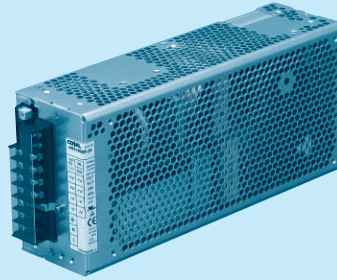


# ADA1000F

① **ADA** ② **1000** ③ **F** ④ **-24** 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.

- ① Series name
  - ② Output wattage
  - ③ Universal input
  - ④ Output voltage
  - ⑤ Optional \*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.

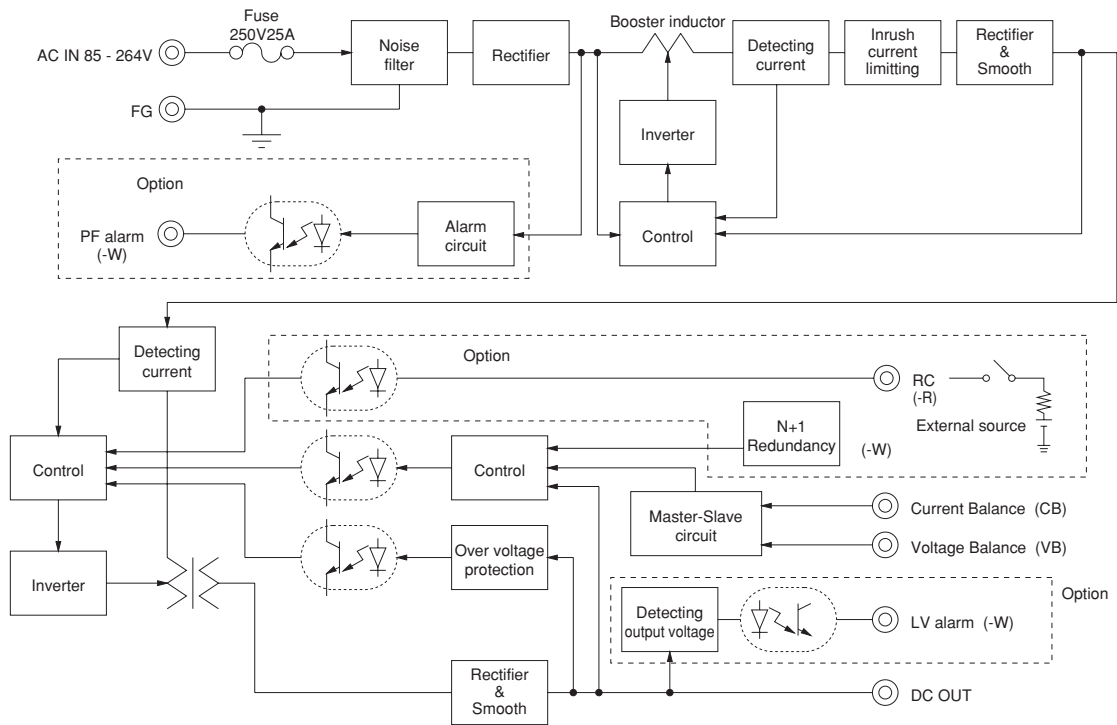
## SPECIFICATIONS

	MODEL	ADA1000F-24	ADA1000F-30	ADA1000F-36	ADA1000F-48	
INPUT	VOLTAGE[V]	AC85 - 264 1 φ 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°C *3	120max	160max	200max	300max
		-10 - 0°C *3	160max	230max	260max	300max
	RIPPLE NOISE[mVp-p]	0 to +50°C *3	150max	190max	230max	250max
		-10 - 0°C *3	180max	250max	280max	400max
	TEMPERATURE REGULATION[mV]	0 to +50°C	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)				
ISOLATION	REMOTE ON/OFF(RC)	Requirement for external source (Option : -R, refer to Instruction Manual 5)				
	INPUT-OUTPUT · RC	*5	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)			
	INPUT-FG	*5	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)			
ENVIRONMENT	OUTPUT · RC-FG	*5	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)			
	OPERATING TEMP., HUMID. AND ALTITUDE	-10 to +71°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000feet) max				
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max				
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis				
SAFETY AND NOISE REGULATIONS	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis				
	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				

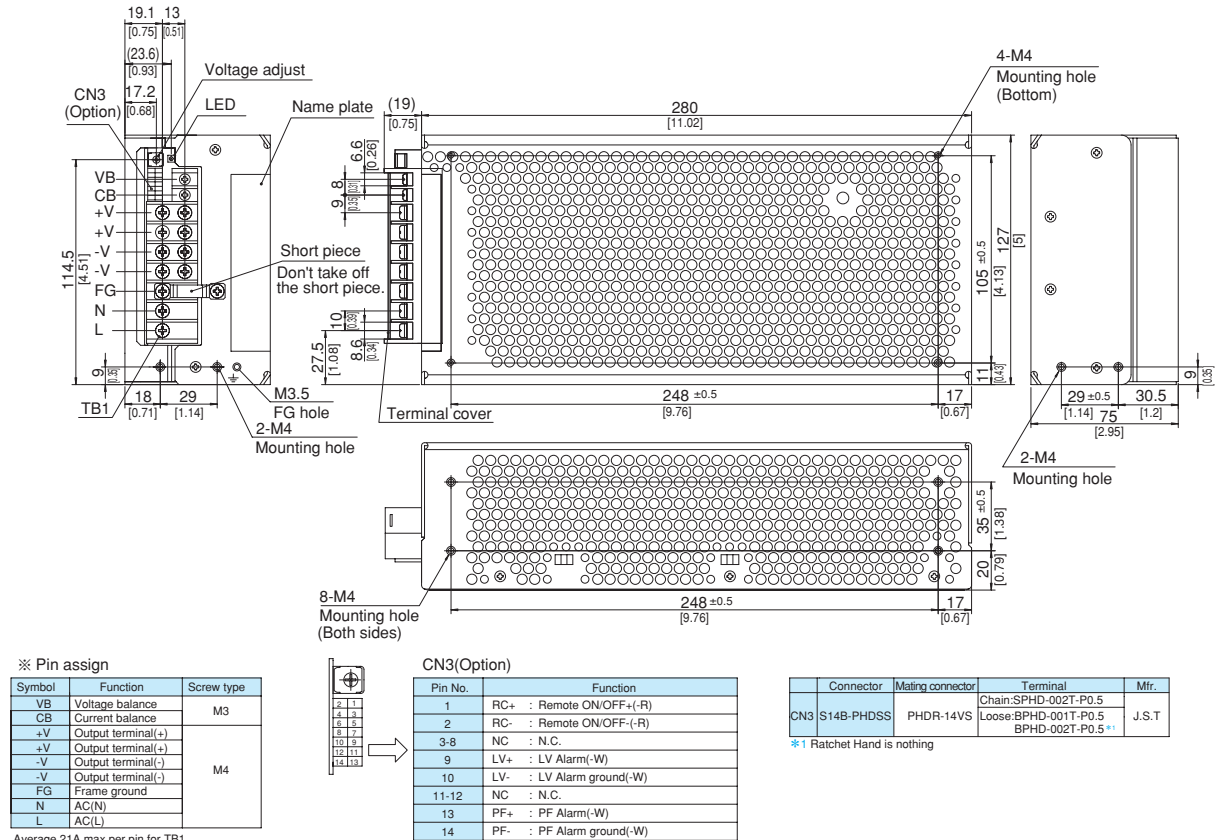
\*1 The value is primary surge. The current of input surge to a built-in EMI/EMC Filter (0.2ms or less) is excluded.  
 \*2 Peak loading for 10sec. And Duty 35% max. Refer to Instruction Manual 4. Forced air is shown in Instruction Manual 2.3.  
 \*3 This is the value that measured on measuring board with capacitor of 22 μF 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°C, 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



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