

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

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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/en/e-tools/drawings.html>.



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.

Table 1 - 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 (20 x 20 x 8 in.)	50.8 x 60.9 x 20.3 cm (20 x 24 x 8 in.)	50.8 x 76.2 x 20.3 cm (20 x 30 x 8 in.)	60.9 x 76.2 x 20.3 cm (24 x 30 x 8 in.)	76.2 x 91.4 x 20.3 cm (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 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				
IEC temperature code	T4	T5			
Enclosure type rating	None (open-style)				

Table 2 - 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 (20 x 20 x 8 in.)	50.8 x 60.9 x 20.3 cm (20 x 24 x 8 in.)	50.8 x 76.2 x 20.3 cm (20 x 30 x 8 in.)	60.9 x 76.2 x 20.3 cm (24 x 30 x 8 in.)	76.2 x 91.4 x 20.3 cm (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 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	T4				
IEC temperature code	T4				
Enclosure type rating	None (open-style)				

Table 3 - 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 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	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	
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	

Table 4 - Certifications - ControlLogix Standard Chassis

Certification ⁽¹⁾	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. 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 LR54689C. CSA Certified Process Control Equipment for Class I, Division 2 Group A,B,C,D Hazardous Locations. See CSA File LR69960C.		CSA Certified Process Control Equipment. See CSA File LR054689. CSA Certified Process Control Equipment for Class I, Division 2 Group A,B,C,D Hazardous Locations. See CSA File LR069960.
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"> 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: <ul style="list-style-type: none"> EN 60079-15; Potentially Explosive Atmospheres, Protection "n" EN 60079-0; General Requirements II 3 G Ex nA IIC T4 Gc X 	European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> EN 60079-15; Potentially Explosive Atmospheres, Protection "n" EN 60079-0; General Requirements II 3 G Ex nA IIC T5 Gc X 	European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> EN 60079-15; Potentially Explosive Atmospheres, Protection "n" EN 60079-0; General Requirements II 3 G Ex nA IIC T4 Gc DEMKO13ATEX1325026X

Table 4 - Certifications - ControlLogix Standard Chassis

Certification ⁽¹⁾	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
IECEx	N/A		IECEx System, compliant with: <ul style="list-style-type: none"> IEC 60079-15; Potentially Explosive Atmospheres, Protection "n" IEC 60079-0; General Requirements II 3 G Ex nA IIC T4 Gc IECExUL14.0008X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3		
EAC	Russian Customs Union TR CU 020/2011 EMC Technical Regulation 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.

Table 5 - Technical Specifications - ControlLogix-XT Chassis

Attribute	1756-A4LXT/B	1756-A7LXT/B	1756-A5XT/B	1756-A7XT/B	1756-A7XT/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	10 A/6 A
Backplane current, chassis/slot max @ 24V DC	2 A/2 A			2.8 A/ 2.8A	2 A/2 A
Power dissipation, max	3.7 W	4.1 W	4.4 W		
Isolation voltage	Determined by installed power supply and modules				
Slots	4	7	5	7	
Mounting method	Horizontal only				
Cabinet size (HxWxD), min	50.8 x 50.8 x 20.3 cm (20 x 20 x 8 in.)	50.8 x 60.9 x 20.3 cm (20 x 24 x 8 in.)	50.8 x 76.2 x 20.3 cm (20 x 30 x 8 in.)	50.8 x 60.9 x 20.3 cm (20 x 24 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)	
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			T4A	T4
IEC temperature code	T5		T4		
Enclosure type rating	None (open-style)				

Table 6 - Environmental Specifications - ControlLogix-XT Chassis

Attribute	1756-A4LXT/B, 1756-A7LXT/B	1756-A5XT/B, 1756-A7XT/B	1756-A7XT/C
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...60 °C (-13...140 °F)	-25...70 °C (-13...158 °F)	
Temperature, surrounding air	60 °C (140 °F)	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		
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		

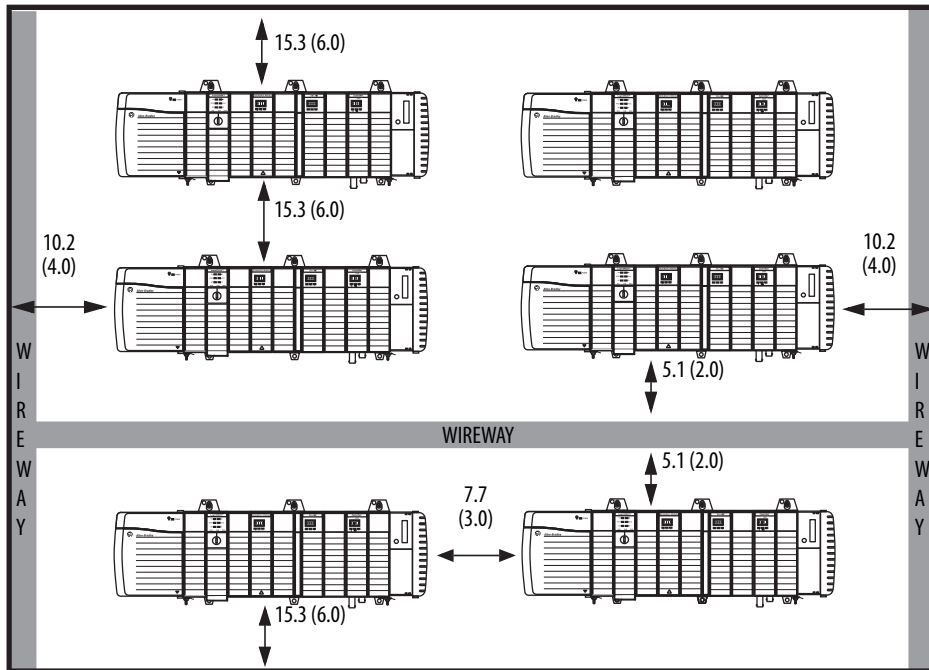
Table 7 - Certifications - ControlLogix-XT Chassis

Certification ⁽¹⁾	1756-A5XT/B, 1756-A7XT/B, 1756-A7XT/C	1756-A4LXT/B, 1756-A7LXT/B
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 2004/108/EC EMC Directive, compliant with: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> EN 60079-15; Potentially Explosive Atmospheres, Protection "n" EN 60079-0; General Requirements II 3 G Ex nA IIC T4 GcX DEMK013ATEX1325026X 	
IECEx	IECEx System, compliant with: <ul style="list-style-type: none"> IEC 60079-15; Potentially Explosive Atmospheres, Protection "n" IEC 60079-0; General Requirements II 3 G Ex nA IIC T4 Gc IECExUL14.0008X 	IECEx System, compliant with: <ul style="list-style-type: none"> IEC 60079-15; Potentially Explosive Atmospheres, Protection "n" IEC 60079-0; General Requirements II 3 G Ex nA IIC T5 Gc IECExUL14.0008X
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3	
EAC	Russian Customs Union TR CU 020/2011 EMC Technical Regulation 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).



Dimensions are in cm (in.).

The 10.2 (4.0) measurement to the side of the enclosure can include the wireway.

ControlLogix Chassis with Standard Power Supplies Mounting Dimensions (Series B)

Dimensions are in cm (in.).

Figure 1 - Chassis Common Dimensions

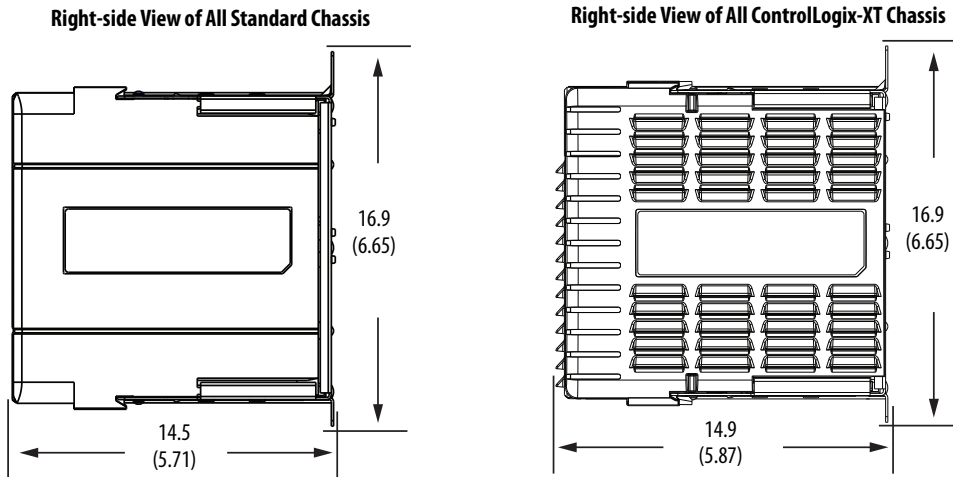
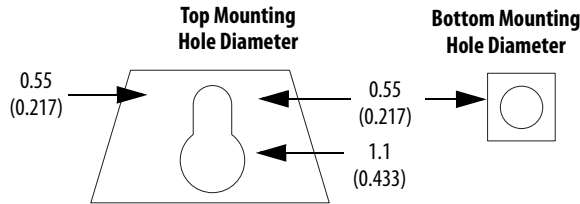


Figure 2 - 1756-A4/B Chassis and Power Supply

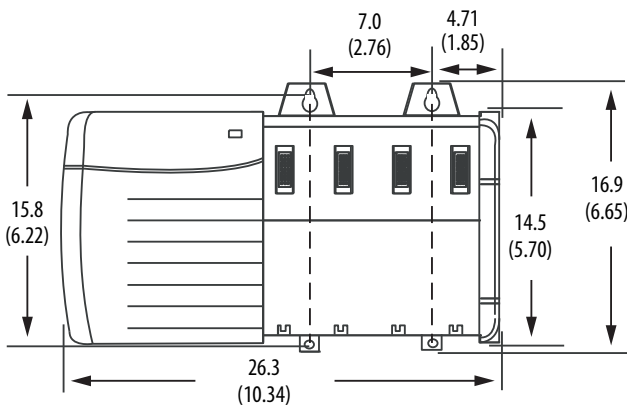


Figure 3 - 1756-A7/B Chassis and Power Supply

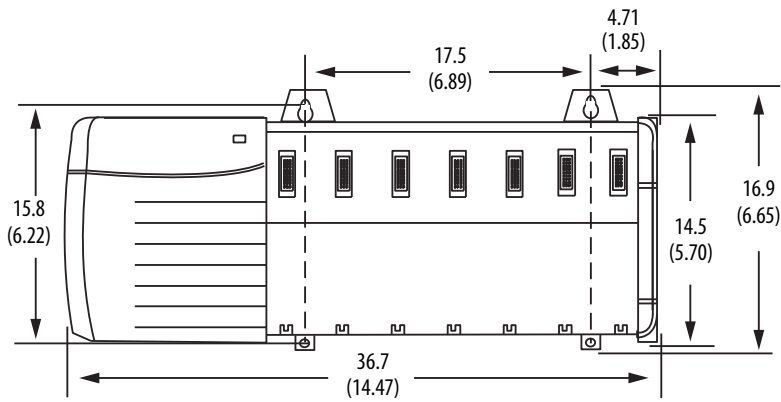


Figure 4 - 1756-A10/B Chassis and Power Supply

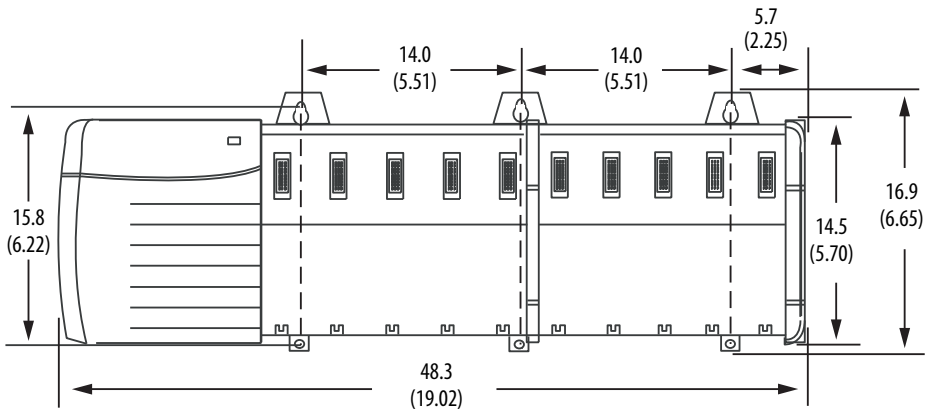


Figure 5 - 1756-A13/B Chassis and Power Supply

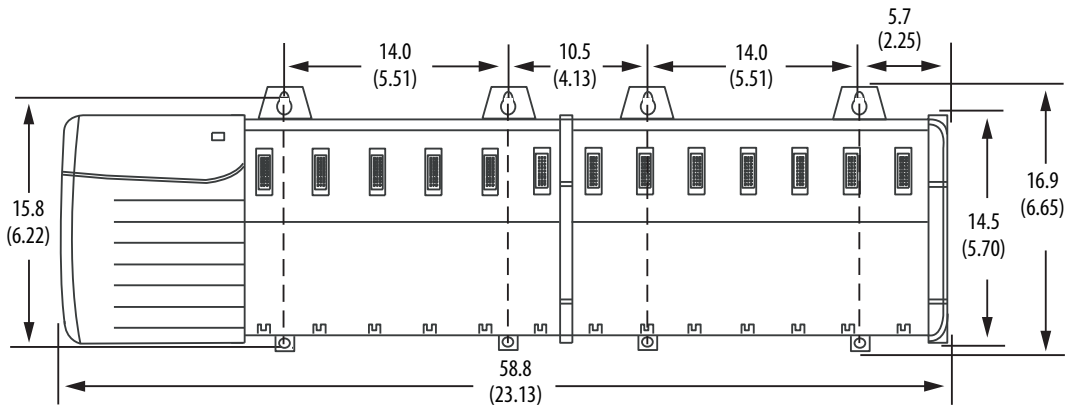


Figure 6 - 1756-A17/B Chassis and Power Supply

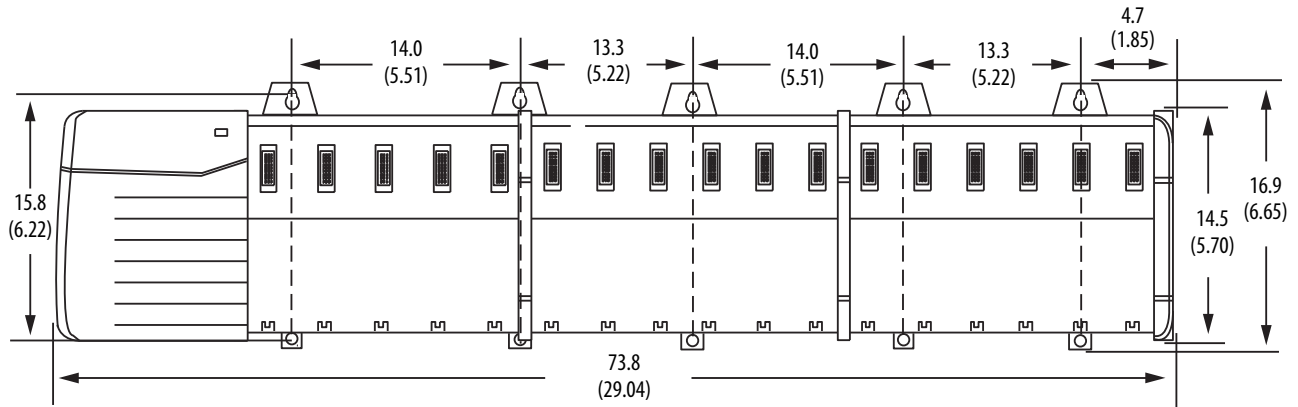


Figure 7 - 1756-A4LXT/B Chassis and Power Supply

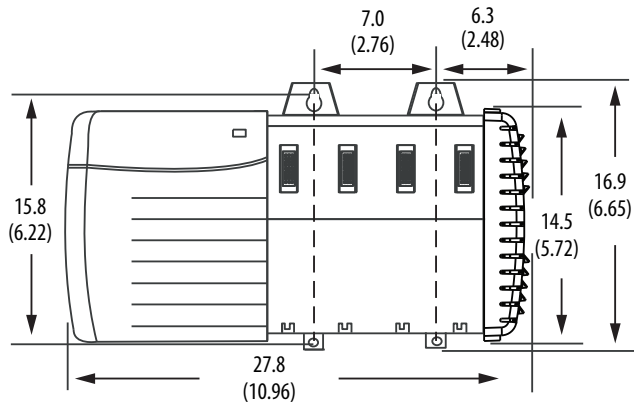


Figure 8 - 1756-A5XT/B Chassis and Power Supply

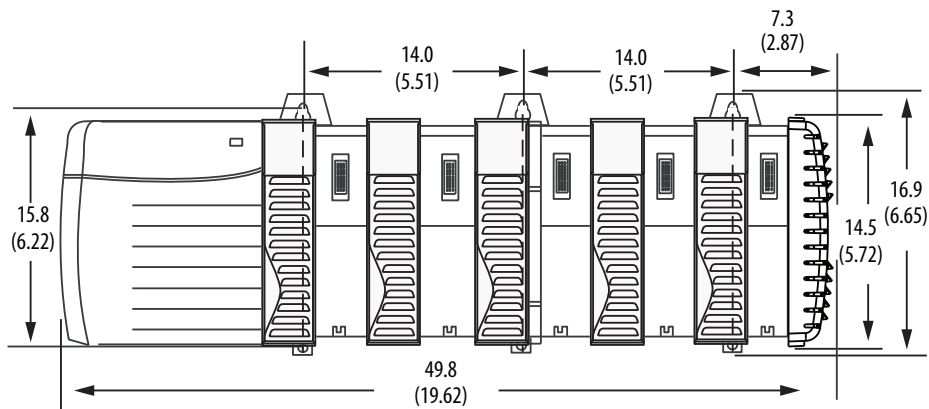


Figure 9 - 1756-A7LXT/B Chassis and Power Supply

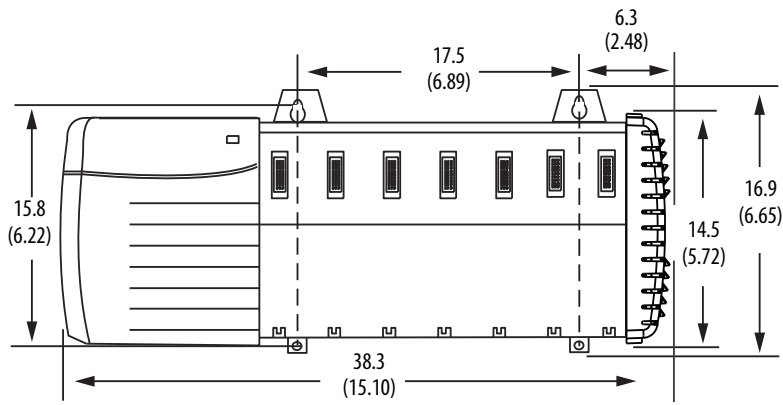
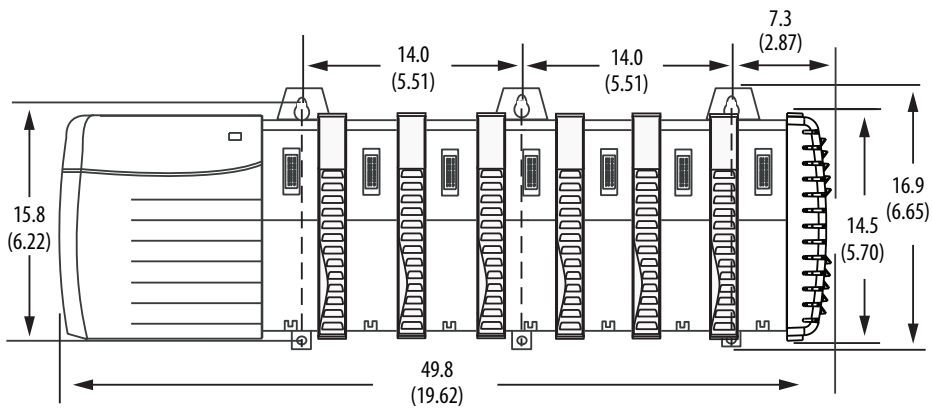


Figure 10 - 1756-A7XT/B Chassis and Power Supply



ControlLogix Chassis with Standard Power Supplies Mounting Dimensions (Series C)

Dimensions are in cm (in.).

Figure 11 - Chassis Common Dimensions

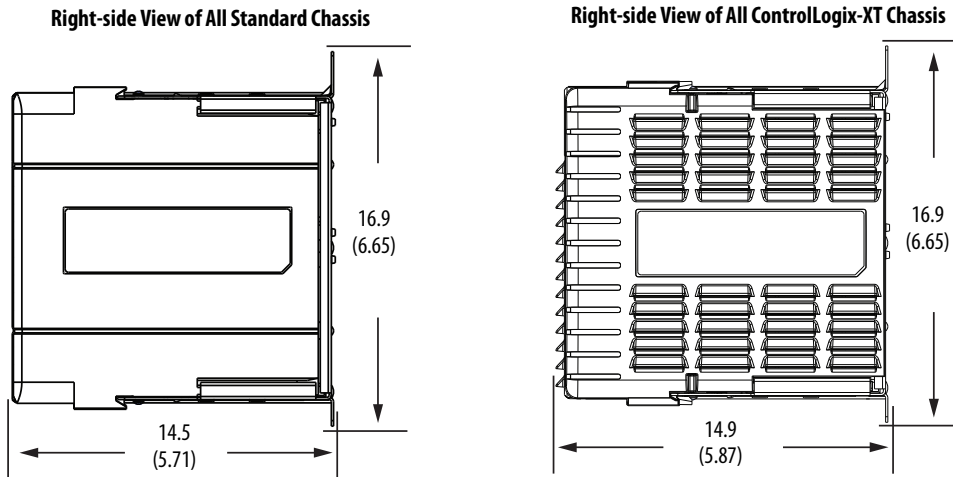
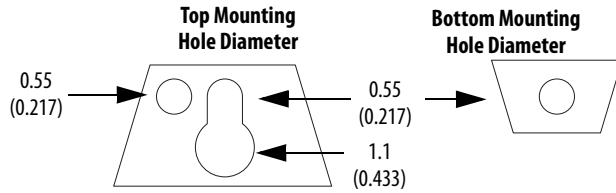


Figure 12 - 1756-A4/C Chassis and Power Supply

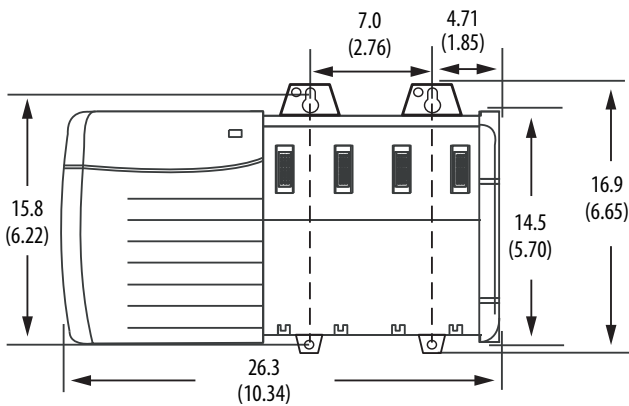


Figure 13 - 1756-A7/C Chassis and Power Supply

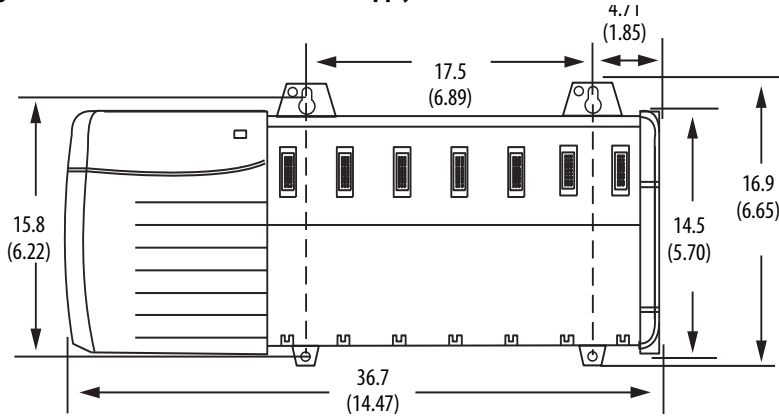


Figure 14 - 1756-A10/C Chassis and Power Supply

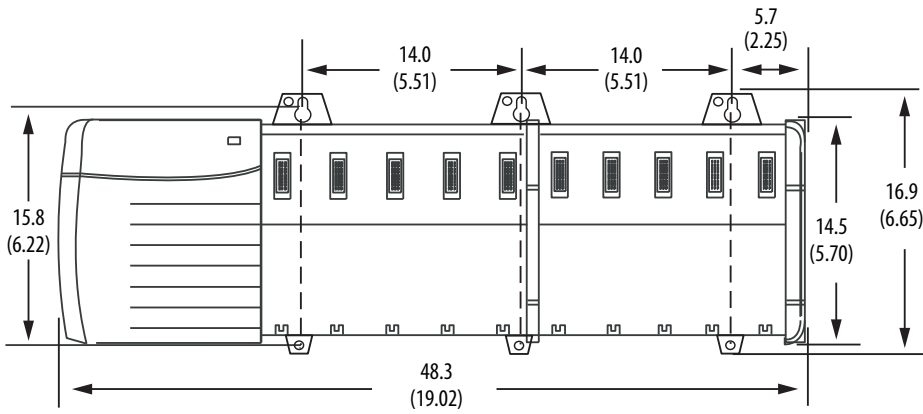


Figure 15 - 1756-A13/C Chassis and Power Supply

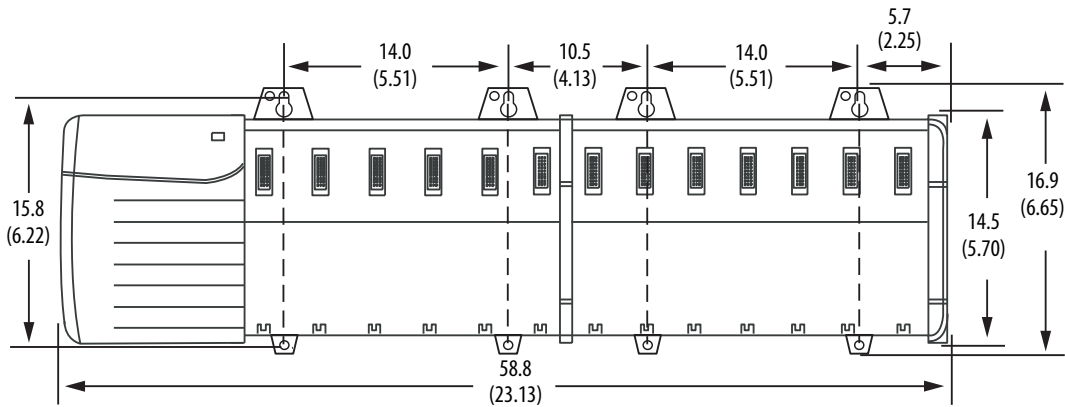


Figure 16 - 1756-A17/C Chassis and Power Supply

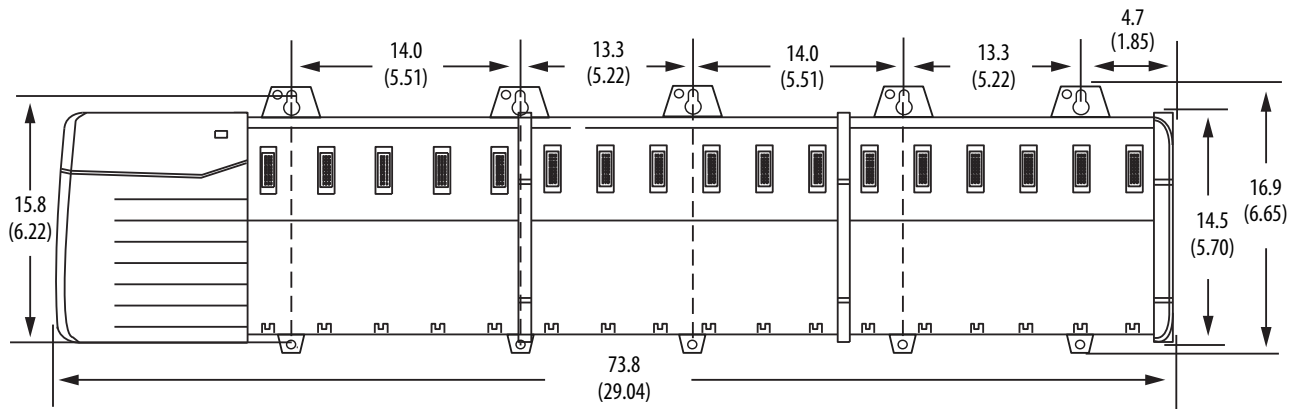
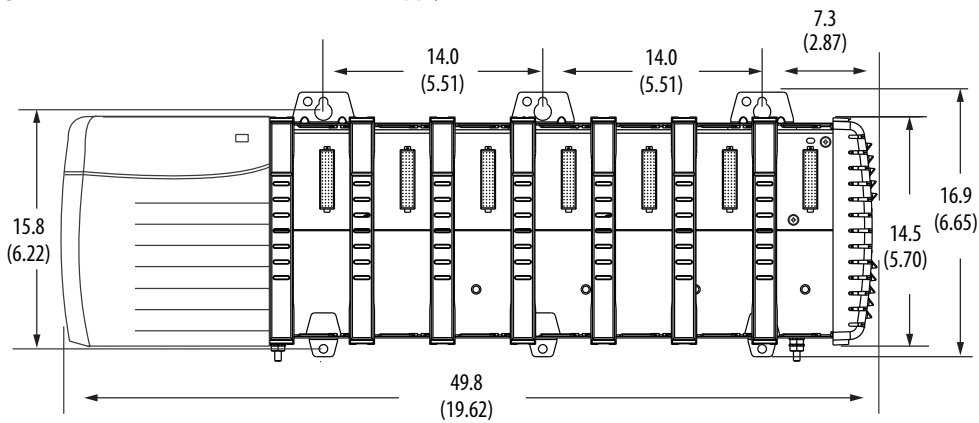


Figure 17 - 1756-A7XT/C Chassis and Power Supply



ControlLogix Chassis with Redundant Power Supplies Mounting Dimensions (Series B)

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.

Dimensions are in cm (in.).

Figure 18 - Redundant Power Supplies

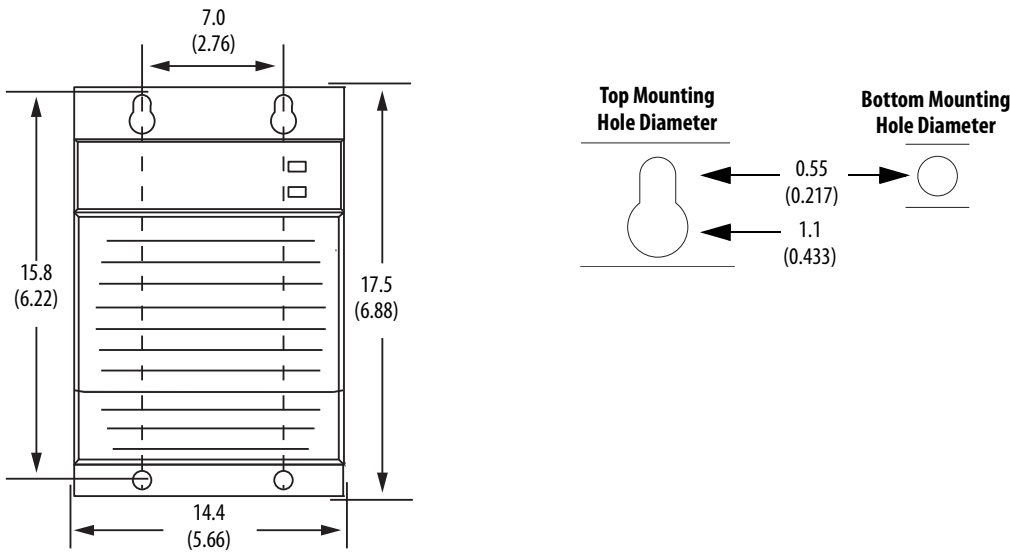


Figure 19 - Chassis Common Dimensions

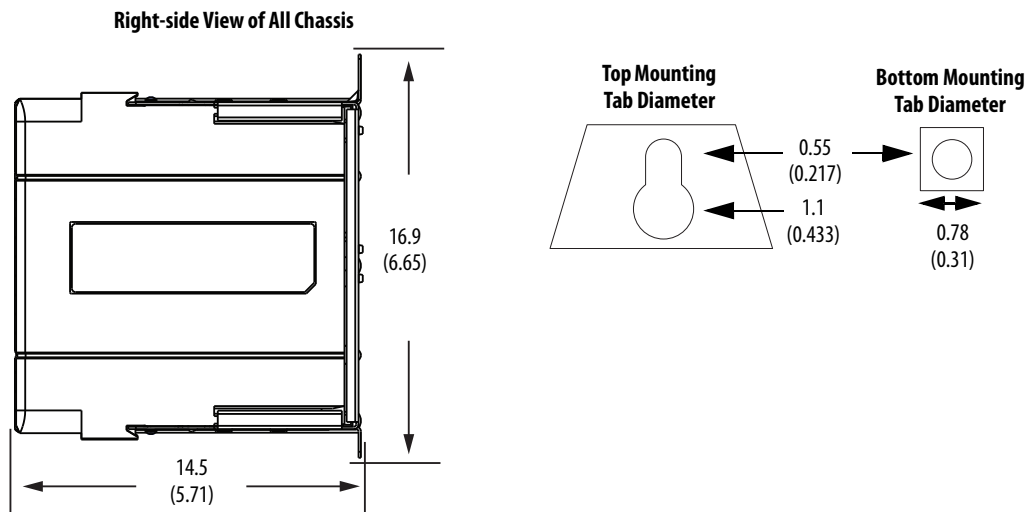


Figure 20 - 1756-A4/B Chassis and Chassis Adapter Module

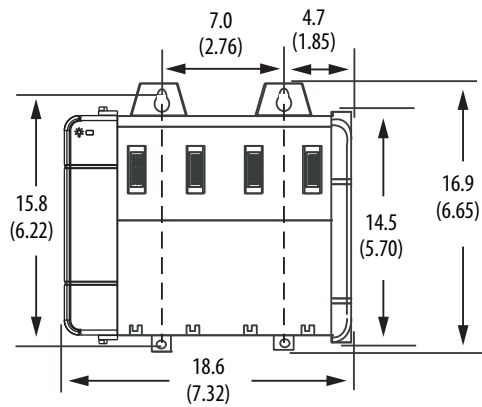


Figure 21 - 1756-A7/B Chassis and Chassis Adapter Module

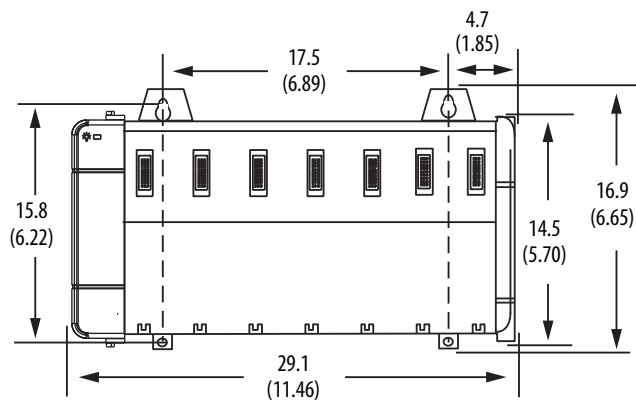


Figure 22 - 1756-A10/B Chassis and Chassis Adapter Module

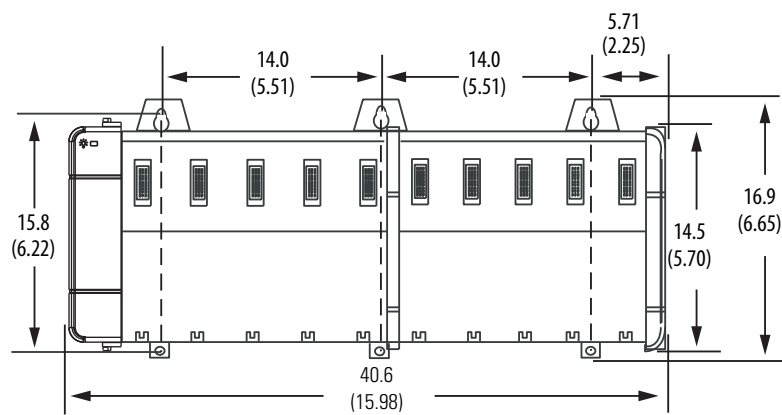


Figure 23 - 1756-A13/B Chassis and Chassis Adapter Module

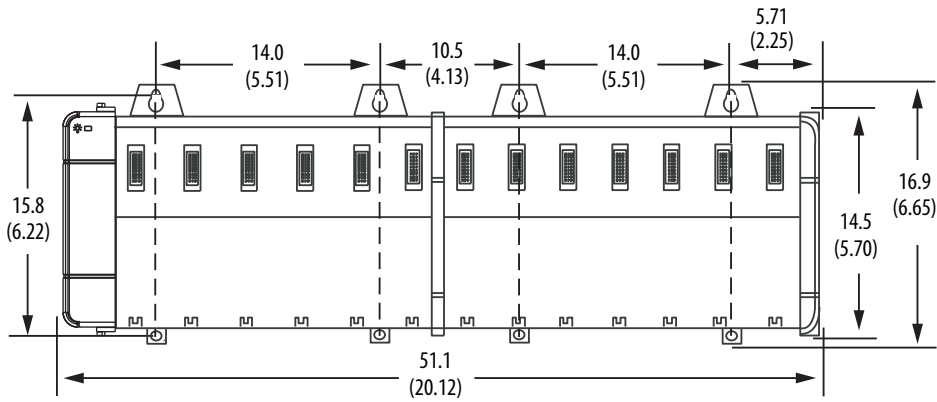


Figure 24 - 1756-A17/B Chassis and Chassis Adapter Module.

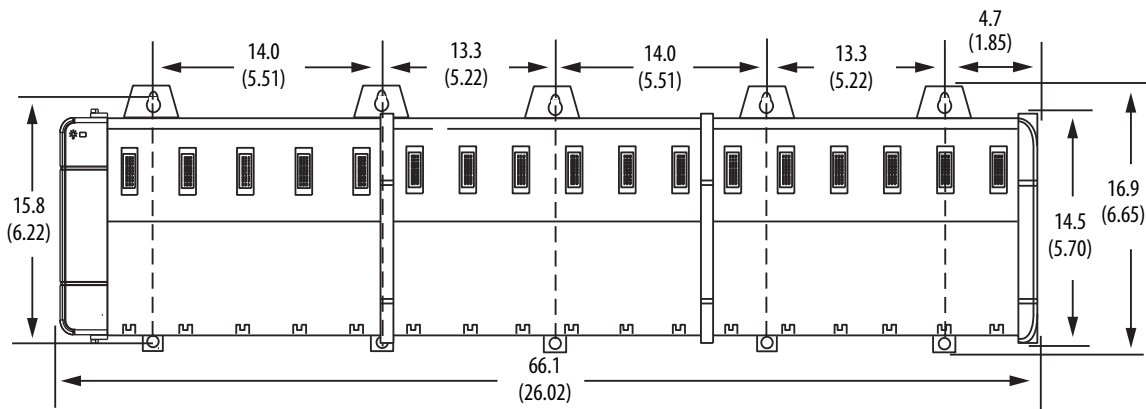
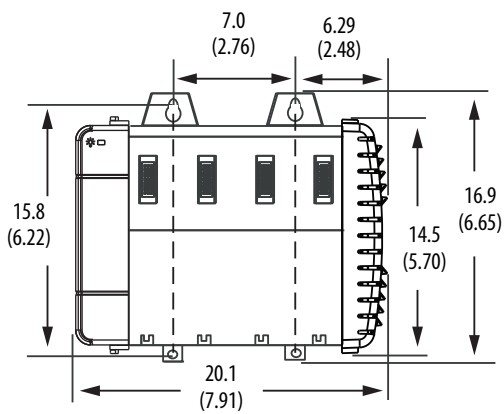
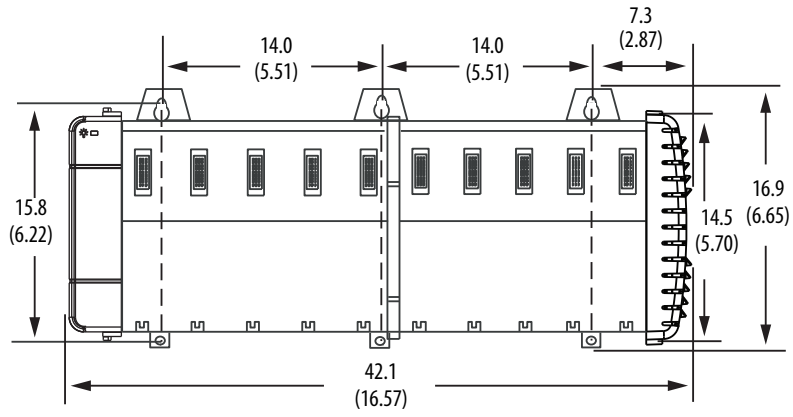


Figure 25 - 1756-A4LXT/B Chassis and Chassis Adapter



■ **Figure 26 - 1756-A5XT/A7XT/B Chassis and Chassis Adapter**



ControlLogix Chassis with Redundant Power Supplies Mounting Dimensions (Series C)

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.

Figure 27 - Redundant Power Supplies

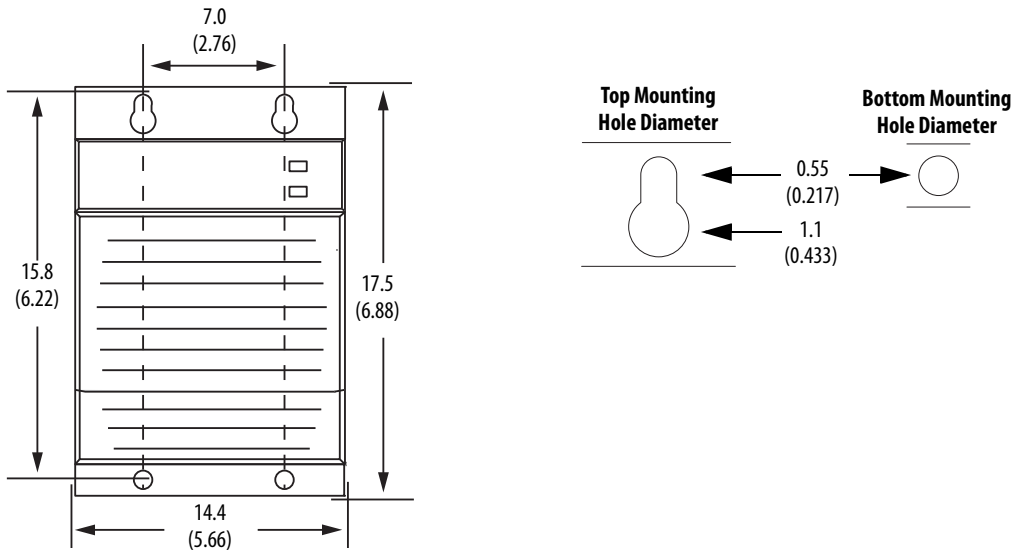


Figure 28 - Chassis Common Dimensions
Right-side View of All Chassis

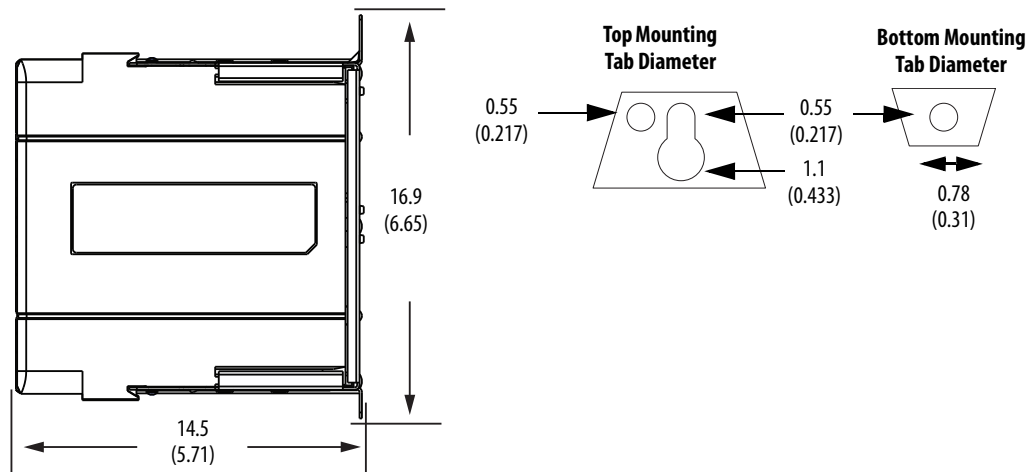
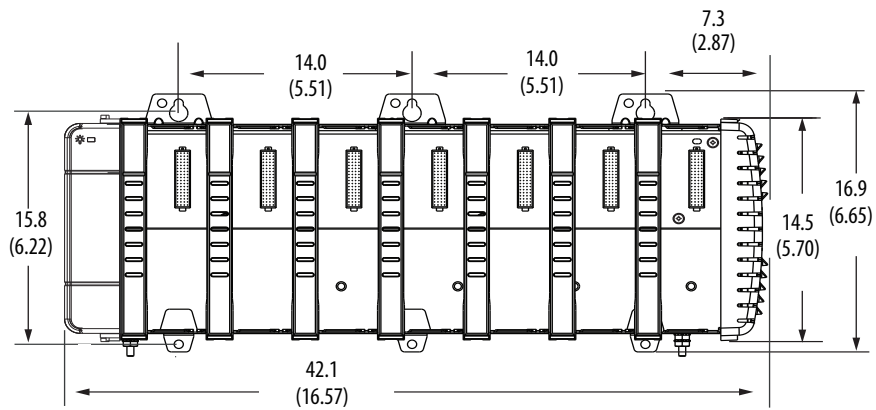


Figure 29 - 1756-A7XT/C Chassis and Chassis Adapter

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 chassis

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
ControlLogix Selection Guide, publication 1756-SG001	Provides an overview of the ControlLogix system and its products.
ControlLogix Power Supplies Specifications Technical Data, publication 1756-TD005	Provides technical specifications for ControlLogix power supplies.
ControlLogix System User Manual, publication 1756-UM001	Provides information on how to install, configure, program, and use ControlLogix controllers.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation® industrial system.
Product Certifications website, http://www.ab.com	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Allen-Bradley® distributor or Rockwell Automation sales representative.

Notes:

Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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