



ANSI/AAMI ES60601-1/-1-11



IEC60601-1/-1-11



TPTC004



■ Features

- 2 pole USA plug, Class II power unit
- Medical safety approved (2 × MOPP) according to ANSI/AAMI ES60601-1/-1-11
- Extremely low leakage current
- No load power consumption < 0.1W
- Energy efficiency Level VI (except 5~9V for Level V)
- -25~+60°C wide range working temperature
- Protections: Short circuit / Overload / Over voltage
- LED indicator for power on
- Various DC plug quick adapter accessory available (Plug kit sold sperately, please refer to : https://www.meanwell.com/upload/pdf/DC_plug.pdf)
- 3 years warranty

■ Applications

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

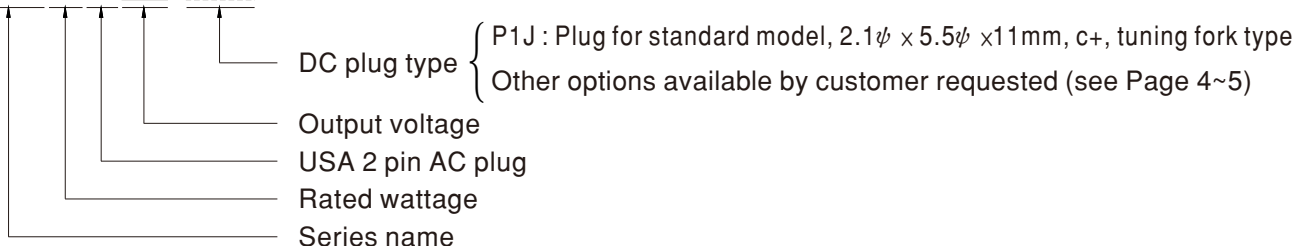
■ Description

GSM18U is a highly reliable, 18W wall-mounted style single-output green medical adaptor series. This product is equipped with a 2-pin (no FG) standard USA AC 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 μ 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, GSM18U is compliant with USA EISA 2007/DoE and Canada NRCan; 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. GSM18U is approved with the international medical safety certificates.

■ Model Encoding

GSM18U05-P1J

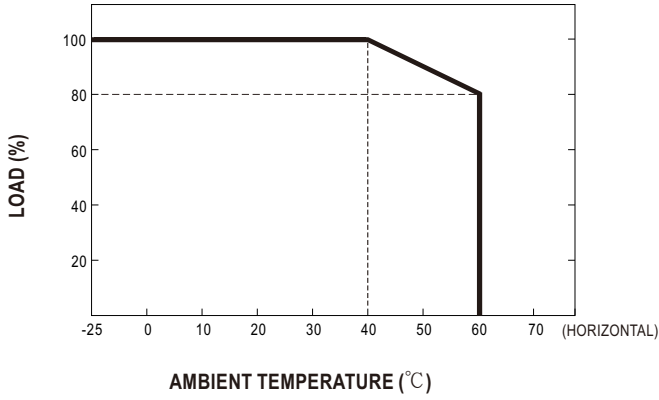




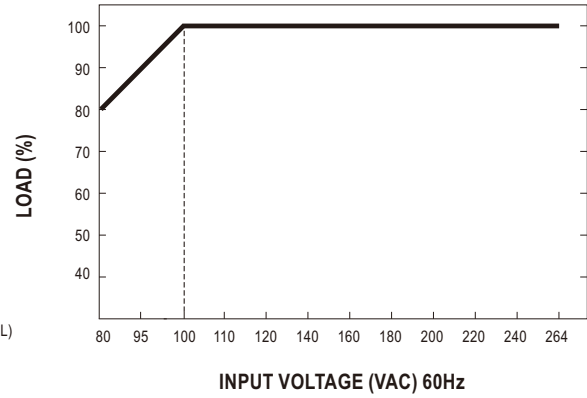
SPECIFICATION

| ORDER NO. | | GSM18U05-P1J | GSM18U07-P1J | GSM18U09-P1J | GSM18U12-P1J | GSM18U15-P1J | GSM18U18-P1J | GSM18U24-P1J | GSM18U48-P1J | |
|---------------------------------------|---|---|---------------|--------------|--------------|----------------|--------------|--------------|-------------------|--|
| OUTPUT | SAFETY MODEL NO. | GSM18U05 | GSM18U07 | GSM18U09 | GSM18U12 | GSM18U15 | GSM18U18 | GSM18U24 | GSM18U48 | |
| | DC VOLTAGE <small>Note.2</small> | 5V | 7.5V | 9V | 12V | 15V | 18V | 24V | 48V | |
| | RATED CURRENT | 3A | 2A | 2A | 1.5A | 1.2A | 1A | 0.75A | 0.375A | |
| | CURRENT RANGE | 0 ~ 3A | 0 ~ 2A | 0 ~ 2A | 0 ~ 1.5A | 0 ~ 1.2A | 0 ~ 1A | 0 ~ 0.75A | 0 ~ 0.375A | |
| | RATED POWER (max.) | 15W | 15W | 18W | 18W | 18W | 18W | 18W | 18W | |
| | RIPPLE & NOISE (max.) <small>Note.3</small> | 60mVp-p | 80mVp-p | 80mVp-p | 120mVp-p | 120mVp-p | 150mVp-p | 180mVp-p | 240mVp-p | |
| | VOLTAGE TOLERANCE <small>Note.4</small> | ±5.0% | ±5.0% | ±5.0% | ±3.0% | ±3.0% | ±3.0% | ±2.0% | ±2.0% | |
| | LINE REGULATION <small>Note.5</small> | ±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% | ±2.0% | ±2.0% | |
| | SETUP, RISE TIME <small>Note.6</small> | 500ms, 30ms / 230VAC 1000ms, 30ms / 115VAC at full load | | | | | | | | |
| HOLD UP TIME (Typ.) | 16ms / 230VAC 16ms / 115VAC at full load | | | | | | | | | |
| INPUT | VOLTAGE RANGE <small>Note.7</small> | 80 ~ 264VAC 113 ~ 370VDC | | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | |
| | EFFICIENCY (Typ.) | 80% | 83% | 84% | 86% | 87% | 87% | 87% | 88% | |
| | AC CURRENT (Typ.) | 0.5A / 115VAC 0.25A / 230VAC | | | | | | | | |
| | INRUSH CURRENT (Typ.) | 55A / 230VAC 30A / 115VAC | | | | | | | | |
| | LEAKAGE CURRENT(max.) | Touch current < 50µA/264VAC | | | | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 170% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | | | | |
| | OVER VOLTAGE | 5.25 ~ 7.5V | 7.88 ~ 10.13V | 9.45 ~ 12.6V | 12.6 ~ 17.2V | 15.75 ~ 20.25V | 18.9 ~ 24.3V | 25.2 ~ 32.4V | 50.4 ~ 64.8V | |
| ENVIRONMENT | WORKING TEMP. | -25 ~ +60°C (Refer to "Derating Curve") | | | | | | | | |
| | WORKING HUMIDITY | 20% ~ 90% RH non-condensing | | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH non-condensing | | | | | | | | |
| | TEMP. COEFFICIENT | ±0.03% / °C (0~40°C) | | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | | | | | | |
| SAFETY & EMC <small>(Note. 8)</small> | SAFETY STANDARDS | ANSI/AAMI ES60601-1, ES60601-1-11, EAC TP TC 004 approved | | | | | | | | |
| | ISOLATION LEVEL | Primary-Secondary: 2xMOPP | | | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:4KVAC | | | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH | | | | | | | | |
| | EMC EMISSION | Parameter | Standard | | | | | | Test Level / Note | |
| | Conducted emission | FCC PART 15 / CISPR22 | | | | | | Class B | | |
| | Radiated emission | FCC PART 15 / CISPR22 | | | | | | Class B | | |
| OTHERS | MTBF | 796.7K hrs min. MIL-HDBK-217F(25°C) | | | | | | | | |
| | DIMENSION | 79*54*33mm (L*W*H) | | | | | | | | |
| | PACKING | 185g ; 60pcs / 12.1Kg / CARTON | | | | | | | | |
| CONNECTOR | PLUG | See page 4~5 ; Other type available by customer requested | | | | | | | | |
| | CABLE | See page 4~5 ; Other type available by customer requested | | | | | | | | |
| NOTE | <p>1. All parameters are specified at 115VAC input, rated load, 25°C 70% RH ambient.</p> <p>2. DC voltage: The output voltage set at point measure by plug terminal & 50% load.</p> <p>3. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µf & 47µf capacitor.</p> <p>4. Tolerance: includes set up tolerance, line regulation, load regulation.</p> <p>5. Line regulation is measured from low line to high line at rated load.</p> <p>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.</p> <p>7. Derating may be needed under low input voltage. Please check the derating curve for more details.</p> <p>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." (as available on http://www.meanwell.com)</p> | | | | | | | | | |

Derating Curve

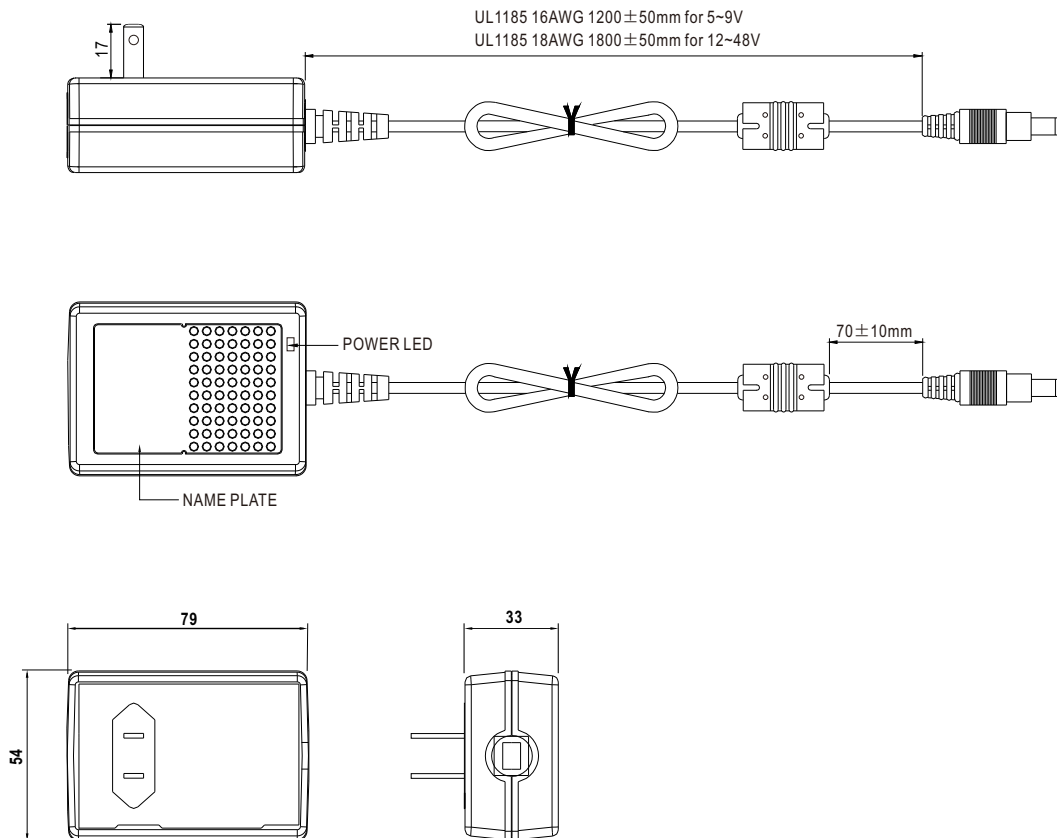


Static Characteristics



Mechanical Specification

Unit:mm



■ DC output plug

◎ Standard plug: P1J

| P1J | Pin Assignment |
|-----|-----------------|
| | |
| | Outside Inside |

◎ 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

Example quick adapter accessory:



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

| Tuning Fork Style | Type No. | A | B | C | Quick Adapter Accessory |
|---------------------|---------------------|------|------|-------|--|
| | | OD | ID | L | |
| | P1I (Straight) | 5.5 | 2.1 | 9.5 | Available (Current rating: 7.5A max.) |
| | P1L (Straight) | 5.5 | 2.5 | 9.5 | |
| | P1M (Straight) | 5.5 | 2.5 | 11.0 | |
| | P1IR (Right-angled) | 5.5 | 2.1 | 9.5 | |
| | P1JR (Right-angled) | 5.5 | 2.1 | 11.0 | |
| | P1LR (Right-angled) | 5.5 | 2.5 | 9.5 | |
| P1MR (Right-angled) | 5.5 | 2.5 | 11.0 | | |
| Barrel Style | Type No. | A | B | C | Quick Adapter Accessory |
| | | OD | ID | L | |
| | P2I (Straight) | 5.5 | 2.1 | 9.5 | None |
| | P2J (Straight) | 5.5 | 2.1 | 11.0 | |
| | P2L (Straight) | 5.5 | 2.5 | 9.5 | |
| | P2M (Straight) | 5.5 | 2.5 | 11.0 | |
| | P2IR (Right-angled) | 5.5 | 2.1 | 9.5 | |
| | P2JR (Right-angled) | 5.5 | 2.1 | 11.0 | |
| | P2LR (Right-angled) | 5.5 | 2.5 | 9.5 | |
| | P2MR (Right-angled) | 5.5 | 2.5 | 11.0 | |
| Lock Style | Type No. | A | B | C | Quick Adapter Accessory |
| | | OD | ID | L | |
| | P2S(S761K) | 5.53 | 2.03 | 12.06 | None |
| | 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 | B | C | Quick Adapter Accessory | |
|--|-------------|----------------|--------|--|--|--|
| | | OD | ID | L | | |
| | P3A | 2.35 | 0.7 | 11.0 | Available (Current rating: 5A max.) | |
| | P3B | 4.0 | 1.7 | 11.0 | | |
| | P3C | 4.75 | 1.7 | 11.0 | | |
| Center Pin Style | Type No. | A | B | C | D | Available (Current rating: 7.5A max.) |
| | 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 | | Available (Current rating: 7.5A max.) | | |
| | R6B | PIN No. | Output | | | |
| | | 1 | +Vo | | | |
| | | 2 | -Vo | | | |
| 3 | +Vo | | | | | |
| Min. DIN 4 Pin with Lock (male) | Type No. | Pin Assignment | | Available (Current rating: 7.5A max.) | | |
| | R7B | PIN No. | Output | | | |
| | | 1 | +Vo | | | |
| | | 2 | -Vo | | | |
| | | 3 | -Vo | | | |
| 4 | +Vo | | | | | |
| Min. DIN 4 Pin with Lock (female) | Type No. | Pin Assignment | | None | | |
| | R7BF | PIN No. | Output | | | |
| | | 1 | +Vo | | | |
| | | 2 | -Vo | | | |
| | | 3 | -Vo | | | |
| 4 | +Vo | | | | | |
| DIN 5 Pin (male) | Type No. | Pin Assignment | | Available (Current rating: 7.5A max.) | | |
| | R1B | PIN No. | Output | | | |
| | | 1 | -Vo | | | |
| | | 2 | -Vo | | | |
| | | 3 | +Vo | | | |
| | | 4 | -Vo | | | |
| 5 | +Vo | | | | | |
| Stripped and tinned leads | Type No. | Pin Assignment | | None | | |
| <p>Length of Land L1 by request (MW's standard length, L: 25 mm, L1: 5 mm)</p> | by customer | PIN No. | Output | | | |
| | | 1 | +Vo | | | |
| 2 | -Vo | | | | | |

■ Installation Manual

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