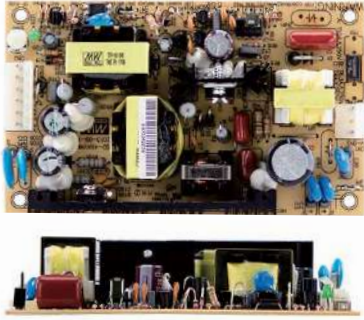




# 45W DC-DC Single Output Switching Power Supply

# PSD-45 series



### ■ Features :

- 2:1 wide input range
- Protections: Short circuit/Over load /Over voltage/ Polarity
- Cooling by free air convection
- Built-in EMI filter, low ripple noise
- 100% full load burn-in test
- Fixed switching frequency at 96KHZ
- Low cost
- High reliability
- 2 year warranty



### ■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

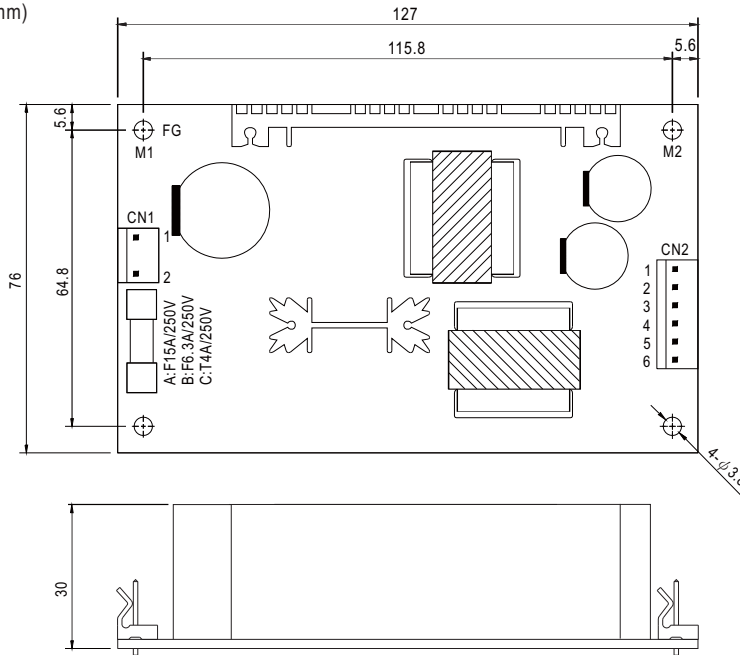
### SPECIFICATION



| MODEL                     |  | PSD-45A-05  | PSD-45B-05 | PSD-45C-05 | PSD-45A-12          | PSD-45B-12 | PSD-45C-12 | PSD-45A-24           | PSD-45B-24 | PSD-45C-24 |
|---------------------------|--|---|------------|------------|---------------------|------------|------------|----------------------|------------|------------|
| OUTPUT                    | DC VOLTAGE   | 5V  | 5V         | 5V         | 12V                 | 12V        | 12V        | 24V                  | 24V        | 24V        |
|                           | RATED CURRENT  | 6A  | 9A         | 9A         | 2.5A                | 3.75A      | 3.75A      | 1.25A                | 1.875A     | 1.875A     |
|                           | CURRENT RANGE  | 0 ~ 6A  | 0 ~ 9A     | 0 ~ 9A     | 0 ~ 2.5A            | 0 ~ 3.75A  | 0 ~ 3.75A  | 0 ~ 1.25A            | 0 ~ 1.875A | 0 ~ 1.875A |
|                           | RATED POWER  | 30W   | 45W        | 45W        | 30W                 | 45W        | 45W        | 30W                  | 45W        | 45W        |
|                           | RIPPLE & NOISE (max.) Note.2   | 100mVp-p  |            |            | 120mVp-p            |            |            | 150mVp-p             |            |            |
|                           | VOLTAGE ADJ RANGE  | 4.5 ~ 5.5V  |            |            | 10.8 ~ 13.2V        |            |            | 21.6 ~ 26.4V         |            |            |
|                           | VOLTAGE TOLERANCE Note.3   | ± 2.0%  |            |            | ± 2.0%              |            |            | ± 2.0%               |            |            |
|                           | LINE REGULATION  | ± 1.0%  |            |            | ± 1.0%              |            |            | ± 0.5%               |            |            |
| LOAD REGULATION           | ± 1.0%   |   |            | ± 1.0%     |                     |            | ± 0.5%     |                      |            |            |
| SETUP, RISE, HOLD UP TIME | 1000ms, 50ms, ----/12VDC/24VDC at full load; 1500ms, 50ms, ----48VDC at full load  |   |            |            |                     |            |            |                      |            |            |
| INPUT                     | VOLTAGE RANGE  | A: 9.2 ~ 18VDC (12VDC) B: 18 ~ 36VDC (24VDC) C: 36 ~ 72VDC (48VDC)  |            |            |                     |            |            |                      |            |            |
|                           | EFFICIENCY(Typ.)   | 74%   | 77%        | 80%        | 78%                 | 82%        | 83%        | 79%                  | 85%        | 86%        |
|                           | DC CURRENT(Typ.)   | 3.5A/12VDC 2.5A/24VDC 1.2A/48VDC  |            |            |                     |            |            |                      |            |            |
| PROTECTION                | OVER LOAD  | 105% -160% rated output power<br>Protection type :shut down, Re-power on after fault condition is removed     |            |            |                     |            |            |                      |            |            |
|                           | OVER VOLTAGE   | 5.75 ~ 6.75V/10%load  |            |            | 13.8~ 16.2V/10%load |            |            | 27.6 ~ 32.4V/10%load |            |            |
| ENVIRONMENT               | WORKING TEMP.  | -10 ~ +60°C (Refer to output load derating curve), 20~90%RH non-condensing                                    |            |            |                     |            |            |                      |            |            |
|                           | WORKING HUMIDITY   | 20 ~ 95% RH non-condensing  |            |            |                     |            |            |                      |            |            |
|                           | STORAGE TEMP., HUMIDITY  | -20 ~ +85°C, 10 ~ 95% RH  |            |            |                     |            |            |                      |            |            |
|                           | TEMP. COEFFICIENT  | ±0.05%/°C (0 ~ 50°C)  |            |            |                     |            |            |                      |            |            |
|                           | VIBRATION  | 10 ~ 500Hz, 2G 10min./1cycle, Period for 60min.each along X, Y, Z axes  |            |            |                     |            |            |                      |            |            |
| SAFETY & EMC              | SAFETY STANDARDS   | TUV BS EN/EN62368-1, EAC TP TC 004 approved   |            |            |                     |            |            |                      |            |            |
|                           | WITHSTAND VOLTAGE  | I/P-O/P:1.5KVAC I/P-FG:2.0KVAC O/P-FG:0.5KVAC   |            |            |                     |            |            |                      |            |            |
|                           | ISOLATION RESISTANCE   | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC / 25°C/ 70% RH   |            |            |                     |            |            |                      |            |            |
|                           | EMI CONDUCTION&RADIATION   | Compliance to BS EN/EN55032(CISPR32) CLASS B, EAC TP TC 020   |            |            |                     |            |            |                      |            |            |
| OTHERS                    | EMS IMMUNITY   | Compliance to BS EN/EN61000-4-2,3,4,6,8, BS EN/EN55035, BS EN/EN61000-6-1 Light industry level, EAC TP TC 020 |            |            |                     |            |            |                      |            |            |
|                           | MTBF   | 3067.4K hrs min. Telcordia SR-332 (Bellcore) ; 463.9K hrs min. MIL-HDBK-217F (25°C)                           |            |            |                     |            |            |                      |            |            |
|                           | DIMENSION  | 127*76*30mm (L*W*H)   |            |            |                     |            |            |                      |            |            |
|                           | PACKING  | 0.19Kg;72pcs/15.6Kg/1.28CUFT  |            |            |                     |            |            |                      |            |            |
| NOTE                      | <p>1. All parameters NOT specially mentioned are measured at normal input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20 MHz of bandwidth by using a 12inch twisted pair-wire terminated with a 0.1uf &amp; 47uf capacitor.</p> <p>3. Tolerance: includes set up tolerance, line regulation and load regulation.</p> <p>4. The interval of turning ON and OFF the power supply continuously is 2 seconds.</p> <p>5. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |   |            |            |                     |            |            |                      |            |            |

**Mechanical Specification**

(Unit: mm , tolerance  $\pm 1$ mm)



DC Input Connector (CN1) : Molex 5277-02 or equivalent

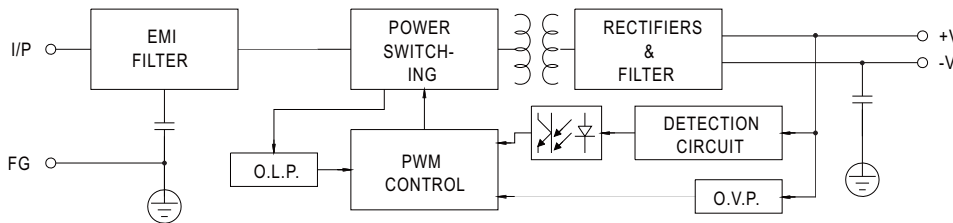
| Pin No. | Assignment | Mating Housing           | Terminal                 |
|---------|------------|--------------------------|--------------------------|
| 1       | Vin-       | Molex 5195 or equivalent | Molex 5194 or equivalent |
| 2       | Vin+       |                          |                          |

DC Output Connector (CN2) : Molex 5273-06 or equivalent

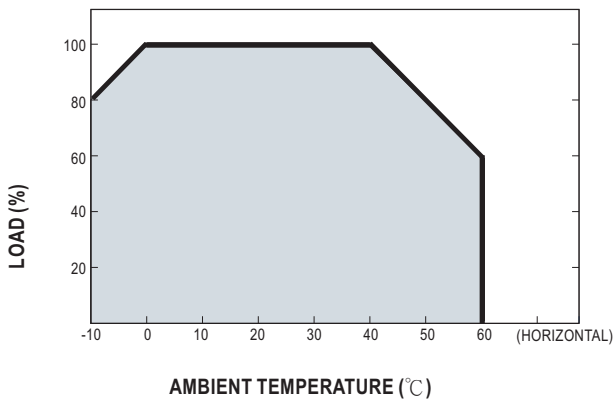
| Pin No. | Assignment | Mating Housing           | Terminal                 |
|---------|------------|--------------------------|--------------------------|
| 1,2,3   | +V         | Molex 5195 or equivalent | Molex 5194 or equivalent |
| 4,5,6   | -V         |                          |                          |

**Block Diagram**

fosc :96KHz



**Output Derating**



**Static Characteristics**

