



## 46.5~50W AC-DC Triple Output Desktop

## P50A-T series



### ■ Features :

- 3 pole AC inlet IEC320-C14
- Class I power (with earth pin)
- Protections: Short circuit / Overload / Over voltage
- Fully enclosed plastic case
- Fix switching frequency and regulation
- Topology: PWM 3882 circuit
- LED indicator for power on
- Approvals: UL / CUL / TUV
- 1 year warranty

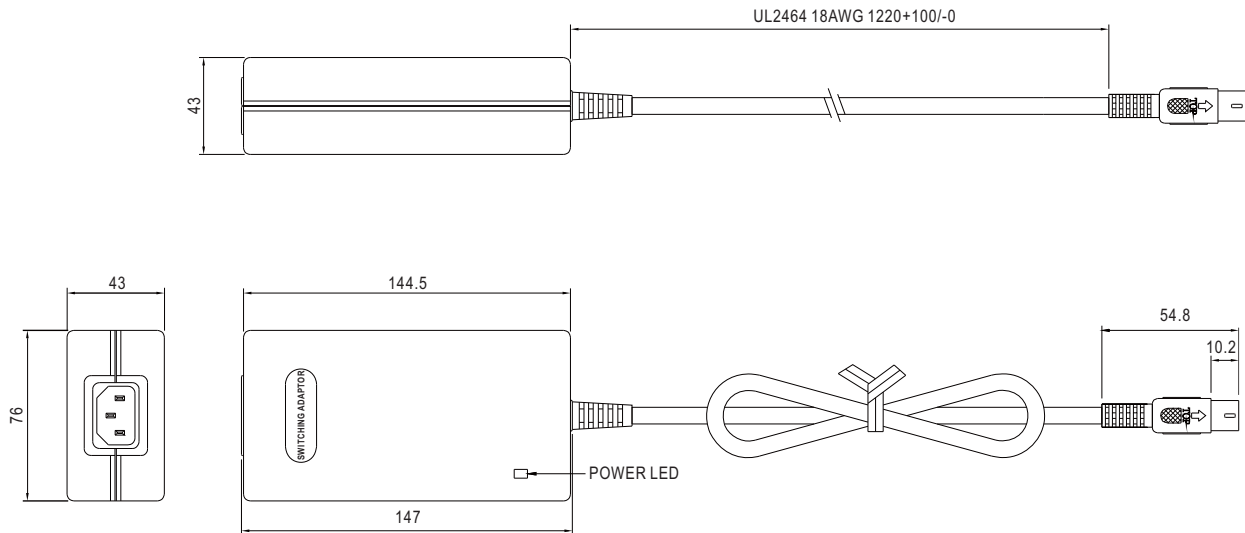


### SPECIFICATION

| ORDER NO.                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | P50A13A-R1B                                                                                                             |            |            | P50A13D-R1B |            |            | P50A14E-R1B |            |            |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------|------------|-------------|------------|------------|-------------|------------|------------|
| OUTPUT                    | SAFETY MODEL NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | P50A13A                                                                                                                 |            |            | P50A13D     |            |            | P50A14E     |            |            |
|                           | DC VOLTAGE                      Note.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5V                                                                                                                      | 12V        | -5V        | 5V          | 12V        | -12V       | 5V          | 15V        | -15V       |
|                           | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4A                                                                                                                      | 2A         | 0.5A       | 4A          | 2A         | 0.5A       | 4A          | 1.5A       | 0.5A       |
|                           | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.5 ~ 4.0A                                                                                                              | 0.5 ~ 2.0A | 0.1 ~ 0.5A | 0.5 ~ 4.0A  | 0.5 ~ 2.0A | 0.1 ~ 0.5A | 0.5 ~ 4.0A  | 0.5 ~ 1.5A | 0.1 ~ 0.5A |
|                           | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 46.5W                                                                                                                   |            |            | 50W         |            |            | 50W         |            |            |
|                           | RIPPLE & NOISE (max.) Note.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 50mVp-p                                                                                                                 | 100mVp-p   | 100mVp-p   | 50mVp-p     | 100mVp-p   | 100mVp-p   | 50mVp-p     | 100mVp-p   | 100mVp-p   |
|                           | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Fixed                                                                                                                   |            |            |             |            |            |             |            |            |
|                           | VOLTAGE TOLERANCE Note.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ±6.0%                                                                                                                   | ±10%       | ±12%       | ±6.0%       | ±10%       | ±12%       | ±6.0%       | ±10%       | ±12%       |
|                           | LINE REGULATION              Note.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ±1.0%                                                                                                                   | ±1.0%      | ±1.0%      | ±1.0%       | ±1.0%      | ±1.0%      | ±1.0%       | ±1.0%      | ±1.0%      |
|                           | LOAD REGULATION              Note.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ±5.0%                                                                                                                   | ±10%       | ±10%       | ±5.0%       | ±10%       | ±10%       | ±5.0%       | ±10%       | ±10%       |
| SETUP, RISE, HOLD UP TIME |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.5s, 50ms, 12ms at full load                                                                                           |            |            |             |            |            |             |            |            |
| INPUT                     | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 90 ~ 264VAC    135~ 370VAC                                                                                              |            |            |             |            |            |             |            |            |
|                           | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 47 ~ 63Hz                                                                                                               |            |            |             |            |            |             |            |            |
|                           | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 70%                                                                                                                     |            |            | 72%         |            |            | 74%         |            |            |
|                           | AC CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1.6A / 100VAC                                                                                                           |            |            |             |            |            |             |            |            |
|                           | INRUSH CURRENT (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 40A / 230VAC                                                                                                            |            |            |             |            |            |             |            |            |
|                           | LEAKAGE CURRENT (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.75mA / 240VAC                                                                                                         |            |            |             |            |            |             |            |            |
| PROTECTION                | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 150 ~ 250% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |            |            |             |            |            |             |            |            |
|                           | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5V: 110 ~ 140% of rated output voltage<br>Protection type : Shut down o/p voltage, re-power on to recover               |            |            |             |            |            |             |            |            |
| ENVIRONMENT               | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0 ~ +40℃ (Refer to "Derating Curve")                                                                                    |            |            |             |            |            |             |            |            |
|                           | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 20% ~ 90% RH non-condensing                                                                                             |            |            |             |            |            |             |            |            |
|                           | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -20 ~ +85℃, 10 ~ 95% RH                                                                                                 |            |            |             |            |            |             |            |            |
|                           | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ±0.03% / °C (0 ~ 50℃)                                                                                                   |            |            |             |            |            |             |            |            |
|                           | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                 |            |            |             |            |            |             |            |            |
| SAFETY & EMC<br>(Note. 7) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | UL1950, CSA22.2, EN60950-1 approved                                                                                     |            |            |             |            |            |             |            |            |
|                           | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | I/P-O/P:3KVAC , I/P-FG:1.5KVAC                                                                                          |            |            |             |            |            |             |            |            |
|                           | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | I/P-O/P,I/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH                                                                        |            |            |             |            |            |             |            |            |
|                           | EMI CONDUCTION & RADIATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Compliance to EN55022(CISPR22) class B                                                                                  |            |            |             |            |            |             |            |            |
|                           | HARMONIC CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Compliance to EN61000-3-2,3                                                                                             |            |            |             |            |            |             |            |            |
|                           | EMS IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Compliance to EN61000-4-2,3,4,5,6,11, ENV50204, light industry level, criteria A                                        |            |            |             |            |            |             |            |            |
| OTHERS                    | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 280K hrs min.    MIL-HDBK-217F (25℃)                                                                                    |            |            |             |            |            |             |            |            |
|                           | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 147*76*43mm (L*W*H)                                                                                                     |            |            |             |            |            |             |            |            |
|                           | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.55kg; 36pcs / 21kg / CARTON                                                                                           |            |            |             |            |            |             |            |            |
| CONNECTOR                 | PLUG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Standard type R1B: DIN 5PIN for stock ; Other type available by customer requested                                      |            |            |             |            |            |             |            |            |
|                           | CABLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Standard type AWM2464    18Awg*4c with shiell 4ft for stock ; 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.Load regulation is measured from 20% to 100% rated load.<br>7.The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. |                                                                                                                         |            |            |             |            |            |             |            |            |

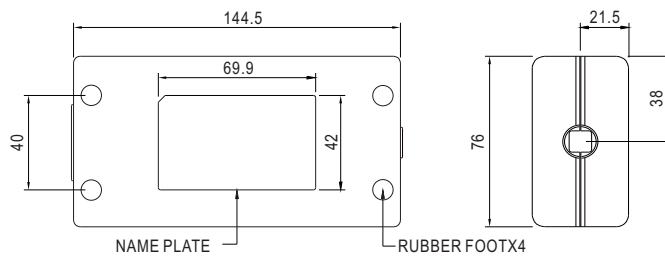
## Mechanical Specification

Unit:mm



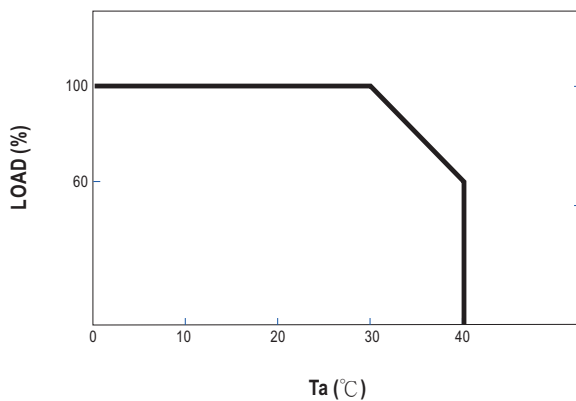
## Plug Assignment

Standard plug: R1B (option)



| PIN NO | OUTPUT |
|--------|--------|
| 1      | COM    |
| 2      | COM    |
| 3      | +5VDC  |
| 4      | -Vout  |
| 5      | +Vout  |

## Derating Curve



## Static Characteristics

