



User's Manual



Video



BS EN/EN60601-1 ANSI/AAMI ES60601-1 IEC60601-1 TPTC004

## Features

- 3 pole AC inlet IEC320-C14, Class I power unit
- Medical safety approved (2 x MOPP) according to ANSI/AAMI ES60601-1 and IEC/BS EN/EN60601-1
- Extremely low leakage current
- No load power consumption<0.15W
- Energy efficiency level VI and meet CoC Version 5 (Except 5~9V for Level V)
- -30~+70°C wide range working temperature
- Protections: Short circuit / Overload / Over voltage/ Over temperature
- LED indicator for power on
- Lifetime > 105 K hours
- Various DC plug quick adapter accessory available (Plug kit sold sperately,please refer to : [https://www.meanwell.com/upload/pdf/DC\\_plug.pdf](https://www.meanwell.com/upload/pdf/DC_plug.pdf))
- 3 years warranty

## Applications

- Mobile clinical workstation
- Oral irrigator
- Portable hemodialysis machine
- Breath Machine
- Medical computer monitor

## GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

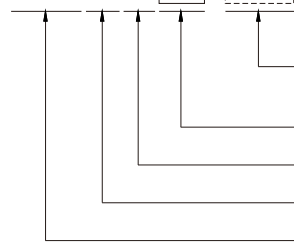
## Description

GSM60A is a highly reliable, 60W desktop style single-output green medical adaptor series. This product is a class I power unit(with FG),equipped with a standard IEC320-C14 AC inlet and adopting the input range from 80VAC to 264VAC. The entire series supplies different models with output voltages between 5VDC and 48VDC that can satisfy the demands for various types of medical electrical devices. The circuitry design meets the international medical standards (2\*MOPP), having an ultra low leakage current (<100μA), fitting the medical devices in direct electrical contact with the patients.

With the efficiency up to 91% and the extremely low no-load power consumption below 0.15W, GSM60A is compliant with USA EISA 2007/DoE , Canada NRCAN, Australia and New Zealand MEPS , EU ErP, and meet Code of Conduct(CoC) Version 5.The supreme feature allows the adaptor to save the energy when it is either under the operating mode or the standby mode. The entire series utilizes the 94V-0 flame retardant plastic case.GSM60A is certified for the international medical safety regulations.

## Model Encoding

**GSM60 A 05 - P1J**



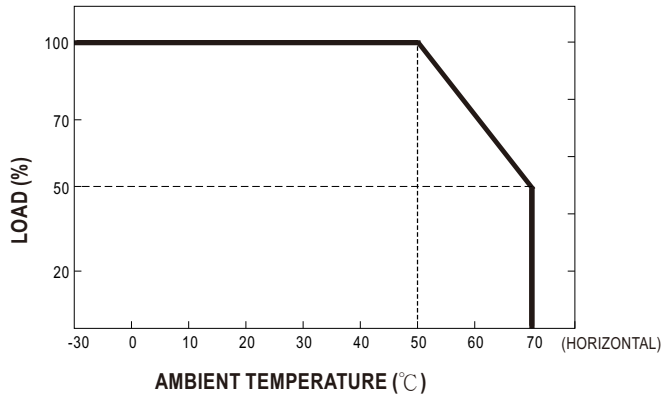
DC plug type { P1J: Standard model, 2.1 φ x 5.5 φ x 11 mm, C+, tuning fork type  
Other options available by customer requested (see Page 4~5)

Output voltage  
IEC320-C14 AC inlet  
Rated wattage  
Series name

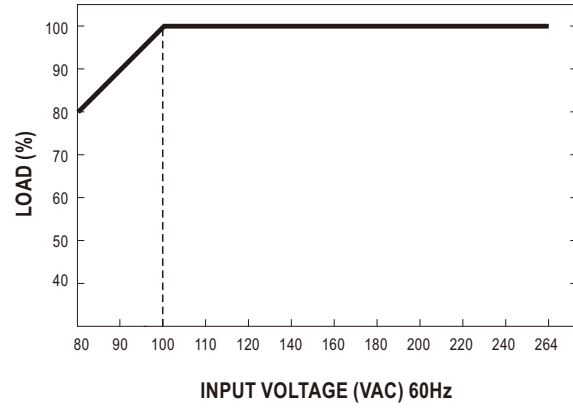
# SPECIFICATION

| ORDER NO.                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | GSM60A05-P1J                                                                                                                        | GSM60A07-P1J                                                           | GSM60A09-P1J | GSM60A12-P1J | GSM60A15-P1J                                                              | GSM60A18-P1J                                                         | GSM60A24-P1J | GSM60A48-P1J |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------|--------------|---------------------------------------------------------------------------|----------------------------------------------------------------------|--------------|--------------|
| OUTPUT                    | SAFETY MODEL NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | GSM60A05                                                                                                                            | GSM60A07                                                               | GSM60A09     | GSM60A12     | GSM60A15                                                                  | GSM60A18                                                             | GSM60A24     | GSM60A48     |
|                           | DC VOLTAGE <span>Note.2</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5V                                                                                                                                  | 7.5V                                                                   | 9V           | 12V          | 15V                                                                       | 18V                                                                  | 24V          | 48V          |
|                           | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6A                                                                                                                                  | 6A                                                                     | 6A           | 5A           | 4A                                                                        | 3.33A                                                                | 2.5A         | 1.25A        |
|                           | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.1 ~ 6A                                                                                                                            | 0.1 ~ 6A                                                               | 0.1 ~ 6A     | 0.1 ~ 5A     | 0.1 ~ 4A                                                                  | 0.1 ~ 3.33A                                                          | 0.1 ~ 2.5A   | 0.1 ~ 1.25A  |
|                           | RATED POWER (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 30W                                                                                                                                 | 45W                                                                    | 54W          | 60W          | 60W                                                                       | 60W                                                                  | 60W          | 60W          |
|                           | RIPPLE & NOISE (max.) <span>Note.3</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 80mVp-p                                                                                                                             | 80mVp-p                                                                | 100mVp-p     | 100mVp-p     | 100mVp-p                                                                  | 120mVp-p                                                             | 150mVp-p     | 240mVp-p     |
|                           | VOLTAGE TOLERANCE <span>Note.4</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ±5.0%                                                                                                                               | ±5.0%                                                                  | ±5.0%        | ±3.0%        | ±3.0%                                                                     | ±3.0%                                                                | ±3.0%        | ±2.5%        |
|                           | LINE REGULATION <span>Note.5</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ±1.0%                                                                                                                               | ±1.0%                                                                  | ±1.0%        | ±1.0%        | ±1.0%                                                                     | ±1.0%                                                                | ±1.0%        | ±1.0%        |
|                           | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ±5.0%                                                                                                                               | ±5.0%                                                                  | ±5.0%        | ±3.0%        | ±3.0%                                                                     | ±3.0%                                                                | ±3.0%        | ±2.5%        |
|                           | SETUP, RISE TIME <span>Note.6</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1000ms, 30ms / 230VAC      1500ms, 30ms / 115VAC at full load                                                                       |                                                                        |              |              |                                                                           |                                                                      |              |              |
| HOLD UP TIME (Typ.)       | 50ms / 230VAC      18ms / 115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                     |                                                                        |              |              |                                                                           |                                                                      |              |              |
| INPUT                     | VOLTAGE RANGE <span>Note.7</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 80 ~ 264VAC                                                                                                                         |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 47 ~ 63Hz                                                                                                                           |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 81.5%                                                                                                                               | 86%                                                                    | 87.5%        | 88%          | 88.5%                                                                     | 89%                                                                  | 90.5%        | 91.5%        |
|                           | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1.4A / 115VAC      1A / 230VAC                                                                                                      |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Cold start   30A/115VAC      60A / 230VAC                                                                                           |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | LEAKAGE CURRENT(max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Earth leakage current < 100μA/264VAC , Touch current < 100μA/264VAC                                                                 |                                                                        |              |              |                                                                           |                                                                      |              |              |
| PROTECTION                | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 105 ~ 160% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed             |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5.2 ~ 7.0V                                                                                                                          | 7.8 ~ 10.2V                                                            | 9.4 ~ 12.2V  | 12.6 ~ 16.2V | 15.7 ~ 20.3V                                                              | 18.9 ~ 24.3V                                                         | 25.2 ~ 32.4V | 50.4 ~ 64.8V |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Protection type : Shut down o/p voltage, re-power on to recover                                                                     |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Shut down o/p voltage, re-power on to recover                                                                                       |                                                                        |              |              |                                                                           |                                                                      |              |              |
| ENVIRONMENT               | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -30 ~ +70℃ (Refer to "Derating Curve")                                                                                              |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 20% ~ 90% RH non-condensing                                                                                                         |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -40 ~ +85℃ , 10 ~ 95% RH non-condensing                                                                                             |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±0.03% / ℃ (0~40℃)                                                                                                                  |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                             |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | OPERATING ALTITUDE <span>Note.8</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3000 meters                                                                                                                         |                                                                        |              |              |                                                                           |                                                                      |              |              |
| SAFETY & EMC<br>(Note 9)  | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | IEC60601-1, TUV BS EN/EN60601-1, ANSI/AAMI ES60601-1(3.1 version), CAN/CSA-C22.2 No. 60601-1:14 - Edition 3, EAC TP TC 004 approved |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | ISOLATION LEVEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Primary-Secondary: 2xMOPP, Primary-Earth:1xMOPP                                                                                     |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | I/P-O/P:4KVAC    I/P-FG:2KVAC      O/P-FG:SHORT                                                                                     |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | I/P-O/P, I/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH                                                                                   |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Parameter                                                                                                                           | Standard                                                               |              |              |                                                                           | Test Level / Note                                                    |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Conducted emission                                                                                                                  | BS EN/EN55011 (CISPR11), FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B) |              |              |                                                                           | Class B                                                              |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Radiated emission                                                                                                                   | BS EN/EN55011 (CISPR11), FCC PART 15 / CISPR22, CAN ICES-3(B)/NMB-3(B) |              |              |                                                                           | Class B                                                              |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Harmonic current                                                                                                                    | BS EN/EN61000-3-2                                                      |              |              |                                                                           | Class A                                                              |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Voltage flicker                                                                                                                     | BS EN/EN61000-3-3                                                      |              |              |                                                                           | -----                                                                |              |              |
|                           | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BS EN/EN60601-1-2, BS EN/EN61204-3                                                                                                  |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Parameter                                                                                                                           | Standard                                                               |              |              |                                                                           | Test Level / Note                                                    |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ESD                                                                                                                                 | BS EN/EN61000-4-2                                                      |              |              |                                                                           | Level 4, 15KV air ; Level 4, 8KV contact                             |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RF field susceptibility                                                                                                             | BS EN/EN61000-4-3                                                      |              |              |                                                                           | Level 3, 10V/m( 80MHz~2.7GHz )<br>Table 9, 9~28V/m( 385MHz~5.78GHz ) |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | EFT bursts                                                                                                                          | BS EN/EN61000-4-4                                                      |              |              |                                                                           | Level 3, 2KV                                                         |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Surge susceptibility                                                                                                                | BS EN/EN61000-4-5                                                      |              |              |                                                                           | Level 3, 1KV/Line-Line , 2KV/Line-FG                                 |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Conducted susceptibility                                                                                                            | BS EN/EN61000-4-6                                                      |              |              |                                                                           | Level 3, 10V                                                         |              |              |
| Magnetic field immunity   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BS EN/EN61000-4-8                                                                                                                   |                                                                        |              |              | Level 4, 30A/m                                                            |                                                                      |              |              |
| Voltage dip, interruption |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BS EN/EN61000-4-11                                                                                                                  |                                                                        |              |              | 100% dip 1 periods, 30% dip 25 periods,<br>100% interruptions 250 periods |                                                                      |              |              |
| OTHERS                    | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3597.9K hrs min.      Telcordia SR-332 (Bellcore) ; 721.1K hrs min.      MIL-HDBK-217F (25℃)                                        |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 125*50*31.5mm (L*W*H)                                                                                                               |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.32Kg; 40pcs/    13.8Kg/1.04CUFT                                                                                                   |                                                                        |              |              |                                                                           |                                                                      |              |              |
| CONNECTOR                 | PLUG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | See page 4~5 ; Other type available by customer requested                                                                           |                                                                        |              |              |                                                                           |                                                                      |              |              |
|                           | CABLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | See page 4~5 ; Other type available by customer requested                                                                           |                                                                        |              |              |                                                                           |                                                                      |              |              |
| NOTE                      | <div>1. All parameters are specified at 230VAC input, rated load, 25℃ 70% RH ambient.</div> <div>2. DC voltage: The output voltage set at point measure by plug terminal &amp; 50% load.</div> <div>3. Ripple &amp; noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μf &amp; 47μf capacitor.</div> <div>4. Tolerance: includes set up tolerance, line regulation, load regulation.</div> <div>5. Line regulation is measured from low line to high line at rated load.</div> <div>6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.</div> <div>7. Derating may be needed under low input voltages. Pleas check the derating curve for more details.</div> <div>8. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).</div> <div>9. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."<br/>(as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</div> <div>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></div> |                                                                                                                                     |                                                                        |              |              |                                                                           |                                                                      |              |              |

## Derating Curve

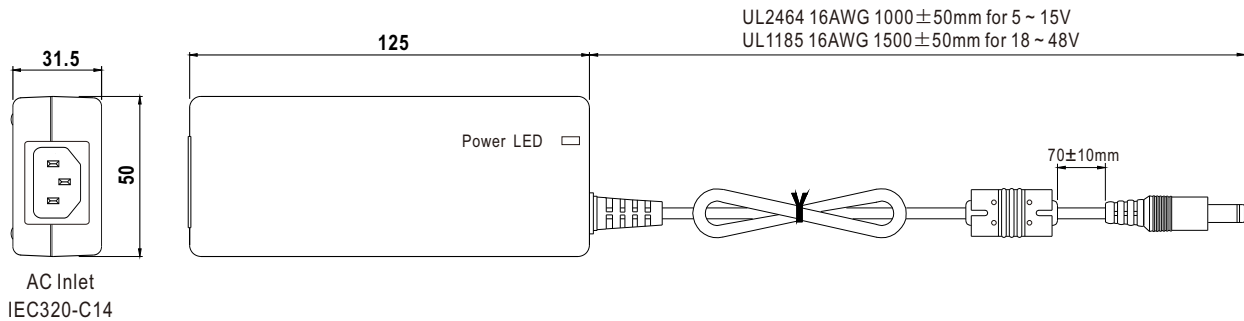


## Static Characteristics



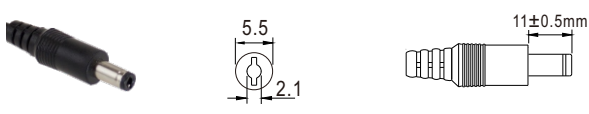
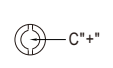
## Mechanical Specification

Case No. GS60A Unit:mm



## DC output plug

Standard plug: P1J

| P1J                                                                                 | Pin Assignment                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |                                                                                           |
|                                                                                     | Outside  Inside<br>-V connected to AC FG(standard)<br>-V not connected to AC FG(optional) |

◎ DC plug changeable through:

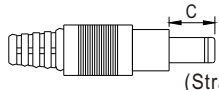
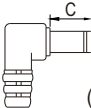
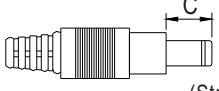
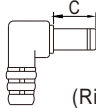
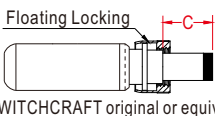
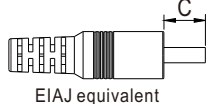
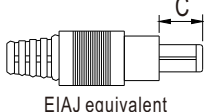
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

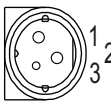
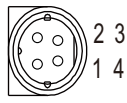
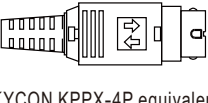
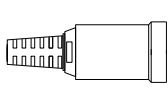
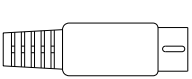
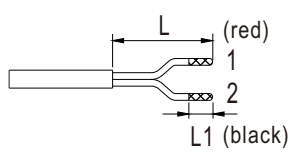
Please refer to below table and online selection guide : [https://www.meanwell.com/upload/pdf/DC\\_plug.pdf](https://www.meanwell.com/upload/pdf/DC_plug.pdf)

Example quick adapter accessory:



◎ Optional DC plug: (Available in customized cable or quick adapter)

| Tuning Fork Style                                                                                                                                                                                                                                                 |                                                                                                                                                                                                            | Type No. | A<br>OD | B<br>ID | C<br>L | Quick Adapter<br>Accessory               |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|---------|--------|------------------------------------------|------------------------------------------|
| <br>                                                                                            | <br>(Straight)<br><br>(Right-angled)    | P1I      | 5.5     | 2.1     | 9.5    | Available<br>(Current rating: 7.5A max.) |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P1L      | 5.5     | 2.5     | 9.5    |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P1M      | 5.5     | 2.5     | 11.0   |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P1IR     | 5.5     | 2.1     | 9.5    |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P1JR     | 5.5     | 2.1     | 11.0   |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P1LR     | 5.5     | 2.5     | 9.5    |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P1MR     | 5.5     | 2.5     | 11.0   |                                          |                                          |
| Barrel Style                                                                                                                                                                                                                                                      |                                                                                                                                                                                                            | Type No. | A<br>OD | B<br>ID | C<br>L | None                                     |                                          |
| <br>                                                                                        | <br>(Straight)<br><br>(Right-angled) | P2I      | 5.5     | 2.1     | 9.5    |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P2J      | 5.5     | 2.1     | 11.0   |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P2L      | 5.5     | 2.5     | 9.5    |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P2M      | 5.5     | 2.5     | 11.0   |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P2IR     | 5.5     | 2.1     | 9.5    |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P2JR     | 5.5     | 2.1     | 11.0   |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P2LR     | 5.5     | 2.5     | 9.5    |                                          |                                          |
|                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                            | P2MR     | 5.5     | 2.5     | 11.0   |                                          |                                          |
| Lock Style                                                                                                                                                                                                                                                        |                                                                                                                                                                                                            | Type No. | A<br>OD | B<br>ID | C<br>L | None                                     |                                          |
| <br><br> | P2S(S761K)                                                                                                                                                                                                 | 5.53     | 2.03    | 12.06   |        |                                          |                                          |
|                                                                                                                                                                                                                                                                   | P2K(761K)                                                                                                                                                                                                  | 5.53     | 2.54    | 12.06   |        |                                          |                                          |
|                                                                                                                                                                                                                                                                   | P2C(S760K)                                                                                                                                                                                                 | 5.53     | 2.03    | 9.52    |        |                                          |                                          |
|                                                                                                                                                                                                                                                                   | P2D(760K)                                                                                                                                                                                                  | 5.53     | 2.54    | 9.52    |        |                                          |                                          |
| Min. Pin Style                                                                                                                                                                                                                                                    |                                                                                                                                                                                                            | Type No. | A<br>OD | B<br>ID | C<br>L | Available<br>(Current rating: 5A max.)   |                                          |
| <br><br> | P3A                                                                                                                                                                                                        | 2.35     | 0.7     | 11.0    |        |                                          |                                          |
|                                                                                                                                                                                                                                                                   | P3B                                                                                                                                                                                                        | 4.0      | 1.7     | 11.0    |        |                                          |                                          |
|                                                                                                                                                                                                                                                                   | P3C                                                                                                                                                                                                        | 4.75     | 1.7     | 11.0    |        |                                          |                                          |
| Center Pin Style                                                                                                                                                                                                                                                  |                                                                                                                                                                                                            | Type No. | A<br>OD | B<br>ID | C<br>L | D<br>Center Pin                          | Available<br>(Current rating: 7.5A max.) |
| <br><br> | P4A                                                                                                                                                                                                        | 5.5      | 3.4     | 11.0    | 1.0    |                                          |                                          |
|                                                                                                                                                                                                                                                                   | P4B                                                                                                                                                                                                        | 6.5      | 4.4     | 11.0    | 1.4    |                                          |                                          |
|                                                                                                                                                                                                                                                                   | P4C                                                                                                                                                                                                        | 7.4      | 5.1     | 11.0    | 0.6    |                                          |                                          |

| Min. DIN 3 Pin with Lock (male)                                                                                                                                                                                                                                                      | Type No.    | Pin Assignment |        | Quick Adapter Accessory                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------|--------|------------------------------------------|
|                                                                                                                                                                                                                                                                                      |             | PIN No.        | Output |                                          |
|   <br>KYCON KPPX-3P equivalent    | R6B         | 1              | +Vo    | Available<br>(Current rating: 7.5A max.) |
|                                                                                                                                                                                                                                                                                      |             | 2              | -Vo    |                                          |
|                                                                                                                                                                                                                                                                                      |             | 3              | +Vo    |                                          |
| Min. DIN 4 Pin with Lock (male)                                                                                                                                                                                                                                                      | Type No.    | Pin Assignment |        |                                          |
|                                                                                                                                                                                                                                                                                      |             | PIN No.        | Output |                                          |
|   <br>KYCON KPPX-4P equivalent    | R7B         | 1              | +Vo    | Available<br>(Current rating: 7.5A max.) |
|                                                                                                                                                                                                                                                                                      |             | 2              | -Vo    |                                          |
|                                                                                                                                                                                                                                                                                      |             | 3              | -Vo    |                                          |
|                                                                                                                                                                                                                                                                                      |             | 4              | +Vo    |                                          |
| Min. DIN 4 Pin with Lock (female)                                                                                                                                                                                                                                                    | Type No.    | Pin Assignment |        |                                          |
|                                                                                                                                                                                                                                                                                      |             | PIN No.        | Output |                                          |
|   <br>KYCON KPJX-CM-4S equivalent | R7BF        | 1              | +Vo    | None                                     |
|                                                                                                                                                                                                                                                                                      |             | 2              | -Vo    |                                          |
|                                                                                                                                                                                                                                                                                      |             | 3              | -Vo    |                                          |
|                                                                                                                                                                                                                                                                                      |             | 4              | +Vo    |                                          |
| DIN 5 Pin (male)                                                                                                                                                                                                                                                                     | Type No.    | Pin Assignment |        |                                          |
|                                                                                                                                                                                                                                                                                      |             | PIN No.        | Output |                                          |
|                             | R1B         | 1              | -Vo    | Available<br>(Current rating: 7.5A max.) |
|                                                                                                                                                                                                                                                                                      |             | 2              | -Vo    |                                          |
|                                                                                                                                                                                                                                                                                      |             | 3              | +Vo    |                                          |
|                                                                                                                                                                                                                                                                                      |             | 4              | -Vo    |                                          |
|                                                                                                                                                                                                                                                                                      |             | 5              | +Vo    |                                          |
| Stripped and tinned leads                                                                                                                                                                                                                                                            | Type No.    | Pin Assignment |        |                                          |
|                                                                                                                                                                                                                                                                                      |             | PIN No.        | Output |                                          |
|  <br>Length of Land L1 by request<br>(MW's standard length, L: <u>25</u> mm, L1: <u>5</u> mm)                  | by customer | 1              | +Vo    | None                                     |
|                                                                                                                                                                                                                                                                                      |             | 2              | -Vo    |                                          |

## Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>