P R B X POWERBOX Defense Line OFD1200A Series 1200W Single Output AC/DC Baseplate Power Supply

OFD1200A – a powerful baseplate cooling power supply for defense applications. The design to meet MIL-STD makes it be solution from off-the-shelf products. A product that is suitable for wide application areas in industrial and others. Ruggedized construction makes it ideal for harsh environmental applications.

Features
Conductive cooling
Conformal coating
Output active ORing (optional only 28Vdc & 48Vdc)
Active current shared paralleling & Redundancy operation
Voltage & Current, wide range adjustable (see manual)
Vibration/shock according MIL-STD-810H
EMC according to MIL-STD-461 CE-102
Meet MIL-STD-1399-300
Power Good, Remote sense, Remote On/Off
OCP OVP OTP SCP

85-305VAC
100-277VAC
No
47-63Hz
I (with ground)
0.98/0.95 (110VAC/230VAC)
40A typ.
12V: 10.9A/ 5.1A
28V, 48V and 65V: 12.5A/ 5.8A
20ms (230VAC, Full load)
Yes
600ms typ. (Remote on 100ms)
@-40°C deg. 1)
<1.5mA at 277VAC/60Hz

Output	
Output volt./Cur./Power	See table
Output peak power	N/A
Minimum load	OA
Line regulation	0.5% mV max
Load regulation	0.5% mV max. 10-90% load change
Temp. coefficient	± 0.02%/°C
Ripple & noise (20MHz BW)	1%, :1,5% for 12Vdc. (2% below 0°C)
Output voltage adj.	Potentiometer & ext. voltage. 2)
Paralleling	Yes, up to 9 units



Environmental	
Operating temperature (Baseplate temperature)	-40°C to +95°C
Operating temperature (Ambient temperature)	-40°C to +80°C
Derating	See manual
Operating humidity	20-95%RH (Non condensing)
Altitude operation	max. 5000m
Storage temperature	-40°C to +85°C
Storage humidity	20-95%RH (Non condensing)
Vibration	MIL-STD810H, Method 514.8,
	Category 24, Figure 514.8E-1.
Shock	MIL-STD-810H,
	Procedure 1, 20G 11ms
Mechanical	
Size WxHxD	142x40x340mm
IP class	IPX0
Weight	1.8kg typ.
Connectors	Input: Phoenix MKDS 5/ 3-9,5 (1714984)
	Output: Studs/M6 Screw
	Signals: Molex 818311041
Connector placement	Input and Output on the opposite side
General	
MTBF Telcordia	>1,990,000h @ 25°C, full load
Life time expectations	See manual

Model	Output	Output	Output	Efficiency
Number	Voltage	Current	Voltage adj. 2)	110VAC/230VAC
OFD1200A12	2 12VDC	~0-84A	~0-14.4VDC	84% / 86.5%
OFD1200A28	3 28VDC	~0-43A	~0-33.6VDC	88% / 90.5%
OFD1200A48	3 48VDC	~0-25A	~0-57.6VDC	89% / 92%
OFD1200A65	5 65VDC	~0-18.5A	~0-78.0VDC	88%/91%

Protection Circuit and Others

Over current protection	Yes, works over 105% of rating auto recovery
Type of current limit	Hiccup ³⁾
Constant current mode	Yes (when current level adjusted otherwise hiccup)
Over voltage protection	Yes
Over temp. protection	Yes
Remote sensing	Yes
Remote ON/OFF	Yes
Output LED	Yes, green (operate only at nominal o/p voltage)
Active ORing	Only for 28V & 48V version (optional)

Control and Communication

Power Good	Yes, Normal operation: Low	
VTRM, ITRM	Yes	
Isolation		
Input -Output, RC	3000VAC	
Input-FG	2000VAC	
Output-FG	500VAC	
Output - RC, PG	100VAC	

Safety Standards

UL certificate	UL62368-1 3 rd ed. 2019
	CSA 22.2 No. 62368-1:19 3 rd ed.
CB certificate	IEC 62368-1:2018
evaluated to	EN62368-1:2020+A11:2020
	BS EN62368-1:2020+A11:2020
Certification mark	CE, UKCA, cURus
RoHS	Yes, Directive 2011/65/EU (2015/863)

EMC

EMC		
Harmonic attenuator	EN61000-3-2 class A, (C >50% load)	
Flicker	EN61000-3-3	
Conducted noise	MIL-STD-461, CE 10	2
Radiated noise	EN55032 class A 4)	
EMS immunity	Standards	Criterion
	EN61000-4-2	А
	EN61000-4-3	А
	EN61000-4-4	A ⁵⁾
	EN61000-4-5	В
	EN61000-4-6	А
	EN61000-4-8	Α
	EN61000-4-11	В

Part numbers and options

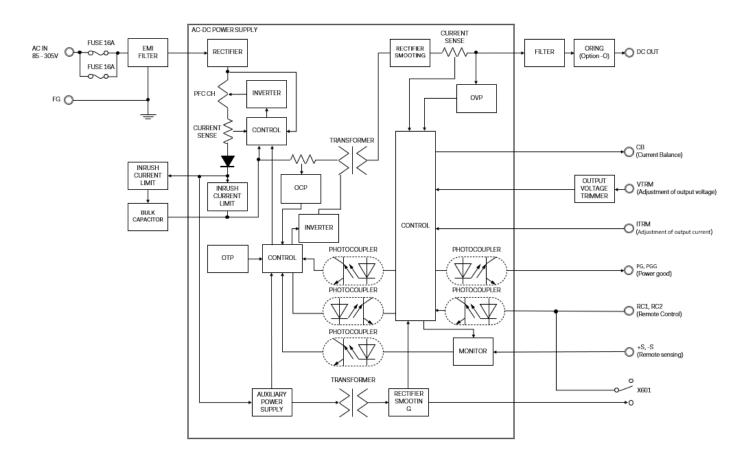
OFD1200A	XX	-	NY
	O/p Voltage		Y: Option or blank
	12: 12VDC		Option O: Oring (only for 28 & 48)
	28: 28VDC		
	48: 48VDC		
	65: 65VDC		

Note

- 1. For startup below -20°C see manual.
- Wide output adj. see manual. Full adj. range only when use external voltage VTRM. On board potentiometer adj. range 35% to 120% of nominal o/p voltage. For option -O: o/p adj. range 1V to 120% of nominal voltage.
- 3. See manual
- For OFD1200A65, tested with the ferrite clamp 742 715 5 from Wurth Electronics with two turns wiring on the output cable
- The criterion on the test frequency 100KHz: B

www.prbx.com 2023.10.11

Block diagram



Mechanical dimensions

