

Please refer to derating curve, because the rated load current depends on cooling method that is convention cooling or forced air.
(1)Series name
(2) Output wattage (3)Universal input (4) Output voltage (5) Optional

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.

## SPECIFICATIONS

|  | MODEL |  | ADA1000F-24 | ADA1000F-30 | ADA1000F-36 | ADA1000F-48 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INPUT | VOLTAGE[V] |  | AC85-264 $1 \phi$ or DC 120-350 (AC70 or DC100 optionally available *6) |  |  |  |
|  | FREQUENCY[Hz] |  | 50/60 (47-63) or DC |  |  |  |
|  | EFFICIENCY[\%] | ACIN 100V | 86typ (lo=100\%) | 86typ (lo=100\%) | 87typ (lo=100\%) | 87typ (lo=100\%) |
|  |  | ACIN 200V | 88typ (lo=100\%) | 88typ (lo=100\%) | 89typ (lo=100\%) | 89typ (Io=100\%) |
|  | POWER FACTOR | ACIN 100V | 0.99 typ (lo=100\%) |  |  |  |
|  |  | ACIN 200 V | 0.98 typ (lo=100\%) |  |  |  |
|  | INRUSH CURRENT[A] | ACIN 100\% * | 20typ (lo=100\%) (More than 3sec.to re-start) |  |  |  |
|  |  | ACIN 200\% * | 40typ (lo=100\%) (More than 3sec.to re-start) |  |  |  |
|  | LEAKAGE CURRENT[mA] |  | 0.75 max ( 60 Hz , According to IEC60950 and DEN-AN) (Io=100\%) |  |  |  |
| OUTPUT | VOLTAGE[V] |  | 24 | 30 | 36 | 48 |
|  | CURRENT[A] | ACIN 100\% *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 200\% *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 <br>  -10 | Oto +50'\% * | 120max | 160max | 200max | 200max |
|  |  | $-10 \cdot 0^{\circ} \mathrm{C}$ * | 160max | 230max | 260max | 300max |
|  | RIPPLE NOISE[mVp-p] | Oto $+50^{\circ} \mathrm{C} * 3$ | 150max | 190max | 230max | 250max |
|  |  | -10-0 $0^{\circ} \mathrm{C}$ * | 180max | 250max | 280max | 400max |
|  | TEMPERATURE REGULATION[mV] 0 to $+50^{\circ} \mathrm{C}$ |  | 240max | 300max | 360max | 480max |
|  | DRIFT[mV] |  | 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] |  |  |  |  |  |
|  | OPERATING INDICATION |  |  |  |  |  |
|  | 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 |  | AC3,000V 1minute, Cutoff current $=10 \mathrm{~mA}$, DC500V $50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
|  | INPUT-FG |  | AC2,000V 1minute, Cutoff current $=10 \mathrm{~mA}, \mathrm{DC} 500 \mathrm{~V} 50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
|  | OUTPUT • RC-FG |  | AC500V 1minute, Cutoff current $=100 \mathrm{~mA}$, DC500V $50 \mathrm{M} \Omega \mathrm{min}$ (At Room Temperature) |  |  |  |
| ENVIRONMENT | OPERATING TEMP,HUMID.AND ALTITUDE |  | -10 to $+71^{\circ} \mathrm{C}, 20-90 \%$ RH (Non condensing) (Refer to DERATING CURVE), $3,000 \mathrm{~m}$ (10,000feet) max |  |  |  |
|  | STORAGE TEMP.,HUMID.AND ALTITUDE |  | -20 to $+75^{\circ} \mathrm{C}, 20-90 \%$ RH (Non condensing), 9,000m (30,000feet) max |  |  |  |
|  | VIBRATION |  | $10-55 \mathrm{~Hz}, 19.6 \mathrm{~m} / \mathrm{s}^{2}(2 \mathrm{G})$, 3minutes period, 60minutes each along $\mathrm{X}, \mathrm{Y}$ and Z axis |  |  |  |
|  | IMPACT |  | $196.1 \mathrm{~m} / \mathrm{s}^{2}$ (20G), 11 ms , once each $\mathrm{X}, \mathrm{Y}$ and Z axis |  |  |  |
| SAFETY AND NOISE <br> REGULATIONS | AGENCY APPROVALS |  | UL60950, C-UL(CSA60950), EN60950, EN50178 Complies with DEN-AN and IEC60950 (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 |  | $75 \times 127 \times 280 \mathrm{~mm}(\mathrm{~W} \times \mathrm{H} \times \mathrm{D})$ (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 noise filter ( 0.2 ms 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 $22 \mu \mathrm{~F}$ within 150 mm from output terminal.Measured by 20 MHz oscilloscope or Ripple-Noise meter (Equivalent to

* 4 Drift is the change in DC output for an eight hour period after a half-hour warm-up at $25^{\circ} \mathrm{C}$, 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.
* A sound may occur from power supply at pulse loading.

