

# MEAN WELL

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## 35W Triple Output Switching Power Supply

## NET-35 series



### ■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Over load / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- 2 years warranty



### SPECIFICATION

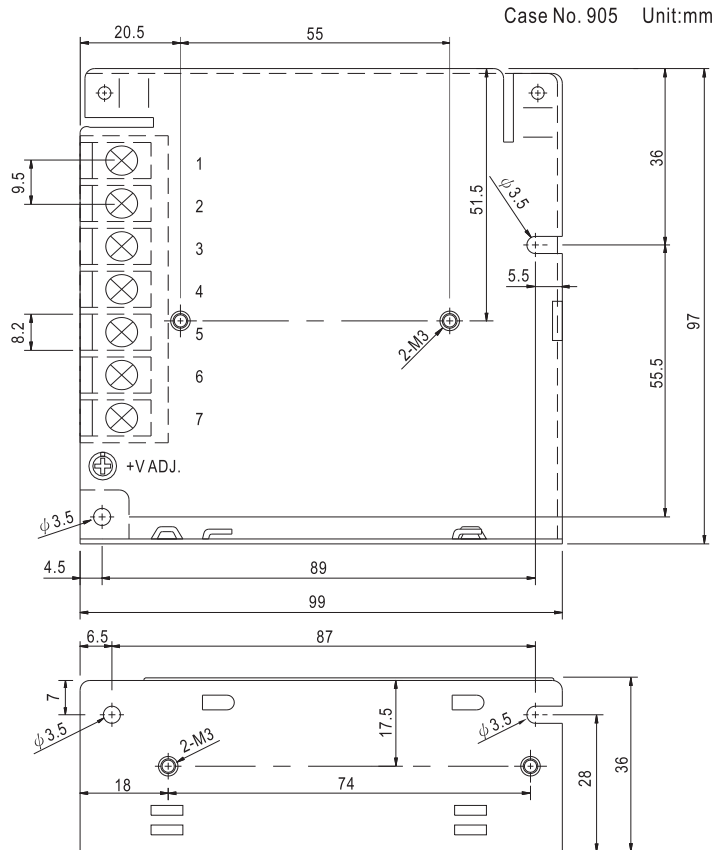
| SPECIFICATION            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                         |            |            |                                  |            |            |                  |            |            |                  |          |          |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------|------------|----------------------------------|------------|------------|------------------|------------|------------|------------------|----------|----------|
| MODEL                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | NET-35A                                                                                                                 |            |            | NET-35B                          |            |            | NET-35C          |            |            | NET-35D          |          |          |
| OUTPUT                   | OUTPUT NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | CH1                                                                                                                     | CH2        | CH3        | CH1                              | CH2        | CH3        | CH1              | CH2        | CH3        | CH1              | CH2      | CH3      |
|                          | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5V                                                                                                                      | 12V        | -5V        | 5V                               | 12V        | -12V       | 5V               | 15V        | -15V       | 5V               | 24V      | 12V      |
|                          | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3A                                                                                                                      | 1A         | 0.5A       | 3A                               | 1A         | 0.5A       | 2.5A             | 1A         | 0.5A       | 2.5A             | 0.5A     | 1A       |
|                          | CURRENT RANGE <span>Note.6</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.5 ~ 4A                                                                                                                | 0.1 ~ 1.5A | 0.1 ~ 0.5A | 0.5 ~ 4A                         | 0.1 ~ 1.5A | 0.1 ~ 0.5A | 0.5 ~ 3.5A       | 0.1 ~ 1.5A | 0.1 ~ 0.5A | 0.5 ~ 3.5A       | 0.1 ~ 1A | 0.1 ~ 1A |
|                          | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 29.5W                                                                                                                   |            |            | 33W                              |            |            | 35W              |            |            | 36.5W            |          |          |
|                          | RIPPLE & NOISE (max.) <span>Note.2</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 80mVp-p                                                                                                                 | 120mVp-p   | 120mVp-p   | 80mVp-p                          | 120mVp-p   | 120mVp-p   | 80mVp-p          | 150mVp-p   | 150mVp-p   | 80mVp-p          | 200mVp-p | 120mVp-p |
|                          | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CH1:4.75 ~ 5.5V                                                                                                         |            |            | CH1: 4.75 ~ 5.5V                 |            |            | CH1: 4.75 ~ 5.5V |            |            | CH1: 4.75 ~ 5.5V |          |          |
|                          | VOLTAGE TOLERANCE <span>Note.3</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ±2.0%                                                                                                                   | ±6.0%      | ±6.0%      | ±2.0%                            | ±6.0%      | ±6.0%      | ±2.0%            | ±8.0%      | ±8.0%      | ±2.0%            | ±8.0%    | ±8.0%    |
|                          | LINE REGULATION <span>Note.4</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±0.5%                                                                                                                   | ±1.0%      | ±1.0%      | ±0.5%                            | ±1.0%      | ±1.0%      | ±0.5%            | ±1.0%      | ±1.0%      | ±0.5%            | ±1.0%    | ±1.0%    |
|                          | LOAD REGULATION <span>Note.5</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±1.5%                                                                                                                   | ±3.0%      | ±3.0%      | ±1.5%                            | ±3.0%      | ±3.0%      | ±1.5%            | ±3.0%      | ±3.0%      | ±1.5%            | ±3.0%    | ±3.0%    |
| SETUP, RISE TIME         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 500ms, 30ms/230VAC                                                                                                      |            |            | 1200ms, 30ms/115VAC at full load |            |            |                  |            |            |                  |          |          |
| HOLD UP TIME (Typ.)      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 50ms/230VAC                                                                                                             |            |            | 10ms/115VAC at full load         |            |            |                  |            |            |                  |          |          |
| INPUT                    | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 85 ~ 264VAC                                                                                                             |            |            | 120 ~ 370VDC                     |            |            |                  |            |            |                  |          |          |
|                          | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 47 ~ 63Hz                                                                                                               |            |            |                                  |            |            |                  |            |            |                  |          |          |
|                          | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 78%                                                                                                                     |            |            | 79%                              |            |            | 79%              |            |            | 79%              |          |          |
|                          | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.75A/115VAC                                                                                                            |            |            | 0.5A/230VAC                      |            |            |                  |            |            |                  |          |          |
|                          | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | COLD START 45A                                                                                                          |            |            |                                  |            |            |                  |            |            |                  |          |          |
|                          | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <2mA / 240VAC                                                                                                           |            |            |                                  |            |            |                  |            |            |                  |          |          |
| PROTECTION               | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 110 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |            |            |                                  |            |            |                  |            |            |                  |          |          |
|                          | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CH1: 5.75 ~ 6.75V<br>Protection type : Shut down o/p voltage, re-power on to recover                                    |            |            |                                  |            |            |                  |            |            |                  |          |          |
| 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 ~ 45°C)                                                                                                    |            |            |                                  |            |            |                  |            |            |                  |          |          |
|                          | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                 |            |            |                                  |            |            |                  |            |            |                  |          |          |
| SAFETY & EMC<br>(Note 7) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | UL60950-1, CB(IEC60950-1) approved                                                                                      |            |            |                                  |            |            |                  |            |            |                  |          |          |
|                          | 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                    |            |            |                                  |            |            |                  |            |            |                  |          |          |
| OTHERS                   | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 386.2Khrs min. MIL-HDBK-217F (25°C)                                                                                     |            |            |                                  |            |            |                  |            |            |                  |          |          |
|                          | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 99*97*36mm (L*W*H)                                                                                                      |            |            |                                  |            |            |                  |            |            |                  |          |          |
|                          | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.36Kg; 45pcs/17.2Kg/0.93CUFT                                                                                           |            |            |                                  |            |            |                  |            |            |                  |          |          |
| NOTE                     | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. Line regulation is measured from low line to high line at rated load.<br>5. Load regulation is measured from 20% to 100% rated load, and other output at 60% rated load.<br>6. Each output can work within current range. But total output power can't exceed rated output power.<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. 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> ) |                                                                                                                         |            |            |                                  |            |            |                  |            |            |                  |          |          |

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## Mechanical Specification

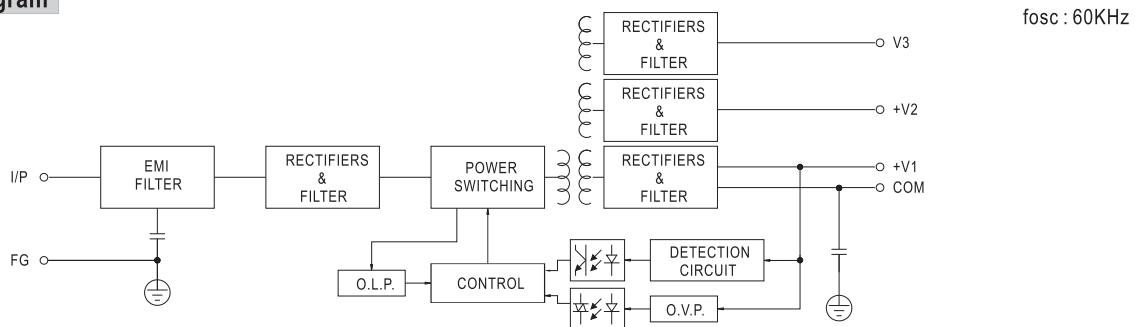
Terminal Pin No. Assignment

| Pin No. | Assignment   | Pin No. | Assignment    |
|---------|--------------|---------|---------------|
| 1       | AC/L         | 5       | DC OUTPUT +V2 |
| 2       | AC/N         | 6       | DC OUTPUT COM |
| 3       | FG $\perp$   | 7       | DC OUTPUT +V1 |
| 4       | DC OUTPUT V3 |         |               |

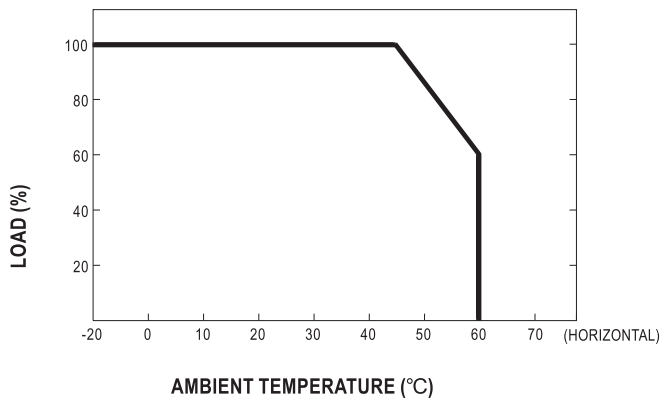


Case No. 905 Unit:mm

## Block Diagram



## Derating Curve



## Output Derating VS Input Voltage

