

INDUSTRIAL POWER SUPPLIES



c3controls' Industrial Power Supplies are the clear choice when it comes to providing a regulated power for not only industrial and commercial loads but also residential applications. Designed to fit in panels of almost all sizes, c3 power supplies range from 60 to 480W, and of course, with all the necessary certifications and compliances.

Check out all the innovative features these power supplies have to offer!

Section 31

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PROVEN

Conformity to Standards:
UL 508
CSA C22.2 NO. 107.1-01
IEC 62368-1

Certifications:
UL File #: E336563

CE Marked (per EU Low Voltage Directive 2014/35/EC and
RoHS Directive 2011/65/EU)

Visit c3controls.com to download product certifications.

INDUSTRIAL POWER SUPPLIES

c3controls offers a range of Industrial Power Supplies designed and manufactured to meet the needs of the machine builder. We promise durable products at a price that gives you an edge, and we guarantee same-day shipping. Check out all the features these power supplies have to offer!

DELIVERING THE MOST RELIABLE, UNINTERRUPTED & HIGH QUALITY POWER

✓ Proven	Our Series IPS Industrial Power Supplies are UL Listed and CE marked to meet global standards requirements and are compliant to the RoHS directives. 
✓ Secure Installation	Quick and simple snap-on installation on a 35mm DIN Rail.
✓ Clear Visibility	LED indication allows you to see the availability of the DC power output, making it very helpful in troubleshooting.
✓ Environmentally Secure	Designed and tested for ensuring operation in extreme temperatures, to keep your application running.
✓ Visible Certifications	Product certifications and electrical ratings are clearly marked on the outside of the device for easy reference during installation.
✓ 36-Month Warranty*	Every product is backed by our 36-Month Warranty—giving you confidence in the quality, reliability, and performance of components designed for the most demanding applications.
✓ Guaranteed Same-Day Shipping*	Product availability reduces inventory, and improves cash-flow— saving you money. With c3controls any order for standard catalog items received by 6:00pm ET is guaranteed to ship same-day.
✓ Advantage Pricing	Our approach to product development, manufacturing, and focus on servicing the OEM and Electrical Equipment Builder reduces cost. The result—the best value in the industry.

*See c3controls Terms & Conditions

IPS1-60-24



IPS1-120-24



IPS1-240-24



IPS1-480-24



UNIQUE PRODUCT LINE FEATURES

BEST IN CLASS EFFICIENCY



c3controls' Industrial Power Supplies are designed to deliver the power with up to 93% efficiency.

RELIABILITY



Unmatched protection against short circuit, overload, overvoltage and over temperature, along with Auto-recovery functionality.

FLEXIBILITY



Adjustable output voltage from 100 to 116%.

EASY MONITORING



Power supplies from 240W to 480W come with DC OK Relay Contacts to provide status signals to the monitoring system.

COMPACT



Ultra-compact design to save valuable panel space.

FIND IT FAST

Industrial Power Supplies



c3controls.com

- Certifications
- Specifications
- Dimension Drawings
- Installation Instructions
- Easy to Buy

IT'S EASY TO BUILD YOUR OWN INDUSTRIAL POWER SUPPLY

Simply pick the code number from each of the sections below and combine them to build your part number.

Industrial Power Supplies

IPS1 - -
/ // ///

Example: To build one of our most popular Industrial Power Supplies, the part number would be **IPS1 + II + III** or **IPS1-60-12**



I. PRODUCT TYPE

CODE	DESCRIPTION
IPS1	Industrial Power Supply

II. OUTPUT POWER

CODE	DESCRIPTION	LIST
60	60W	\$ 73.60
120	120W	\$ 89.10
240	240W	\$235.00
480	480W	\$361.00

III. OUTPUT VOLTAGE

CODE	DESCRIPTION
12	12V*
24	24V
48	48V

*Note: Only available with 60W, 120W and 240W variant.

DISCOUNT
SCHEDULE **G**

SOME OF OUR POPULAR CONFIGURATIONS:

INDUSTRIAL POWER SUPPLIES

CATALOG NUMBER	DESCRIPTION	LIST
IPS1-60-12	Industrial Power Supply, 60W, 12V	\$ 73.60
IPS1-60-24	Industrial Power Supply, 60W, 24V	\$ 73.60
IPS1-60-48	Industrial Power Supply, 60W, 48V	\$ 73.60
IPS1-120-12	Industrial Power Supply, 120W, 12V	\$ 89.10
IPS1-120-24	Industrial Power Supply, 120W, 24V	\$ 89.10
IPS1-120-48	Industrial Power Supply, 120W, 48V	\$ 89.10

SPECIFICATIONS:

INDUSTRIAL POWER SUPPLIES				
		IPS1-60-12	IPS1-60-24	IPS1-60-48
OUTPUT				
	UNITS			
Nominal DC Voltage	V	12	24	48
Rated Current	A	5	2.5	1.25
Current Range	A	0 - 5	0 - 2.5	0 - 1.25
Rated Power	W	60	60	60
Ripple & Noise (max)		< 1 % of Vout	< 1 % of Vout	< 1 % of Vout
Voltage Adjustment Range	V	12 to 14	24 to 28	48 to 56
Voltage Tolerance		± 1 %		
Line Regulation		± 0.5 %		
Load Regulation		± 1 %		
Turn On Time		< 1 sec @ 230 VAC & < 3 sec @ 115 VAC, Full Load		
Hold Up Time		≥ 60 ms @ 230 VAC & ≥ 15 ms @ 115 VAC, Full Load		
Rise Time	ms	< 100		
INPUT				
Voltage Range	VAC	90 - 264		
Frequency Range	Hz	50 / 60		
Efficiency @ 230 VAC		up to 86%	up to 87%	up to 87%
AC Current		1.2A @ 115 VAC; 0.8A @ 230 VAC		
Inrush Current		< 48 Amps; Measured at 264 VAC, 25°C Ambient, Cold Start		
Leakage Current		< 1 mA; 264 VAC Input		
PROTECTION				
Overload		> 110% of Rated Output Current; Hiccup Type, Auto-recovery		
Overvoltage	VDC	17 ± 1	31.5 ± 1	61 ± 2
Output Short Circuit		Latched Type; Input AC power to be recycled to recover the power supply		
Over Temperature		Hiccup mode when output is shorted; Auto-recovery type		
		Power supply shuts down when the temperature of PCB below main transformer reaches typically 120°C. Turns on only after the temperature falls below 90°C typically and AC power is recycled thereafter.		
ENVIRONMENT				
Operating Temperature		- 25°C to + 70°C; de-rate linearly above 50°C from 100% load at 50°C to 50% load at 70°C		
		- 25°C to 0°C startup is guaranteed with specification deviation		
		(Output ripple can be more than 10% of the output voltage.)		
Storage Temperature	°C	- 40 to + 85		
Cooling		Natural Convection Cooled		
Humidity	RH	5 to 95 %, Non-condensing		
Altitude	m	2000		
Vibration		Component: 10 ~ 500 Hz, 2 G 10 min. / 1 cycle, period for 60 min. each along X, Y, Z axes		
SAFETY & EMC				
Dielectric Withstand Voltage	VAC	I/P to Earth: 2500		
		I/P to O/P: 4000		
		O/P to Earth: 1500		
OTHERS				
Dimension (W x H x D)	mm	43 x 109.8 x 102.7		
Weight	gms	285		
Mounting		35mm DIN Rail		
ROHS COMPLIANCE		For RoHS compliance documentation by product, refer to c3controls.com		

SPECIFICATIONS:

INDUSTRIAL POWER SUPPLIES				
		IPS1-120-12	IPS1-120-24	IPS1-120-48
OUTPUT				
	UNITS			
Nominal DC Voltage	V	12	24	48
Rated Current	A	8	5	2.5
Current Range	A	0 - 8	0 - 5	0 - 2.5
Rated Power	W	96	120	120
Ripple & Noise (max)		< 1 % of Vout	< 1 % of Vout	< 1 % of Vout
Voltage Adjustment Range	V	12 to 14	24 to 28	48 to 56
Voltage Tolerance		± 1 %		
Line Regulation		± 1 %		
Load Regulation		± 1 %		
Turn On Time		< 1 sec @ 230 VAC & < 3 sec @ 115 VAC, Full Load		
Hold Up Time		≥ 60 ms @ 230 VAC & ≥ 15 ms @ 115 VAC, Full Load		
Rise Time	ms	< 100		
INPUT				
Voltage Range	VAC	90 - 264		
Frequency Range	Hz	50 / 60		
Efficiency @ 230 VAC		up to 89 %		
AC Current		2.2A @ 115 VAC; 1.5A @ 230 VAC		
Inrush Current		< 48 Amps; Measured at 264 VAC, 25°C Ambient, Cold Start		
Leakage Current		< 1 mA; 264 VAC Input		
PROTECTION				
Overload		> 110% of Rated Output Current; Hiccup Type, Auto-recovery		
Overvoltage	VDC	17 ± 1	31.5 ± 1	61 ± 2
		Latched Type; Input AC power to be recycled to recover the power supply		
Output Short Circuit		Hiccup mode when output is shorted; Auto-recovery type		
Over Temperature		Power supply shuts down when the temperature of PCB below main transformer reaches typically 120°C. Turns on only after the temperature falls below 90°C typically and AC power is recycled thereafter.		
ENVIRONMENT				
Operating Temperature		- 25°C to + 70°C; de-rate linearly above 50°C from 100% load at 50°C to 50% load at 70°C - 25°C to 0°C startup is guaranteed with specification deviation (Output ripple can be more than 10% of the output voltage.)		
Storage Temperature	°C	- 40 to + 85		
Cooling		Natural Convection Cooled		
Humidity	RH	5 to 95 %, Non-condensing		
Altitude	m	2000		
Vibration		Component: 10 ~ 500 Hz, 2 G 10 min. / 1 cycle, period for 60 min. each along X, Y, Z axes		
SAFETY & EMC				
Dielectric Withstand Voltage	VAC	I/P to Earth: 2500 I/P to O/P: 4000 O/P to Earth: 1500		
OTHERS				
Dimension (W x H x D)	mm	43 x 109.8 x 102.7		
Weight	gms	350		
Mounting		35mm DIN Rail		
ROHS COMPLIANCE		For RoHS compliance documentation by product, refer to c3controls.com		

SPECIFICATIONS:

INDUSTRIAL POWER SUPPLIES				
		IPS1-240-12	IPS1-240-24	IPS1-240-48
OUTPUT				
	UNITS			
Nominal DC Voltage	V	12	24	48
Rated Current	A	18	10	5
Current Range	A	0 - 18	0 - 10	0 - 5
Rated Power	W	240	240	240
Ripple & Noise (max)		< 1 % of Vout	< 1 % of Vout	< 1 % of Vout
Voltage Adjustment Range	V	24 to 28	24 to 28	48 to 56
Voltage Tolerance			± 1 %	
Line Regulation			± 1 %	
Load Regulation			± 1 %	
Turn On Time		< 2 sec @ Full Load		
Hold Up Time		> 25 ms @ 12V & > 16 ms @ 14V @ 115/230 VAC, Full Load	> 25 ms @ 24V & > 16 ms @ 28V @ 115/230 VAC, Full Load	> 25 ms @ 48V & > 16 ms @ 56V @ 115/230 VAC, Full Load
Rise Time	ms	< 100		
INPUT				
Voltage Range	VAC	90 - 264 De-rate output power linearly below 100 VAC from 100% @ 100 VAC to 90% @ 90 VAC		
Frequency Range	Hz	50 / 60		
Power Factor		> 0.95 @ Full Load over entire input range		
Efficiency @ 230 VAC		> 92 %	> 93 %	> 93 %
AC Current		2.4A @ 115 VAC; 1.2A @ 230 VAC		
Inrush Current		< 60 Amps; Measured at 264 VAC, 25°C Ambient, Cold Start		
Leakage Current		< 1 mA; 264 VAC Input		
PROTECTION				
Overload		110% to 140% of Rated Output Current; Hiccup Type; Auto-recovery		
Overvoltage	VDC	16 ± 0.5	31 ± 0.5	60 ± 1
		Latched Type; Input AC power to be recycled to recover the power supply		
Output Short Circuit		Hiccup mode when output is shorted; Auto-recovery type		
Over Temperature		The power supply shuts down when the temperature of PCB below PFC choke reaches typically 120°C. It recovers automatically when temperature falls to typically 90°C.		
FUNCTION				
DC OK Signal	V	Contact Closes @ 11.5 (typical) / Contact Opens @ 11.0 (typical)	Contact Closes @ 23.0 (typical) / Contact Opens @ 22.5 (typical)	Contact Closes @ 46.0 (typical) / Contact Opens @ 45.0 (typical)
		Contact Rating: 30 VDC 1A; 60 VDC 0.5A; 125 VAC 0.5A; resistive load, min. current 1 mA		
ENVIRONMENT				
Operating Temperature		- 25°C to + 70°C; de-rate linearly above 50°C from 100% load at 50°C to 50% load at 70°C - 25°C to 0°C startup is guaranteed with specification deviation (Output ripple can be more than 10% of the output voltage.)		
Storage Temperature	°C	- 40 to + 85		
Cooling		Natural Convection Cooled		
Humidity	RH	5 to 95 %, Non-condensing		
Altitude	m	2000		
Vibration		Component: 10 ~ 500 Hz, 2 G 10 min. / 1 cycle, period for 60 min. each along X, Y, Z axes		
SAFETY & EMC				
Dielectric Withstand Voltage	VAC	I/P to Earth: 2500 I/P to O/P: 4000 O/P to Earth: 1500 O/P to DC-OK: 500		
OTHERS				
Dimension (W x H x D)	mm	50 x 136 x 135		
Weight	gms	645		
Mounting		35mm DIN Rail		
ROHS COMPLIANCE		For RoHS compliance documentation by product, refer to c3controls.com		

SPECIFICATIONS:

INDUSTRIAL POWER SUPPLIES			
		IPS1-480-24	IPS1-480-48
OUTPUT			
	UNITS		
Nominal DC Voltage	V	24	48
Rated Current	A	20	10
Current Range	A	0 - 20	0 - 10
Rated Power	W	480	480
Ripple & Noise (max)		< 1 % of Vout	< 1 % of Vout
Voltage Adjustment Range	V	24 to 28	48 to 56
Voltage Tolerance		± 1 %	
Line Regulation		± 1 %	
Load Regulation		± 1 %	
Turn On Time		< 2 sec; @ Full Load	
Hold Up Time		> 20 ms @ 24V & > 12 ms @ 28V @ 115/230 VAC, Full Load	> 20 ms @ 48V & > 12 ms @ 56V @ 115/230 VAC, Full Load
Rise Time	ms	< 100	
INPUT			
Voltage Range	VAC	90 - 264 De-rate output power linearly below 100 VAC from 100% @ 100 VAC to 90% @ 90 VAC	
Frequency Range	Hz	50 / 60	
Power Factor		> 0.95 @ Full Load over entire input range	
Efficiency @ 230 VAC		> 93.5 %	> 94 %
AC Current		4.8A @ 115 VAC; 2.4A @ 230 VAC	
Inrush Current		< 60 Amps; Measured at 264 VAC, 25°C Ambient, Cold Start	
Leakage Current		< 1 mA; 264 VAC Input	
PROTECTION			
Overload		110% to 140% of Rated Output Current; Hiccup Type: Auto-recovery	
Overvoltage	VDC	31 ± 0.5	60 ± 1
		Latched Type; Input AC power to be recycled to recover the power supply	
Output Short Circuit		Hiccup mode when output is shorted; Auto-recovery type	
Over Temperature		Power supply shuts down when the temperature of PCB below main transformer reaches typically 120°C. Turns on only after the temperature falls below 90°C typically and AC power is recycled thereafter.	
FUNCTION			
DC OK Signal	V	Contact Closes @ 23.0 (typical) / Contact Opens @ 22.5 (typical)	Contact Closes @ 46.0 (typical) / Contact Opens @ 45.0 (typical)
		Contact Rating: 30 VDC 1A; 60 VDC 0.5A; 125 VAC 0.5A; resistive load, min. current 1 mA	
ENVIRONMENT			
Operating Temperature		- 25°C to + 70°C; de-rate linearly above 50°C from 100% load at 50°C to 50% load at 70°C - 25°C to 0°C startup is guaranteed with specification deviation (Output ripple can be more than 10% of the output voltage.)	
Storage Temperature	°C	- 40 to + 85	
Cooling		Natural Convection Cooled	
Humidity	RH	5 to 95 %, Non-condensing	
Altitude	m	2000	
Vibration		Component: 10 ~ 500 Hz, 2 G 10 min. / 1 cycle, period for 60 min. each along X, Y, Z axes	
SAFETY & EMC			
Dielectric Withstand Voltage	VAC	I/P to Earth: 2500 I/P to O/P: 4000 O/P to Earth: 1500 O/P to DC-OK: 500	
OTHERS			
Dimension (W x H x D)	mm	60 x 154 x 158.55	
Weight	gms	1050	
Mounting		35mm DIN Rail	
ROHS COMPLIANCE		For RoHS compliance documentation by product, refer to c3controls.com	

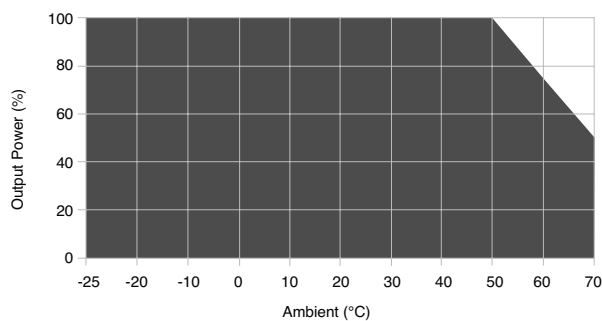
COMPLIANCES:

APPLICABLE EMI / EMC STANDARDS		
CATEGORY	REFERENCE STANDARDS	TESTING LEVEL
Conducted Emission	CISPR11	CLASS A (for 60W & 120W) CLASS B (for 240W & 480W)
Radiated Emission	CISPR22	CLASS A
Electrostatic Discharge	IEC 61000-4-2	Level 4, Criteria A Level 3, Criteria A
Radiated Susceptibility	IEC 61000-4-3	Level 3, Criteria B
Electrical Fast Transient / Burst	IEC 61000-4-4	Level 3, Criteria A
Surge	IEC 61000-4-5	Level 3, Criteria A
Conducted Susceptibility	IEC 61000-4-6	Level 3, Criteria B
Power Frequency Magnetic Field	IEC 61000-4-8	Level 4, Criteria A
Voltage Dips & Interruption	EC 61000-4-11	Criteria A & B
Safety	UL 508 approved (E336563) Designed to meet IEC 62368-1	

DERATING CURVES

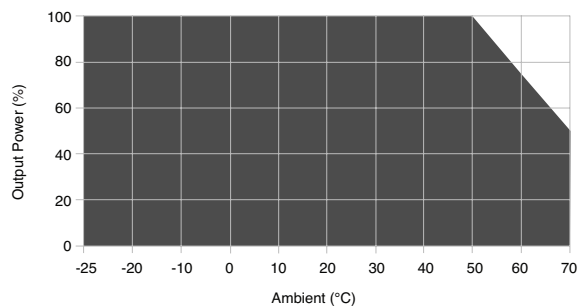
IPS1-60-** & IPS1-120-**

Power Derating w. r. t. Ambient Temperature

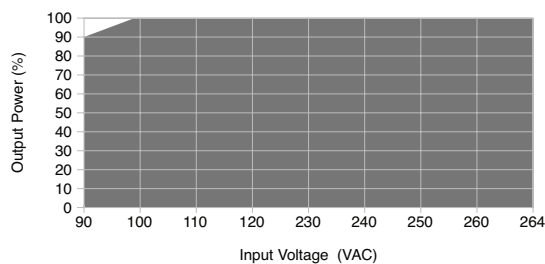


IPS1-240-** & IPS1-480-**

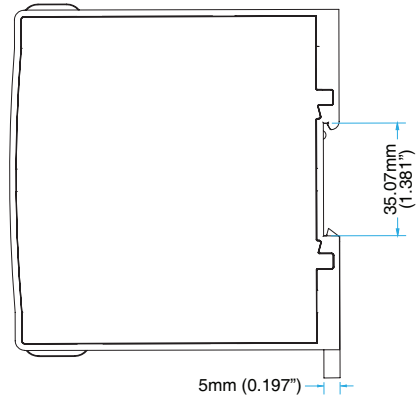
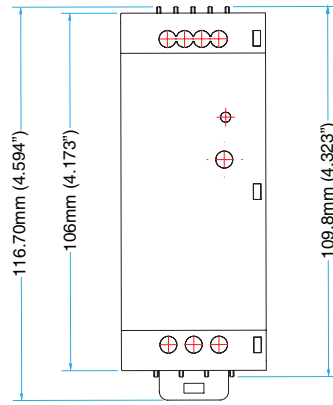
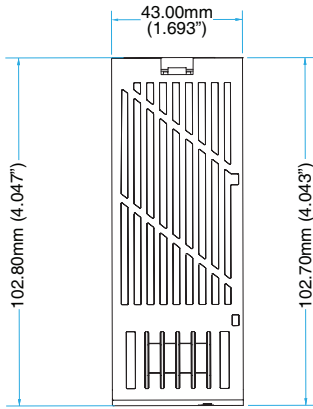
Power Derating w. r. t. Ambient Temperature



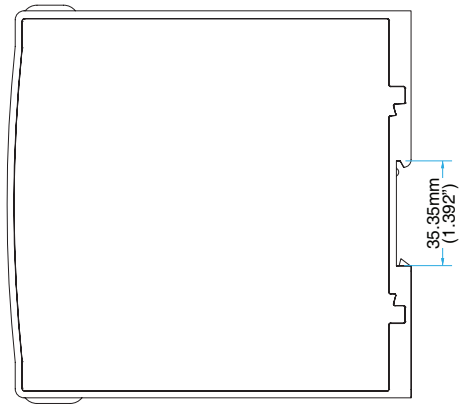
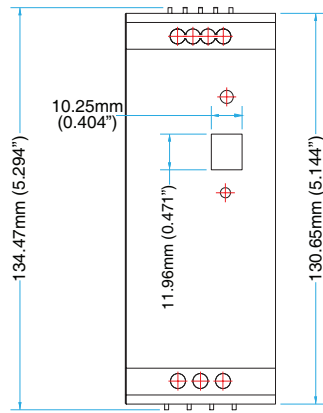
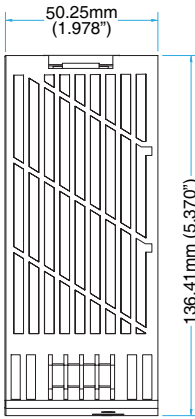
Power Derating w. r. t. Input Voltage



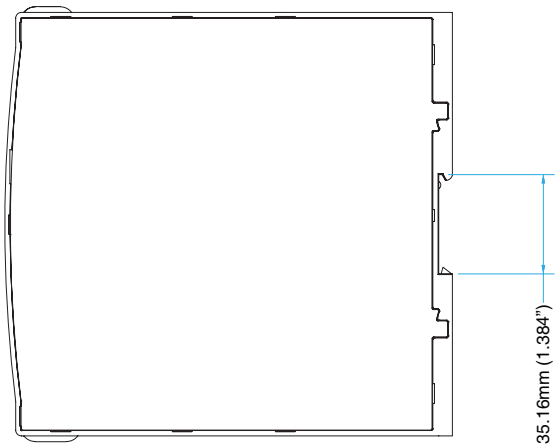
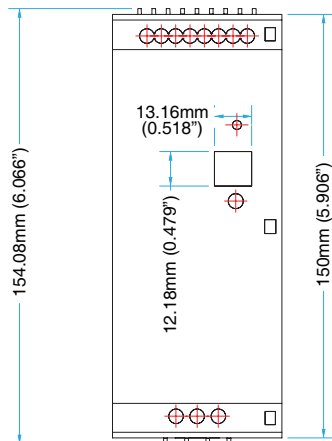
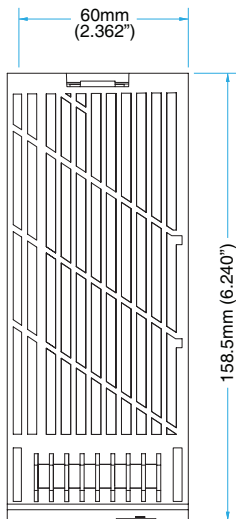
IPS1-60- & IPS1-120-****



IPS1-240-**



IPS1-480-**



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