1769-L33ERMSK 1769-L36ERMS 1769-L37ERMS, 1769-L37ERMSK 1769-L38ERMS, 1769-L38ERMSK
Power supply distance rating	–		• Controller and 1769-SDN: 4 • 1769 Compact I/O modules: 4…8, depending on module	4 (3 I/O modules between controller and power supply)
Wire category[2]	1 - signal ports 1 - power ports 2 - communication ports		2 - communication ports	
Wire type, Ethernet	RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e minimum cable according to TIA 568 B.1 or Category 5 cable according to ISO/IEC 24702			
Wire type, power terminals, and embedded I/O connections	Copper		–	
Wire size, power terminals[3]	0.051…3.31 mm^2 (30…12 AWG) solid or stranded copper wire rated at 90 °C (194 °F), or greater, 1.2 mm (3/64 in.) insulation, max Each terminal accepts 1 or 2 wires	0.25…2.50 mm^2 (22…14 AWG) solid copper wire rated at 75 °C (167 °F), or greater 1.2 mm (3/64 in.) insulation, max Each terminal accepts only 1 wire	–	
Wire stripping length, power terminals[3]	10 mm (0.39 in)	8 mm (0.31 in)	–	
Screw torque, power terminals [3]	0.5…0.6 N•m (4.4…5.3 lb•in)	1.0…1.2 N•m (8.9…10.6 lb•in)	–	
Wire size, embedded I/O connections	0.205…1.31 mm^2 (24…16 AWG) solid or stranded copper wire rated at 90 °C (194 °F), or greater 1.2 mm (3/64 in.) insulation, max or 90 °C (194 °F) Each terminal accepts only 1 wire		–	
Wire stripping length, embedded I/O connections	10 mm (0.39 in)		–	
North American temperature code	T4A	T3C	T5	
IECEx temperature code	–	T4	–	
UKEX/ATEX temperature code	T4		T5	
Enclosure type rating	None (open-style)			

(1) You can use up to the maximum number of local expansion modules with the CompactLogix 5370 L1 controllers that are listed. This condition applies only if the total current drawn by the embedded I/O and local expansion modules does not exceed both the available POINTBus™ backplane current of 1 A and the field power current of 3 A. For more information on POINTBus backplane current and field-power current considerations when installing local expansion modules, see page 9.

(2) Use this Conductor Category information to plan conductor routing. See the Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1 and the appropriate system-level installation manual.

(3) In regard to the CompactLogix 5370 L1 controllers, this specification applies to connecting wires to the power connector that is inserted in the controller. In regard to the CompactLogix 5370 L2 controllers, this specification applies to connecting wires to power terminals built into the controller.