

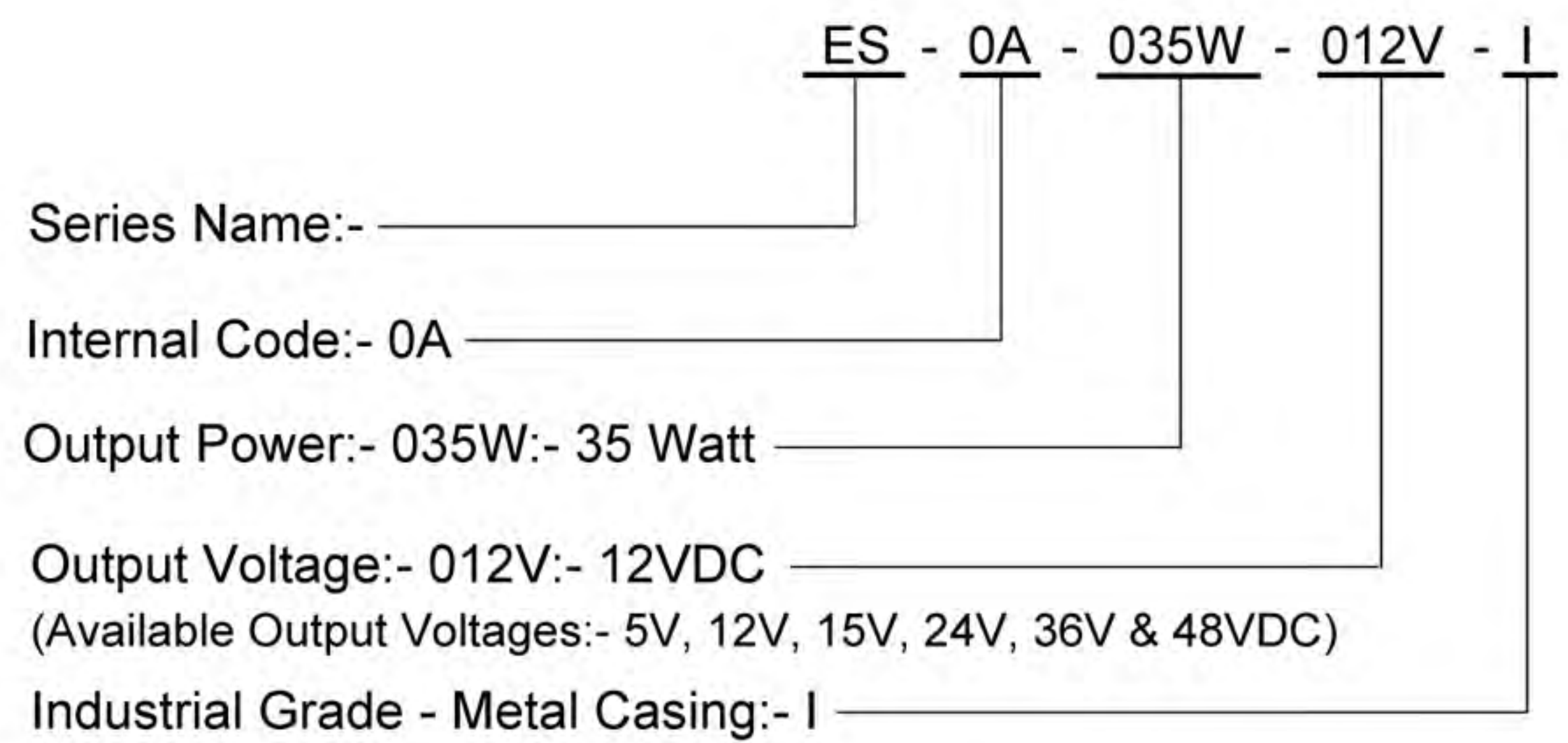
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**leOne**<sup>®</sup>

ES-0A-035W

**POWER SUPPLY**

Single Output Switching Power Supply



## Features:-

- Universal AC input/Full range
- Withstand 300VAC surge input for 5 second
- Miniature size and 1U low profile,low weight
- Protections:Short circuit/Overload/Over voltage
- Cooling by free air convection
- No load power consumption < 0.5W
- Operating altitude up to 5000 meters ( Note6 )
- LED indicator for power on
- 100% full load burn-in test
- High efficiency,long life and high reliability

## Applications:-

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments,equipments or apparatus

## Descriptions:-

ES-0A-035W series is a 35W single output enclosed type power supply with 30mm of low profile design. Adopting the full range 85~264VAC input, the entire series provides an output voltage line of 5V, 12V, 15V, 24V, 36V and 48V.

In addition to the high efficiency up to 90%, the desing of metallic mesh case enhances the heat dissipation of ES-0A-035W that the whole series operates from -30°C through 70°C under air convection without a fan. Delivering an extremely low no load power consumption (less than 0.5W), it allows the end system to easily meet the worldwide energy requirement. ES-0A-035W has the complete protection functions and 5G anti-vibration capability. ES-0A-035W series serve as a high price to performance power supply solution for various industrial applications.

## Specifications:-

| Model       |   | 005V  | 012V     | 015V     | 024V     | 036V     | 048V     |
|-------------|---|---|----------|----------|----------|----------|----------|
| Output      | DC voltage                              | 5V  | 12V      | 15V      | 24V      | 36V      | 48V      |
|             | Rated current                           | 7A  | 3A       | 2.4A     | 1.5A     | 1A       | 0.8A     |
|             | Current range                           | 0~7A  | 0~3A     | 0~2.4A   | 0~1.5A   | 0~1A     | 0~0.8A   |
|             | Rated power                             | 35W   | 36W      | 36W      | 36W      | 36W      | 38.4W    |
|             | Ripple&noise                            | 100mVp-p  | 120mVp-p | 120mVp-p | 150mVp-p | 200mVp-p | 200mVp-p |
|             | DC voltage ADJ. range                   | ± 10%   | ± 10%    | ± 10%    | ± 10%    | ± 10%    | ± 10%    |
|             | Voltage tolerance <small>Note.3</small> | ± 3%  | ± 2%     | ± 1%     | ± 1%     | ± 1%     | ± 1%     |
|             | Line regulation <small>Note.4</small>   | ± 0.5%  | ± 0.5%   | ± 0.5%   | ± 0.5%   | ± 0.5%   | ± 0.5%   |
|             | Load regulation <small>Note.5</small>   | ± 2%  | ± 1%     | ± 0.5%   | ± 0.5%   | ± 0.5%   | ± 0.5%   |
|             | Setup,rise,hold up time                 | 800ms,30ms,30ms/230VAC(full load)   |          |          |          |          |          |
| Input       | Voltage range                           | 90~264VAC ,127~373VDC( Withstand 300VAC surge input for 5 second)                 |          |          |          |          |          |
|             | Frequency range                         | 47~63Hz   |          |          |          |          |          |
|             | AC current                              | 0.7A/115VAC 0.42/230VAC   |          |          |          |          |          |
|             | Efficiency                              | 83%   | 86%      | 87%      | 88%      | 89%      | 90%      |
|             | Inrush current                          | Cold start45A/230VAC  |          |          |          |          |          |
|             | leakage current                         | < 0.75mA/240VAC   |          |          |          |          |          |
| Protection  | Overload                                | Rated output power110% ~ 150%Start overload protection                            |          |          |          |          |          |
|             |   | Protection type:hiccup mode,auto-recovery after fault condition is removed        |          |          |          |          |          |
|             | Over voltage                            | Rated output voltage 115%~135% Start over voltage protection                      |          |          |          |          |          |
|             |   | Protection type:cut off the output,auto-recovery after fault condition is removed |          |          |          |          |          |
| Environment | Working temperature                     | -30°C ~ +70°C(Please refer to“derating curve”)                                    |          |          |          |          |          |
|             | Working humidity                        | 20%~90%RH Non-condensing  |          |          |          |          |          |
|             | Storage temp& humidity                  | -40°C ~ +85°C;10%~95%RH Non-condensing  |          |          |          |          |          |
|             | Withstand vibration                     | 10~500Hz,3G 10min./1Cycle, Period for 60min, Each axes                            |          |          |          |          |          |
| Safety      | Withstand voltage                       | I/P-O/P: 3KVAC I/P-FG: 2KVAC O/P-FG: 1.25KVAC                                     |          |          |          |          |          |
|             | Isolation resistance                    | I/P-O/P,I/P-FG,O/P-FG: 100M Ohms/500VDC/25°C/70%RH                                |          |          |          |          |          |
| Others      | Dimension                               | 99*82*30 mm ( L*W*H )   |          |          |          |          |          |
|             | Weight                                  | 0.23kg/60pcs/14.8kg/0.025m <sup>3</sup> /0.88CUFT                                 |          |          |          |          |          |
|             | MTBF                                    | ≥ 720K hrs min. MIL-HDBK-217F(25°C)   |          |          |          |          |          |

Note: 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.

2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.

3. Tolerance : includes set up tolerance, line regulation and load regulation.

4.Line regulation is measured from low line to high line at rated load.

5.Load regulation is measured from 0% to 100% rated load

6.The ambient temperature derating of 5°C/1000 m is needed for operating altitude greater than 2000m(6500ft)

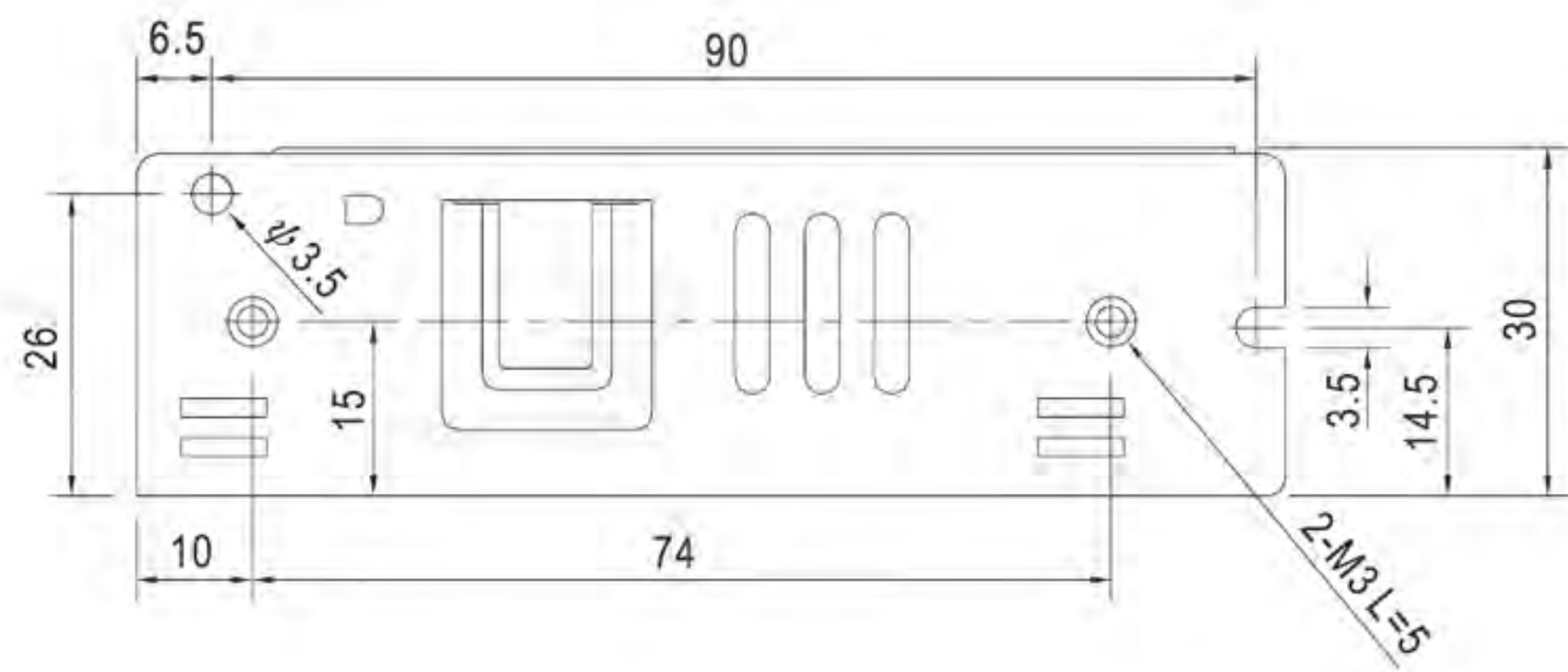
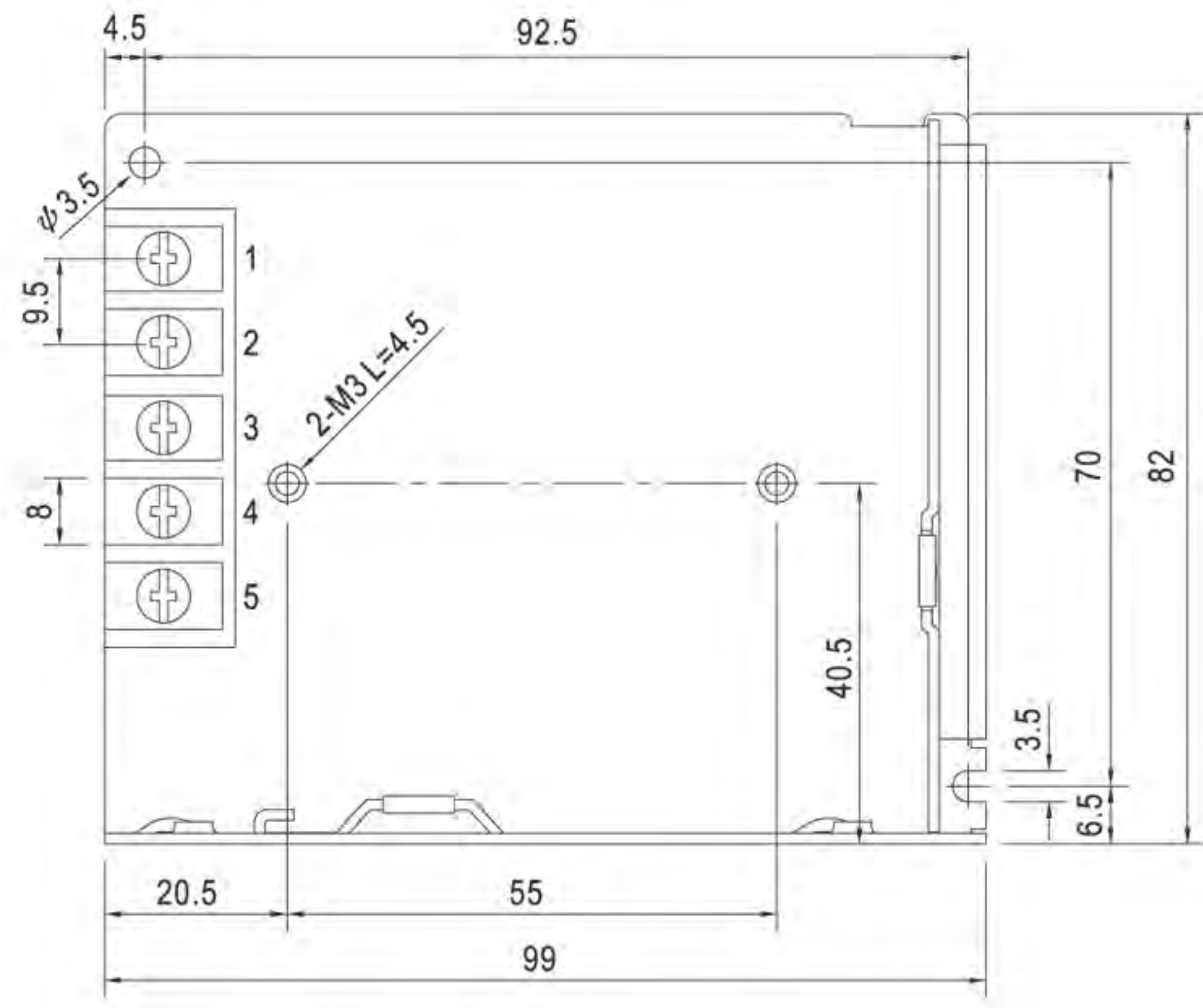
7.The power supply is considered as a component which will be installed into a finalequipment.The final equipment must be re-confirmed that it still meets EMC directives.

# Mechanical Specifications:-

Unit:mm

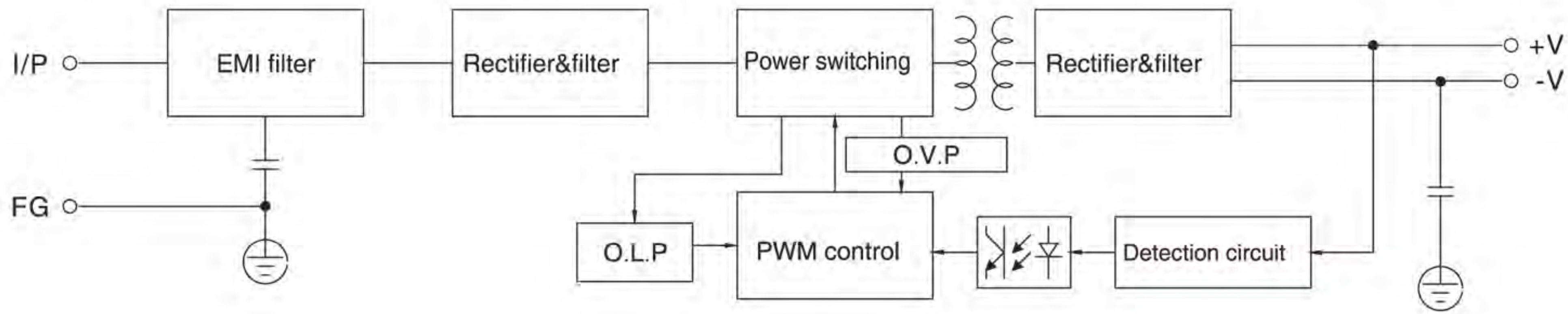
Terminal Pin No.Assignment

| Pin No. | Assignment | Pin No. | Assignment   |
|---------|------------|---------|--------------|
| 1       | AC/L       | 4       | DC OUTPUT -V |
| 2       | AC/N       | 5       | DC OUTPUT +V |
| 3       | FG $\perp$ |         |              |

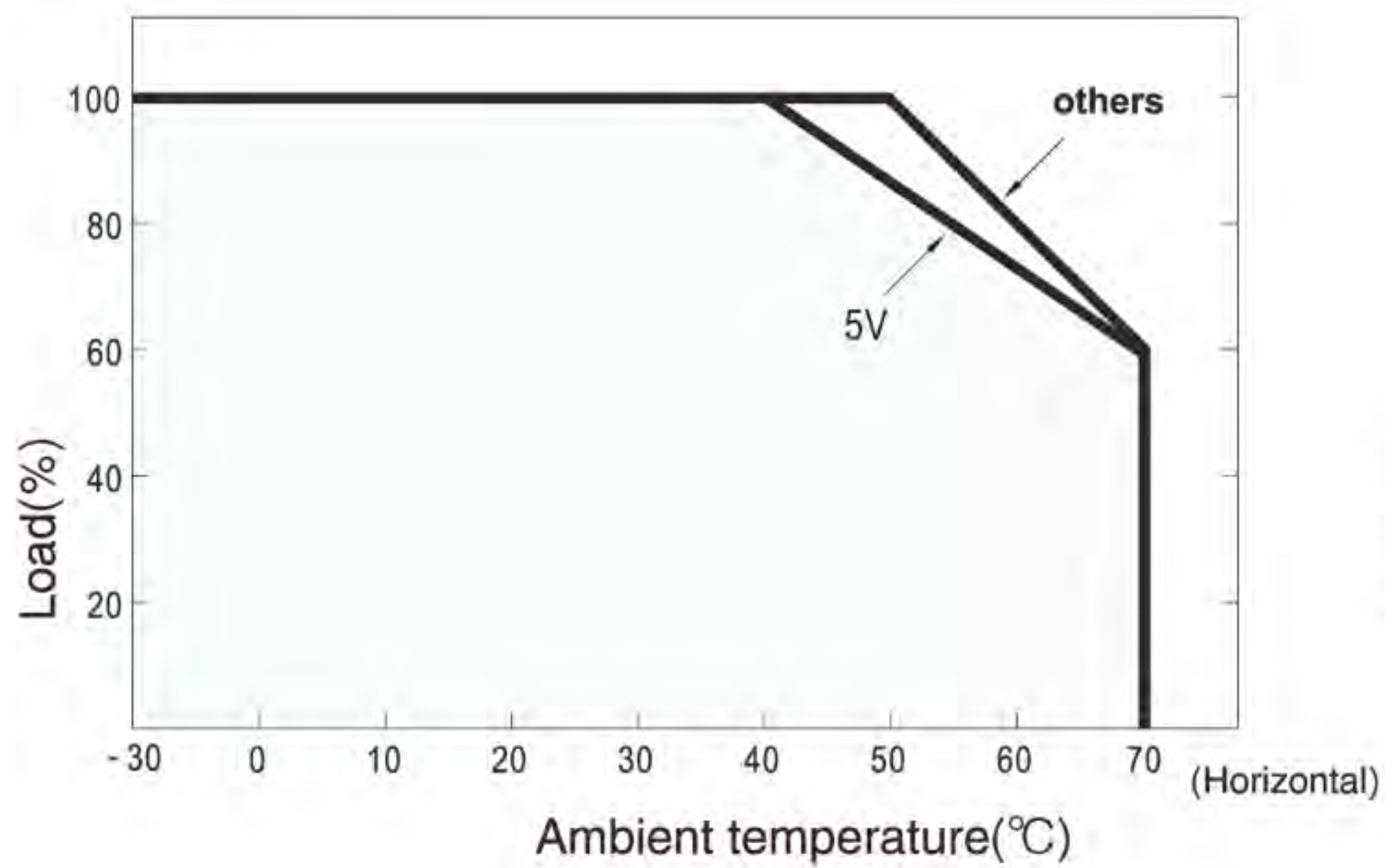


Block diagram:-

PWM Frequency: 65KHz



Derating Curve:-



Static Characteristic:-

