

# 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-A10/B, 1756-A10K/B, 1756-A10/C, 1756-A10K/C, 1756-A13/B, 1756-A13K/B, 1756-A13/C, 1756-A13K/C, 1756-A17/B, 1756-A17K/B, 1756-A17/C, 1756-A17K/C, 1756-A4LXT/B, 1756-A5XT/B, 1756-A7LXT/B, 1756-A7XT/B, 1756-A7XT/C, 1756-A10XT/C

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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.

AutoCAD product drawings are available at <http://www.rockwellautomation.com/global/support/drawings.page>.



## Standard ControlLogix Chassis Specifications

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

### Technical Specifications - ControlLogix Standard Chassis (Series B)

| Attribute                                     | 1756-A4/B   | 1756-A7/B                                  | 1756-A10/B                                 | 1756-A13/B                                 | 1756-A17/B                                 |
|---|---|--|--|--|--|
| 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<br>(20 x 20 x 8 in.)  | 50.8 x 60.9 x 20.3 cm<br>(20 x 24 x 8 in.) | 50.8 x 76.2 x 20.3 cm<br>(20 x 30 x 8 in.) | 60.9 x 76.2 x 20.3 cm<br>(24 x 30 x 8 in.) | 76.2 x 91.4 x 20.3 cm<br>(30 x 36 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 <sup>2</sup> (8 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater<br>Protective Earth Ground - 2.1 mm <sup>2</sup> (14 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater |  |  |  |  |
| North American temperature code               | T5  |  |  |  |  |
| IEC temperature code                          | T4  | T5   |  |  |  |
| Enclosure type rating                         | None (open-style)   |  |  |  |  |

### Technical Specifications - ControlLogix Standard Chassis (Series C)

| Attribute                                     | 1756-A4/C   | 1756-A7/C                                  | 1756-A10/C                                 | 1756-A13/C                                 | 1756-A17/C                                 |
|---|---|--|--|--|--|
| 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<br>(20 x 20 x 8 in.)  | 50.8 x 60.9 x 20.3 cm<br>(20 x 24 x 8 in.) | 50.8 x 76.2 x 20.3 cm<br>(20 x 30 x 8 in.) | 60.9 x 76.2 x 20.3 cm<br>(24 x 30 x 8 in.) | 76.2 x 91.4 x 20.3 cm<br>(30 x 36 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 <sup>2</sup> (8 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater<br>Protective earth ground - 2.1 mm <sup>2</sup> (14 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater |  |  |  |  |
| North American temperature code               | T4  |  |  |  |  |
| IEC temperature code                          | T4  |  |  |  |  |
| Enclosure type rating                         | None (open-style)   |  |  |  |  |

## Environmental Specifications - ControlLogix Standard Chassis

| Attribute  | 1756-A4/B, 1756-A7/B, 1756-A10/B, 1756-A13/B, 1756-A17/B   | 1756-A4/C, 1756-A7/C, 1756-A10/C, 1756-A13/C, 1756-A17/C |
|--|--|--|
| Temperature, operating<br>IEC 60068-2-1 (Test Ad, Operating Cold),<br>IEC 60068-2-2 (Test Bd, Operating Dry Heat),<br>IEC 60068-2-14 (Test Nb, Operating Thermal Shock)  | 0...60 °C (32...140 °F)  | -25...+60 °C (-13...+140 °F)                             |
| Temperature, surrounding air   | 60 °C (140 °F)   |  |
| Temperature, nonoperating<br>IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold),<br>IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat),<br>IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock) | -40...+85 °C (-40...+185 °F)   |  |
| Relative humidity<br>IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)  | 5...95% noncondensing  |  |
| Vibration<br>IEC 60068-2-6 (Test Fc, Operating)  | 2 g @ 10...500 Hz  |  |
| Shock, operating<br>IEC 60068-2-27 (Test Ea, Unpackaged Shock)   | 30 g   |  |
| Shock, nonoperating<br>IEC 60068-2-27 (Test Ea, Unpackaged Shock)  | 50 g   | 30 g   |
| Emissions  | IEC 61000-6-4  |  |
| ESD immunity<br>IEC 61000-4-2  | 6 kV contact discharges<br>8 kV air discharges   |  |
| Radiated RF immunity<br>IEC 61000-4-3  | 10V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz<br>3V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |  |

## Certifications - ControlLogix Standard Chassis

| Certification <sup>(1)</sup> | 1756-A4/B   | 1756-A7/B, 1756-A10/B, 1756-A13/B, 1756-A17/B   | 1756-A4/C, 1756-A7/C, 1756-A10/C, 1756-A13/C, 1756-A17/C   |
|------------------------------|---|---|--|
| c-UL-us                      | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584.<br>UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810.  |   |  |
| CSA                          | CSA Certified Process Control Equipment. See CSA File 54689.<br>CSA Certified Process Control Equipment for Class I, Division 2 Group A,B,C,D Hazardous Locations. See CSA File 69960.  |   |  |
| FM                           | FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations.  |   |  |
| CE                           | European Union 2004/108/EC EMC Directive, compliant with: <ul style="list-style-type: none"> <li>EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>EN 61000-6-2; Industrial Immunity</li> <li>EN 61000-6-4; Industrial Emissions</li> <li>EN 61131-2; Programmable Controllers (Clause 8, Zone A &amp; B)</li> </ul> |   |  |
| RCM                          | Australian Radiocommunications Act, compliant with:<br>EN 61000-6-4; Industrial Emissions   |   |  |
| Ex                           | European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>EN 60079-0; General Requirements</li> <li>II 3 G Ex nA IIC T4 Gc X</li> </ul>   | European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>EN 60079-0; General Requirements</li> <li>II 3 G Ex nA IIC T5 Gc X</li> </ul> | European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>EN 60079-0; General Requirements</li> <li>II 3 G Ex nA IIC T4 Gc</li> <li>DEMKO13ATEX1325026X</li> </ul> |
| IECEX                        | N/A   |   | IECEX System, compliant with: <ul style="list-style-type: none"> <li>IEC 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>IEC 60079-0; General Requirements</li> <li>II 3 G Ex nA IIC T4 Gc</li> <li>IECEXUL14.0008X</li> </ul>                            |
| KC                           | Korean Registration of Broadcasting and Communications Equipment, compliant with:<br>Article 58-2 of Radio Waves Act, Clause 3  |   |  |
| EAC                          | Russian Customs Union TR CU 020/2011 EMC Technical Regulation<br>Russian Customs Union TR CU 004/2011 LV Technical Regulation   |   |  |

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

## ControlLogix-XT Chassis Specifications

The ControlLogix-XT™ chassis support extreme temperature environments. The chassis are conformally coated for increased survivability in ISA G3 environments.

### Technical Specifications - ControlLogix-XT Chassis

| Attribute                                     | 1756-A4LXT/B  | 1756-A7LXT/B                               | 1756-A5XT/B                                | 1756-A7XT/B                                | 1756-A7XT/C | 1756-A10XT/C                                   |
|---|---|--|--|--|-------------|--|
| 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 | 10 A/6 A  |  |  |  | 15 A/6 A    |  |
| Backplane current, chassis/slot max @ 24V DC  | 2 A/2 A   |  |  |  | 2.8 A/2.8 A |  |
| Power dissipation, max                        | 3.7 W   | 4.1 W                                      | 4.4 W                                      | 4.5 W                                      |             | 5.0 W  |
| Isolation voltage                             | Determined by installed power supply and modules  |  |  |  |             |  |
| Slots   | 4   | 7  | 5  | 7  |             | 10   |
| Mounting method                               | Horizontal only   |  |  |  |             |  |
| Cabinet size (HxWxD), min                     | 50.8 x 50.8 x 20.3 cm<br>(20 x 20 x 8 in.)  | 50.8 x 60.9 x 20.3 cm<br>(20 x 24 x 8 in.) | 50.8 x 76.2 x 20.3 cm<br>(20 x 30 x 8 in.) | 50.8 x 60.9 x 20.3 cm<br>(20 x 24 x 8 in.) |             | 50.8 x 85.75 x 20.3 cm<br>(20 x 33.75 x 8 in.) |
| Weight, approx                                | 0.75 kg (1.7 lb)  | 1.1 kg (2.4 lb)                            | 1.45 kg (3.2 lb)                           | 1.09 kg (2.4 lb)                           |             | 1.91 kg (4.2 lb)                               |
| Location                                      | Panel   |  |  |  |             |  |
| Wire size                                     | Functional earth ground - 8.3 mm <sup>2</sup> (8 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater<br>Protective earth ground - 2.1 mm <sup>2</sup> (14 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater |  |  |  |             |  |
| North American temperature code               | T5  |  |  | T4A  | T4          |  |
| IEC temperature code                          | T5  |  | T4   |  |             |  |
| Enclosure type rating                         | None (open-style)   |  |  |  |             |  |

### Environmental Specifications - ControlLogix-XT Chassis

| Attribute  | 1756-A4LXT/B, 1756-A7LXT/B   | 1756-A5XT/B, 1756-A7XT/B     | 1756-A7XT/C, 1756-A10XT/C |
|--|--|------------------------------|---------------------------|
| Temperature, operating<br>IEC 60068-2-1 (Test Ad, Operating Cold),<br>IEC 60068-2-2 (Test Bd, Operating Dry Heat),<br>IEC 60068-2-14 (Test Nb, Operating Thermal Shock)  | -25...+60 °C (-13...+140 °F)   | -25...+70 °C (-13...+158 °F) |                           |
| Temperature, surrounding air   | 60 °C (140 °F)   | 70 °C (158 °F)               |                           |
| Temperature, nonoperating<br>IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold),<br>IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat),<br>IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock) | -40...+85 °C (-40...+185 °F)   |                              |                           |
| Relative humidity<br>IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)  | 5...95% noncondensing  |                              |                           |
| Vibration<br>IEC 60068-2-6 (Test Fc, Operating)  | 2 g @ 10...500 Hz  |                              |                           |
| Shock, operating<br>IEC 60068-2-27 (Test Ea, Unpackaged Shock)   | 30 g   |                              |                           |
| Shock, nonoperating<br>IEC 60068-2-27 (Test Ea, Unpackaged Shock)  | 50 g   |                              | 30 g                      |
| Emissions  | IEC 61000-6-4  |                              |                           |
| ESD immunity<br>IEC 61000-4-2  | 6 kV contact discharges<br>8 kV air discharges   |                              |                           |
| Radiated RF immunity<br>IEC 61000-4-3  | 10V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz<br>3V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |                              |                           |

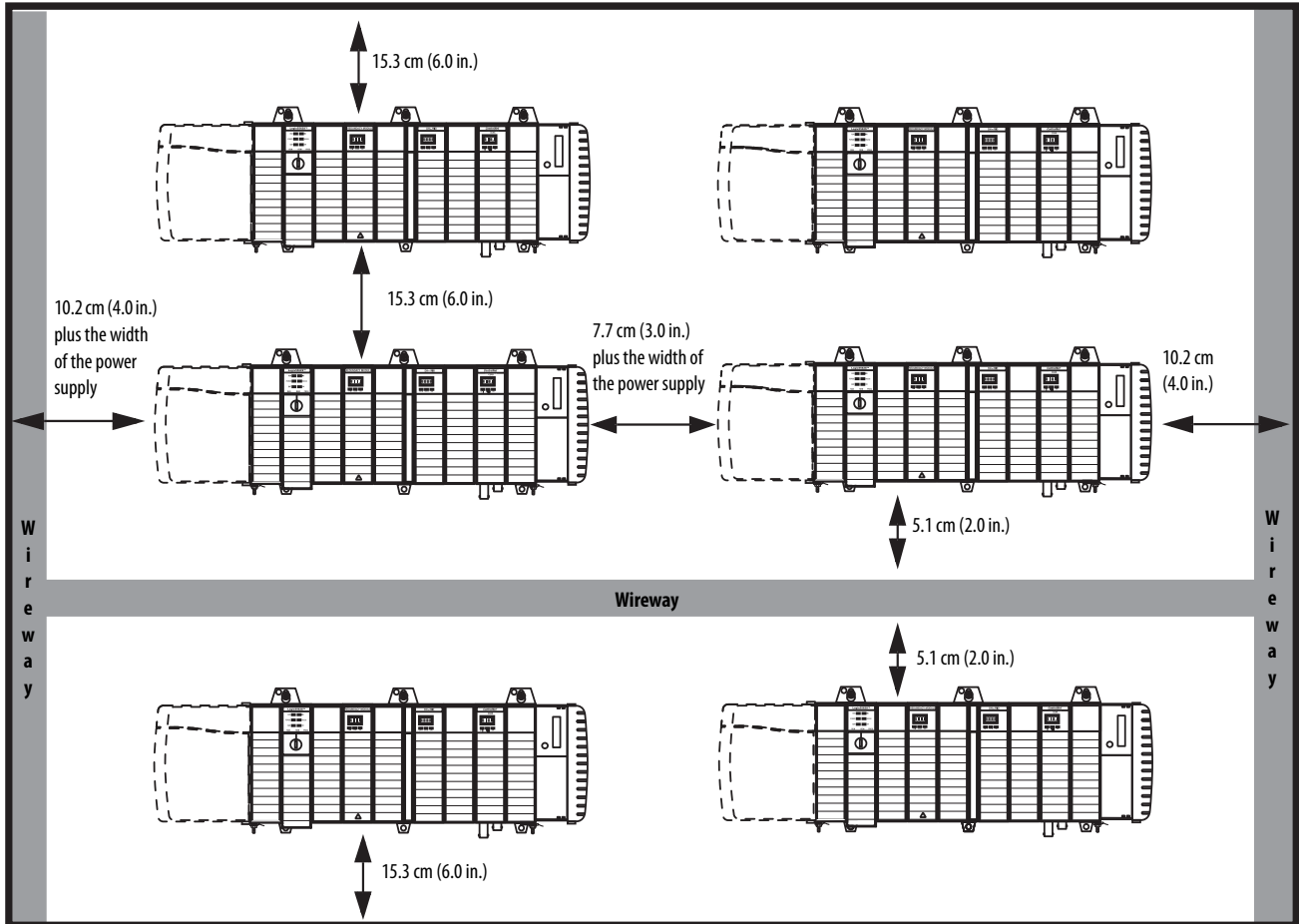
**Certifications - ControlLogix-XT Chassis**

| <b>Certification<sup>(1)</sup></b> | <b>1756-A4LXT/B, 1756-A7LXT/B</b>   | <b>1756-A5XT/B, 1756-A7XT/B, 1756-A7XT/C, 1756-A10XT/C</b>   |
|------------------------------------|---|--|
| c-UL-us                            | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584.<br>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 2004/108/EC EMC Directive, compliant with: <ul style="list-style-type: none"> <li>• EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>• EN 61000-6-2; Industrial Immunity</li> <li>• EN 61000-6-4; Industrial Emissions</li> <li>• EN 61131-2; Programmable Controllers (Clause 8, Zone A &amp; B)</li> </ul> |  |
| RCM                                | Australian Radiocommunications Act, compliant with:<br>EN 61000-6-4; Industrial Emissions   |  |
| Ex                                 | European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>• EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>• EN 60079-0; General Requirements</li> <li>• II 3 G Ex nA IICT4 Gc X</li> <li>• DEMKO13ATEX1325026X</li> </ul>   |  |
| IECEx                              | IECEx System, compliant with: <ul style="list-style-type: none"> <li>• IEC 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>• IEC 60079-0; General Requirements</li> <li>• II 3 G Ex nA IICT5 Gc</li> <li>• IECExUL14.0008X</li> </ul>  | IECEx System, compliant with: <ul style="list-style-type: none"> <li>• IEC 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>• IEC 60079-0; General Requirements</li> <li>• II 3 G Ex nA IICT4 Gc</li> <li>• IECExUL14.0008X</li> </ul> |
| KC                                 | Korean Registration of Broadcasting and Communications Equipment, compliant with:<br>Article 58-2 of Radio Waves Act, Clause 3  |  |
| EAC                                | Russian Customs Union TR CU 020/2011 EMC Technical Regulation<br>Russian Customs Union TR CU 004/2011 LV Technical Regulation   |  |

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

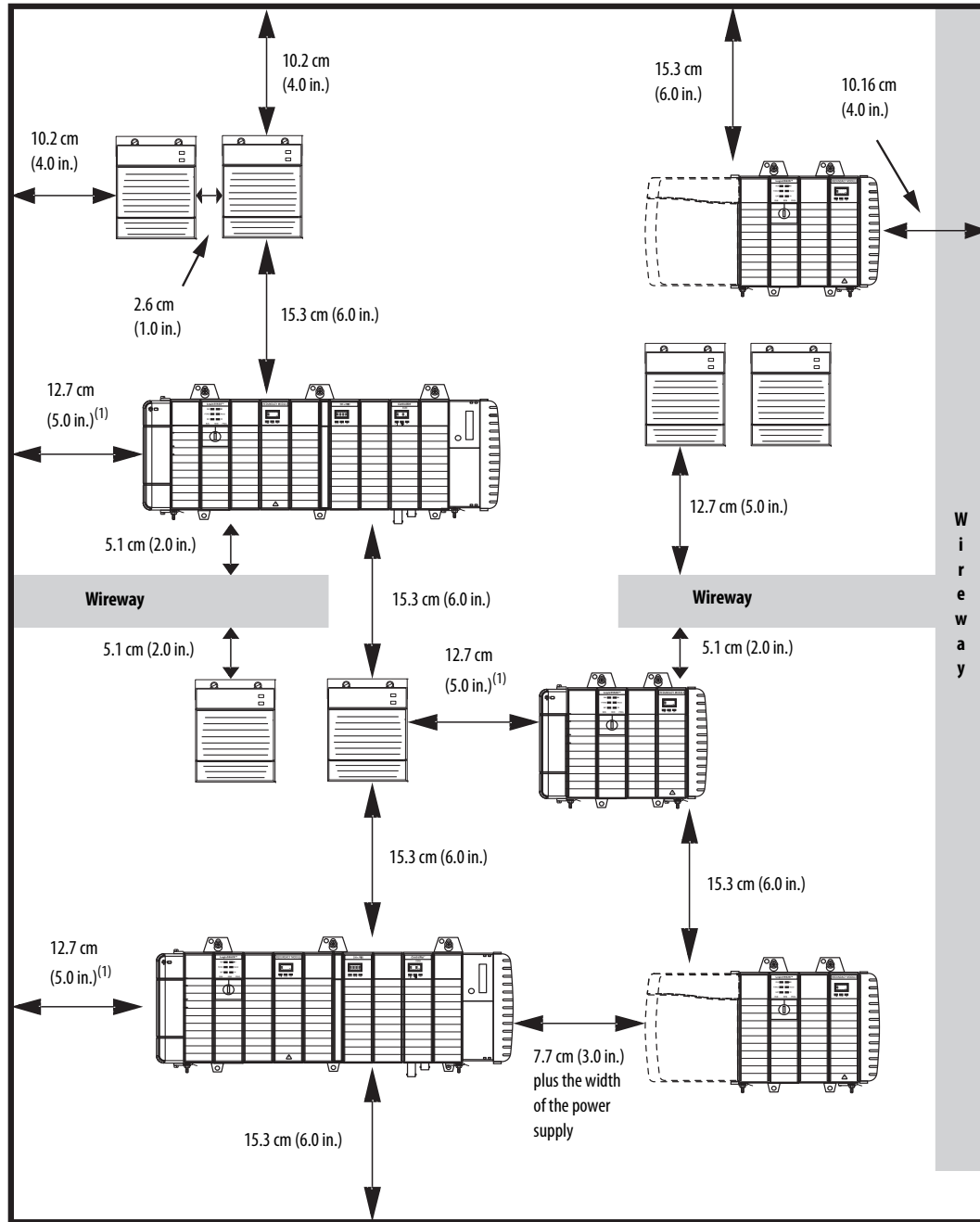
## Spacing Requirements

When you mount a ControlLogix chassis with a standard power supply in an enclosure, follow these spacing requirements (series C chassis depicted).



**IMPORTANT** The 1756-CPR2 cable has a bend radius of 12.7 cm (5.0 in.). The chassis must have a minimum clearance of 12.7 cm (5.0 in.) on the left side to route and connect the 1756-CPR2 cable. The redundant power supplies must have a minimum clearance of 12.7 cm (5.0 in.) below the supply to route and connect the 1756-CPR2 cable.

When you mount a ControlLogix chassis with a redundant power supply and a chassis adapter in an enclosure, follow these spacing requirements (series C chassis depicted).



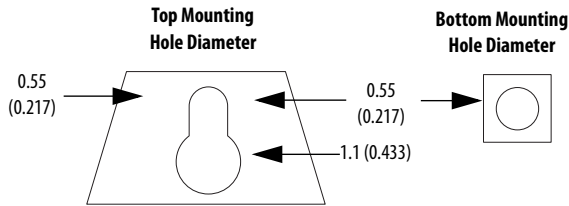
Series C chassis offer these features:

- Improved slot guidelines
- Improved ventilation
- Stronger mounting tabs
- Additional hole in mounting tab
- Additional ground screw

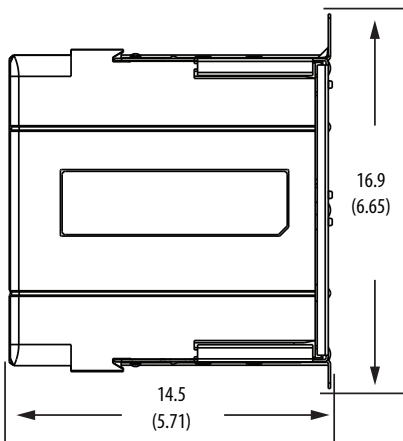
## Series B ControlLogix Chassis with Standard and Slim Power Supply Mounting Dimensions

Dimensions are in cm (in.).

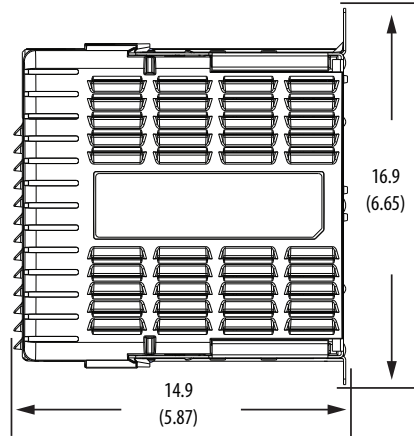
### Chassis Common Dimensions



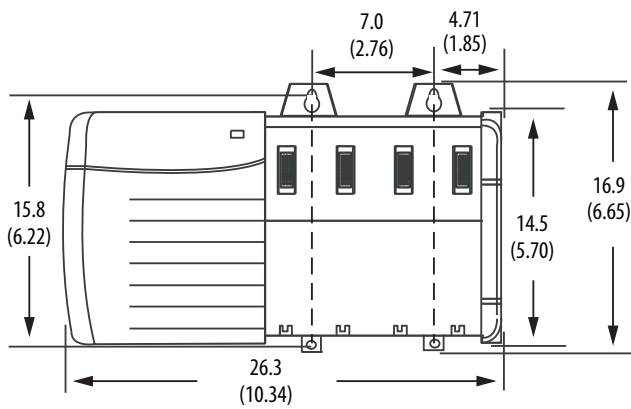
Right-side View of All Standard Chassis



Right-side View of All ControlLogix-XT Chassis

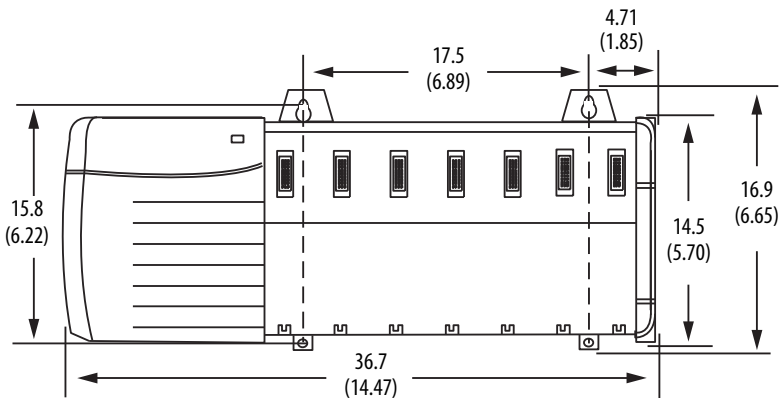


### 1756-A4/B Chassis and Power Supply

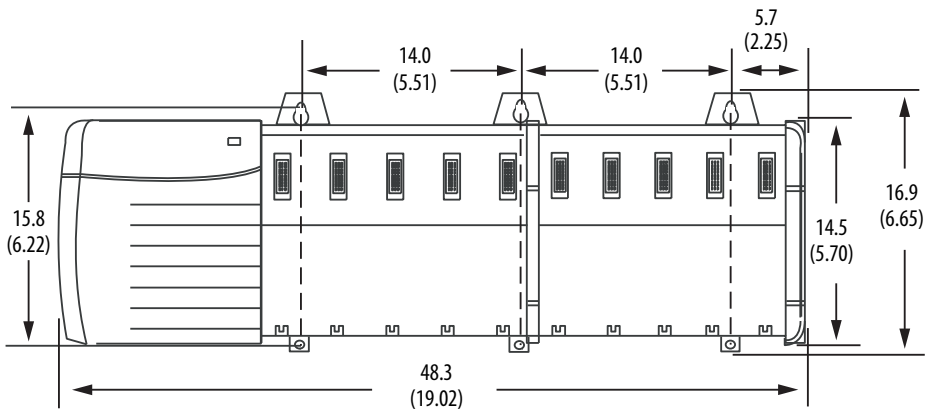




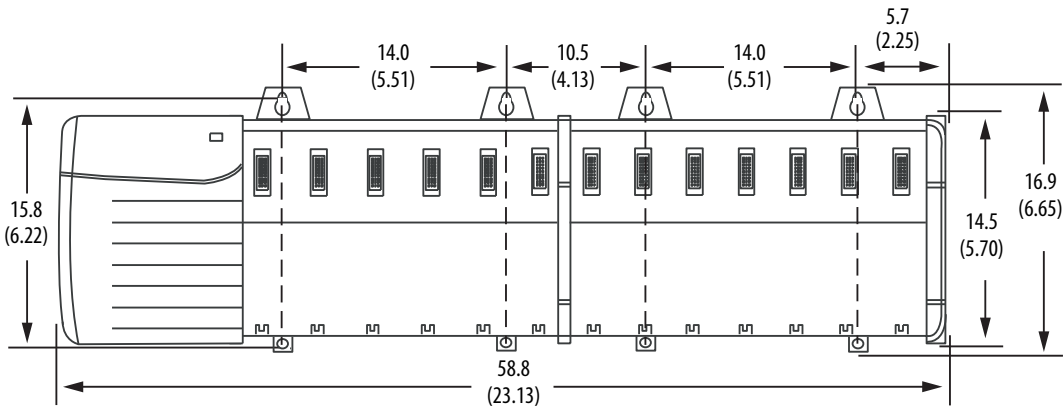
**1756-A7/B Chassis and Power Supply**



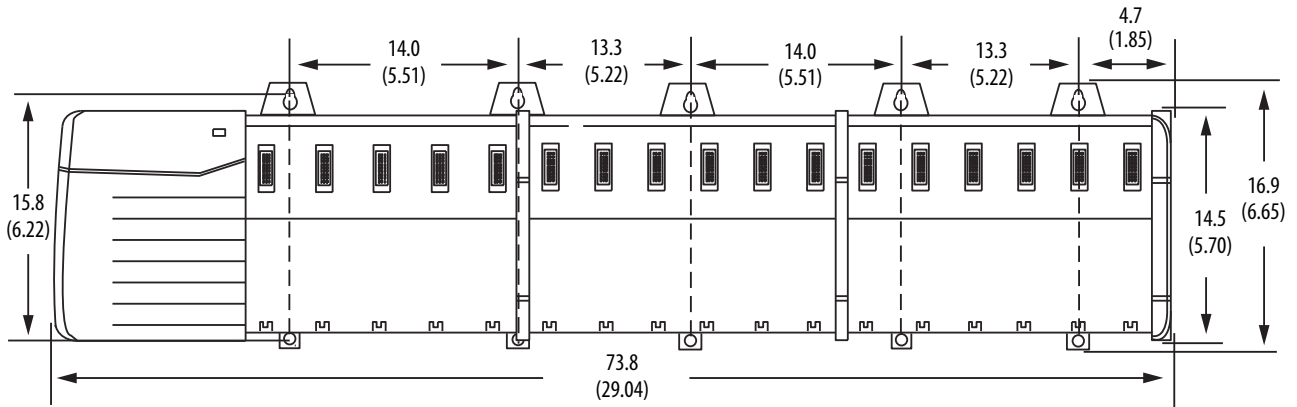
**1756-A10/B Chassis and Power Supply**



**1756-A13/B Chassis and Power Supply**



**1756-A17/B Chassis and Power Supply**



**1756-A4LXT/B Chassis and Power Supply**

