COSEL AC-DC Power Supplies Enclosed Type

PLA30F

Ordering information

PL	A	30	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.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional *7
C : with Coating
J : Connector interface
T : Vertical terminal block
N1 : with DIN rail

See 5.1 in Instruction Manual.

SPECIFICATIONS

	MODEL		PLA30F-5	PLA30F-12	PLA30F-15	PLA30F-24
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	0.7typ (Io=90%)			
		ACIN 115V	0.7typ (Io=100%)			
		ACIN 230V	0.4typ (Io=100%)			
	FREQUENCY[Hz]		50 / 60 (47 - 63)			
	EFFICIENCY[%]	ACIN 100V	73.0typ (Io=90%)	80.0typ (Io=90%)	81.0typ (Io=90%)	82.5typ (Io=90%)
		ACIN 115V	74.0typ (Io=100%)	80.5typ (Io=100%)	81.5typ (Io=100%)	83.0typ (Io=100%)
		ACIN 230V	77.0typ (Io=100%)	81.0typ (Io=100%)	82.0typ (Io=100%)	83.5typ (Io=100%)
	INRUSH CURRENT[A]	ACIN 100V	16typ (Io=90%) Ta=25℃ at cold start			
		ACIN 115V	16typ (Io=100%) Ta=25℃ at cold start			
		ACIN 230V	32typ (Io=100%) Ta=25℃ at cold start			
	LEAKAGE CURRENT[mA]		0.65max (ACIN 115V / 240V, 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)			
OUTPUT	VOLTAGE[V]		5	12	15	24
	CURRENT[A]		6	2.5	2	1.3
	WATTAGE[W]	ACIN 85-115V	Output derating is required at ACIN 115V or less (refer to instruction manual 3.2)			
		ACIN 115V-264V	30.0	30.0	30.0	31.2
	LINE REGULATION[mV] *4		20max	48max	60max	96max
	LOAD REGULATION[mV] *4		40max	100max	120max	150max
	RIPPLE[mVp-p] *1	0 to +50℃	80max	120max	120max	120max
		-10 to 0℃	140max	160max	160max	160max
	RIPPLE NOISE[mVp-p] *1	0 to +50℃	120max	150max	150max	150max
		-10 to 0℃	160max	180max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	150max	240max
		-10 to +50℃	60max	150max	180max	290max
	DRIFT[mV] *2		20max	48max	60max	96max
	START-UP TIME[ms]		150typ (ACIN 115V, Io=100%)			
	HOLD-UP TIME[ms]		20typ (ACIN 115V, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		4.50 to 5.50	10.80 to 13.20	13.50 to 16.50	21.60 to 26.40
	OUTPUT VOLTAGE SETTING[V]		5.00 to 5.15	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]		5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60
	OPERATING INDICATION		LED (Green)			
	REMOTE SENSING		Not provided			
	REMOTE ON/OFF		Not provided			
ISOLATION	INPUT-OUTPUT		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-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At room temperature)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE *5		-20 to +70℃, 20 - 90%RH (Non condensing), 3,000m (10,000 feet) max			
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max			
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axes			
	IMPACT		196.1m/s² (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

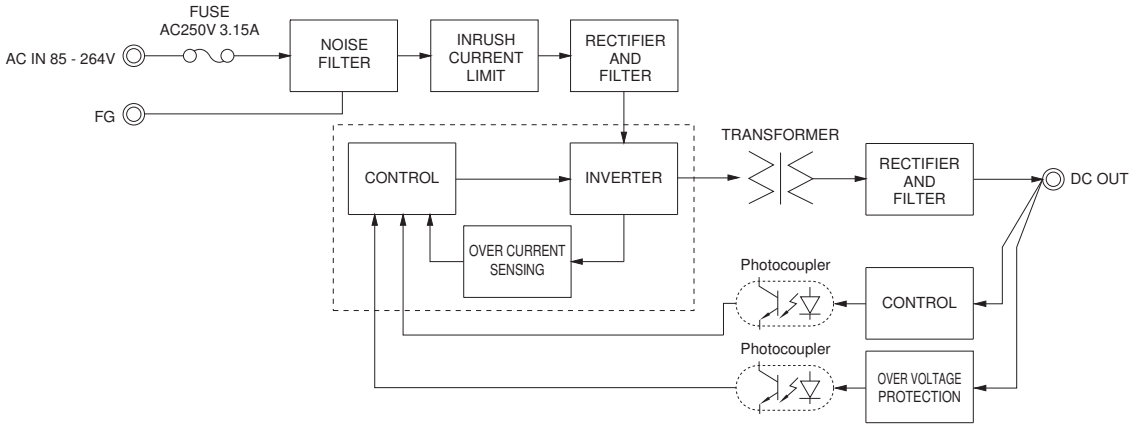
OTHERS	CASE SIZE/WEIGHT		38×80×88mm [1.50×3.15×3.46 inches] (Excluding terminal block and screw) (W×H×D) / 330g max
	COOLING METHOD		Convection
WARRANTY	WARRANTY	✻6	5 years (subject to the operating conditions)

✻1 This is the result of measurement of the testing board with capacitors of 22μF and 0.1μF placed at 150 mm from the output terminals by a 20 MHz oscilloscope or a ripple-noise meter equivalent to Keisoku-Giken RM103.
See 1.6 of Instruction Manual for more details.
✻2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
✻3 Output power derating is required. As for DC input, consult us for advice.
✻4 Consult us about dynamic load and input response.
✻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.
✻ 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.

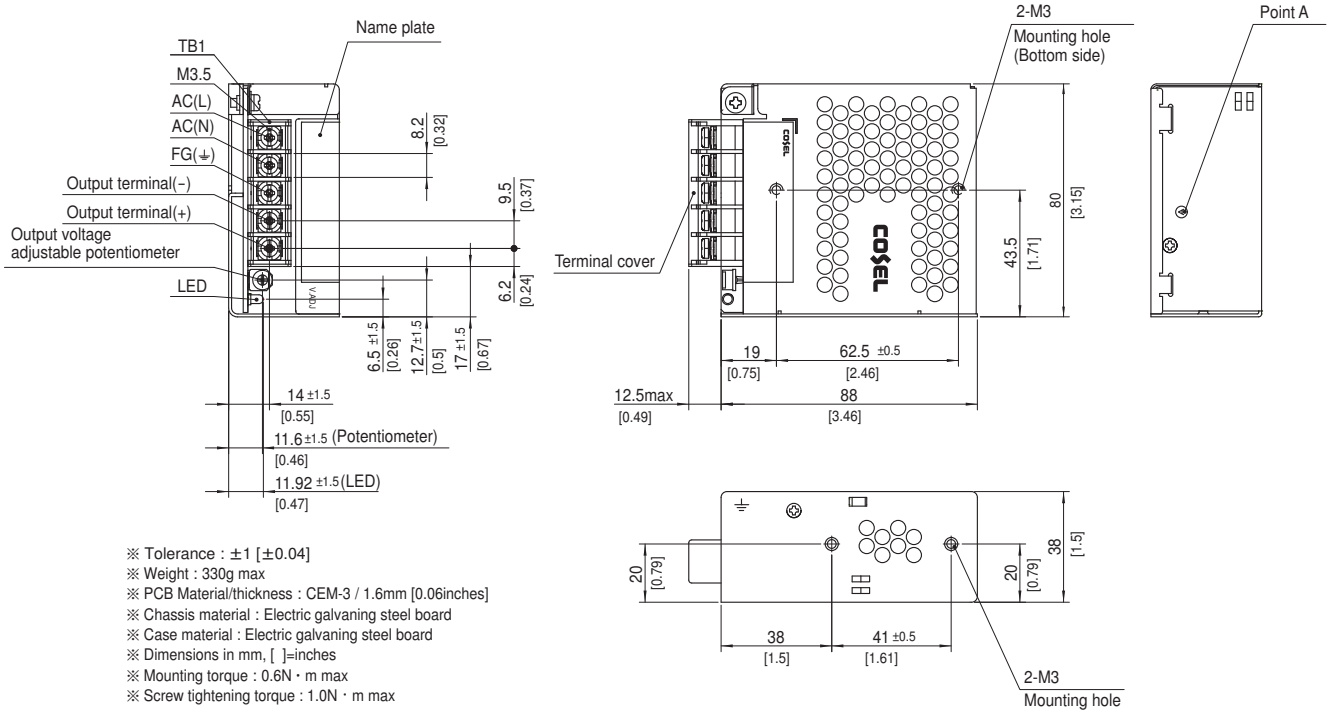
Features

- **Compact design (Depth: 88mm 3.46inches)**
- **UL508 approved (Except option -J), and complies with SEMI F47**
- **Various connection interface options (vertical terminal [-T], AMP connector [-J])**

Block diagram



External view



※ Tolerance : ±1 [±0.04]
※ Weight : 330g max
※ PCB Material/thickness : CEM-3 / 1.6mm [0.06inches]
※ Chassis material : Electric galvaning steel board
※ Case material : Electric galvaning steel board
※ Dimensions in mm, [ ]=inches
※ Mounting torque : 0.6N・m max
※ Screw tightening torque : 1.0N・m max