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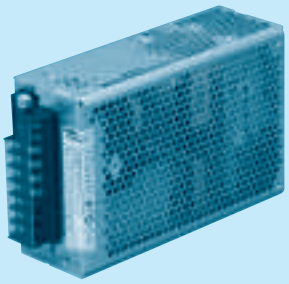
COSEL **Unit type**

# ADA600F

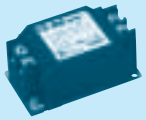
**Ordering information**

| ADA | 600 | F | -24 | -□ | |
|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | |

ADA



**Recommended Noise Filter NAC-20-472**



High voltage pulse noise type : NAP series
Low leakage current type : NAM series
✻The Noise Filter is recommended to connect with several devices.

①Series name
②Output wattage
③Universal input
④Output voltage
⑤Optional
G :Low leakage current
E :Low leakage current and EMI class A
F :with Fan unit(only -24)
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.

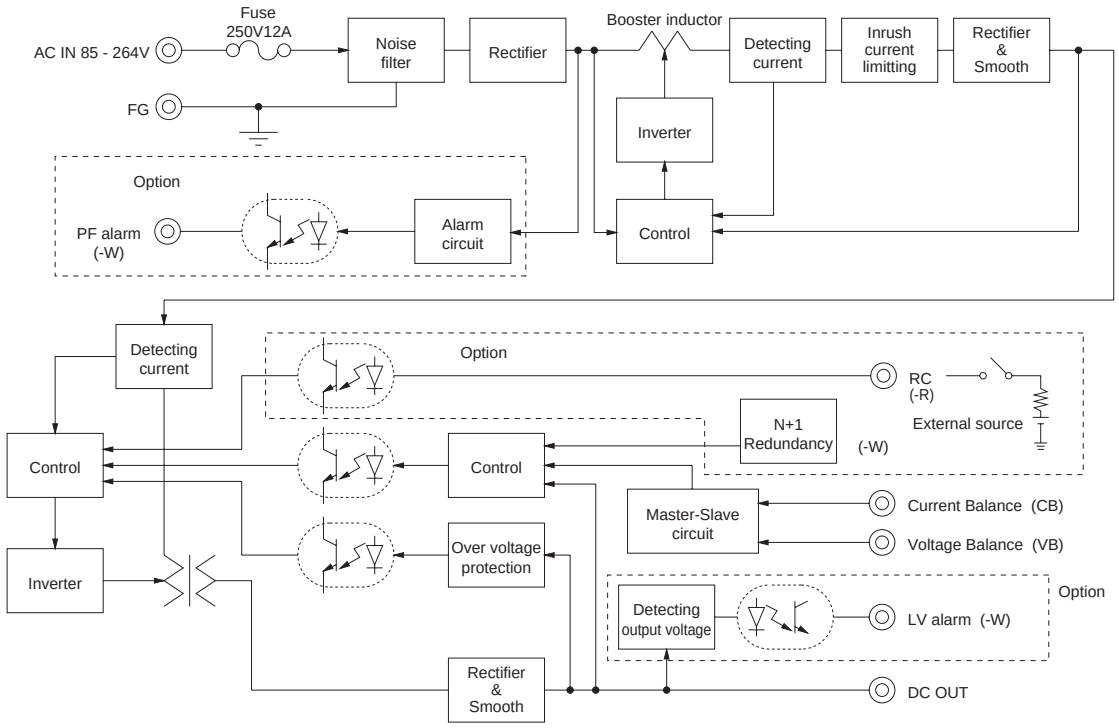
Please refer to derating curve, because the rated load current depends on cooling method that is convention cooling or forced air.

## SPECIFICATIONS

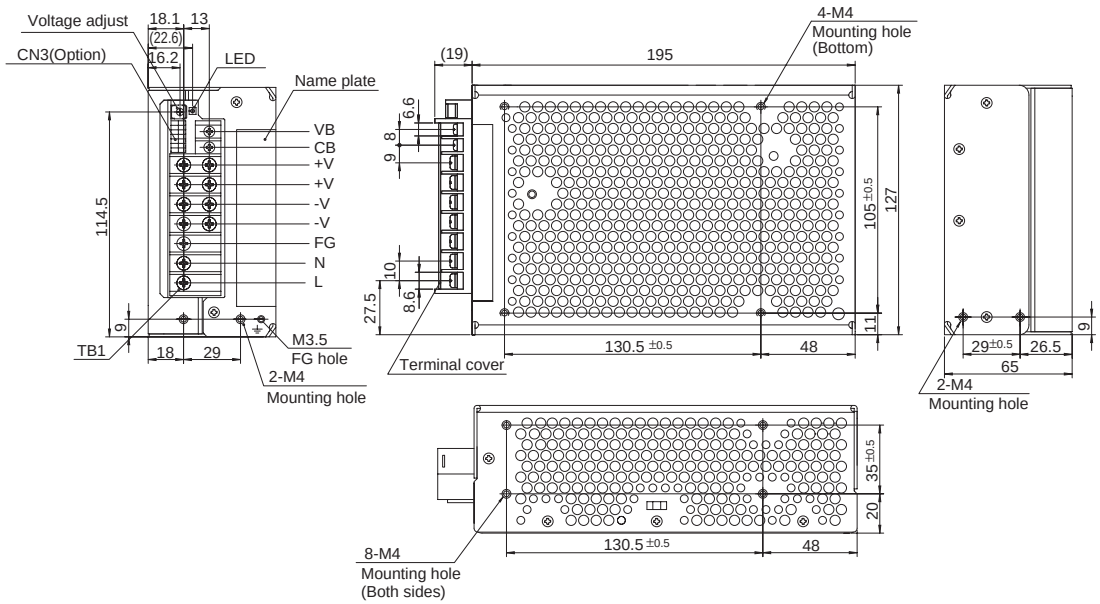
| | MODEL | | ADA600F-24 | ADA600F-30 | ADA600F-36 | ADA600F-48 |
|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | AC85 - 264 1φ or DC 120 - 350 (AC64 or DC90 optionally available ✻6) | | | |
| | FREQUENCY[Hz] | | 50/60 (47 - 63) or DC | | | |
| | EFFICIENCY[%] | ACIN 100V | 84typ (Io=100%) | 86typ (Io=100%) | 86typ (Io=100%) | 86typ (Io=100%) |
| | | ACIN 200V | 86typ (Io=100%) | 87typ (Io=100%) | 87typ (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 | 14 (Peak 25) convection | 11 (Peak 20) convection | 9 (Peak 16.5) convection | 6.5 (Peak 12.5) convection |
| | | ACIN 100V ✻2 | 21 (Peak 25) forced air | 16.5 (Peak 20) forced air | 14 (Peak 16.5) forced air | 10.5 (Peak 12.5) forced air |
| | | ACIN 200V ✻2 | 15 (Peak 31) convection | 12 (Peak 24.5) convection | 10 (Peak 20.5) convection | 7 (Peak 15.5) convection |
| | | ACIN 200V ✻2 | 25 (Peak 31) forced air | 20 (Peak 24.5) forced air | 16.5 (Peak 20.5) forced air | 12.5 (Peak 15.5) 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 | 47.0 - 49.0 |
| 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, EN50178 Complies with DEN-AN and IEC60950-1 (At only AC input) | | | |
| | CONDUCTED NOISE | | Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B | | | |
| | CE MARKING | | Low Voltage Directive, EMC Directive | | | |
| | HARMONIC ATTENUATOR | | Complies with IEC61000-3-2 | | | |
| OTHERS | CASE SIZE/WEIGHT | | 65×127×195mm (W×H×D) (without terminal block) /1.5kg max | | | |
| | COOLING METHOD | | Convection/Forced air | | | |

✻1 The value is primary surge.The current of input surge to a built-in noise 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.
✻ A sound may occur from power supply at pulse loading.

## Block diagram



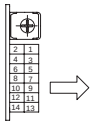

## External view




※ 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 | J.S.T |
| | | | Loose:BPHD-001T-P0.5 | |
| | | | BPHD-002T-P0.5 *1 | |

*1 Ratchet Hand is nothing

※ Tolerance : ±1
※ Weight : 1.5kg max
※ PCB material / thickness : FR-4 / 1.6mm
※ Chassis and cover material : aluminium
※ Dimensions in mm
※ 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.

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