Installation Instructions

ControlLogix Power Supplies

(Catalog Numbers 1756-PA72/B, -PB72/B)

Use this publication as a guide when installing a Control**Logix™** power supply.

ATTENTION: Electrostatic discharge can damage integrated circuits or semiconductors if you touch backplane connector pins. Follow these guidelines when you handle the 1756-PA72/B or 1756-PB72/B.

- Touch a grounded object to discharge static potential.
- Do not touch the backplane connector or connector pins.
- Do not touch circuit components inside the power supply.
- If available, use a static-safe work station.
- When not in use, keep the power supply in its static-shield packaging.

Publication 1756-5.67 - July 1998

Compliance to European Union Directives

If this product bears the  marking it is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives.

EMC Directive

This apparatus is tested to meet Council Directive 89/336/EEC Electromagnetic Compatibility (EMC) using a technical construction file and the following standards, in whole or in part:

- EN 50081-2 EMC - Generic Emission Standard, Part 2 - Industrial Environment
- EN 50082-2 EMC - Generic Immunity Standard, Part 2 - Industrial Environment

The product described in this document is intended for use in an industrial environment.

Low Voltage Directive

This product is also designed to meet Council Directive 73/23/EEC Low Voltage, by applying the safety requirements of EN 61131-2 Programmable Controllers, Part 2 - Equipment Requirements and Tests.

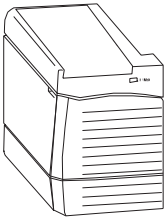
For specific information required by EN 61131-2, see the appropriate sections in this publication, as well as the following Allen-Bradley publications:

- *Industrial Automation Wiring and Grounding Guidelines,* publication 1770-4.1
- *Automation Systems Catalog, publication B111*

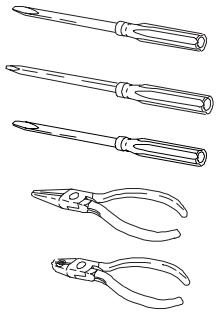
This equipment is classified as open equipment and must be installed (mounted) in an enclosure during operation as a means of providing safety protection.

Prepare for Installation

Power Supply

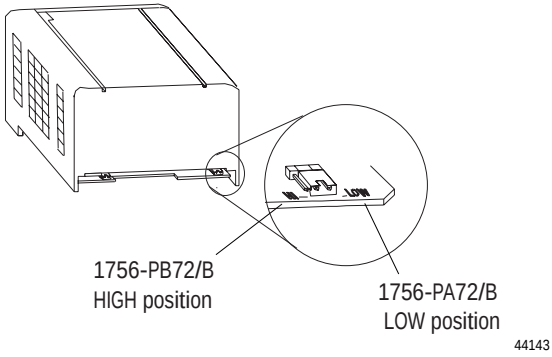


These Tools

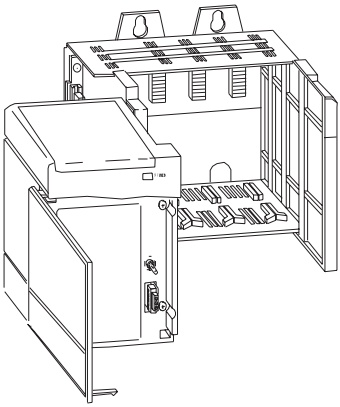


Install the Power Supply

1. Verify that the voltage jumper is present and in the factory-preset position:

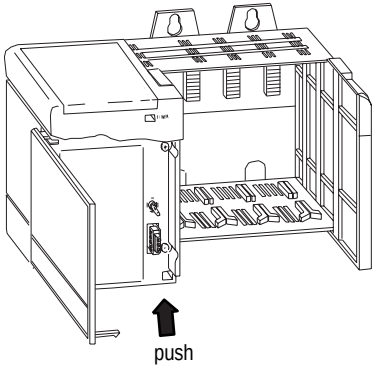


2. Align the circuit board of the power supply with the card guides on the left side of the chassis.



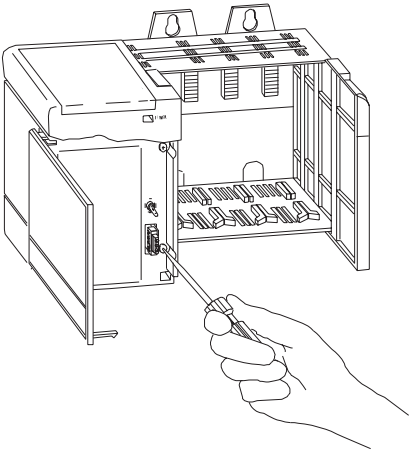
20264a-M

3. Slide the power supply in until it is flush with the chassis.



44144

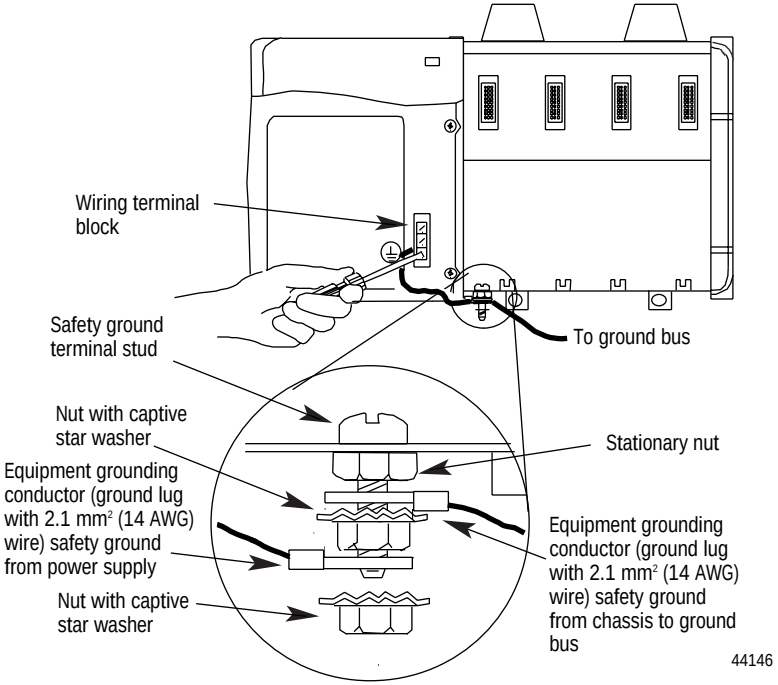
4. Fasten the power supply to the chassis.



44145

Connect Safety Ground

Use the following figure to connect safety ground from the power supply to the chassis.

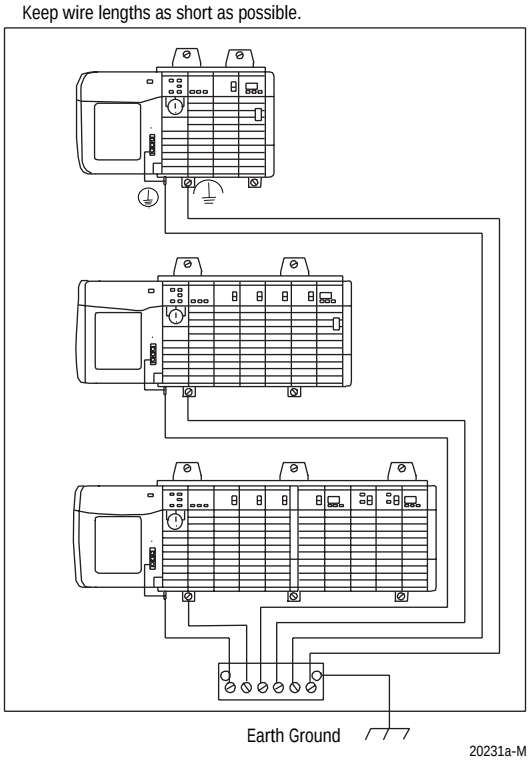


Important: Tighten the nut on the safety ground terminal stud to a torque of 12 inch-pounds.

Verify Grounding Configuration

This figure shows you how to run functional and safety ground connections from the chassis. We recommend using a ground bus because it reduces the electrical resistance at the connection.

For More Information on installing and connecting safety ground to the ControlLogix chassis, refer to the ControlLogix Chassis Installation Instructions, publication 1756-5.2.



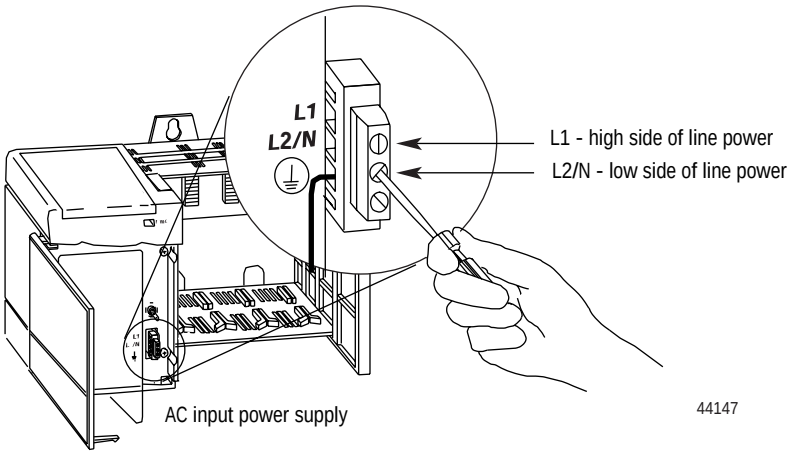
Connect Power

ATTENTION: Turn off power lines before connecting power; failure to do so could cause injury to personnel and/or equipment. This equipment must be provided with a disconnect on each ungrounded conductor.

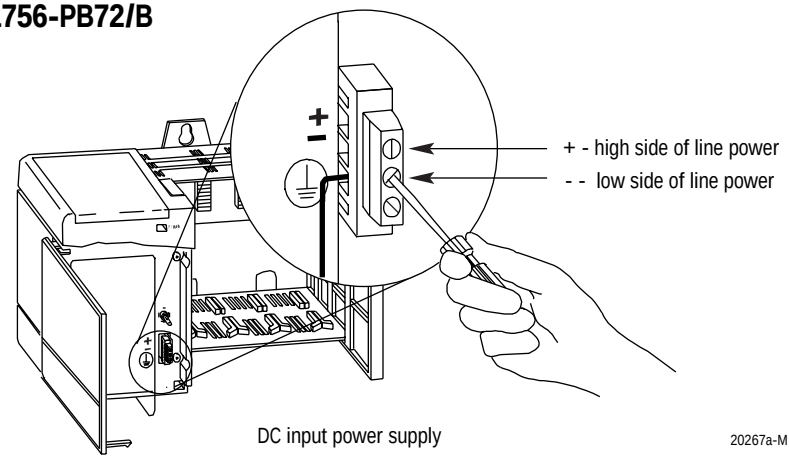
▶ For this connection, use #14 AWG 75°C copper wire.

Tighten the terminals to a torque of 7 inch-pounds (0.79 Newton-meters).

1756-PA72/B



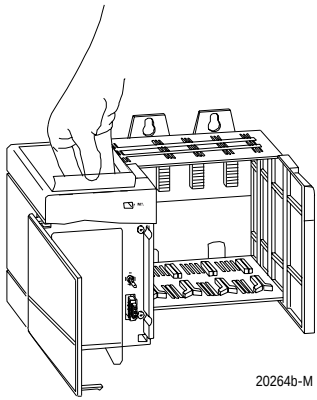
1756-PB72/B



DC input power supply 20267a-M

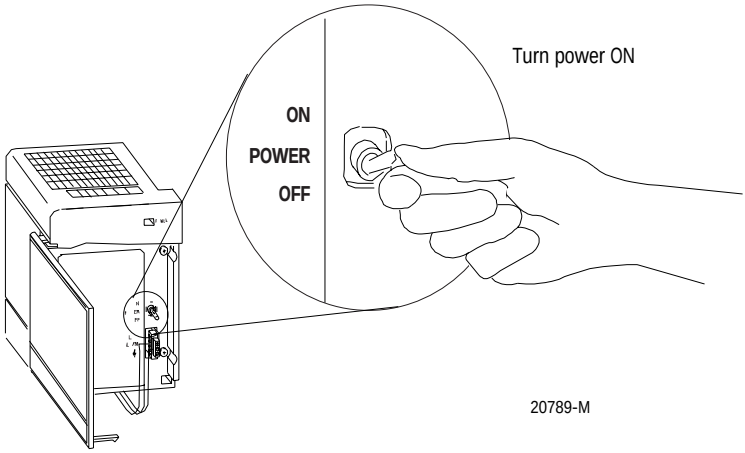
Remove the Protective Label

ATTENTION: Make sure the chassis is mounted and all panel fabrication is complete before you remove the protective label. This label protects the power supply from metal shavings falling inside the power supply and damaging it during operation.



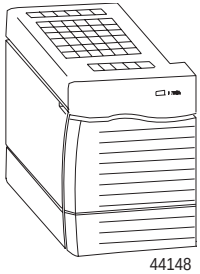
20264b-M

Activate the Power Supply



Troubleshooting

The Control**Logix** power supplies have a green LED indicator that remains ON during normal operation.

Indicator	If indicator is off
 44148	**1.** Verify that the line voltage is within the specified range. **2.** If indicator remains off, cycle line power OFF. **3.** Loosen the screws holding the power supply to the chassis. **4.** Slide the power supply out so that the rear connector is disconnected. **5.** Make sure the voltage jumper is present and in the factory-preset settings: 1756-PA72/B - low positon, 1756-PB72/B - high position. **6.** Wait 45 seconds and reapply input power. **7.** If the indicator turns on, verify that the module loads in the system are within the output rating of the power supply and reinstall the power supply in the chassis. If the LED remains off, return the power supply to your local Allen-Bradley distributor.

CSA Hazardous Location Approval

CSA certifies products for general use as well as for use in hazardous locations. **Actual CSA certification is indicated by the product label** and not by statements in any user documentation.

Example CSA certification product label

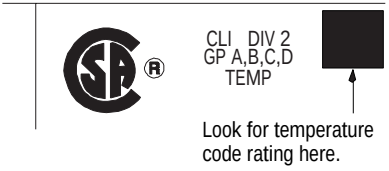
12364-I

To comply with CSA certification for use in hazardous locations, the following information becomes a part of the product literature for CSA-certified Allen-Bradley industrial control products.

- This equipment is suitable for use in Class I, Division 2, Groups A, B, C, D, or non-hazardous locations only.
- The products having the appropriate CSA markings (i.e., Class I Division 2, Groups A, B, C, D), are certified for use in other equipment where the suitability of combination (i.e., application or use) is determined by the CSA or the local inspection office having jurisdiction.

Important: Due to the modular nature of a PLC, control system, the product with the highest temperature rating determines the overall temperature code rating of a PLC control system in a Class I, Division 2 location. The temperature code rating is marked on the product label.

Temperature Code Rating



12365-I

The following warnings apply to products having CSA certification for use in hazardous locations.

ATTENTION: Explosion hazard —

- Substitution of components may impair suitability for Class I, Division 2.
- Do not replace components unless power has been switched off or the area is known to be non-hazardous.
- Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- Do not disconnect connectors unless power has been switched off or the area is known to be non-hazardous. Secure any user-supplied connectors that mate to external circuits on an Allen-Bradley product using screws, sliding latches, threaded connectors, or other means such that any connection can withstand a 15 Newton (3.4 lb.) separating force applied for a minimum of one minute.

Approbation d'utilisation dans des emplacements dangereux par la CSA

La CSA certifie les produits d'utilisation générale aussi bien que ceux qui s'utilisent dans des emplacements dangereux. **La certification CSA en vigueur est indiquée par l'étiquette du produit** et non par des affirmations dans la documentation à l'usage des utilisateurs.

Exemple d'Øtiquette de certification d'un produit par la CSA

44149

Pour satisfaire à la certification de la CSA dans des endroits dangereux, les informations suivantes font partie intégrante de la documentation des produits industriels de contrôle Allen-Bradley certifiés par la CSA.

- Cet équipement convient à l'utilisation dans des emplacements de Classe I, Division 2, Groupes A, B, C, D, ou ne convient qu'à l'utilisation dans des endroits non dangereux.
- Les produits portant le marquage approprié de la CSA (c'est à dire, Classe I, Division 2, Groupes A, B, C, D) sont certifiés à l'utilisation pour d'autres équipements où la convenance de combinaison (application ou utilisation) est déterminée par la CSA ou le bureau local d'inspection qualifié.

Important: Par suite de la nature modulaire du système de contrôle PLC,, le produit ayant le taux le plus élevé de température détermine le taux d'ensemble du code de température du système de contrôle d'un PLC dans un emplacement de Classe I, Division 2. Le taux du code de température est indiqué sur l'étiquette du produit.

Taux du code de tempØrature

Le taux du code de tempØrature est indiquØ ici

44150

Les avertissements suivants s'appliquent aux produits ayant la certification CSA pour leur utilisation dans des emplacements dangereux.

AVERTISSEMENT:Risque d'explosion -

- La substitution de composants peut rendre ce matériel inacceptable pour les emplacements de Classe I, Division 2.
- Couper le courant ou s'assurer que l'emplacement est désigné non dangereux avant de remplacer les composants.
- Avant de débrancher l'équipement, couper le courant ou s'assurer que l'emplacement est désigné non dangereux.
- Avant de débrancher les connecteurs, couper le courant ou s'assurer que l'emplacement est reconnu non dangereux. Attacher tous connecteurs fournis par l'utilisateur et reliés aux circuits externes d'un appareil Allen-Bradley à l 'aide de vis, loquets coulissants, connecteurs filetés ou autres moyens permettant aux connexions de résister à une force de séparation de 15 newtons (3,4 lb. - 1,5 kg) appliquée pendant au moins une minute.

1756-PA72/B, -PB72/B Specifications

		1756-PA72/B	1756-PB72/B
Input Voltage Range		85-132 V ac 170-265 V ac	19.2-32 V dc (16-32V dc)[1]
Input Power		225 VA, 95 W	95 W[2]
Output Power		CSA certified – 75W @ 60°C FM approved – 75W @ 60°C UL listed – 75W @ 60°C	
Maximum Inrush Current		20 A	30 A
Frequency Range		47-63 Hz	dc
Backplane Output Current — maximum[3]		1.5 A @ 1.2 V 4 A @ 3.3 V 10 A @ 5 V 2.8 A @ 24 V	
Maximum user-supplied overcurrent protection[4]		15 A	15 A
Internal Fuse Protection[5]		non-replaceable fuse is soldered in place	
Wiring		#14 AWG 75°C copper	
Connector Screw Torque		7 inch-pounds (0.79 Newton-meters)	
Dimensions (W x H x D)		11.2 x 14.0 x 14.5 cm (4.41 x 5.51 x 5.71")	
Weight — approximate		1.1 kg (2.5 lbs)	
Location		left side of chassis	
Environmental Conditions	Operating Temperature	0 to 60°C	
	Storage Temperature	–40 to 85°C (–40 to 185°F)	
	Relative Humidity	5 to 95%, noncondensing	
Agency Certification (when product or packaging is marked)		UL CSA Class I Div 2 Hazardous[6] FM Class I Div 2 Hazardous[6] CE marked for all applicable directives	

1 Input may drop to 16 V for a maximum of two minutes each hour for motor starting.

2 To comply with CE low voltge directives, a safety extra low voltage (SELV) or a protected extra low voltage power supply is required.

3 The combination of all output power (5 V backplane, 24 V backplane, 3.3 V backplane, and 1.2 V backplane) cannot exceed 75 W.

4 Use time-delay type overcurrent protection in all ungrounded conductors.

5 This fuse is intended to guard against fire hazard due to short circuit conditions.

6 CSA certification - Class I, Division 2, Group A, B, C, D or nonhazardous locations.
FM approved - Class I, Division 2, Group A, B, C, D or nonhazardous locations.

Rockwell Automation Headquarters, 1201 South Second Street, Milwaukee, WI 53204 USA, Tel: (1) 414 382-2000, Fax: (1) 414 382-4444
Rockwell Automation European Headquarters SA/NV, avenue Herrmann Debroudaan, 46, 1160 Brussels, Belgium, Tel: (32) 2 663 06 00, Fax: (32) 2 663 06 40
Rockwell Automation Asia Pacific Headquarters, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Publication 1756-5.67 - July 1998 PN 955130-82