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Find the *Rockwell / Allen-Bradley 1771-P4* at our website: ***Click HERE***

POWER SUPPLIES

Power Supply Modules

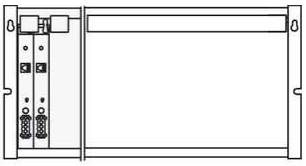
The power supply modules are used in 1771 Universal I/O chassis to provide 5V DC power directly to the chassis backplane. These power supplies occupy one or two slots and can provide up to 8 A per supply to the I/O chassis. Power supply modules can be paralleled to provide up to 20 A per chassis @ 60 °C (or up to 24 A per chassis at 55 °C). Refer to the power supply selection chart for compatibility information.

Benefits

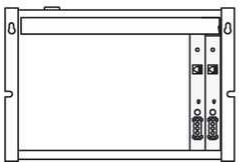
- Require no space outside the I/O chassis.
- Connect directly to the I/O chassis backplane.
- Contain output-power indicators that indicate if 5V DC is being supplied to the backplane.
- Can be paralleled (using 1771-CT cable) to provide up to 16 A of current per chassis (1771-P4S, -P6S, -P4S1, -P6S1).
- Single failure-proof chassis power of up to 20 A of current per chassis using redundant configurations (1771-P4R, -P6R).

Typical Configurations

Power Supply Modules in a1771-PSC Power Supply Chassis that is connected to an I/O chassis



Power Supply Modules inserted into an I/O chassis



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POWER SUPPLIES

1771 Power Supply Selection

Cat. No.	Input Voltage, Nom.	Cabling	Paralleled	Input Voltage Range	Real Input Power, Max.	Apparent Input Power, Max.	Xformer Load, Max.	User Output Current
1771-P4S	120V AC	1771-CT	-LSP, -LWP, -XP, -ZP, P4S	97...132V AC	59 W	89VA	148VA	—
1771-P5	24V DC	1771-CT	-P10, -P5	20.5...30V DC	57 W	—	—	—
1771-P5E	24V DC✶	1771-CT	-P10, -P5	20.5...30V DC	57 W	—	—	—
1771-P4S1	100V AC	1771-CT	-P4S1	85...120V AC	56 W	89VA	140VA	—
1771-P6S1	200V AC	1771-CT	-P6S1	170...240V AC	56 W	89VA	140VA	—
1771-P4R	120V AC	Redundancy cable for P4R included	—	97...132V AC	59 W	92VA	148VA	—
1771-P6R	220V AC	Redundancy cable for P6R included	—	194...264V AC	59 W	92VA	148VA	—
1771-P6S	220V AC	1771-CT	-P6S, -LWP, -LZP, -LXP	194...264V AC	56 W	89VA	140VA	—
1771-P7	120V AC or 220V AC	1771-CP1 Local 1771-CP2 Remote 5 ft 1771-CP3 Remote 5 ft	—	97...132V AC 195...264V AC	108 W	176VA	270VA	—
1771-PS7	120V AC or 220V AC	1771-PSCC Remote 5.5 ft	—	97...132V AC 195...264V AC	171 W	257VA	427VA	8 A @ 5V DC 2 A @ 15V DC 2 A @ -15V DC 2.5 A @ 24V DC
1771-P10	125V DC	1771-CT	-P5, -P10	97...145V DC	51 W	—	—	—

✶ Has selectable power-loss time delay.

Specifications

Cat. No.	Backplane Output Current	Frequency	Fuse	Dimensions (WxHxD), Approx.	Weight	Location	Keying
1771-P4S	8 A @ 5V DC	47...63 Hz	1.5 A, 250V, slow-blow	1 chassis slot	0.9 kg (2 lb)	1771 chassis, 1 slot	—
1771-P5	8 A @ 5V DC	DC/Rect	5 A, 32V, normal-	2 chassis slots	1 kg (2.3 lb)	1771 chassis, 2	12 and 14

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		sine	blow			slots	22 and 24
1771-P5E	8 A @ 5V DC	DC/Rect sine	5 A, 32V, normal-blow	2 chassis slots	1 kg (2.3 lb)	1771 chassis, 2 slots	12 and 14 22 and 24
1771-P4S1	8 A @ 5V DC	47…63 Hz	1.5 A, 250V, slow-blow	1 chassis slot	0.9 kg (2 lb)	1771 chassis, 1 slot	—
1771-P6S1	8 A @ 5V DC	47…63 Hz	1.5 A, 250V, slow-blow	1 chassis slot	0.9 kg (2 lb)	1771 chassis, 1 slot	—
1771-P4R	8 A @ 5V DC	47…63 Hz	1.5 A, 250V, slow-blow	1 chassis slot	0.9 kg (2 lb)	1771 chassis, 1 slot	—
1771-P6R	8 A @ 5V DC	47…63 Hz	1.5 A, 250V, slow-blow	1 chassis slot	0.9 kg (2 lb)	1771 chassis, 1 slot	—
1771-P6S	8 A @ 5V DC	47…63 Hz	1.5 A, 250V, slow-blow	1 chassis slot	0.9 kg (2 lb)	1771 chassis, 1 slot	—
1771-P7	16 A @ 5V DC	47…63 Hz	3 A, 250V, normal-blow	115 x 317 x 160 mm (4.5 x 12.4 x 6.3 in)	1.9 kg (4.3 lb)	Stand-alone	—
1771-PS7	16 A @ 5V DC✶	47…63 Hz	3 A, 250V, normal-blow	115 x 317 x 160 mm (4.5 x 12.4 x 6.3 in)	2.9 kg (6.5 lb)	Stand-alone	—
1771-P10	8 A @ 5V DC	DC/Rect sine	1.5 A, 32V, slow-blow	2 chassis slots	1.2 kg (2.6 lb)	1771 chassis, 2 slots	12 and 14 20 and 22

✶ Total output power (including user) is 100W max.

Power Requirement and Transformer Sizing

Each AC-input power supply generates a shutdown signal on the backplane whenever the AC line voltage drops below its lower voltage limit. It removes the shutdown signal when the line voltage comes back up to the lower voltage limit. This shutdown is necessary to help ensure that only valid data is stored in memory.

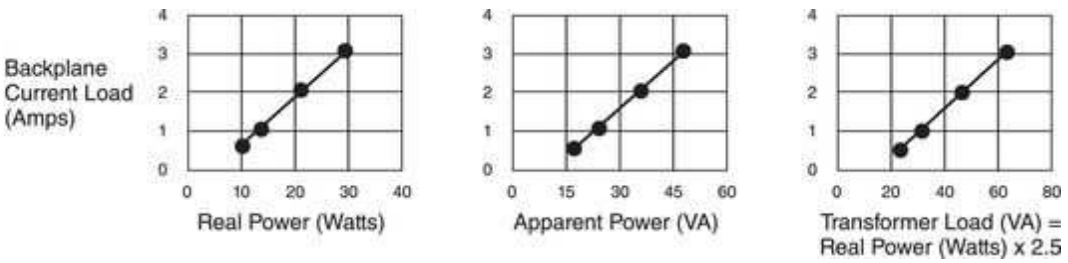
The external transformer rating (in VA) of each power supply is greater than its real input power (in Watts) because a capacitor-input AC/DC supply draws power only from the peak of the AC voltage wave form. If the transformer is too small, it clips the peak of the sine wave; when the voltage is still above the lower voltage limit, the power supply will sense this clipped wave form as low voltage and could prematurely shut down modules in the chassis.

In the following graphs, the backplane current load is displayed on the vertical axis.

For the DC-input power supply, the input real power is displayed in watts. For each AC-input power supply, the input real power is displayed in watts, apparent power in VA, and the transformer load in VA, each in a separate graph.

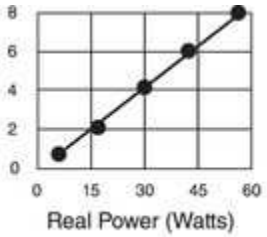
- Use the real power value in watts for determining the amount of heat dissipation inside the enclosure.
- Use the apparent power value in VA for estimating power cost.
- Use the transformer load value in VA of each power supply plus all other loads on a transformer to determine the required transformer size.

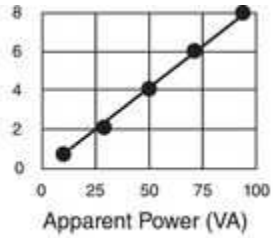
1771-AM1, AM2
ac/dc

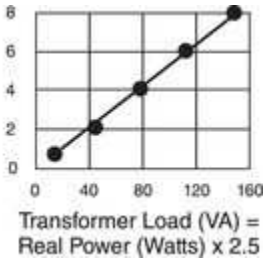


1771-P4S, P6S
P4S1, P6S1
ac/dc

Backplane Current Load (Amps)

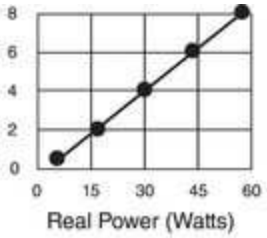


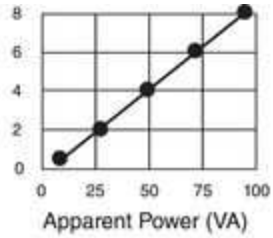


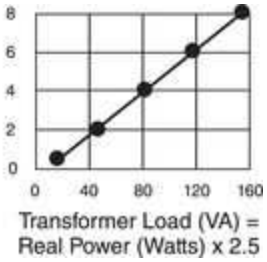


1771-P4R, P6R
ac/dc
1 Unit

Backplane Current Load (Amps)

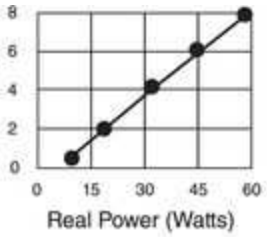


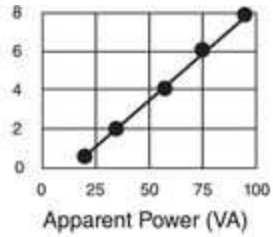


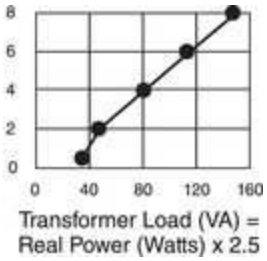


1771-P4R, P6R
ac/dc
2 Units

Backplane Current Load (Amps)

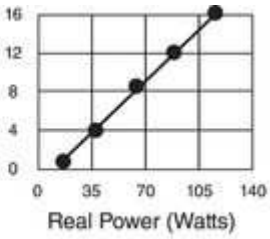


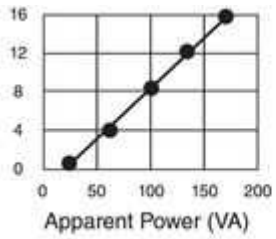


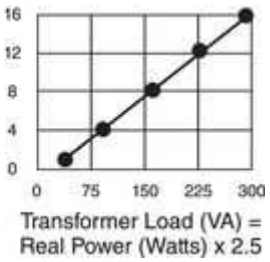


1771-P4R, P6R
ac/dc
3 Units

Backplane Current Load (Amps)



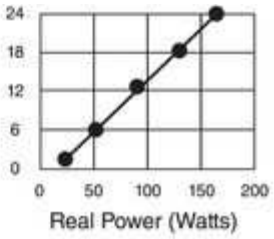


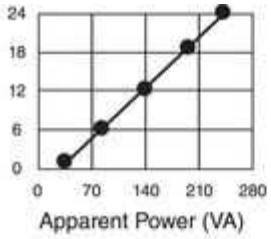


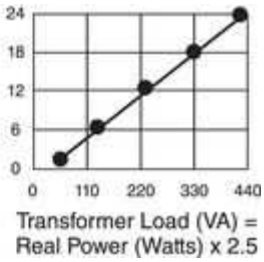
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1771-P4R, P6R
ac/dc
4 Units

Backplane Current Load (Amps)

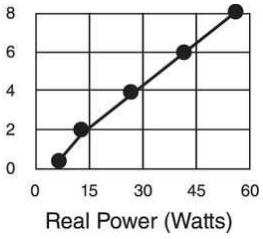






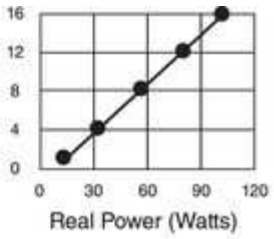
1771-P5, P5E
ac/dc

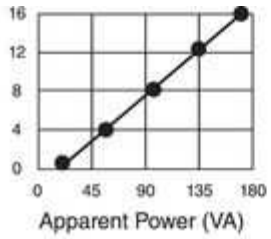
Backplane Current Load (Amps)

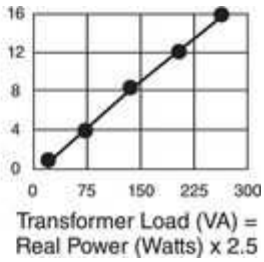


1771-P7
ac/dc

Backplane Current Load (Amps)

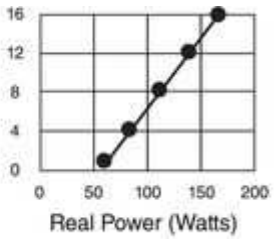


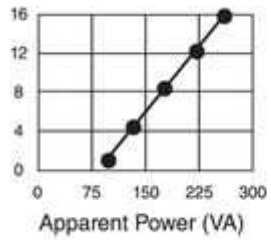


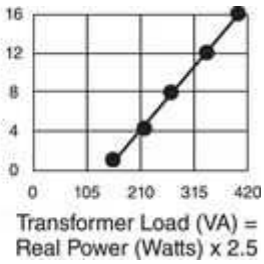


1771-PS7
ac/dc

Backplane Current Load (Amps)

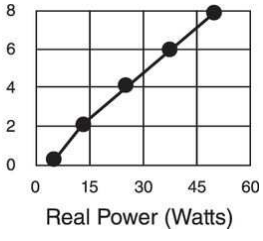






1771-P10
dc/dc

Backplane Current Load (Amps)



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