

## Features

- Universal AC input / Full range
- 2 pole AC inlet IEC320-C8
- Medical safety approved (2 × MOPP between primary to secondary)
- Suitable for BF application with appropriate system consideration
- Low leakage current <50 $\mu$ A
- No load power consumption<0.1W
- Energy efficiency Level VI( except 5~9V for Level V)
- Comply with EISA 2007/DoE,NRCan,AU/NZ MEPS,EU ErP and meet CoC Version 5
- High efficiency up to 88%
- High operating temperature up to +60 $^{\circ}$ C
- Class II power (without earth pin)
- Protections: Short circuit / Overload / Over voltage
- Fully enclosed plastic case
- LED indicator for power on
- Optional lock type DC plug
- 100% full load burn-in test
- 3 years warranty

## Applications

- Blood glucose meter
- Blood pressure meter
- Nebulizer
- Inhaler
- Portable medical device

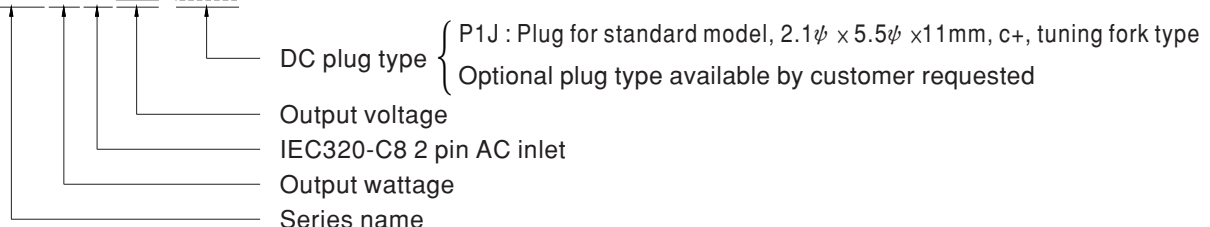
## Description

GSM25B is a highly reliable, 25W desktop style single-output green medical adaptor series. This product is equipped with a 2-pin (no FG) standard IEC320-C8 power plug, adopting the input range from 80VAC to 264VAC. The entire series supplies different output voltages between 5VDC and 48VDC that can satisfy the demands for various kinds of miniature medical devices. The circuitry design meets the international medical standards (2 × MOPP), having an ultra low leakage current (<50 $\mu$ A), fitting the medical devices in direct electrical contact with the patients.

With the efficiency up to 88% and the extreme low no-load power consumption below 0.1W, GSM25B 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, providing the double insulation that effectively prevents electrical shock. GSM25B is approved with the international medical safety certificates.

## Model Encoding

**GSM25 B 05 -P1J**

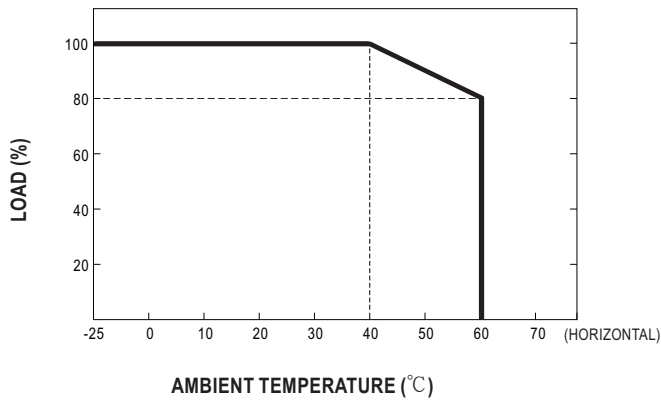




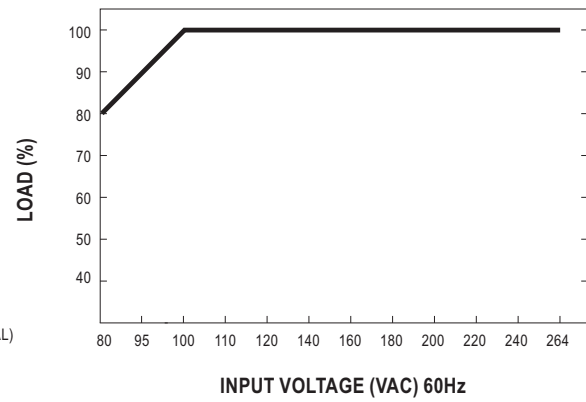
## SPECIFICATION

| ORDER NO.                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | GSM25B05-P1J                                                                                                                                                                                   | GSM25B07-P1J | GSM25B09-P1J | GSM25B12-P1J | GSM25B15-P1J | GSM25B18-P1J | GSM25B24-P1J | GSM25B48-P1J |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| OUTPUT                    | SAFETY MODEL NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | GSM25B05                                                                                                                                                                                       | GSM25B07     | GSM25B09     | GSM25B12     | GSM25B15     | GSM25B18     | GSM25B24     | GSM25B48     |
|                           | DC VOLTAGE                      Note.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5V                                                                                                                                                                                             | 7.5V         | 9V           | 12V          | 15V          | 18V          | 24V          | 48V          |
|                           | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4A                                                                                                                                                                                             | 2.93A        | 2.77A        | 2.08A        | 1.66A        | 1.38A        | 1.04A        | 0.52A        |
|                           | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0 ~ 4A                                                                                                                                                                                         | 0 ~ 2.93A    | 0 ~ 2.77A    | 0 ~ 2.08A    | 0 ~ 1.66A    | 0 ~ 1.38A    | 0 ~ 1.04A    | 0 ~ 0.52A    |
|                           | RATED POWER (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 20W                                                                                                                                                                                            | 22W          | 25W          | 25W          | 25W          | 25W          | 25W          | 25W          |
|                           | RIPPLE & NOISE (max.) Note.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 60mVp-p                                                                                                                                                                                        | 80mVp-p      | 80mVp-p      | 120mVp-p     | 120mVp-p     | 150mVp-p     | 180mVp-p     | 240mVp-p     |
|                           | VOLTAGE TOLERANCE Note.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ±6.0%                                                                                                                                                                                          | ±5.0%        | ±5.0%        | ±3.0%        | ±3.0%        | ±3.0%        | ±2.0%        | ±2.0%        |
|                           | LINE REGULATION              Note.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±1.0%                                                                                                                                                                                          | ±1.0%        | ±1.0%        | ±1.0%        | ±1.0%        | ±1.0%        | ±1.0%        | ±1.0%        |
|                           | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ±6.0%                                                                                                                                                                                          | ±5.0%        | ±5.0%        | ±3.0%        | ±3.0%        | ±3.0%        | ±2.0%        | ±2.0%        |
|                           | SETUP, RISE TIME              Note.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 500ms, 30ms / 230VAC              1000ms, 30ms / 115VAC at full load                                                                                                                           |              |              |              |              |              |              |              |
| HOLD UP TIME (Typ.)       | 16ms / 230VAC              16ms / 115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                |              |              |              |              |              |              |              |
| INPUT                     | VOLTAGE RANGE              Note.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 80 ~ 264VAC    113 ~ 370VDC                                                                                                                                                                    |              |              |              |              |              |              |              |
|                           | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 47 ~ 63Hz                                                                                                                                                                                      |              |              |              |              |              |              |              |
|                           | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 80%                                                                                                                                                                                            | 83%          | 84%          | 86%          | 86%          | 86%          | 87%          | 88%          |
|                           | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.7A / 115VAC              0.35A / 230VAC                                                                                                                                                      |              |              |              |              |              |              |              |
|                           | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 55A / 230VAC              30A / 115VAC                                                                                                                                                         |              |              |              |              |              |              |              |
|                           | LEAKAGE CURRENT(max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Touch current < 50 $\mu$ A/264VAC                                                                                                                                                              |              |              |              |              |              |              |              |
| PROTECTION                | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 105 ~ 170% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed                                                                        |              |              |              |              |              |              |              |
|                           | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5.25 ~ 7.5V    7.88 ~ 10.5V    9.45 ~ 13V    12.6 ~ 17.2V    15.75 ~ 20.25V    18.9 ~ 25.2V    25.2 ~ 32.4V    50.4 ~ 64.8V<br>Protection type : Shut down o/p voltage, re-power on to recover |              |              |              |              |              |              |              |
|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                |              |              |              |              |              |              |              |
| ENVIRONMENT               | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -25 ~ +60℃ (Refer to "Derating Curve")                                                                                                                                                         |              |              |              |              |              |              |              |
|                           | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 20% ~ 90% RH non-condensing                                                                                                                                                                    |              |              |              |              |              |              |              |
|                           | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -40 ~ +85℃, 10 ~ 95% RH                                                                                                                                                                        |              |              |              |              |              |              |              |
|                           | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ±0.03% / °C (0~40℃)                                                                                                                                                                            |              |              |              |              |              |              |              |
|                           | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                                                                                        |              |              |              |              |              |              |              |
| SAFETY & EMC<br>(Note. 8) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ANSI/AAMI ES60601-1 / 60601-1-11, TUV EN60601-1 / 60601-1-11 approved                                                                                                                          |              |              |              |              |              |              |              |
|                           | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | I/P-O/P:4KVAC                                                                                                                                                                                  |              |              |              |              |              |              |              |
|                           | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH                                                                                                                                                       |              |              |              |              |              |              |              |
|                           | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Compliance to EN55011(CISPR11) class B, EN61000-3-2,3, FCC PART 15 class B                                                                                                                     |              |              |              |              |              |              |              |
|                           | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN60601-1-2, EN61204-3 medical level, criteria A                                                                                              |              |              |              |              |              |              |              |
| OTHERS                    | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 796.7K hrs min. MIL-HDBK-217F(25℃)                                                                                                                                                             |              |              |              |              |              |              |              |
|                           | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 79*54*33mm (L*W*H)                                                                                                                                                                             |              |              |              |              |              |              |              |
|                           | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 235g ; 60pcs / 15.1Kg / CARTON                                                                                                                                                                 |              |              |              |              |              |              |              |
| CONNECTOR                 | PLUG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | See page 3 ; Other type available by customer requested                                                                                                                                        |              |              |              |              |              |              |              |
|                           | CABLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | See page 3 ; Other type available by customer requested                                                                                                                                        |              |              |              |              |              |              |              |
| NOTE                      | 1. All parameters are specified at 230VAC input, rated load, 25℃ 70% RH ambient.<br>2. DC voltage: The output voltage set at point measure by plug terminal & 50% load.<br>3. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor.<br>4. Tolerance: includes set up tolerance, line regulation, load regulation.<br>5. Line regulation is measured from low line to high line at rated load.<br>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.<br>7. Derating may be needed under low input voltage. Please check the derating curve for more details.<br>8. 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> ) |                                                                                                                                                                                                |              |              |              |              |              |              |              |

### Derating Curve



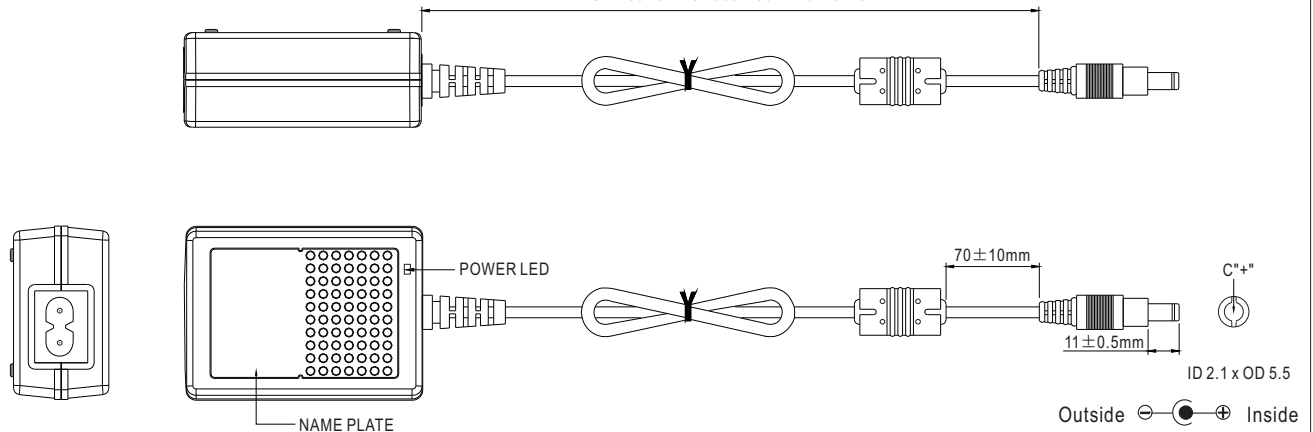
### Static Characteristics



### Mechanical Specification

Unit:mm

UL1185 16AWG 1200±50mm for 5~9V  
 UL1185 16AWG 1800±50mm for 12V  
 UL1185 18AWG 1800±50mm for 15~48V



### Plug Assignment

Standard plug: P1J

| P1J    |        |
|--------|--------|
| P/N    | OUTPUT |
| CENTER | +      |

Optional lock type plug: P2S

SWITCHCRAFT S761K plug equivalent

### Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>