# **MEAN WELL**

See full Datasheet below...







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### 100W Single Output Switching Power Supply

## NES-100 series



#### Features :

- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- 2 years warranty



#### SPECIFICATION

| PECIFIC                               |   |   |                    |                      |                     |                    |                    |                  |  |
|---------------------------------------|---|---|--------------------|----------------------|---------------------|--------------------|--------------------|------------------|--|
| MODEL                                 |   | NES-100-5   | NES-100-7.5        | NES-100-9            | NES-100-12          | NES-100-15         | NES-100-24         | NES-100-48       |  |
| OUTPUT                                | DC VOLTAGE  | 5V  | 7.5V               | 9V                   | 12V                 | 15V                | 24V                | 48V              |  |
|                                       | RATED CURRENT   | 20A   | 13.6A              | 11.2A                | 8.5A                | 7A                 | 4.5A               | 2.3A             |  |
|                                       | CURRENT RANGE   | 0~20A   | 0~13.6A            | 0~11.2A              | 0~8.5A              | 0~7A               | 0~4.5A             | 0~2.3A           |  |
|                                       | RATED POWER   | 100W  | 102W               | 100.8W               | 102W                | 105W               | 108W               | 110.4W           |  |
|                                       | RIPPLE & NOISE (max.) Note.2  | 80mVp-p   | 120mVp-p           | 120mVp-p             | 120mVp-p            | 120mVp-p           | 120mVp-p           | 150mVp-p         |  |
|                                       | VOLTAGE ADJ. RANGE  | 4.75 ~ 5.5V   | 7.13~8.3V          | 8.55 ~ 9.9V          | 11.4 ~ 13.2V        | 14.25 ~ 16.5V      | 22.8 ~ 26.4V       | 45.6 ~ 52.8V     |  |
|                                       | VOLTAGE TOLERANCE Note.3  | ±2.0%   | ±1.0%              | ±1.0%                | ±1.0%               | ±1.0%              | ±1.0%              | ±1.0%            |  |
|                                       | LINE REGULATION Note.4  | ±0.5%   | ±0.5%              | ±0.5%                | ±0.5%               | ±0.5%              | ±0.5%              | ±0.5%            |  |
|                                       | LOAD REGULATION Note.5  | ±0.5%   | ±0.5%              | ±0.5%                | ±0.5%               | ±0.5%              | ±0.5%              | ±0.5%            |  |
|                                       | SETUP, RISE TIME  | 1000ms, 20ms/2  | 230VAC 1000r       | ns, 20ms/115VAC      | at full load        |                    |                    |                  |  |
|                                       | HOLD UP TIME (Typ.)   | 30ms/230VAC 25ms/115VAC at full load  |                    |                      |                     |                    |                    |                  |  |
| INPUT                                 |   | 8 85 ~ 132VAC / 176 ~ 264VAC selected by switch 248 ~ 373VDC  |                    |                      |                     |                    |                    |                  |  |
|                                       | FREQUENCY RANGE   | 47 ~ 63Hz   |                    |                      |                     |                    |                    |                  |  |
|                                       | EFFICIENCY (Typ.)   | 80%   | 81%                | 81%                  | 83%                 | 84%                | 86%                | 86%              |  |
|                                       | AC CURRENT (Typ.)   | 2A/115VAC   | 1.2A/230VAC        |                      | 1                   |                    |                    |                  |  |
|                                       | INRUSH CURRENT (Typ.)   | COLD START 45A  |                    |                      |                     |                    |                    |                  |  |
|                                       | LEAKAGE CURRENT   | <pre>2mA/240VAC</pre>   |                    |                      |                     |                    |                    |                  |  |
| PROTECTION                            |   | 110 ~ 150% rated output power   |                    |                      |                     |                    |                    |                  |  |
|                                       | DVERLOAD         Protection type : Hiccup mode, recovers automatically after fault condition is removed   |   |                    |                      |                     |                    |                    |                  |  |
|                                       |   | 5.75 ~ 6.75V  | 8.6 ~ 10.1V        | 10.4 ~ 12.2V         | 13.8 ~ 16.2V        | 17.25 ~ 20.25V     | 27.6 ~ 32.4V       | 55.2 ~ 64.8V     |  |
|                                       | OVER VOLTAGE  |   | Hiccup mode, reco  |                      |                     |                    |                    |                  |  |
| ENVIRONMENT                           | WORKING TEMP.   | -20 ~ +60°C (Refer to "Derating Curve")   |                    |                      |                     |                    |                    |                  |  |
|                                       | WORKING HUMIDITY  | 20 ~ 90% RH non-condensing  |                    |                      |                     |                    |                    |                  |  |
|                                       | STORAGE TEMP., HUMIDITY   | -40 ~ +85°C. 10 ~ 95% RH  |                    |                      |                     |                    |                    |                  |  |
|                                       | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 50°C)  |                    |                      |                     |                    |                    |                  |  |
|                                       | VIBRATION   | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes   |                    |                      |                     |                    |                    |                  |  |
| SAFETY &<br>EMC<br>(Note 7)<br>OTHERS | SAFETY STANDARDS Note.6   |   |                    |                      |                     |                    |                    |                  |  |
|                                       | WITHSTAND VOLTAGE   | I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC   |                    |                      |                     |                    |                    |                  |  |
|                                       | ISOLATION RESISTANCE  | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH   |                    |                      |                     |                    |                    |                  |  |
|                                       | EMC EMISSION  | Compliance to EN55022 (CISPR22) Class B, EN61000-3-2,-3   |                    |                      |                     |                    |                    |                  |  |
|                                       | EMC IMMUNITY  | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-1, light industry level, criteria A  |                    |                      |                     |                    |                    |                  |  |
|                                       | MTBF  | 320.7Khrs min. MIL-HDBK-217F (25°C)   |                    |                      |                     |                    |                    |                  |  |
|                                       | DIMENSION   | 159*97*38mm (L*W*H)   |                    |                      |                     |                    |                    |                  |  |
|                                       | PACKING   | 0.55Kg; 30pcs/17.5Kg/0.97CUFT   |                    |                      |                     |                    |                    |                  |  |
|                                       |   | -   | -                  | AC input, rated load | d and 25°C of amb   | pient temperature. |                    |                  |  |
| NOTE                                  | <ol> <li>All parameters not specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> </ol> |   |                    |                      |                     |                    |                    |                  |  |
|                                       |   | lerance : includes set up tolerance, line regulation and load regulation.   |                    |                      |                     |                    |                    |                  |  |
|                                       | <ol> <li>Line regulation is measured from low line to high line at rated load.</li> <li>Load regulation is measured from 0% to 100% rated load.</li> </ol>  |   |                    |                      |                     |                    |                    |                  |  |
|                                       | 6. For the request of GB4943.1, the power supply is only suitable for use in the altitude 2000m below and the non tropical climate condition.   |   |                    |                      |                     |                    |                    |                  |  |
|                                       | 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. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."  |   |                    |                      |                     |                    |                    |                  |  |
| 1                                     |   | (as available on http://www.meanwell.com)<br>When using DC voltage as the input, please connect positive pole of input voltage to mark "N" of the terminal block and negative pole of input voltage |                    |                      |                     |                    |                    |                  |  |
|                                       |   |   | connect nositive n | ole of input voltage | e to mark "N" of th | e terminal block a | nd negative note ( | of input voltage |  |



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