



1756 ControlLogix Power Supplies Specifications

Standard Power Supplies	1756-PA72, 1756-PA72K, 1756-PA75, 1756-PA75K, 1756-PB72, 1756-PB72K, 1756-PB75, 1756-PB75K, 1756-PC75, 1756-PH75
Standard Slim Power Supplies	1756-PA50, 1756-PA50K, 1756-PB50, 1756-PB50K
ControlLogix-XT Power Supplies	1756-PAXT, 1756-PBXT
ControlLogix-XT Slim Power Supplies	1756-PA30XT, 1756-PB30XT
Redundant Power Supplies	1756-PA75R, 1756-PA75RK, 1756-PB75R, 1756-PB75RK
Redundant Power Supplies Chassis Adapter	1756-PSCA2, 1756-PSCA2K
ControlLogix-XT Redundant Power Supplies	1756-PAXTR, 1756-PBXTTR
ControlLogix-XT Redundant Power Supplies Chassis Adapter	1756-PSCA2XT
Redundant Power Supply Power Cable	1756-CPR2, 1756-CPR2D, 1756-CPR2U

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Summary of Changes

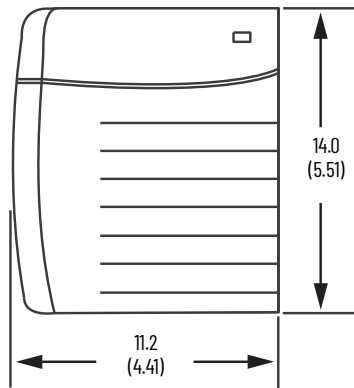
This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Updated or Added Operating Temperature Environmental Specifications	Throughout
Updated UKCA, Ex, UKEX, IECEx, and CCC Certification Information	Throughout

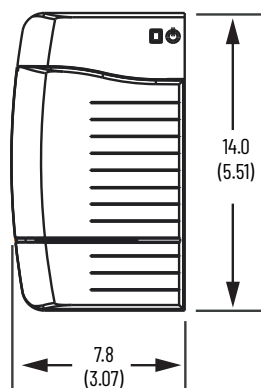
Standard AC Power Supplies

Mounting Dimensions

1756-PA72, 1756-PA72K, 1756-PA75, 1756-PA72K



1756-PA50, 1756-PA50K



Dimensions are in cm (in.).

Technical Specifications - Standard AC Power Supplies

Attribute	1756-PA50, 1756-PA50K	1756-PA72/C, 1756-PA72K/C	1756-PA75/B, 1756-PA75K/B
Input voltage range ⁽¹⁾	85...265V AC		
Input voltage, nom	120V/240V AC		
Input frequency range	47...63 Hz		
Input power, max	81 W/91VA @ 50 °C (122 °F) 68 W/77VA @ 60 °C (140 °F)	100VA/100 W	
Output power, max	60 W @ 0...50 °C (32...122 °F) ⁽³⁾ 50 W @ 0...60 °C (32...140 °F) ⁽⁴⁾	75 W @ 0...60 °C (32...140 °F) ⁽⁶⁾	
Inrush current, max	20 A		
Hold up time ⁽²⁾	4 cycles @85...265V AC, 50/60 Hz, 60 W 5 cycles @85...265V AC, 50/60 Hz, 50 W	5 cycles @ 85V AC, 50/60 Hz 6 cycles @ 120V AC, 50/60 Hz 6 cycles @ 200V AC, 50/60 Hz 6 cycles @ 240V AC, 50/60 Hz	2 cycles @ 85V AC, 60 Hz 6 cycles @ 120V AC, 60 Hz 20 cycles @ 220V AC, 60 Hz
Current capacity @ 1.2V DC	1.5 A		
Current capacity @ 3.3V DC	2 A	4 A	
Current capacity @ 5.1V DC	8 A @ 50 °C (122 °F) 6 A @ 60 °C (140 °F)	10 A	13 A
Current capacity @ 24V DC	2.5 A @ 50 °C (122 °F) 2.0 A @ 60 °C (140 °F)	2.8 A	
Isolation voltage	250V (continuous), Reinforced Insulation Type, Power Input to Backplane Type tested @ 3150V DC for 60 s	250V (continuous), Reinforced Insulation Type, Power Input to Backplane Type tested at 3500V DC for 60 s	
Weight, approx	0.77 kg (1.7 lb)	0.95 kg (2.10 lb)	
Dimensions (HxWxD), approx	14.0 x 7.8 x 14.5 cm (5.51 x 3.07 x 5.71 in.)	14.0 x 11.2 x 14.5 cm (5.51 x 4.41 x 5.71 in.)	
Module location	Left side of 1756 chassis		
Chassis	1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17		
Chassis compatibility	Series A Series B Series C		Series B Series C
Wire size	2.5 mm ² (14 AWG) solid or stranded copper wire that is rated at 90 °C (194 °F), or greater, 1.2 mm (3/64 in.) insulation max		
Wire category	1 - on power ports ⁽⁵⁾		

Technical Specifications - Standard AC Power Supplies (Continued)

Attribute	1756-PA50, 1756-PA50K	1756-PA72/C, 1756-PA72K/C	1756-PA75/B, 1756-PA75K/B
Conductor screw torque	0.565 N•m (5 lb•in)		
North American temperature code	T4		
Enclosure type rating	None (open-style)		

- (1) UL certification for 120/240V AC, 50/60 Hz nominal. Rockwell Automation specified 85...265V AC, 47...63 Hz.
 (2) The hold up time is the time between input voltage removal and DC power failure.
 (3) The combination of all output power (5.1V backplane, 24V backplane, 3.3V backplane, and 1.2V backplane) can't exceed 60 W @ 50 °C (122 °F) maximum temperature.
 (4) The combination of all output power (5.1V backplane, 24V backplane, 3.3V backplane, and 1.2V backplane) can't exceed 50 W @ 60 °C (140 °F) maximum temperature.
 (5) 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](#).
 (6) The combination of all output power (5.1V backplane, 24V backplane, 3.3V backplane, and 1.2V backplane) can't exceed 75 W.

Environmental Specifications - Standard AC Power Supplies

Attribute	1756-PA50, 1756-PA50K	1756-PA72/C, 1756-PA72K/C, 1756-PA75/B, 1756-PA75K/B
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, surrounding air, max	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 ⁽¹⁾	
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	
EFT/B immunity IEC 61000-4-4	±4 kV at 5 kHz on power ports	
Surge transient immunity IEC 61000-4-5	±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports	
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine wave 80% AM from 150 kHz...80 MHz	
Voltage variation IEC 61000-4-11	30% dips for 1 period at 0° and 180° on AC supply ports 60% dips for 5 and 50 periods on AC supply ports ±10% fluctuations for 15 min on AC supply ports >95% interruptions for 250 periods on AC supply ports	
Damped oscillatory wave immunity IEC 61000-4-18	±2.5 kV line-line (DM) and ±2.5 kV line-earth (CM) on power ports	-

- (1) Series C chassis have a maximum nonoperating shock value of 30 g. If you select a Series C chassis for use with your power supply, you're limited to a maximum nonoperating shock value of 30 g.

Certifications - Standard AC Power Supplies

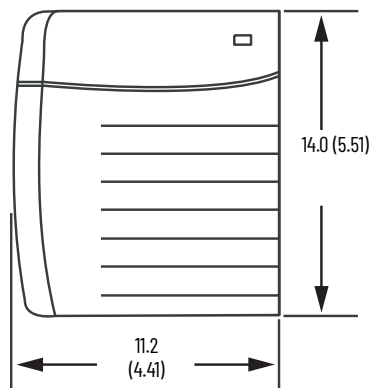
Certification ⁽¹⁾	1756-PA50, 1756-PA50K	1756-PA72/C, 1756-PA72K/C	1756-PA75/B, 1756-PA75K/B
UL	-	UL Listed Industrial Control Equipment. See UL File E65584.	
c-UL-us	UL Listed Industrial Control Equipment, which is certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, which are certified for U.S. and Canada. See UL File E194810.	-	
UKCA	In conformity with the following UK Statutory Instruments and their amendments: • 2016 No. 1091, Electromagnetic Compatibility Regulations • 2016 No. 1101, Electrical Equipment (Safety) 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		
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.	
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations		
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 2014/35/EU LVD, compliant with: • EN 61010-2-201; Control Equipment Safety Requirements	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 2014/35/EU LVD, compliant with: • EN 61131-2; Programmable Controllers (Clause 11)	
RCM	Australian Radiocommunications Act, compliant with: • EN 61000-6-4; Industrial Emissions		
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		
CCC	CCC 2020122309111830, 2020122309111998, 2020122309113868 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		

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

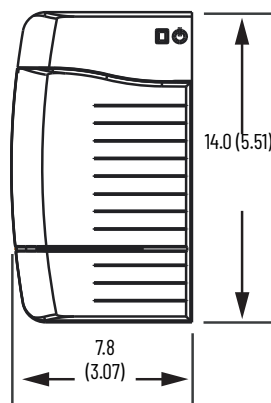
Standard DC Power Supplies

Mounting Dimensions

1756-PB72, 1756-PB72K, 1756-PB75,
1756-PB75K, 1756-PC75, 1756-PH75



1756-PB50, 1756-PB50K



Dimensions are in cm (in.).

Technical Specifications - Standard DC Power Supplies

Attribute	1756-PB50, 1756-PB50K	1756-PB72/C, 1756-PB72K/C	1756-PB75/B, 1756-PB75K/B	1756-PC75/B	1756-PH75/B
Input voltage range	18...32V DC ⁽²⁾			30...60V DC ⁽⁵⁾	90...143V DC ⁽⁶⁾
Input voltage, nom	24V DC			48V DC	125V DC
Input power, max	85 W @ 50 °C (122 °F) 70 W @ 60 °C (140 °F)	95 W			
Output power, max	60 W @ 0...50 °C (32...122 °F) 50 W @ 0...60 °C (32...140 °F)	75 W @ 0...60 °C (32...140 °F) ⁽⁴⁾			
Inrush current, max	30 A				
Hold up time ⁽¹⁾	30 ms @18...32V DC, 60 W 40 ms @18...32V DC, 50 W	35 ms @ 18V DC 40 ms @ 24V DC 40 ms @ 32V DC		50 ms @ 30...60V DC nom	50 ms @ 90...143V DC nom
Current capacity @ 1.2V	1.5 A				
Current capacity @ 3.3V	2 A	4 A			
Current capacity @ 5.1V	8 A @ 50 °C (122 °F) 6 A @ 60 °C (140 °F)	10 A	13 A		
Current capacity @ 24V	2.5 A @ 50 °C (122 °F) 2.0 A @ 60 °C (140 °F)	2.8 A			
Isolation voltage	250V (continuous), Reinforced Insulation Type, Power Input to Backplane Type tested @ 3150V DC for 60 s	250V (continuous), Reinforced Insulation Type, Power Input to Backplane Type tested @ 3500V DC for 60 s			
Weight, approx	0.77 kg (1.7 lb)	0.95 kg (2.10 lb)			
Dimensions (HxWxD), approx	14.0 x 7.8 x 14.5 cm (5.51 x 3.07 x 5.71 in.)	14.0 x 11.2 x 14.5 cm (5.51 x 4.41 x 5.71 in.)			
Module location	Left side of 1756 chassis				
Chassis	1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17				
Chassis compatibility	Series A Series B Series C		Series B Series C		
Wire size	2.5 mm ² (14 AWG) solid or stranded copper wire that is rated at 90 °C (194 °F), or greater, 1.2 mm (3/64 in.) insulation max				
Wire category	1 - on power ports ⁽³⁾				
Conductor screw torque	0.565 N•m (5 lb•in)				
North American temperature code	T4				

Technical Specifications - Standard DC Power Supplies (Continued)

Attribute	1756-PB50, 1756-PB50K	1756-PB72/C, 1756-PB72K/C	1756-PB75/B, 1756-PB75K/B	1756-PC75/B	1756-PH75/B
ATEX temperature code	T4			-	
IEC temperature code	T4			-	
Enclosure type rating	None (open-style)				

- (1) The hold up time is the time between input voltage removal and DC power failure.
- (2) UL certification for 24V DC nominal. Rockwell Automation specified 18...32V DC.
- (3) 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](#).
- (4) The combination of all output power (5.1V backplane, 24V backplane, 3.3V backplane, and 1.2V backplane) can't exceed 75 W.
- (5) UL Certification for 48V DC nominal. Rockwell Automation specified 30...60V DC.
- (6) UL certification for 125V DC nominal. Rockwell Automation specified 90...143V DC.

Environmental Specifications - Standard DC Power Supplies

Attribute	1756-PB50, 1756-PB50K	1756-PB72/C, 1756-PB72K/C 1756-PB75/B, 1756-PB75K/B	1756-PC75/B, 1756-PH75/B
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, surrounding air, max	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 ⁽¹⁾		
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		
EFT/B immunity IEC 61000-4-4	±4 kV at 5 kHz on power ports		
Surge transient immunity IEC 61000-4-5	±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports		
Conducted RF immunity IEC 61000-4-6	10V rms with 1 kHz sine wave 80% AM from 150 kHz...80 MHz		
Voltage variation IEC 61000-4-29	10 ms interruption on DC supply ports ⁽²⁾ 60% dips for 100 ms on DC supply ports 100% dips for 50 ms on DC supply ports ±20% fluctuations for 15 min on DC supply ports 5 s interruptions on DC supply ports ⁽³⁾		

- (1) Series C chassis have a maximum nonoperating shock value of 30 g. If you select a Series C chassis for use with your power supply, you're limited to a maximum nonoperating shock value of 30 g.
- (2) Short interruption test verifies ride-through. The supply remains fully functional under this condition.
- (3) Long interruption test verifies that repetitive inrush surge currents do not create any unsafe conditions. The supply fully shuts down and starts up in this test.