



## Features

- Universal AC input / Full range
- 3 pole AC inlet IEC320-C14, Class I power unit
- No load power consumption < 0.3W
- **Energy efficiency level VI**
- Comply with EISA 2007/DoE
- Protections: Short circuit / Overload / Over voltage
- Fully enclosed plastic case
- -20 ~ +70°C working temperature
- LED indicator for power on
- Dual output available (optional)
- ± 16V / +48V also available for video system (optional, order NO. : GP50A58F-R1B)
- 3 years warranty

## Applications

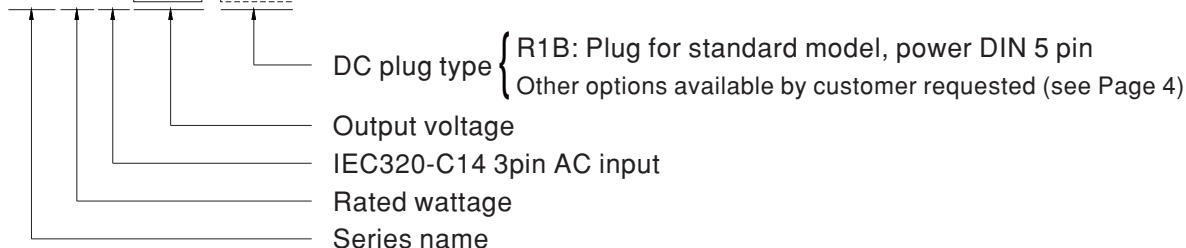
- Consumer electronic devices
- Telecommunication devices
- Office facilities
- Industrial equipments

## Description

GP50A is a 50W triple-output desktop type green adaptor series, complying with the mandatory energy saving standard USA EISA 2007/DoE (Level VI). Adopting Class I design and utilizing the standard inlet IEC320-C14, it is designed with FG and uses the 94V-0 flame retardant plastic enclosure, which can effectively prevent electric shock hazards. This series operates from 90~264VAC and offers three models with the output voltage sets +5V/+12V/-5V, +5V/+12V/-12V, +5V/+15V/-15V and can option +16V/+48V/-16V. Its supreme advantages includes the less-than-0.3W no load power consumption, the capability of working under -20~+70°C ambient temperature, complete protection functions and three-year warranty and the compliance to the international safety certification such as CB, TUV, UL, CE and FCC. GP50A is a multiple-output green adaptor with high safety, high reliability and high quality.

## Model Encoding

**GP50 A 13A -R1B**

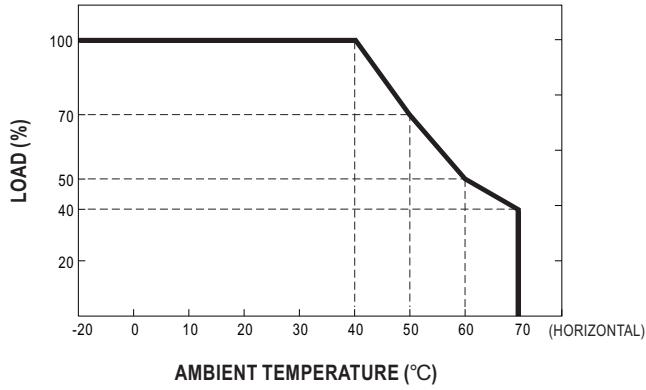




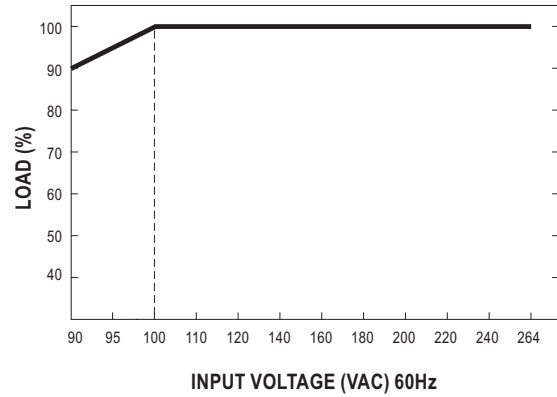
## SPECIFICATION

| ORDER NO.                 |                                        | GP50A13A-R1B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                               |            | GP50A13D-R1B                             |           |           | GP50A14E-R1B                                                                   |            |            | GP50A58F-R1B (option) |            |            |  |
|---------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------|------------------------------------------|-----------|-----------|--------------------------------------------------------------------------------|------------|------------|-----------------------|------------|------------|--|
| OUTPUT                    | SAFETY MODEL NO.                       | GP50A13A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                               |            | GP50A13D                                 |           |           | GP50A14E                                                                       |            |            | GP50A58F              |            |            |  |
|                           | DC VOLTAGE                      Note.2 | 5V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 12V                                                           | -5V        | 5V                                       | 12V       | -12V      | 5V                                                                             | 15V        | -15V       | 16V                   | 48V        | -16V       |  |
|                           | RATED SET CURRENT                      | 4A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2A                                                            | 0.5A       | 4A                                       | 2A        | 0.5A      | 4A                                                                             | 1.5A       | 0.5A       | 2A                    | 0.15A      | 2A         |  |
|                           | CURRENT RANGE                          | 0 ~ 4.0A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.3 ~ 2.0A                                                    | 0.1 ~ 0.5A | 0 ~ 4.0A                                 | 0.3 ~2.0A | 0.1 ~0.5A | 0 ~ 4.0A                                                                       | 0.3 ~ 1.5A | 0.1 ~0.5A  | 0.4 ~ 2.0A            | 30mA~150mA | 0.4 ~2.0A  |  |
|                           | RATED POWER                            | 46.5W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                               |            | 50W                                      |           |           | 50W                                                                            |            |            | 71.2W                 |            |            |  |
|                           | RIPPLE & NOISE (max.) Note.3           | 50mVp-p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 100mVp-p                                                      | 100mVp-p   | 50mVp-p                                  | 150mVp-p  | 100mVp-p  | 50mVp-p                                                                        | 150mVp-p   | 150mVp-p   | 180mVp-p              | 180mVp-p   | 180mVp-p   |  |
|                           | VOLTAGE TOLERANCE Note.4               | ±5.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ±3.0%                                                         | -5% ~ +10% | ±5.0%                                    | ±3.0%     | -5% ~ +8% | ±5.0%                                                                          | ±3.0%      | -5% ~ +15% | ±5.0%                 | -5% ~ +10% | -5% ~ +10% |  |
|                           | LINE REGULATION              Note.5    | ±1.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ±1.0%                                                         | ±1.0%      | ±1.0%                                    | ±1.0%     | ±1.0%     | ±1.0%                                                                          | ±1.0%      | ±1.0%      | ±1.0%                 | ±1.0%      | ±1.0%      |  |
|                           | LOAD REGULATION              Note.6    | ±5.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ±3.0%                                                         | ±5.0%      | ±5.0%                                    | ±3.0%     | ±5.0%     | ±5.0%                                                                          | ±3.0%      | ±5.0%      | ±5.0%                 | ±5.0%      | ±5.0%      |  |
| SETUP, RISE, HOLD UP TIME |                                        | 1000ms, 50ms, 20ms / 230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                               |            | 1500ms, 50ms, 16ms / 115VAC at full load |           |           |                                                                                |            |            |                       |            |            |  |
| INPUT                     | VOLTAGE RANGE              Note.7      | 90 ~ 264VAC    135~ 370VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | FREQUENCY RANGE                        | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | EFFICIENCY (Typ.)                      | 84%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                               |            | 84%                                      |           |           | 84.5%                                                                          |            |            | 86%                   |            |            |  |
|                           | AC CURRENT                             | 1.6A / 100VAC              0.8A / 230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | INRUSH CURRENT (max.)                  | Cold start   30A/115VAC    45A / 230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | LEAKAGE CURRENT (max.)                 | 0.75mA / 240VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
| PROTECTION                | OVERLOAD                               | 120 ~ 200% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | OVER VOLTAGE                           | Protection type : Clamp by zener diode, output short                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
| ENVIRONMENT               | WORKING TEMP.                          | -20 ~ +70℃ (Refer to "Derating Curve")                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | WORKING HUMIDITY                       | 20% ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | STORAGE TEMP., HUMIDITY                | -20 ~ +85℃, 10 ~ 95% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | 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                       | UL60950-1, CSA22.2, EN60950-1, EAC TP TC 004 approved                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | WITHSTAND VOLTAGE                      | I/P-O/P:4242VDC , I/P-FG:2121VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | ISOLATION RESISTANCE                   | I/P-O/P,I/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | EMC EMISSION                           | Parameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Standard                                                      |            |                                          |           |           | Test Level / Note                                                              |            |            |                       |            |            |  |
|                           |                                        | Conducted emission                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | EN55032(CISPR32),FCC PART 15/ CISPR22, CAN ICES-3(B)/NMB-3(B) |            |                                          |           |           | Class B                                                                        |            |            |                       |            |            |  |
|                           |                                        | Radiated emission                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | EN55032(CISPR32),FCC PART 15/ CISPR22, CAN ICES-3(B)/NMB-3(B) |            |                                          |           |           | Class B                                                                        |            |            |                       |            |            |  |
|                           |                                        | Harmonic current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EN61000-3-2                                                   |            |                                          |           |           | Class A                                                                        |            |            |                       |            |            |  |
|                           |                                        | Voltage flicker                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | EN61000-3-3                                                   |            |                                          |           |           | -----                                                                          |            |            |                       |            |            |  |
|                           | EMC IMMUNITY                           | Parameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Standard                                                      |            |                                          |           |           | Test Level /Note                                                               |            |            |                       |            |            |  |
|                           |                                        | ESD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EN61000-4-2                                                   |            |                                          |           |           | Level 3, 8KV air; Level 2, 4KV contact                                         |            |            |                       |            |            |  |
|                           |                                        | RF field susceptibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | EN61000-4-3                                                   |            |                                          |           |           | Level 2, 3V/m                                                                  |            |            |                       |            |            |  |
|                           |                                        | EFT bursts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | EN61000-4-4                                                   |            |                                          |           |           | Level 2, 1KV                                                                   |            |            |                       |            |            |  |
|                           |                                        | Surge susceptibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EN61000-4-5                                                   |            |                                          |           |           | Level 3, 1KV/L-N, 2KV/L,N-PE                                                   |            |            |                       |            |            |  |
|                           |                                        | Conducted susceptibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | EN61000-4-6                                                   |            |                                          |           |           | Level 2, 3V                                                                    |            |            |                       |            |            |  |
|                           |                                        | Voltage dips , interruption                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | EN61000-4-11                                                  |            |                                          |           |           | > 95% dip 0. 5 periods, 30% dip 25 periods,<br>> 95% interruptions 250 periods |            |            |                       |            |            |  |
| OTHERS                    | LIFE                                   | 3 years : 100% load 40℃, 8hours / day                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | MTBF                                   | 280K hrs min.    MIL-HDBK-217F (25℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | DIMENSION                              | 146*75.5*43mm (L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | PACKING                                | 0.55kg; 36pcs / 21kg / CARTON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
| CONNECTOR                 | PLUG                                   | See page 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
|                           | CABLE                                  | See page 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                               |            |                                          |           |           |                                                                                |            |            |                       |            |            |  |
| 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 0.1μf & 47μf 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.When measured between the light load (20% of rated load) and full load, the load regulation is within ±5% whereas the cross regulation is within ±15%.<br>7.Derating may be needed under low input voltages. Please check the static characteristics 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

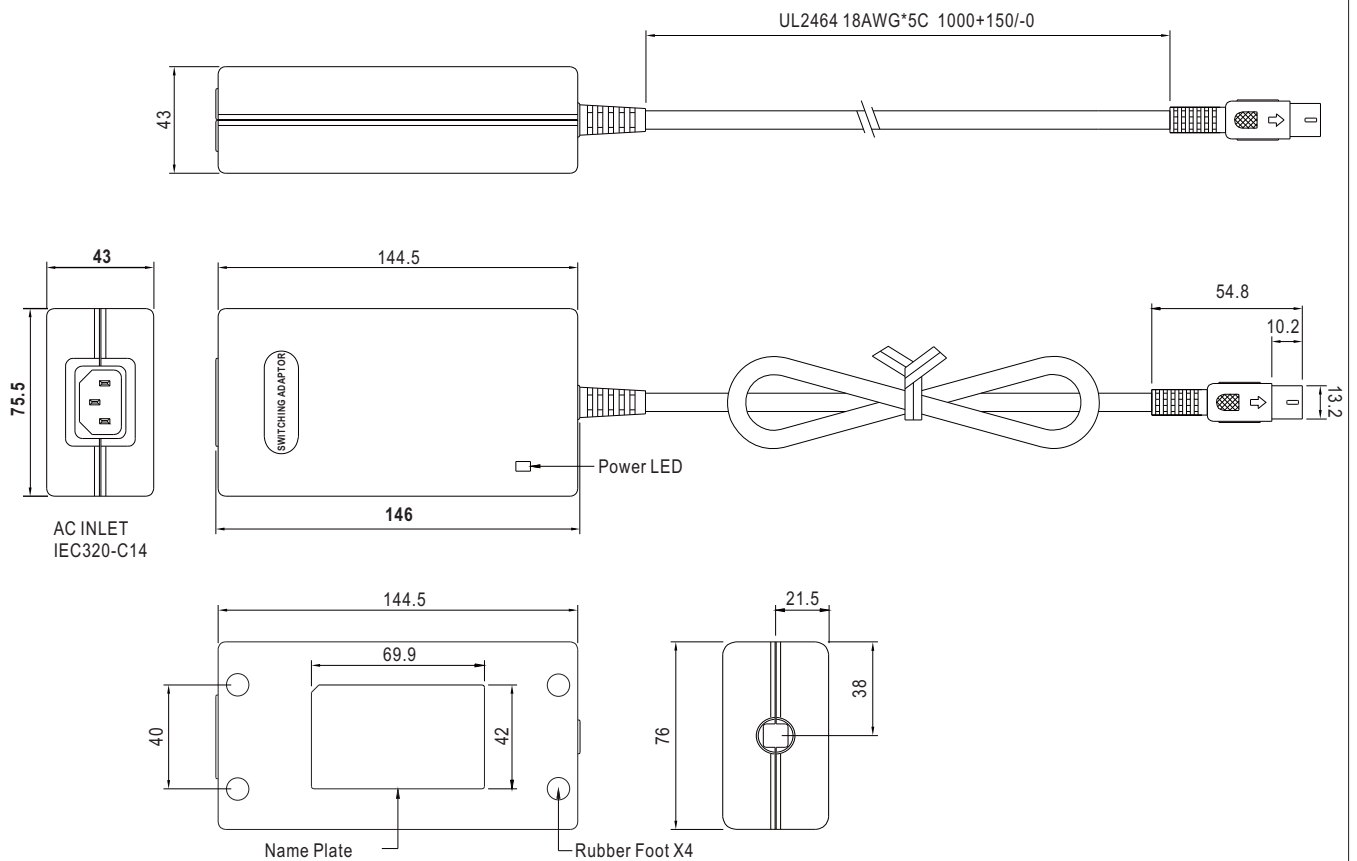


### Static Characteristics



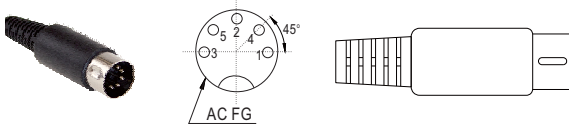
### Mechanical Specification

Unit:mm

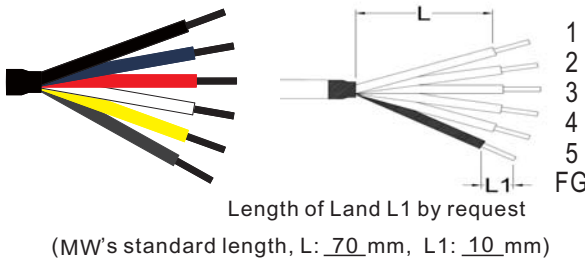


### ■ DC output plug

☉ Standard plug: R1B

| DIN 5 Pin (male)                                                                  | Type No. | Pin Assignment |        |
|-----------------------------------------------------------------------------------|----------|----------------|--------|
|                                                                                   |          | PIN No.        | Output |
|  | R1B      | 1              | COM    |
|                                                                                   |          | 2              | COM    |
|                                                                                   |          | 3              | +5VDC  |
|                                                                                   |          | 4              | -Vout  |
|                                                                                   |          | 5              | +Vout  |

☉ Optional DC plug:

| Stripped and tinned leads                                                           | Type No.    | Pin Assignment |        |
|-------------------------------------------------------------------------------------|-------------|----------------|--------|
|                                                                                     |             | PIN No.        | Output |
|  | by customer | 1(Black)       | COM    |
|                                                                                     |             | 2(Blue)        | COM    |
|                                                                                     |             | 3(Red)         | +5VDC  |
|                                                                                     |             | 4(White)       | -Vout  |
|                                                                                     |             | 5(Yellow)      | +Vout  |
|                                                                                     |             | FG(Drain Wire) | FG     |

### ■ Installation Manual

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

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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