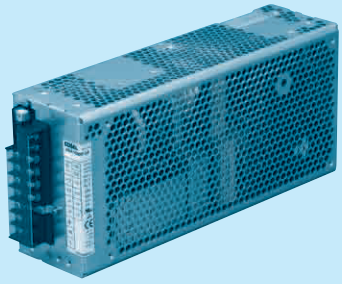
COSEL AC-DC Power Supplies Enclosed Type

ADA1000F

Ordering information

ADA 1000 F -24 -□

① ② ③ ④ ⑤



Recommended EMI/EMC Filter
NAC-20-472

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
②Output wattage
③Universal input
④Output voltage
⑤Optional ＊7
G :Low leakage current
E :Low leakage current and EMI class A
F :with Fan unit
T :Vertical terminal block
J :Connector type
C :with Coating
R :Remote ON/OFF
N1:DIN rail
W:Alarms and Redundant operation
Specification is changed at option,refer to Instruction Manual.

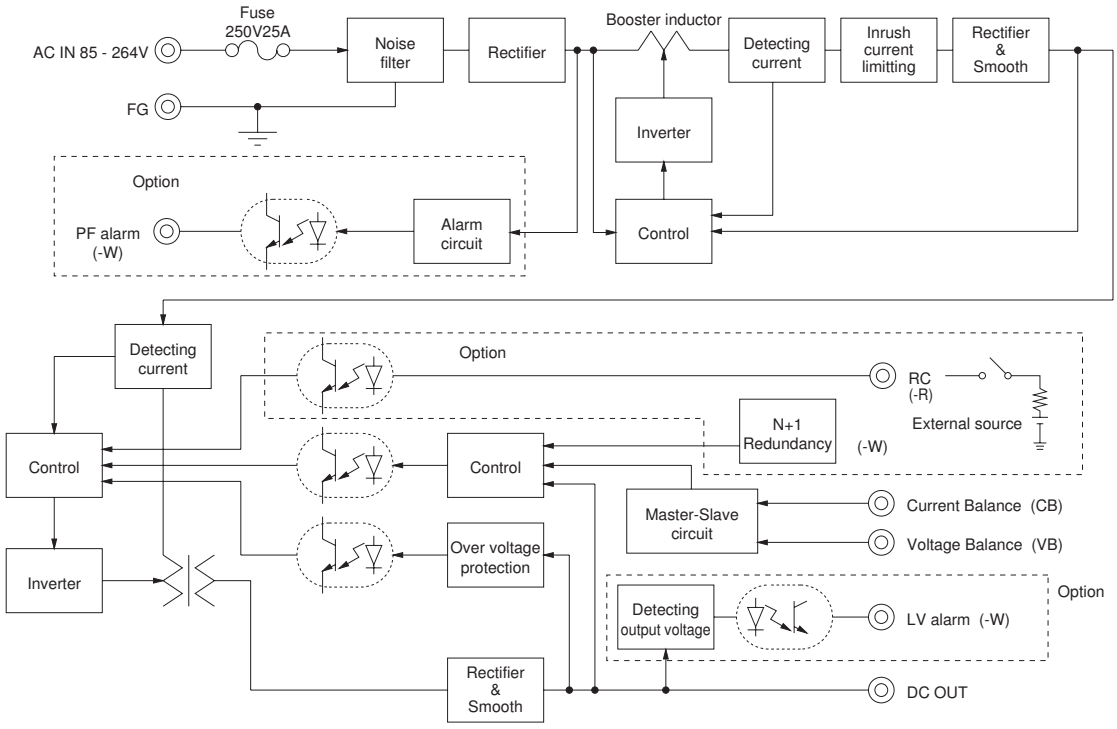
Please refer to derating curve, because the rated load current depends on cooling method that is convection cooling or forced air.

SPECIFICATIONS

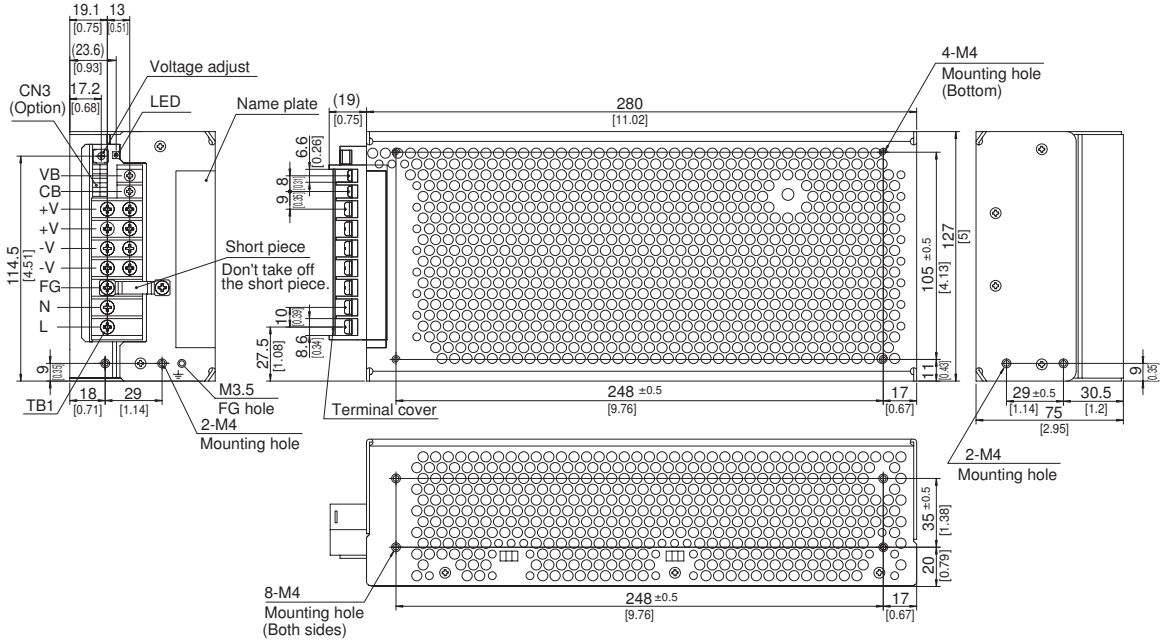
	MODEL		ADA1000F-24	ADA1000F-30	ADA1000F-36	ADA1000F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC 120 - 350 (AC64 or DC90 optionally available ＊6)			
	FREQUENCY[Hz]		50/60 (47 - 63) or DC			
	EFFICIENCY[%]	ACIN 100V	86typ (Io=100%)	86typ (Io=100%)	87typ (Io=100%)	87typ (Io=100%)
		ACIN 200V	88typ (Io=100%)	88typ (Io=100%)	89typ (Io=100%)	89typ (Io=100%)
	POWER FACTOR	ACIN 100V	0.99typ (Io=100%)			
		ACIN 200V	0.98typ (Io=100%)			
	INRUSH CURRENT[A]	ACIN 100V ＊1	20typ (Io=100%) (More than 3sec.to re-start)			
		ACIN 200V ＊1	40typ (Io=100%) (More than 3sec.to re-start)			
	LEAKAGE CURRENT[mA]		0.75max (60Hz, According to IEC60950 and DEN-AN) (Io=100%)			
OUTPUT	VOLTAGE[V]		24	30	36	48
	CURRENT[A]	ACIN 100V ＊2	21 (Peak 63) convection	16.5 (Peak 50) convection	14 (Peak 42) convection	10.5 (Peak 31.5) convection
		ACIN 100V ＊2	33 (Peak 63) forced air	26 (Peak 50) forced air	22 (Peak 42) forced air	16.5 (Peak 31.5) forced air
		ACIN 200V ＊2	25 (Peak 83) convection	20 (Peak 66) convection	16.5 (Peak 55) convection	11.5 (Peak 41.5) convection
		ACIN 200V ＊2	42 (Peak 83) forced air	33.5 (Peak 66) forced air	28 (Peak 55) forced air	21 (Peak 41.5) forced air
	LINE REGULATION[mV]		96max	120max	144max	192max
	LOAD REGULATION[mV]		150max	180max	240max	300max
	RIPPLE[mVp-p]	0 to +50℃ ＊3	120max	160max	200max	200max
		-10 - 0℃ ＊3	160max	230max	260max	300max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊3	150max	190max	230max	250max
		-10 - 0℃ ＊3	180max	250max	280max	400max
	TEMPERATURE REGULATION[mV]	0 to +50℃	240max	300max	360max	480max
	DRIFT[mV]	＊4	96max	120max	144max	192max
	START-UP TIME[ms]		500max (ACIN 100V, Io=100%)			
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		21.6 - 27.0	27.0 - 33.0	33.0 - 41.0	41.0 - 52.8
	OUTPUT VOLTAGE SETTING[V]		23.5 - 24.5	29.0 - 31.0	35.0 - 37.0	47 - 49
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 101% of peak current and recovers automatically			
	OVERVOLTAGE PROTECTION[V]		31 - 34.5	40 - 48	51 - 60	64 - 76
	OPERATING INDICATION		LED (Green)			
	ALARM OUTPUT		Detecting low input voltage(PF), detecting low output voltage(LV). (Optional : -W, refer to Instruction Manual 5)			
	REMOTE ON/OFF(RC)		Requirement for external source (Option : -R, refer to Instruction Manual 5)			
ISOLATION	INPUT-OUTPUT · RC	＊5	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	＊5	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max			
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max			
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis			
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis			
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL60950-1, C-UL(CSA60950-1), EN60950-1, EN60065, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input)			
	CONDUCTED NOISE		Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B			
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊8			
OTHERS	CASE SIZE/WEIGHT		75×127×280mm [2.95×5×11.02 inches] (W×H×D) (without terminal block) /2.5kg max			
	COOLING METHOD		Convection/Forced air			

＊1 The value is primary surge.The current of input surge to a built-in EMI/EMC Filter (0.2ms or less) is excluded.
＊2 Peak loading for 10sec.And Duty 35% max.Refer to Instruction Manual 4.Forced air is shown in Instruction Manual 2.3.
＊3 This is the value that measured on measuring board with capacitor of 22μF within 150mm from output terminal.Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM101).
＊4 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
＊5 Applicable when remote control (optional) is added.
＊6 Derating is required.Consult us for details.
＊7 Please contact us about safety approvals for the model with option.
＊8 Please contact us about class C.
＊ A sound may occur from power supply at pulse loading.

Block diagram



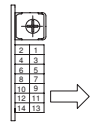
External view



※ Pin assign

Symbol	Function	Screw type
VB	Voltage balance	M3
CB	Current balance	
+V	Output terminal(+)	M4
+V	Output terminal(+)	
-V	Output terminal(-)	
-V	Output terminal(-)	
FG	Frame ground	
N	AC(N)	
L	AC(L)	

Average 21A max per pin for TB1



CN3(Option)

Pin No.	Function
1	RC+ : Remote ON/OFF+(-R)
2	RC- : Remote ON/OFF-(-R)
3-8	NC : N.C.
9	LV+ : LV Alarm(-W)
10	LV- : LV Alarm ground(-W)
11-12	NC : N.C.
13	PF+ : PF Alarm(-W)
14	PF- : PF Alarm ground(-W)

	Connector	Mating connector	Terminal	Mfr.
CN3	S14B-PHDSS	PHDR-14VS	Chain:SPHD-002T-P0.5 Loose:BPHD-001T-P0.5 BPHD-002T-P0.5 *1	J.S.T

*1 Ratchet Hand is nothing

※ Tolerance : ±1 [±0.04]
※ Weight : 2.5kg max
※ PCB material / thickness : FR-4 / 1.6mm [0.06]
※ Chassis and cover material : aluminium
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 1.2N • m(12.8kgf • cm) max
※ Screw tighting torque
M4 : 1.6N • m(16.9kgf • cm) max , M3 : 0.8N • m(8.5kgf • cm) max
※ I/0 terminal for option-J and -T is shown in Instruction Manual 5.