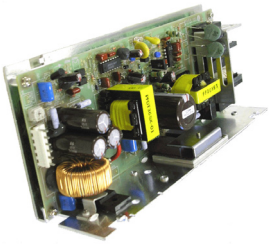
ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

AC/DC SWITCHING POWER SUPPLY
AC INPUT 85~264
SINGLE CHANNEL OUTPUT
120 WATTS

PFD-SX-U1 SERIES



Dimension: 95Wx220lx55H

General Description

"PF"-Series AC/DC Switching power supplies has been designed to meet harmonic current distortion. PF series has the 75 W PFC with the peak of 150 W, the 120W PFD with peak of 240W and 240 W PFE with peak of 480 W. They are suitable for motor drive.

Application

Motor drive

Input

Input Voltage:	AC100-230V
Input Voltage Range:	AC85-264V
Input Current:	0.9-2.0 A
Frequency:	50/60Hz
Input Frequency Range:	47-63Hz
Phase:	Single
Inrush Current: *1	18A(max.) at AC100V 40A(max.) at AC230V
	1mA(maximum)at 25℃
Leakage Current:	0.75mA(maximum) at 25℃,(rated input/output and rated input frequency)

Features

1. Chassis Mount
2. Frameless, Connector Type
3. Low Line Distortion
4. Pulse Load response
5. Designed for peak loads(Doubled for rate output)
6. Power factor correction
7. Cost Effective
8. Harmonic current complies to:
   IEC 1000-3-2, EN6 1000-3-2
9. Universal input 85-264V
10. EMI designed to meet :
    FCC part 15-B Class B, EN 5502 Class B, VCCI Class B
11. CE-marked acc. To LVD

Options

1. Remote Control(add suffix "–R" or "–RR")
2. Cover(add suffix "–P") : * "-P" model dimension of chassis mount model is the same as "Open Frame " model
3. 40 cm long wire harness

Output Characteristic	Unit	Models			
		PFD12SX-U1	PFD24SX-U1	PFD36SX-U1	PFD48SX-U1
Output Voltage	Vdc	12	24	36	48
Output Current	A	10 / Ⓟ20	5 / Ⓟ10	3.4 / Ⓟ6.7	2.5 / Ⓟ5
Voltage Adjust Range	V	± 10% of Rated Output Voltage(at no load within the input range)			
Ripple & Noise(max)*3	mVpp	300	300	300	300
Rise up time	mS	500mS(maximum) at 25℃ and rated input/output			
Hold up time	mS	50mS(minimum) at 25℃ and rated input/output			
Regulation					
a. Line Regulation	mV	60	120	180	240
b. Load Regulation *3	mV	120	240	360	480
c. Temperature Coefficient *4	℃	0.03%/℃			
d. Drift(maximum) *5	mV	75	135	195	255
e. Dynamic Load Regulation (typ.) *6	mV	360	720	1080	1440
f. Recovery Time *6	mS	0.5mS(typical)			
Efficiency *2	%	76 / 80	79 / 82	80 / 83	80 / 83
Power Factor		0.99 Typ. AC100 [V] / 0.95 Typ. AC230 [V]			

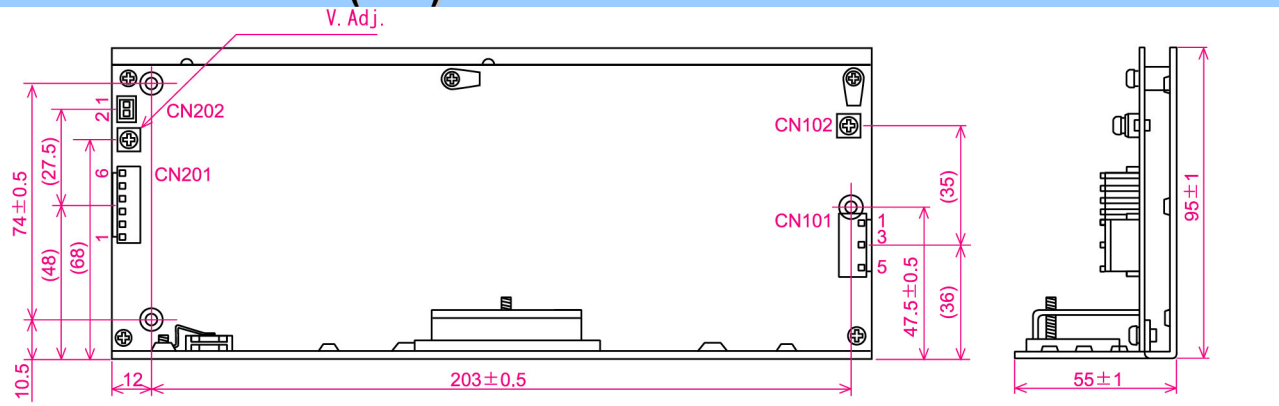
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Visit us at: www.eta-usa.com
email at: sales@eta-usa.com

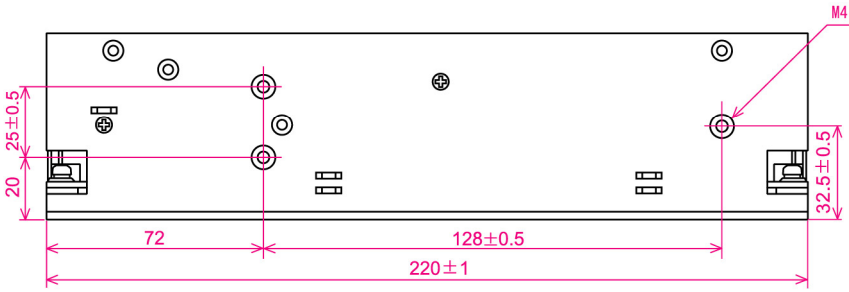
Conditions:
*1 cold start
*2 at AC100/230V input, rated output and 25℃
*3 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth
*4 at -10 to +50℃
*5 for 7hour period after 1hour warm-up at 25℃ and rated input/output
*6 when output current changed from 50% to 150% of rated output current rapidly at rated input
*7 safety approved at 25℃

Environmental Specification	
Operating Temperature	-10 to +50 ℃
Operating Humidity	20 to 85%/RH(non-condensing)
Storage Temperature	-20 to +85 ℃
Storage Humidity	10 to 85%/RH(non-condensing)
Withstanding Voltage	Primary-Secondary AC3,000V for 1minute Primary-Frame Ground AC2,500V for 1minute Secondary-Frame Ground AC500V for 1minute
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ (minimum) by DC500V insulation tester
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s^2,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)
Shock	294m/s^2
Cooling	Convection
Environmental Agencies	
Line Conducted Noise	Built to meet FCC Part15-B Class B Built to meet VCCI Class B Built to meet EN55022 Class B
Line Harmonic Distortion	Built to meet IEC61000-3-2
Safety	UL: UL60950-1 2nd edition , IEC950 C-UL: CSA C22.2 No.950 VDE EN60950-1 2006, IEC950, VDE0805
MTBF [H]	258,000
Switching Frequency[kHz]	140(typ.)
Function/Protection	
Over current Protection	Current Limiting with automatic recovery
Over voltage Protection (≥110% of Rated Output Voltage[V])	output shutdown(to reset, leave 3 minutes after shut-off)
Remote Sense	not available
Remote On/Off	option
Power Fail Detection	not available
Series Operation	not available
Parallel Operation	not available
Mechanical	
Dimension [mm]	95W × 220L × 55H
Weight [g](typical)	680g, enclosed type:820g

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DIMENSION DIAGRAM (mm)





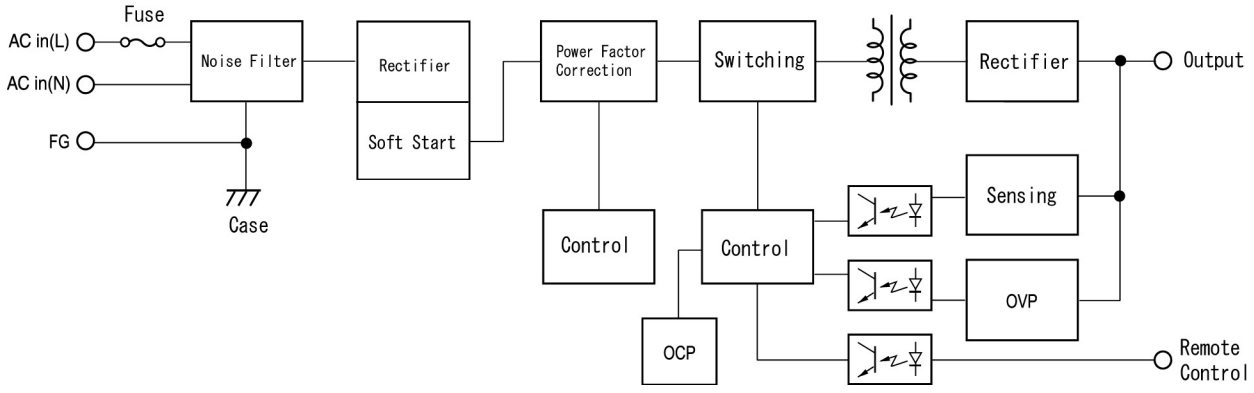
Pin Assignments

CN101	CN201	CN202
1 FG	1 GND	1 +R
3 AC in(N)	2 GND	2 −R
5 AC in(L)	3 GND	
	4 +VOUT	
	5 +VOUT	
	6 +VOUT	

	Mating Connector (housing)
CN101	VHR-5N
CN201	VHR-6N
CN202	XHP-2

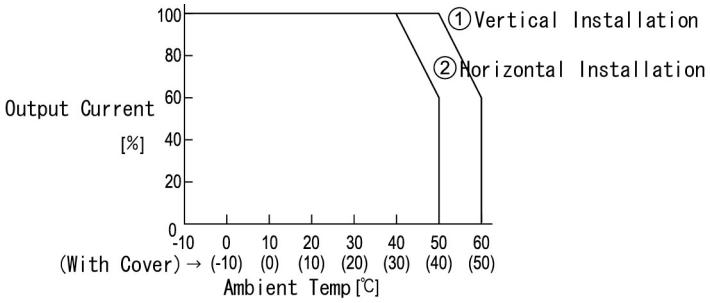
Manufacturer: JST

BLOCK DIAGRAM



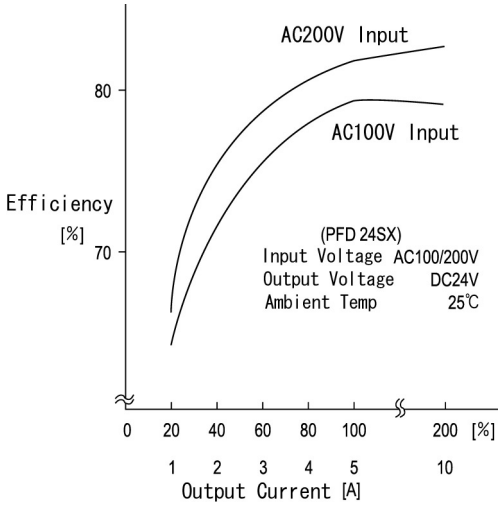
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DERATING CURVE

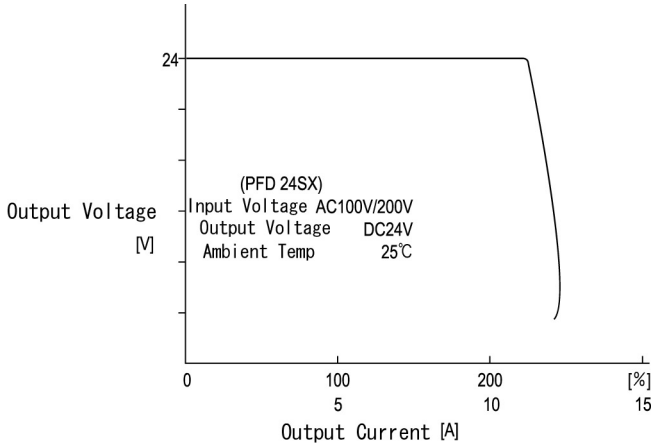


※ For safety specification, contact ETA Sales Representative

EFFICIENCY CURVE



OCP CURVE



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