

1756 ControlLogix Power Supplies Specifications

Standard Power Supplies Catalog Numbers 1756-PA72, 1756-PA75, 1756-PB72, 1756-PB75, 1756-PC75, 1756-PH75

ControlLogix-XT Power Supplies Catalog Numbers 1756-PAXT, 1756-PBXT

Redundant Power Supplies Catalog Numbers 1756-PA75R, 1756-PB75R

Chassis Adapter Module Catalog Number 1756-PSCA2

| Topic | Page |
|-------------------------------------|------|
| Standard AC Power Supplies | 2 |
| Standard DC Power Supplies | 4 |
| 1756 ControlLogix-XT Power Supplies | 7 |
| Redundant Power Supplies | 9 |

ControlLogix® power supplies are used with the 1756 chassis to provide 1.2V, 3.3V, 5V, and 24V DC power directly to the chassis backplane. Standard, ControlLogix-XT™, and redundant power supplies are available.



Standard AC Power Supplies

| Attribute | 1756-PA72/C | 1756-PA75/B |
|---------------------------------|--|-------------|
| Input voltage range | 85...265V AC | |
| Input voltage, nom | 120V/240V AC | |
| Input frequency range | 47...63 Hz | |
| Input power, max | 100VA/100 W | |
| Output power, max | 75 W @ 0...60 °C (32...140 °F) ⁽²⁾ | |
| Power consumption | 25 W @ 0...60 °C (32...140 °F) | |
| Power dissipation | 85.3 BTU/hr | |
| Hold-up time ⁽¹⁾ | 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 | |
| Inrush current, max | 20 A | |
| Current capacity at 1.2V DC | 1.5 A | |
| Current capacity at 3.3V DC | 4 A | |
| Current capacity at 5.1V DC | 10 A | 13 A |
| Current capacity at 24V DC | 2.8 A | |
| Overcurrent protection, max | User-supplied 15 A ⁽³⁾ | |
| Fusing | Non-replaceable fuse is soldered in place ⁽⁴⁾ | |
| Transformer load, max | 100VA | |
| Isolation voltage | 250V (continuous), reinforced insulation type Type tested @ 3500V DC for 60 s, power input-to-backplane | |
| Weight, approx. | 0.95 kg (2.10 lb) | |
| Dimensions | 140 x 112 x 145 mm (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 B |
| Wire size | 2.5 mm ² (14 AWG) solid or stranded copper wire rated at 90 °C (194 °F), or greater, 1.2 mm (3/64 in.) insulation max | |
| Wire category | 1 - on power ports ⁽⁵⁾ | |
| Conductor screw torque | 0.8 N·m (7 lb·in) | |
| North American 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) The combination of all output power (5.1V backplane, 24V backplane, 3.3V backplane, and 1.2V backplane) cannot exceed 75 W.

(3) Use time-delay type overcurrent protection in all ungrounded conductors.

(4) This fuse is intended to guard against fire hazard due to short circuit conditions.

(5) Use this conductor category information for planning conductor routing as described in the system level installation manual. See the Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

| Attribute | 1756-PA72/C, 1756-PA75/B |
|---|--|
| 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, surrounding air, max | 60 °C (140 °F) |
| Temperature, non-operating 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 |
| 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 1kHz 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 | 10 Vrms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz |
| Oscillatory surge withstand IEEE C37.90.1 | 3 kV |
| Voltage variation IEC 61000-4-11 | 30% dips for 1 period at 0° and 80° 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 |

| Certification ⁽¹⁾ | 1756-PA72/C, 1756-PA75/B |
|------------------------------|--|
| UL | UL Listed Industrial Control Equipment. See UL File E65584. |
| 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 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) European Union 2006/95/EC LVD, compliant with: EN 61131-2; Programmable Controllers (Clause 11) |
| C-Tick | Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions |
| 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.

Standard DC Power Supplies

| Attribute | 1756-PB72/C | 1756-PB75/B | 1756-PC75/B | 1756-PH75/B |
|---------------------------------|---|-------------|-------------------------|--------------------------|
| Input voltage range | 18...32V DC | | 30...60V DC | 90...143V DC |
| Input voltage, nom | 24V DC | | 48V DC | 125V DC |
| Input power, max | 95 W | | | |
| Output power, max | 75 W @ 0...60 °C (32...140 °F) ⁽²⁾ | | | |
| Power consumption | 20 W @ 0...60 °C (32...140 °F) | | | |
| Power dissipation | 68.2 BTU/hr | | | |
| Hold-up time ⁽¹⁾ | 35 ms @ 18V DC 40 ms @ 24V DC 40 ms @ 32V DC | | 50 ms @ 30...60V DC nom | 50 ms @ 90...143V DC nom |
| Inrush current, max | 30 A | | 20 A | |
| Current capacity at 1.2V | 1.5 A | | | |
| Current capacity at 3.3V | 4 A | | | |
| Current capacity at 5.1V | 10 A | 13 A | | |
| Current capacity at 24V | 2.8 A | | | |
| Overcurrent protection, max | User-supplied 15 A ⁽³⁾ | | | |
| Fusing | Non-replaceable fuse is soldered in place ⁽⁴⁾ | | | |
| Isolation voltage | 250V (continuous), reinforced insulation type, power input-to-backplane Type tested @ 3500V DC for 60 s | | | |
| Weight, approx. | 0.95 kg (2.10 lb) | | | |
| Dimensions | 140 x 112 x 145 mm (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 B | | |
| Wire size | 2.5 mm ² (14 AWG) solid or stranded copper wire rated at 90 °C (194 °F), or greater, 1.2 mm (3/64 in.) insulation max | | | |
| Wire category | 1 - on power ports ⁽⁵⁾ | | | |
| Conductor screw torque | 0.8 N•m (7 lb•in) | | | |
| North American temperature code | T4 | | | |
| IEC temperature code | T4 | | N/A | |
| Enclosure type rating | None (open-style) | | | |

(1) The hold-up time is the time between input voltage removal and DC power failure.

(2) The combination of all output power (5.1V backplane, 24V backplane, 3.3V backplane, and 1.2V backplane) cannot exceed 75 W.

(3) Use time-delay type overcurrent protection in all ungrounded conductors.

(4) This fuse is intended to guard against fire hazard due to short circuit conditions.

(5) Use this conductor category information for planning conductor routing as described in the system level installation manual. See the Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

| Attribute | 1756-PB72/C, 1756-PB75/B | 1756-PC75/B, 1756-PH75/B |
|--|--|--------------------------|
| 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, 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 | |
| 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 | |
| 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 | 10 Vrms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz | |
| Oscillatory surge withstand IEEE C37.90.1 | N/A | 3 kV |
| Voltage variation IEC 61000-4-29 | 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 10 ms interruption on DC supply ports | |

| Certification⁽¹⁾ | 1756-PB72/C, 1756-PB75/B | 1756-PC75/B, 1756-PH75/B |
|------------------------------------|---|---|
| UL | N/A | UL Listed Industrial Control Equipment. See UL File E65584. |
| 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 US and Canada. See UL File E194810. | N/A |
| 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 | N/A |
| 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) European Union 2006/95/EC LVD, compliant with: <ul style="list-style-type: none"> • EN 61131-2; Programmable Controllers (Clause 11) | |
| C-Tick | Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; 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 | N/A |
| 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.

1756 ControlLogix-XT Power Supplies

The ControlLogix-XT products include control and communication system components that, when used with FLEX I/O-XT™ products, provide a complete control system solution that you can use in environments where temperatures range from -20...70 °C (-4...158 °F).

When used independently, the ControlLogix-XT system can withstand environments where the temperature ranges from -25...70 °C (-13...158 °F).

| Attribute | 1756-PAXT | 1756-PBXT |
|---------------------------------|---|--|
| Input voltage range | 85...265V AC | 18...32V DC |
| Input voltage, nom | 120/240V AC | 24V DC |
| Input frequency range | 47...63 Hz | N/A |
| Input power, max | 82VA 64 W | 54 W |
| Output power, max | 42 W @ -25...70 °C (-13...158 °F) | |
| Power consumption | 22 W | 12 W |
| Power dissipation | 75.1 BTU/hr | 40.9 BTU/hr |
| Hold-up time ⁽¹⁾ | 6 cycles @ 85V AV, 50/60 Hz 6 cycles @ 120V AV, 50/60 Hz 6 cycles @ 200V AV, 50/60 Hz 6 cycles @ 240V AV, 50/60 Hz | 35 ms @ 18V DC 40 ms @ 24V DC 40 ms @ 32V DC |
| Inrush current, max | 20 A | 30 A |
| Current capacity at 1.2V | 1.5 A | |
| Current capacity at 3.3V | 4 A | |
| Current capacity at 5.1V | 8 A | |
| Current capacity at 24V | 1.75 A | |
| Overcurrent protection, max | User-supplied 15 A ⁽²⁾ | |
| Fusing | Non-replaceable fuse is soldered in place ⁽³⁾ | |
| Isolation voltage | 250V (continuous), reinforced insulation type, power input-to-backplane Type tested @ 3260V DC for 60 s | |
| Weight, approx. | 0.95 kg (2.10 lb) | |
| Dimensions | 140 x 112 x 145 mm (5.51 x 4.41 x 5.71 in.) | |
| Module location | Left side of 1756 chassis | |
| Chassis | 1756-A4LXT, 1756-A5XT, 1756-A7LXT, 1756-A7XT | |
| Wire size | 2.5 mm ² (14 AWG) solid or stranded copper wire rated at 90 °C (194 °F), or greater, 1.2 mm (3/64 in.) insulation max | |
| Wire category | 1 - on power ports ⁽⁴⁾ | |
| Conductor screw torque | 0.8 N•m (7 lb•in) | |
| North American temperature code | T4 | T4A |
| 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) Use time-delay type overcurrent protection in all ungrounded conductors.

(3) This fuse is intended to guard against fire hazard due to short circuit conditions.

(4) Use this conductor category information for planning conductor routing as described in the system level installation manual. See the Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

| Attribute | 1756-PAXT | 1756-PBXT |
|--|---|--|
| 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...70 °C (-13...158 °F) | |
| Temperature, surrounding air, max | 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 | |
| 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 at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 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 | 10 Vrms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz | |
| Oscillatory surge withstand IEEE C37.90.1 | 3 kV | N/A |
| 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 | N/A |
| Voltage variation IEC 61000-4-29 | NA | 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 10 ms interruption on DC supply ports |

| Certification ⁽¹⁾ | 1756-PAXT, 1756-PBXT |
|------------------------------|---|
| 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 US and Canada. See UL File E194810. |
| 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) European Union 2006/95/EC LVD, compliant with: <ul style="list-style-type: none"> EN 61131-2; Programmable Controllers (Clause 11) |
| C-Tick | Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; 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 |
| 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.

Redundant Power Supplies

To build a redundant power supply system, you need the following.

| Cat. No. | Description | Amount |
|------------------------------|--|--------|
| 1756-PA75R/A or 1756-PB75R/A | Redundant power supply | 2 |
| 1756-CPR2 | Redundant power supply cable (Length = 0.9 1m [3 ft]) | 2 |
| 1756-PSCA2 | Redundant power supply chassis adapter module ⁽¹⁾ | 1 |
| User-supplied | Annunciator wiring ⁽²⁾ (Max. length = 10 m [32.8 ft]) | 2 |

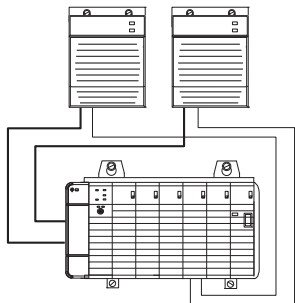
(1) The 1756-PSCA2 chassis adapter module is a passive device that funnels power from the redundant power supplies to the single power connector on the ControlLogix series B chassis backplane.

(2) Optional user-provided annunciator wiring can be connected to the solid-state relay for status and troubleshooting purposes.

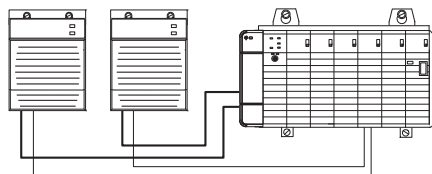
System Configuration Recommendations

We recommend you use one of these methods to configure your redundant power supply system.

Recommended Configurations for a System That Uses One Chassis

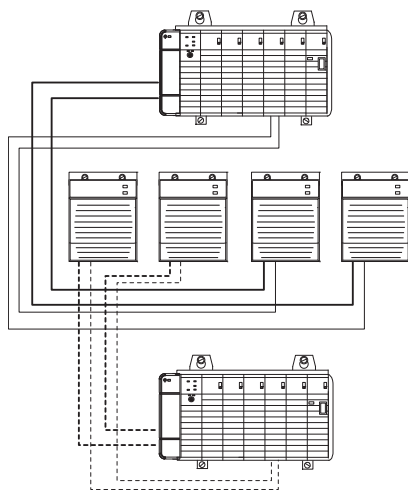


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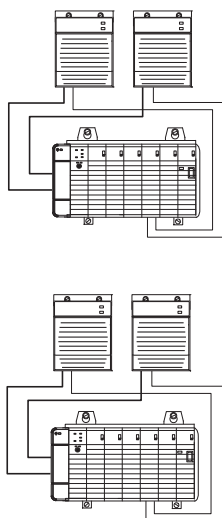


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Recommended Configurations for a System That Uses Two Chassis

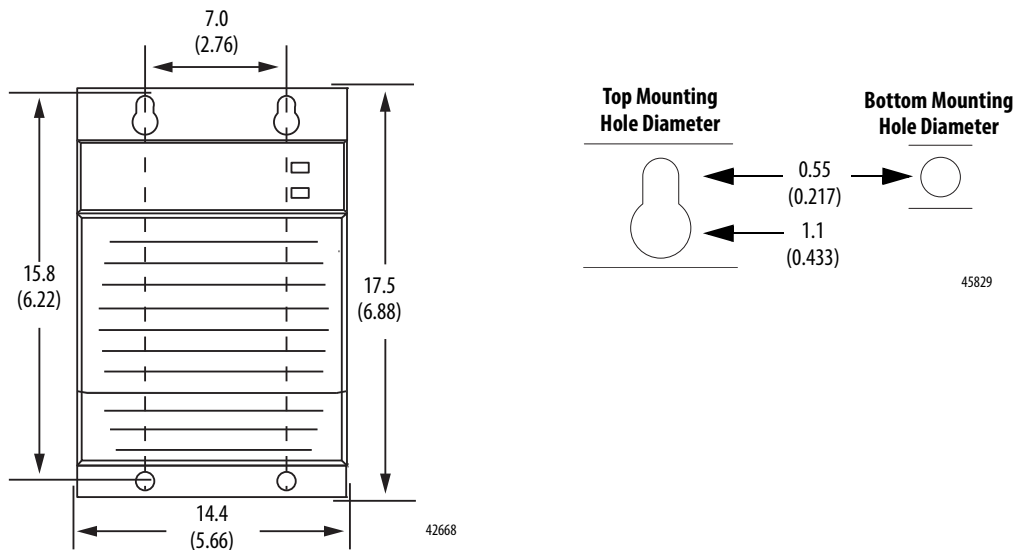


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1756-PA75R and 1756-PB75R Mounting Dimensions



Dimensions are in cm (in.).

Redundant Power Supply Features

The redundant power supplies offer the same features as the standard power supplies, in addition to the following:

- Automatic chassis load sharing between the redundant power supplies
- Status indicators for visual operating status of the pair
- Solid-state relay for system recognition of supply status when wired to an input module

Table 1 - Technical Specifications - ControlLogix Redundant Power Supplies

| Attribute | 1756-PA75R | 1756-PB75R |
|-----------------------------|---|---------------|
| Input voltage range | 85...265V AC | 19.2...32V DC |
| Input voltage | 120V/240V AC | 24V DC |
| Input frequency range | 47...63 Hz | DC |
| Input power, max | 120VA 115 W | 110 W |
| Output power, max | 75 W @ 0...60 °C (32...140 °F) | |
| Hold-up time ⁽¹⁾ | 2 cycles @ 60 Hz 2 cycles @ 50 Hz | 20 ms |
| Inrush current, max | 20 A | 30 A |
| Current capacity at 1.2V | 1.5 A | |
| Current capacity at 3.3V | 4 A | |
| Current capacity at 5.1V | 13 A | |
| Current capacity at 24V | 2.8 A | |
| Annunciator power | 240V AC/DC, 50 mA, Resistive only | |
| Overcurrent protection, max | User-supplied 15 A ⁽²⁾ | |
| Fusing | Non-replaceable fuse is soldered in place ⁽³⁾ | |
| Isolation voltage | 250V (continuous), Reinforced Insulation Type, Power Input to Backplane, Power Input to Annunciator, Annunciator to Backplane Type tested at 2500V DC for 60 s | |

Table 1 - Technical Specifications - ControlLogix Redundant Power Supplies

| Attribute | 1756-PA75R | 1756-PB75R |
|---------------------------------|--|------------|
| Dimensions (HxWxD), approx. | 175 x 145 x 137 mm (6.9 x 5.7 x 5.4 in.) | |
| Weight, approx. | 1.45 kg (3.2 lb) | |
| Chassis | 1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17 | |
| Wire Size | Power - 2.5 mm ² (14 AWG) solid or stranded copper wire rated at 90 °C (194 °F), or greater, 1.2 mm (3/64 in.) insulation max Annunciator - 0.25...2.5 mm ² (22...14 AWG) solid or stranded copper wire rated at 90 °C (194 °F), or greater, 1.2 mm (3/64 in.) insulation max | |
| Wire category ⁽⁴⁾ | 1 - on power ports 3 - on annunciator ports 3 - on 1756-CPR2 connections | |
| Pilot duty rating | Annunciator - not rated | |
| Conductor screw torque | 0.79 N·m (7 lb·in) | |
| Solid-state relay contact | 240V AC/DC ⁽⁵⁾ | |
| North American temperature code | T3C | T4 |
| IEC temperature code | N/A | T4 |
| Enclosure type rating | None (open-style) | |

- (1) The hold-up time is the time between input voltage removal and DC power failure.
(2) Use time-delay type overcurrent protection in all ungrounded conductors.
(3) This fuse is intended to guard against fire hazard due to short circuit conditions.
(4) Use this conductor category information for planning conductor routing as described in the system level installation manual. See the Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).
(5) Do not exceed 50 mA; resistive only.

| Attribute | 1756-PA75R | 1756-PB75R |
|--|---|------------|
| 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, 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 | |
| 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 30... 1000 MHz 10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 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 ±4 kV at 5 kHz on annunciator ports | |
| Surge transient immunity IEC 61000-4-5 | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports | |

| Attribute | 1756-PA75R | 1756-PB75R |
|--|--|--|
| Conducted RF immunity IEC 61000-4-6 | 10 Vrms 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\ | N/A |
| Voltage variation IEC 61000-4-29 | NA | 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 10 ms interruption on DC supply ports |
| Certification ⁽¹⁾ | 1756-PA75R | 1756-PB75R |
| 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. | |
| 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: 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 2006/95/EC LVD, compliant with: EN 61131-2; Programmable Controllers (Clause 11) | |
| C-Tick | Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions | |
| Ex | N/A | 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 Gc 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.

ControlLogix Redundant Power Supply Chassis Adapter Module

Table 2 - Technical Specifications - ControlLogix Redundant Power Supplies Chassis Adapter Module

| Attribute | 1756-PSCA2 |
|---------------------------------|------------------------------|
| Current capacity at 1.2V DC | 1.5 A |
| Current capacity at 3.3V DC | 4 A |
| Current capacity at 5.1V DC | 15 A |
| Current capacity at 24V DC | 2.8 A |
| Wire category ⁽¹⁾ | 3 - on 1756-CPR2 connections |
| North American temperature code | T5 |
| IEC temperature code | T5 |
| Enclosure type rating | None (open-style) |

(1) Use this conductor category information for planning conductor routing as described in the system level installation manual. See the Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

| Attribute | 1756-PSCA2 |
|--|--|
| 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, 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 |
| 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 at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 3V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |

| Certification ⁽¹⁾ | 1756-PSCA2 |
|------------------------------|---|
| 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. |
| 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) |
| C-Tick | <ul style="list-style-type: none"> Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; 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 T5 Gc X |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> 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.

Power Load and Transformer Sizing

The following graphs show the input power requirements for the power supplies, given the power they are providing to the modules in the chassis.

Follow these steps to determine the power requirements for you chassis.

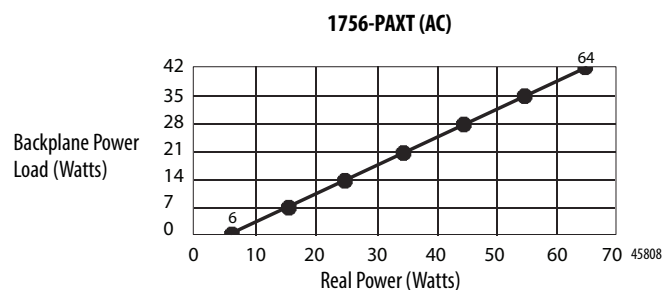
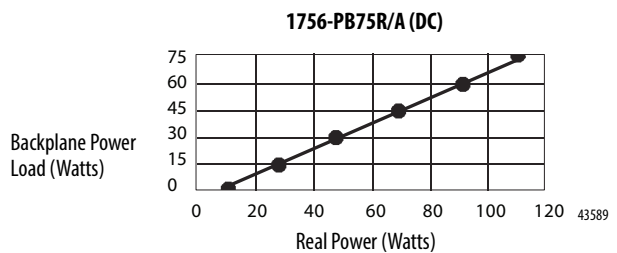
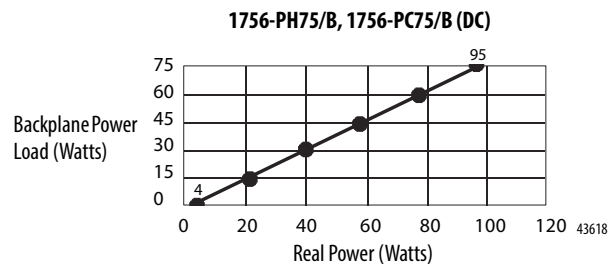
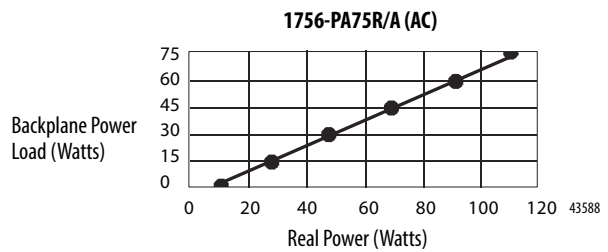
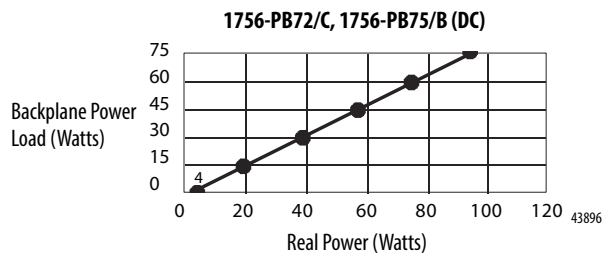
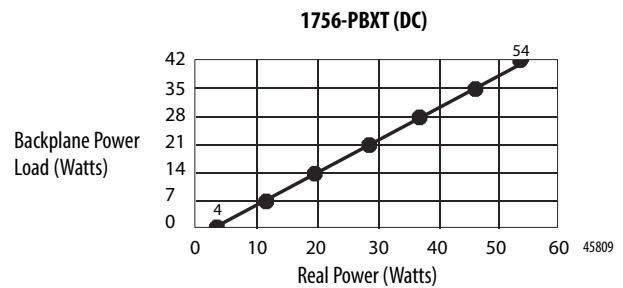
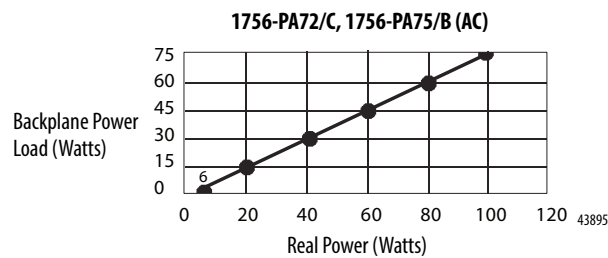
1. Calculate the Backplane Power Load by adding the power draw (in Watts) for all of the planned modules.

For module power draws, refer to the module specification tables in the ControlLogix Selection Guide, publication [1756-SG001](#).

2. Locate the Backplane Power Load on the graph's vertical (y) axis and determine the corresponding Real Power (input-power) rating on the horizontal (x) axis.

The Real Power value is the amount of power consumed by the power supply.

Power Supply Power Requirements



$$\text{Apparent Power (Watts)} = \text{Transformer Load (VA)} = \text{Real Power (Watts)}$$

Additional Resources

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

| Resource | Description |
|---|---|
| ControlLogix Selection Guide, publication 1756-SG001 | Provides overview of the ControlLogix system and its products. |
| ControlLogix Chassis Specifications Technical Data, publication 1756-TD006 | Provides technical specifications for ControlLogix chassis. |
| ControlLogix Chassis and Power Supplies Installation Instructions, publication 1756-IN005 | Provides planning and installation information for the ControlLogix chassis and power supplies. |
| ControlLogix System User Manual, publication 1756-UM001 | Provides information on how to install, configure, program, and use ControlLogix systems. |
| 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.

Important User Information

Solid-state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication [SGI-1.1](#) available from your local Rockwell Automation sales office or online at <http://www.rockwellautomation.com/literature/>) describes some important differences between solid-state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid-state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

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