

# GUS1000

## SPECIFICATIONS (1/2)

CA980-01-01

| MODEL                                 |         | GUS1000-12 |                 | GUS1000-24                                                                                            |               | GUS1000-36    |               | GUS1000-48 |  |
|---------------------------------------|---------|------------|-----------------|-------------------------------------------------------------------------------------------------------|---------------|---------------|---------------|------------|--|
| ITEMS                                 |         |            |                 |                                                                                                       |               |               |               |            |  |
| INPUT                                 |         |            |                 |                                                                                                       |               |               |               |            |  |
| Input Voltage Range & Input Frequency |         | (*2)(*12)  | -               | 85 - 265VAC (47 - 63Hz)                                                                               |               |               |               |            |  |
| Efficiency (Typ.)                     | (*)     | 115VAC     | %               | 91.0                                                                                                  | 92.0          | 92.5          | 92.5          |            |  |
|                                       |         | 230VAC     | %               | 93.0                                                                                                  | 94.5          | 95.0          | 95.0          |            |  |
| Input Current (Typ.)                  | (*)     | 115VAC     | A               | 8.0                                                                                                   | 10.0          |               |               |            |  |
|                                       |         | 230VAC     | A               | 4.0                                                                                                   | 5.0           |               |               |            |  |
| Inrush Current (Typ.)                 | (*)(*3) | 115/230VAC | A               | 25 / 50 at Cold Start                                                                                 |               |               |               |            |  |
| Power Factor (Typ.)                   | (*)     | 115/230VAC | -               | 0.99 / 0.95                                                                                           |               |               |               |            |  |
| Leakage Current                       | (*9)    |            | -               | 0.75mA max @ 265VAC, 60Hz                                                                             |               |               |               |            |  |
| OUTPUT                                |         |            |                 |                                                                                                       |               |               |               |            |  |
| Nominal Output Voltage                |         |            | V               | 12                                                                                                    | 24            | 36            | 48            |            |  |
| Output Voltage Initial Set Accuracy   |         |            | -               | +/- 1%                                                                                                |               |               |               |            |  |
| Output Voltage Adjustment Range       |         |            | V               | 11.7 - 12.6                                                                                           | 23.4 - 25.9   | 35.1 - 38.8   | 46.8 - 51.8   |            |  |
| Maximum Output Current                |         |            | A               | 66.7                                                                                                  | 41.7          | 27.8          | 20.9          |            |  |
| Peak Output Current                   |         |            | A               | 83.4                                                                                                  | 41.7          | 27.8          | 20.9          |            |  |
| Maximum Output Power                  |         |            | (*10) W         | 800.4                                                                                                 | 1000.8        | 1000.8        | 1003.2        |            |  |
| Peak Output Power                     |         |            | (*13) W         | 1000.8                                                                                                | 1000.8        | 1000.8        | 1003.2        |            |  |
| Maximum Line Regulation               |         |            | (*4)(*5) mV     | 60                                                                                                    | 120           | 180           | 240           |            |  |
| Maximum Load Regulation               |         |            | (*4)(*6) mV     | 120                                                                                                   | 240           | 360           | 480           |            |  |
| Temperature Coefficient               |         |            | (*4) -          | Less than 0.02% / °C                                                                                  |               |               |               |            |  |
| Maximum Ripple & Noise                |         |            | (*)(*4)(*15) mV | 240                                                                                                   | 360           | 480           | 480           |            |  |
| Hold-up Time (Typ.)                   |         |            | (*) ms          | 11                                                                                                    |               |               |               |            |  |
| PROTECTIVE FUNCTION                   |         |            |                 |                                                                                                       |               |               |               |            |  |
| Over Current Protection               |         |            | (*7) A          | > 87.60                                                                                               | > 43.80       | > 29.20       | > 22.00       |            |  |
| Over Voltage Protection               |         |            | (*8) V          | 13.80 - 16.20                                                                                         | 27.60 - 32.40 | 41.40 - 48.60 | 55.20 - 64.80 |            |  |
| FUNCTION                              |         |            |                 |                                                                                                       |               |               |               |            |  |
| Remote ON/OFF Control                 |         |            | (*13) -         | Optional                                                                                              |               |               |               |            |  |
| Remote Sensing                        |         |            | -               | None                                                                                                  |               |               |               |            |  |
| Parallel Operation                    |         |            | -               | None                                                                                                  |               |               |               |            |  |
| Series Operation                      |         |            | (*13) -         | Possible                                                                                              |               |               |               |            |  |
| ENVIRONMENT                           |         |            |                 |                                                                                                       |               |               |               |            |  |
| Operating Temperature                 |         |            | (*10) -         | -20 to +70°C, start up at -40°C                                                                       |               |               |               |            |  |
| Storage Temperature                   |         |            | -               | -40 to +70°C                                                                                          |               |               |               |            |  |
| Operating Humidity                    |         |            | -               | 10 to 95%RH (Non Condensing)                                                                          |               |               |               |            |  |
| Storage Humidity                      |         |            | -               | 10 to 95%RH (Non Condensing)                                                                          |               |               |               |            |  |
| Vibration                             |         |            | (*14) -         | At no operating, 10 - 55Hz (Sweep for 1min)<br>19.6m/s <sup>2</sup> Constant, X,Y,Z 1hour each.       |               |               |               |            |  |
| Shock                                 |         |            | (*14) -         | Less than 196m/s <sup>2</sup> (time : 11 ± 5 ms)                                                      |               |               |               |            |  |
| Cooling                               |         |            | -               | Forced air cooling by Intake FAN                                                                      |               |               |               |            |  |
| ISOLATION                             |         |            |                 |                                                                                                       |               |               |               |            |  |
| Withstand Voltage                     |         |            | -               | Input - FG : 2.0kVAC (20mA), Input - Output : 3.0kVAC (20mA)<br>Output - FG : 500VAC (100mA) for 1min |               |               |               |            |  |
| Isolation Resistance                  |         |            | -               | More than 100MΩ at 25°C and 70%RH, Output - FG : 500VDC                                               |               |               |               |            |  |

# GUS1000

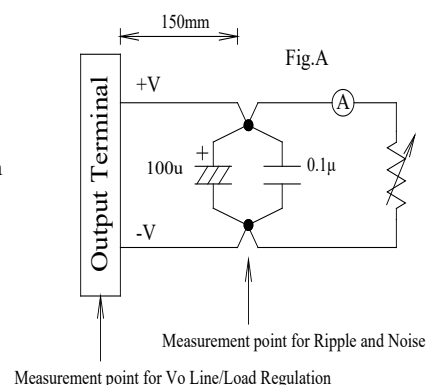
## SPECIFICATIONS (2/2)

| ITEMS                   |            | MODEL | GUS1000-12                                                                                                                                                            | GUS1000-24 | GUS1000-36 | GUS1000-48 |
|-------------------------|------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|
| STANDARD AND COMPLIANCE |            |       |                                                                                                                                                                       |            |            |            |
| Safety                  |            | -     | Approved by IEC/EN/UL/CSA 62368-1 (Altitude ≤ 5,000m)<br>Designed to meet IEC61010-1 (Altitude ≤ 5,000m)<br>Designed to meet IEC62477-1 (OVC III) (Altitude ≤ 4,000m) |            |            |            |
| Conducted Emission      | (*11)      |       | Designed to meet EN55011/EN55032-B, FCC-ClassB, VCCI-B                                                                                                                |            |            |            |
| Radiated Emission       | (*11)      |       | Designed to meet EN55011/EN55032-B, FCC-ClassB, VCCI-B                                                                                                                |            |            |            |
| Harmonic Current        | (*1)(*11)  | -     | Designed to meet IEC61000-3-2, Class A                                                                                                                                |            |            |            |
| Immunity                | (*11)(*16) | -     | Designed to meet IEC61000-6-2, IEC61000-4-2, -3, -4, -5, -6, -8, -11                                                                                                  |            |            |            |
| Line DIP                |            | -     | Designed to meet SEMI-F47 at input voltage ≥ 200VAC                                                                                                                   |            |            |            |
| MECHANICAL              |            |       |                                                                                                                                                                       |            |            |            |
| Weight (Typ.)           |            | g     | 930                                                                                                                                                                   |            |            |            |
| Size (W x H x D)        |            | mm    | 101.6 x 41 x 177.8 ( Refer to Outline Drawing )                                                                                                                       |            |            |            |

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

### =NOTES=

- \*1. At 115VAC/230VAC, Ta=25°C, nominal output voltage, maximum output power.
- \*2. For cases where conformance is required to meet various safety specs (UL, CSA, EN), input voltage range shall be from 100 - 240VAC (50-60Hz).
- \*3. Not applicable for the in-rush current to Noise Filter for less than 0.2ms.
- \*4. Refer to Fig. A for measurement of Vo, line and load regulation, and ripple voltage.
- \*5. Input voltage from 85 to 265VAC at constant output current.
- \*6. Constant input voltage and output current from no load to maximum output current.
- \*7. Hiccup with automatic recovery, however power supply may be latched for protection when output is shorted and manual reset is required (Re power on) .  
Avoid operating at over load or short circuit condition.
- \*8. Inverter shut down method. When OVP is triggered, output will be shut down, and manual reset of power supply is required to re-power on.
- \*9. Apply the appropriate measurement method according to the required standard: UL, CSA, and EN (at 60Hz), Ta=25°C.
- \*10. For details, Refer to OUTPUT DERATING CURVE (CA980-01-02\_).  
- Maximum load start up at -40°C is possible. However, it may not fulfill all the specifications.
- \*11. The specifications are based on TDK-Lambda standard measurement conditions.  
The power supply is considered a component which will be installed into a final equipment.  
The final equipment should be re-evaluated that it meets EMC requirement.
- \*12. When the input voltage is less than 90VAC, output derating is required. Refer to OUTPUT DERATING CURVE (CA980-01-02\_)  
Avoid operating the unit out of the specified input voltage range.
- \*13. Refer to instruction manual.
- \*14. Using 4 mounting holes on chassis. The result is evaluated by TDK-Lambda standard measurement condition.  
The equipment should be re-evaluated to meet its vibration and shock requirement.
- \*15. Ripple & noise are measured at 20MHz by using a 150mm twisted pair of load wires terminated with a 0.1uF and 100uF capacitor.
- \*16. Refer to immunity test data.

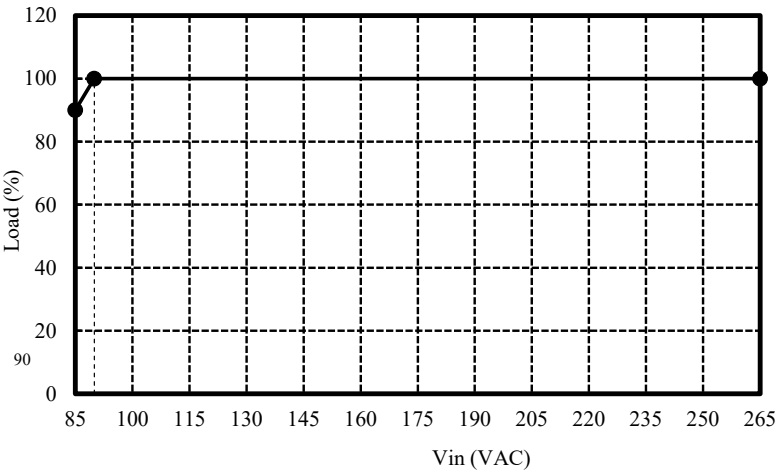


OUTPUT DERATING (1/2)

CA980-01-02

OUTPUT DERATING VERSUS INPUT VOLTAGE

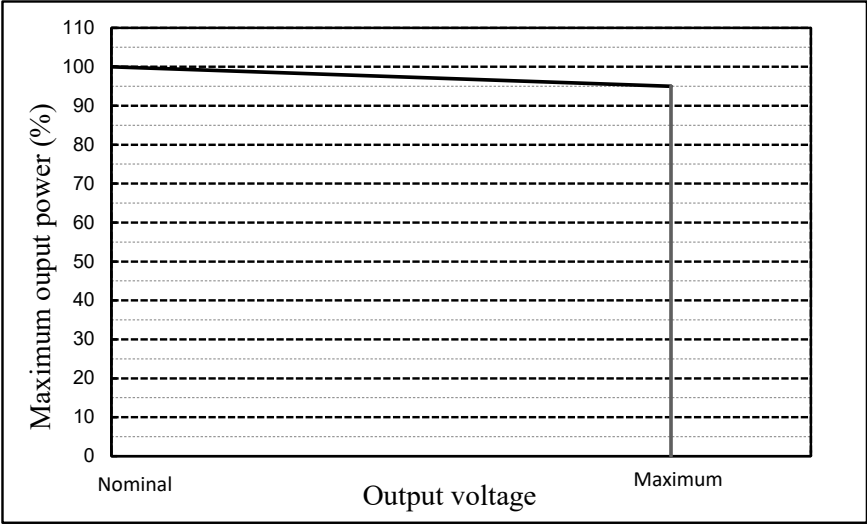
| Input Voltage (VAC) | Load (%) |
|---------------------|----------|
| 85                  | 90       |
| 90~265              | 100      |



OUTPUT POWER DERATING VERSUS HIGH OUTPUT VOLTAGE

MODEL: GUS1000-12/24/36/48

| Output voltage         | Maximum Output Power (%) |
|------------------------|--------------------------|
| Nominal output voltage | 100                      |
| Maximum output voltage | 95                       |



Note: The maximum voltage of each models.

| Model      | Maximum Output Voltage |
|------------|------------------------|
| GUS1000-12 | 12.6V                  |
| GUS1000-24 | 25.9V                  |
| GUS1000-36 | 38.8V                  |
| GUS1000-48 | 51.8V                  |

GUS1000

OUTPUT DERATING (2/2)

OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

GUS1000-12

| Ta (°C) | Load (%) |
|---------|----------|
| -20~+40 | 100      |
| 70      | 60       |

GUS1000-24,-36,-48

| Ta (°C) | Load (%) |
|---------|----------|
| -20~+50 | 100      |
| +70     | 60       |

