



■ Features

- Universal AC input / Full range
- 3 pole AC inlet IEC320-C14
- Medical safety approved (2 x MOPP between primary to secondary)
- Optional models suitable for BF application with appropriate system consideration
- Low leakage current <100uA
- No load power consumption<0.15W
- Energy efficiency level VI
- Comply with EISA 2007/DoE,NRCAn, AU/NZ MEPS, EU ErP and meet CoC Version 5
- Built-in active PFC function
- High efficiency up to 94.5%
- Fanless design with -30~+70°C working temperature
- Class I power (with earth pin)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Fully enclosed plastic case
- LED indicator for power on
- 100% full load burn-in test
- 3 years warranty

■ Applications

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

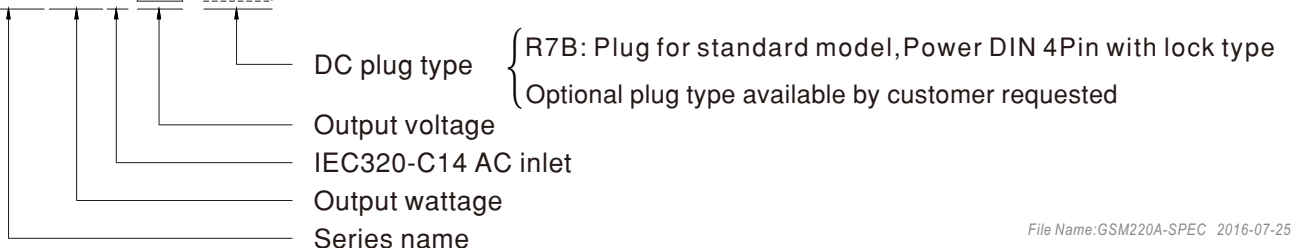
■ Description

GSM220A is a highly reliable, 220W desktop style single-output green medical adaptor series. This product is equipped with a 3-pin (with FG) standard IEC320-C14 power plug, adopting the input range from 80VAC to 264VAC. The entire series supplies different output voltages between 12VDC and 48VDC that can satisfy the demands for various kinds of medical electrical devices. The circuitry design meets the international medical standards (2*MOPP), having an ultra low leakage current (<100uA), fitting the medical devices in direct electrical contact with the patients.

With the efficiency up to 94.5% and the extremely low no-load power consumption below 0.15W, GSM220A 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. GSM220A is approved with the international medical safety certificates.

■ Model Encoding

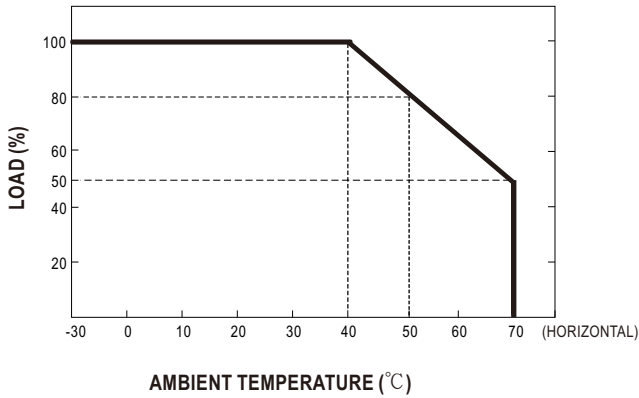
GSM220A 12 -R7B



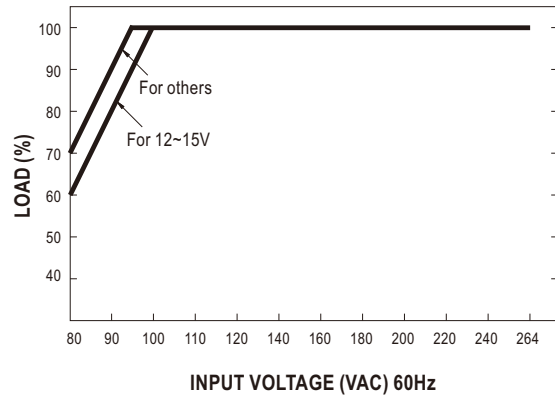
**SPECIFICATION**

| ORDER NO. | | GSM220A12-R7B | GSM220A15-R7B | GSM220A20-R7B | GSM220A24-R7B | GSM220A48-R7B |
|------------------------|---|---|---------------|---------------|---------------|---------------|
| OUTPUT | SAFETY MODEL NO. | GSM220A12 | GSM220A15 | GSM220A20 | GSM220A24 | GSM220A48 |
| | DC VOLTAGE <small>Note.2</small> | 12V | 15V | 20V | 24V | 48V |
| | RATED CURRENT | 15A | 13.4A | 11A | 9.2A | 4.6A |
| | CURRENT RANGE | 0 ~ 15A | 0 ~ 13.4A | 0 ~ 11A | 0 ~ 9.2A | 0 ~ 4.6A |
| | RATED POWER (max.) | 180W | 201W | 220W | 221W | 221W |
| | RIPPLE & NOISE (max.) <small>Note.3</small> | 80mVp-p | 100mVp-p | 150mVp-p | 180mVp-p | 240mVp-p |
| | VOLTAGE TOLERANCE <small>Note.4</small> | ±5.0% | ±5.0% | ±4.0% | ±3.0% | ±2.0% |
| | LINE REGULATION <small>Note.5</small> | ±1.0% | ±1.0% | ±1.0% | ±1.0% | ±1.0% |
| | LOAD REGULATION | ±5.0% | ±5.0% | ±4.0% | ±3.0% | ±2.0% |
| | SETUP, RISE TIME <small>Note.6</small> | 2000ms, 50ms / 230VAC 2000ms, 50ms / 115VAC at full load | | | | |
| HOLD UP TIME (Typ.) | 20ms / 230VAC 20ms / 115VAC at full load | | | | | |
| INPUT | VOLTAGE RANGE <small>Note.7</small> | 80 ~ 264VAC | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | |
| | POWER FACTOR (Typ.) | PF>0.91 / 230VAC PF>0.98 / 115VAC at full load | | | | |
| | EFFICIENCY (Typ.) | 90% | 90% | 92% | 93.5% | 94.5% |
| | AC CURRENT (Typ.) | 4A / 115VAC 2A / 230VAC | | | | |
| | INRUSH CURRENT (max.) | 120A / 230VAC | | | | |
| LEAKAGE CURRENT(max.) | Earth leakage current < 100µA/264VAC , Touch current <100µA/264VAC | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | |
| | OVER VOLTAGE | 105 ~ 135% rated output voltage Protection type : Shut down o/p voltage, re-power on to recover | | | | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70°C (Refer to "Derating Curve") | | | | |
| | WORKING HUMIDITY | 20% ~ 90% RH non-condensing | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH | | | | |
| | TEMP. COEFFICIENT | ±0.03% / °C (0~50°C) | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | | |
| SAFETY & EMC (Note. 9) | SAFETY STANDARDS | ANSI/AAMI ES60601-1, TUV EN60601-1 approved | | | | |
| | ISOLATION LEVEL | Primary-Secondary: 2xMOPP | | | | |
| | WITHSTAND VOLTAGE <small>Note.8</small> | I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25°C / 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 | 208.66K hrs min. MIL-HDBK-217F(25°C) | | | | |
| | DIMENSION | 210*85*46mm (L*W*H) | | | | |
| | PACKING | 1.1Kg; 12pcs/14.2Kg/0.73CUFT | | | | |
| CONNECTOR | PLUG | See page 3 ; Other type available by customer requested | | | | |
| | CABLE | See page 3 ; Other type available by customer requested | | | | |
| NOTE | <ol style="list-style-type: none"> All parameters are specified at 230VAC input, rated load, 25°C 70% RH ambient. DC voltage: The output voltage set at point measure by plug terminal & 50% load. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor. Tolerance: includes set up tolerance, line regulation, load regulation. Line regulation is measured from low line to high line at rated load. 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. Derating may be needed under low input voltages. Please check the derating curve for more details. Optional for 1.5KVAC with BF rated. 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. | | | | | |

Derating Curve

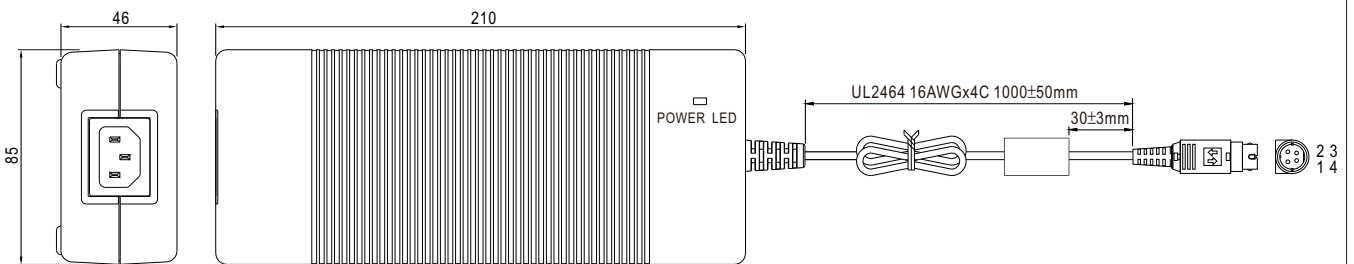


Static Characteristics



Mechanical Specification

Case No. 961A Unit:mm



Plug Assignment

Output plug (Power DIN 4 pin with lock type) : KYCON KPPX-4P equivalent
 Mating plug (customer side , not provide with power supply) : KYCON KPJX-CM-4S equivalent

| R7B | | |
|---------|--------|--|
| PIN NO. | OUTPUT | |
| 1,4 | +V | |
| 2,3 | -V | |

AC FG
 Outer shell -V not connected to AC FG

Installation Manual

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