Allen-Bradley

FLEX I/O Power Supply Modules

Standard FLEX I/O Catalog Numbers 1794-PS13, 1794-PS3

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FLEX I/O™ Power Supply modules are used for powering the FLEX I/O adapters and I/O modules that require a nominal input voltage of 24V DC. These modules are available with 1.3 A and 3 A current output.

Additional Resources

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

Resource	Description
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.rockwellautomation.com/products/certification/	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.

Available 1794 Power Supply Modules

FLEX I/O Module Types

Type	Description
1794-PS13	The 1794-PS13 power supply provides sufficient 24V DC power to operate 4 adapter modules. Do not attempt to operate an entire FLEX I/O system with the 1794-PS13 power supply.
1794-PS3	The 1794-PS3 power supply provides sufficient 24V DC power to operate 10 adapter modules. You can use this 1794-PS3 power supply to operate an entire FLEX I/O system.

FLEX I/O Power Supply Modules

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1794-PS13, 1794-PS3

FLEX I/O Power Supply Modules

Input Specifications

Attribute	1794-PS13	1794-PS3
Indicators	1 green power indicator	
Nominal supply voltage	120V AC, 47…63 Hz; 0.62 A 230V AC, 47…63 Hz; 0.42 A	120V AC, 47…63 Hz; 1.4 A 230V AC, 47…63 Hz; 0.8 A
Voltage range	85…264V AC	
Input current, max	0.7 A	1.9 A
Inrush corrent	30 A , 1 AC cycle @ Vin 264V AC, 55 °C	
Interruption	Output will stay within specification when input drops out for 1/2 cycle @ 47 Hz, 85V AC with maximum load	

Output Specifications

Attribute	1794-PS13	1794-PS3
Nominal output	+24V DC	
Output voltage regulation	20.4…27.6V DC (±15%, includes noise and 5% AC ripple)	
Output current, max	1.3 A	3 A horizontal mount, 2.8 A all other mounting
Output power	31.2 W	72 W
Output ripple	±5% 1200mV peak-to-peak max	
Minimum load	0 mA	50 mA
Output surge	Sufficient to drive 4 adapters	Sufficient to drive 10 adapters
Overvoltage protection	Output internally limited to 40V DC. Cycle power to reenergize.	
Leakage current	0.5 mA rms max @ rated input and output	
Isolation voltage	Isolation will be required between the AC input terminals and the DC output terminals. Isolation voltage requirements: 2500V DC for 1 s	
Overcurrent protection	1.4 A	3.2 A
Thermal dissipation	23.9 BTU/hr	41.0 BTU/hr
Power dissipation	7 W	12 W
Terminal base screw torque	0.8 Nm (7 lb-in.)	
Conductors Wire size Category(1)	 0.33 mm^2…3.31 mm^2(22…12 AWG) stranded copper wire rated @ 75 °C or higher 1.2mm (3/64 in.) insulation max 2	
North American temperature code	T3C	T3
Enclosure	None (open-style)	
Dimensions (HxWxD)	87 x 69 x 69 mm (3.4 x 2.7 x 2.7 in)	87 x 94 x 69 mm (3.4 x 3.7 x 2.7 in.)
Publication, installation instructions	1794-IN069	

(1) You use this category information for planning conductor routing as described in Allen-Bradley publication 1770-4.1, Industrial Automation Wiring and Grounding Guidelines

Environmental Specifications

Attribute	1794-PS13	1794-PS3
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…55 °C (32…131 °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 Nonoperating Damp Heat): 5…95% noncondensing	
Vibration	IEC 60068-2-6 (Test Fc, Operating): 5 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: Group 1, 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 @ 1890 MHz 10V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz	
EFT/B immunity	IEC 61000-4-4: ±2 kV @ 5 kHz on power ports	
Surge transient immunity	IEC 61000-4-5: ±1 kV line-line(DM) and ±2 kV line-earth(CM) on AC power ports	
Conducted RF immunity	IEC 61000-4-6: 10Vrms with 1kHz sine-wave 80%AM from 150 kHz…80 MHz	

Certifications

Certification(1) (When marked on product)	1794-PS13	1794-PS3
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584.	
CE	European Union 2004/108/IEC 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) See the Product Certification link at http://www.rockwellautomation.com/products/certification/ for Declaration of Conformity, Certificates, and other certification details.

Notes:

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.

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 publication 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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