

COSEL AC-DC Power Supplies Enclosed type

**PLA100F**

Ordering information

PL A 100 F - -

① ② ③ ④ ⑤ ⑥



Recommended EMI/EMC Filter  
NAC-04-472



High voltage pulse noise type : NAP series  
Low leakage current type : NAM series  
\* The EMI/EMC Filter is recommended to connect with several devices.

- ① Series name  
② Single output  
③ Output wattage  
④ Universal input  
⑤ Output voltage  
⑥ Optional \*
- C : with Coating  
R : Remote on/off  
(Required external power source)  
J : Connector interface  
T : Vertical terminal block  
L : Lower power consumption  
(0.5W max at AC240Vin, no load, ErP-compliant)  
N1: with DIN rail

See 5.1 in Instruction Manual.

**SPECIFICATIONS**

\* Please consider "PBA100F-5-N" about 5V output with case cover.

	MODEL	PLA100F-12	PLA100F-15	PLA100F-24	PLA100F-36	PLA100F-48	
INPUT	VOLTAGE[V]	AC85 - 264 1 φ (Output derating is required at AC85V - 115V. See 1.1 and 3.2 in Instruction Manual) *3					
	CURRENT[A]	ACIN 100V	1.2typ (Io=90%)				
		ACIN 115V	1.1typ (Io=100%)				
		ACIN 230V	0.6typ (Io=100%)				
	FREQUENCY[Hz]	50 / 60 (47 - 63) (DC input and 440Hz *3)					
	EFFICIENCY[%]	ACIN 100V	82typ (Io=90%)	83typ (Io=90%)	85typ (Io=90%)	86typ (Io=90%)	86typ (Io=90%)
		ACIN 115V	82typ (Io=100%)	83typ (Io=100%)	85typ (Io=100%)	86typ (Io=100%)	86typ (Io=100%)
		ACIN 230V	85typ (Io=100%)	86typ (Io=100%)	88typ (Io=100%)	89typ (Io=100%)	89typ (Io=100%)
	POWER FACTOR	ACIN 100V	0.98typ (Io=90%)				
		ACIN 115V	0.98typ (Io=100%)				
ACIN 230V		0.95typ (Io=100%) * Power factor correction is stopped at AC250V or more.					
INRUSH CURRENT[A]	ACIN 100V	16typ (Io=90%) Ta=25°C at cold start					
	ACIN 115V	16typ (Io=100%) Ta=25°C at cold start					
	ACIN 230V	32typ (Io=100%) Ta=25°C at cold start					
LEAKAGE CURRENT[mA]	0.75max (ACIN 115V / 240V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)						
OUTPUT	VOLTAGE[V]	12	15	24	36	48	
	CURRENT[A]	ACIN 85-115V	Output derating is required at ACIN 115V or less (refer to instruction manual 3.2)				
		ACIN 115V-264V	8.4	6.7	4.3	2.8	2.1
	WATTAGE[W]	ACIN 85-115V	Output derating is required at ACIN 115V or less (refer to instruction manual 3.2)				
		ACIN 115V-264V	100.8	100.5	103.2	100.8	100.8
	LINE REGULATION[mV]	*4	48max	60max	96max	144max	192max
	LOAD REGULATION [mV]	Io=30 to 100%	100max	120max	150max	150max	300max
		Io=0 to 30%	Burst operation (Please contact us about detail)				
	RIPPLE[mVp-p]	0 to +40°C	120max	120max	120max	150max	150max
		-10 to 0°C	160max	160max	160max	200max	400max
		Io: load factor	Io=0 to 30%	500max	500max	500max	500max
	RIPPLE NOISE[mVp-p]	0 to +40°C	150max	150max	150max	200max	200max
		-10 to 0°C	180max	180max	180max	240max	500max
		Io: load factor	Io=0 to 30%	600max	600max	600max	600max
	TEMPERATURE REGULATION[mV]	0 to +40°C	120max	150max	240max	360max	480max
-10 to +40°C		180max	180max	290max	440max	600max	
DRIFT[mV]	*2	48max	60max	96max	144max	192max	
START-UP TIME[ms]	500typ (ACIN 115V, Io=100%) Ta=25°C						
HOLD-UP TIME[ms]	20typ (ACIN 115V, Io=100%)						
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	10.80 to 13.20		13.50 to 16.50		21.60 to 26.40		
OUTPUT VOLTAGE SETTING[V]	12.00 to 12.48		15.00 to 15.60		24.00 to 24.96		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION[V]	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	54.00 to 67.20	
	OPERATING INDICATION	LED (Green)					
	REMOTE SENSING	Not provided					
	REMOTE ON/OFF	Optional (Required external power source. Option -R)					
ISOLATION	INPUT-OUTPUT • RC	*9 AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At room temperature)					
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At room temperature)					
	OUTPUT • RC-FG	*9 AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At room temperature)					
	OUTPUT-RC	*9 AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At room temperature)					
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE *5	-20 to +70°C (Output derating is required), 20 - 90%RH (Non condensing), 3,000m (10,000 feet) max					
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max					
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axes					
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axes					
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178, UL508 (Except option -J) Complies with DEN-AN					
	CONDUCTED NOISE	Complies with FCC-B, VCCI-B, CISPR22-B, EN55011-B, EN55022-B					
	HARMONIC ATTENUATOR	*8 Complies with IEC61000-3-2 class A					

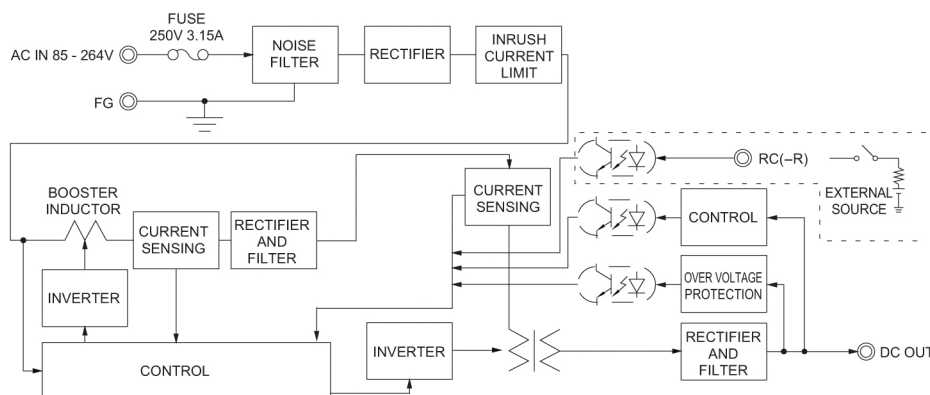
**SPECIFICATIONS**

<b>OTHERS</b>	<b>CASE SIZE/WEIGHT</b>	41 X 97 X 109mm [1.61 X 3.82 X 4.29 inches] (Excluding terminal block and screw) (W X H X D) / 500g max
	<b>COOLING METHOD</b>	Convection
<b>WARRANTY</b>	<b>WARRANTY</b>	*6 5 years (subject to the operating conditions)

- \*1 This is the result of measurement of the testing board with capacitors of 22  $\mu$ F and 0.1  $\mu$ F placed at 150 mm from the output terminals by a 20 MHz oscilloscope or a ripple-noise meter equivalent to Kaiseiku-Giken RM103.  
See 1.6 of Instruction Manual for more details.  
When the load factor is 0 - 30%, the switching power loss is reduced by burst operation, which will cause ripple and ripple noise to go beyond the specifications.
- \*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.
- \*3 Output power derating is required. As for DC input, consult us for advice.
- \*4 Consult us about dynamic load and input response. Measure the output voltage by using the average mode of the tester to deal with the burst operation at 30% load or less.
- \*5 Output power derating is required. See 3.2 in Instruction Manual.
- \*6 See 3.3 in Instruction Manual for more details.
- \*7 Consult us about safety agency approvals for the models with optional functions.
- \*8 Consult us about other classes.
- \*9 The RC terminal is added to option -R models. The RC terminal is isolated from input, output, and FG.
- \* Do not use the power supply in overcurrent conditions or in unspecified input voltage ranges. Otherwise the internal components may be damaged.
- \* Parallel operation is not possible with this mode.
- \* Sound noise may be heard from the power supply when used for pulse load.

**Features**

- Compact design (Depth: 109mm 4.29inches)
- High efficiency (88%typ PLA100F-24, AC230Vin, 100% load)
- Low power consumption (1.5W typ AC240Vin, no load at standard model)
- Lower power consumption (0.5Wmax AC240Vin, no load at option -L: see instruction manual)
- UL508 approved (Except option -J), and complies with SEMI F47 (see instruction manual 1.1)
- Various connection interface options (vertical terminal [-T], AMP connector [-J])

**Block diagram****External view**

The external size of -R option, -J option, -N1 option and -T option models is different from the standard model. See "5. Options and Others" in Instruction Manual for more details.

