

CUS350M

SPECIFICATIONS

CA820-01-01B

| ITEMS | | MODEL | CUS350M-12 | CUS350M-18 | CUS350M-24 | CUS350M-36 | CUS350M-48 |
|-------|---|-------|--|-------------|-------------|-------------|-------------|
| 1 | Nominal Output Voltage | V | 12 | 18 | 24 | 36 | 48 |
| 2 | Maximum Output Current @ Convection cooling | A | 29 | 19.4 | 14.7 | 9.7 | 7.3 |
| | Maximum Output Current @ Forced air cooling (*13) | A | 34.5 | 23 | 17.5 | 11.5 | 8.7 |
| 3 | Maximum Output Power @ Convection cooling | W | 348.0 | 349.2 | 352.8 | 349.2 | 350.4 |
| | Maximum Output Power @ Forced air cooling (*13) | W | 414 | 414 | 420 | 414 | 417.6 |
| 4 | Standby Mode Power | - | 5V, 0.5A | | | | |
| | Fan Supply | - | - (Available only with option models) | | | | |
| 5 | Efficiency @ Convection cooling (Typ.) 115/230 VAC (*1) | % | 91 / 93 | 91 / 94 | 91 / 94 | 91 / 93 | 91 / 94 |
| | Efficiency @ Forced air cooling (Typ.) 115/230 VAC (*1)(*13) | % | 91 / 93 | 91 / 94 | 91 / 94 | 91 / 93 | 91 / 94 |
| 6 | Input Voltage Range (*2) | - | 85 - 265 VAC (47-63Hz) or 120 - 370 VDC | | | | |
| 7 | Input Current(Typ. Convection cooling) 115/230 VAC (*1) | A | 4 / 2 | | | | |
| | Input Current(Typ. Forced air cooling) 115/230 VAC (*1)(*13) | A | 4.5 / 2.3 | | | | |
| 8 | Inrush Current (Typ.) 115/230VAC(*1)(*3) | - | 20A / 40A at Cold Start | | | | |
| 9 | PFHC | - | Built to meet EN61000-3-2 | | | | |
| 10 | Power Factor (Typ.) 115/230 VAC (*1) | - | 0.99 / 0.95 | | | | |
| 11 | Output Voltage Range | - | 11.4 - 12.6 | 17.1 - 18.9 | 22.8 - 25.2 | 34.2 - 37.8 | 45.6 - 50.4 |
| 12 | Maximum Ripple & Noise @ Convection cooling 115/230 VAC (*1)(*4)(*5) | mV | 120 | 180 | 240 | 360 | 480 |
| | Maximum Ripple & Noise @ Forced air cooling 115/230 VAC (*1)(*4)(*5)(*13) | mV | 150 | 200 | 240 | 360 | 480 |
| 13 | Maximum Line Regulation (*4)(*6) | mV | 60 | 90 | 120 | 180 | 240 |
| 14 | Maximum Load Regulation (*4)(*7) | mV | 120 | 180 | 240 | 360 | 480 |
| 15 | Remote Off Power Consumption (Typ.) (*12) | - | 0.5W @ 230VAC | | | | |
| 16 | Temperature Coefficient (*4) | - | Less than 0.02% / °C | | | | |
| 17 | Over Current Protection (*8) | A | >38 | >26 | >20 | >13 | >9.7 |
| 18 | Over Voltage Protection (*9) | V | 13.8 - 16.2 | 20.7 - 24.3 | 27.6 - 32.4 | 41.4 - 48.6 | 55.2 - 64.8 |
| 19 | Hold-up Time (Typ. with Maximum Output Power @ Convection cooling) | - | 20ms | | | | |
| 20 | Leakage Current (*10) | - | 0.3mA max @265VAC,60Hz | | | | |
| 21 | Remote ON/OFF Control | - | Possible Uncommitted isolated optocoupler diode, power diode inhibits the supply | | | | |
| 22 | Remote Sense | - | Compensates for 0.5V maximum voltage drop (See Instruction Manual) | | | | |
| 23 | Power Good | - | - (Available only with option models) | | | | |
| 24 | Parallel Operation | - | - | | | | |
| 25 | Series Operation | - | Possible | | | | |
| 26 | Operating Temperature (*11) | - | -20°C - +70°C | | | | |
| 27 | Operating Humidity | - | 10 - 95%RH (No condensing) | | | | |
| 28 | Storage Temperature | - | -40°C - +85°C | | | | |
| 29 | Storage Humidity | - | 10 - 95%RH (No condensing) | | | | |
| 30 | Cooling (*13) | - | Convection or Forced air cooling | | | | |
| 31 | Withstand Voltage | - | Input-FG : 2kVAC (20mA) 1xMOPP, Input-Output : 4kVAC (20mA) 2xMOPPs Output-FG : 1.5kVAC (20mA) 1xMOPP. | | | | |
| 32 | Isolation Resistance | - | More than 100MΩ at 25°C,70%RH, Output - FG : 500VDC | | | | |
| 33 | Vibration | - | At no operating, 10-55Hz (Sweep for 1min.) Maximum 19.6m/s ² X,Y,Z 1 hour each | | | | |
| 34 | Shock | - | Less than 196m/s ² and MIL-STD-810F | | | | |
| 35 | Safety | - | Approved by: IEC60601-1 2nd Edition and 3rd Edition, EN60601-1 3rd Edition, ANSI/AAMI ES60601-1, CAN/CSA-C22.2 No.60601-1 3rd Edition (cTUVus) IEC/EN60950-1 2nd Edition, UL/CSA60950-1 2nd Edition(cTUVus) Design to meet: GB4943.1 | | | | |
| 36 | EMI 115/230VAC(*1) | - | Designed to meet EN55011-B, EN55022-B, FCC, CE:Class B,RE:Class A @ Convection cooling | | | | |
| 37 | Immunity | - | Designed to meet IEC61000-4-2 (Level 2,3), IEC61000-4-3 (Level 3), IEC61000-4-4 (Level 3), IEC61000-4-5 (Level 3,4), IEC61000-4-6 (Level 3), IEC61000-4-8 (Level 4), IEC61000-4-11 | | | | |
| 38 | Weight (Typ.) | g | 850 | | | | |
| 39 | Size (L x W x H) | mm | 190 x 87 x 40 (Refer to Outline Drawing) | | | | |

*Read instruction manual carefully, before using the power supply unit.

=NOTES=

*1. At Ta=25°C, Nominal output voltage and maximum output power.

*2. For cases where conformance to various safety specs (UL, CSA, EN) are required, input voltage range will be 100 ~ 240VAC (50-60Hz).

Output derating required when Vin is less than 115VAC, refer to output derating curve for details

*3. Not applicable for the in-rush current to Noise Filter for less than 0.2ms.

*4. Please refer to Fig. A for measurement of Vo, line and load regulation and ripple voltage.

*5. Ripple & noise are measured at 20MHz by using a 150mm twisted pair of load wires terminated with a 0.1uF and 100uF capacitor.

*6. 85~265VAC, constant load

*7. No load - full load, constant input voltage.

*8. Hiccup with automatic recovery

Avoid to operate at over load or short circuit condition for more than 30 seconds.

*9. OVP circuit shut down the output, manual reset (Repower on) to get output voltage.

*10. Measured by the each measuring method of UL, CSA, and EN (at 60Hz, Ta=25°C).

*11. Refer to Output Derating Curve for details of output derating versus

input voltage, ambient temperature and mounting method .

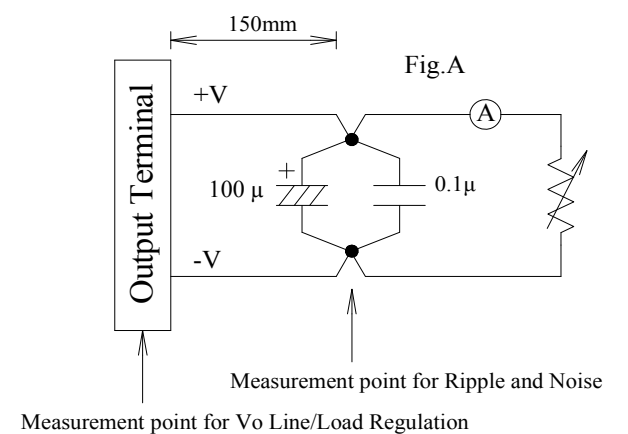
- Load (%) is percent of maximum output power or maximum output current.

Do not exceed its derating of Maximum Load.

- maximum load start up at -40°C is possible. However, it may not fulfill all the specifications.

*12. The power consumption refers to input power during remote off and standby mode power is at no load condition.

*13. Forced air cooling with air velocity more than 1.5m/s (measured at component side, air must flow through component side)



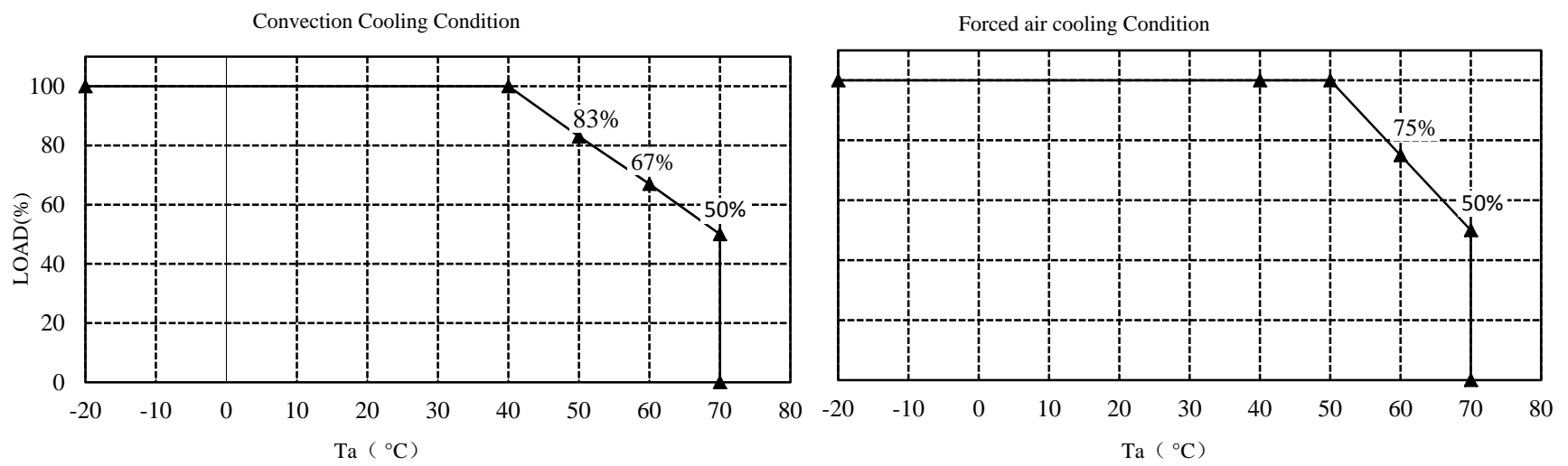
CUS350M

OUTPUT DERATING

CA820-01-02A

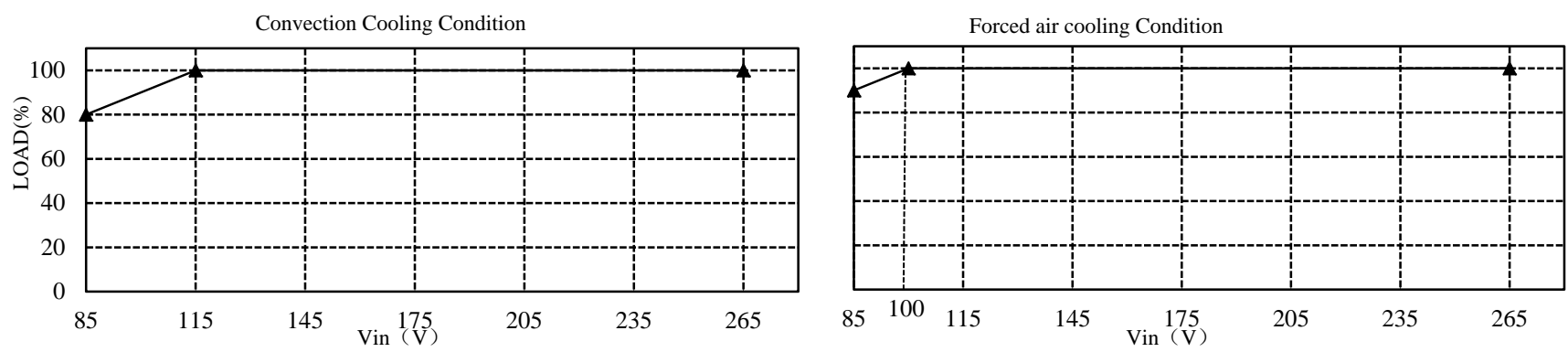
OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

| Ta (°C) | LOAD (%) | |
|-----------|--------------------|--------------------|
| | Convection cooling | Forced air cooling |
| -20 - +40 | 100 | 100 |
| 50 | 83 | 100 |
| 60 | 67 | 75 |
| 70 | 50 | 50 |

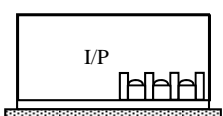


OUTPUT DERATING VERSUS INPUT VOLTAGE

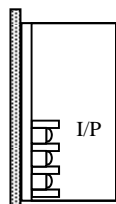
| INPUT VOLTAGE (VAC) | LOAD (%) | |
|---------------------|--------------------|--------------------|
| | Convection cooling | Forced air cooling |
| 85 | 80 | 90 |
| 115~265 | 100 | 100 |



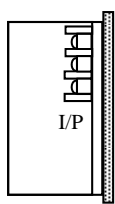
MOUNTING A
(STANDARD MOUNTING)



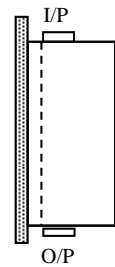
MOUNTING B



MOUNTING C



MOUNTING D



MOUNTING E

