



# LRMY-X-U

AC/DC Power supply  
Multi output

# 15W



The LRMY series which combines small size, high efficiency, low price and high reliability has been developed to be comprehensive and can be used with full range for input voltage of 85-264Vac, anywhere in the world.

As an open frame type it is possible to mount the unit in two side. For the Molex-connectors is possible to have the complete wire harness as option (add WH).



## Features

Wide input voltage range: 85-264Vac  
110-370Vdc

High efficiency & reliability  
Output voltage +3/-0% (V1)  
MTBF: 400'000 hours  
Switching Frequency: 130kHz  
Leakage Current: 1mA  
Warranty: 2 years

## Mechanical features

Dimension (WxLxH): 60x110x37mm  
Weight: 170g  
Connector: Molex connectors  
Open frame type  
Option: Wire harness for Molex (add -WH)

## Standards

Safety: EN 60950; UL1950; C-UL (CSA)23;  
IEC950; VDE 805  
EMI : EN 55022/B FCC classB; VCCI classB

## Possibly applications

Process control  
Office equipment  
Computer peripherals  
Telecommunications  
Industrial electronics&machines

## Control features

Over voltage protection: O.V. clamp  
Over current protection: Fold back current limiting





| Specifications<AC/DC>                | Model  |     |     |                                  |     |     |                                  |     |     |
|--------------------------------------|--|-----|-----|----------------------------------|-----|-----|----------------------------------|-----|-----|
| LRMY-X-U<br>15WATTS / 3 OUTPUTS      | LRMY-01X-U   |     |     | LRMY-03X-U                       |     |     | LRMY-04X-U                       |     |     |
| <b>Input Characteristic</b>          |  |     |     |                                  |     |     |                                  |     |     |
| Input Voltage                        | AC115-230Vac   |     |     |                                  |     |     |                                  |     |     |
| Input Range                          | AC85-264Vac  |     |     |                                  |     |     |                                  |     |     |
| Input DC voltage                     | 110-370Vdc   |     |     |                                  |     |     |                                  |     |     |
| Input Frequency                      | 50/60Hz  |     |     |                                  |     |     |                                  |     |     |
| Input Frequency Range                | 47-440Hz   |     |     |                                  |     |     |                                  |     |     |
| Phase                                | Single   |     |     |                                  |     |     |                                  |     |     |
| Inrush current [A]                   | 20A(maximum)   |     |     |                                  |     |     |                                  |     |     |
| Efficiency [%]                       | 66   |     |     | 66                               |     |     | 66                               |     |     |
| <b>Output Characteristic</b>         |  |     |     |                                  |     |     |                                  |     |     |
| Output Voltage [V]                   | +5   | +12 | -12 | +5                               | +12 | -5  | +5                               | +15 | -15 |
| Output Current [A]                   | 0.2 ~ 2  | 0.3 | 0.2 | 0.2 ~ 2                          | 0.3 | 0.2 | 0.2 ~ 2                          | 0.3 | 0.2 |
| Voltage Adjust Range [%]             | V1: +3/-0, V2&V3: fixed  |     |     |                                  |     |     |                                  |     |     |
| Ripple and Noise [mVp-p](maximum) *2 | (output V) x 1% +50  |     |     |                                  |     |     |                                  |     |     |
| Line Regulation [%]                  | 0.5 max. (85-264Vac)   |     |     |                                  |     |     |                                  |     |     |
| Load Regulation [%]                  | 0.03 max.  |     |     |                                  |     |     |                                  |     |     |
| Temperature Coefficient              | 0.03%/°C   |     |     |                                  |     |     |                                  |     |     |
| Drift[mV](maximum)                   | (output V x 0.5% +15) / 8H (after 1 hour)                                |     |     |                                  |     |     |                                  |     |     |
| Rise up time [ms]                    | 200mS max. at 25°C   |     |     |                                  |     |     |                                  |     |     |
| Hold up time [ms]                    | 10mS min. at 25°C  |     |     |                                  |     |     |                                  |     |     |
| <b>Functions</b>                     |  |     |     |                                  |     |     |                                  |     |     |
| Over current Protection *1           | Fold back current limiting: 2.4A   |     |     | Fold back current limiting: 3.4A |     |     | Fold back current limiting: 4.4A |     |     |
| Over voltage Protection              | V1 only, O.V. clamp  |     |     |                                  |     |     |                                  |     |     |
| Remote Sense                         | none   |     |     |                                  |     |     |                                  |     |     |
| Remote On/Off                        | none   |     |     |                                  |     |     |                                  |     |     |
| Power Fail Detection                 | none   |     |     |                                  |     |     |                                  |     |     |
| Parallel/series Operation            | none   |     |     |                                  |     |     |                                  |     |     |
| <b>Environmental</b>                 |  |     |     |                                  |     |     |                                  |     |     |
| Operating Temperature                | -5 to +50°C (full load)  |     |     |                                  |     |     |                                  |     |     |
| Operating Humidity *3                | 85%RH (non-condensing)   |     |     |                                  |     |     |                                  |     |     |
| Storage Temperature                  | -20 to +85°C   |     |     |                                  |     |     |                                  |     |     |
| Storage Humidity                     | 10 to 85%RH(non-condensing)  |     |     |                                  |     |     |                                  |     |     |
| Withstanding Voltage                 | Primary-Secondary AC3,000V for 1minute                                   |     |     |                                  |     |     |                                  |     |     |
|                                      | Primary-Frame Ground AC2500V for 1minute                                 |     |     |                                  |     |     |                                  |     |     |
|                                      | Secondary-Frame Ground AC500V for 1minute                                |     |     |                                  |     |     |                                  |     |     |
| Isolation Resistance                 | Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester |     |     |                                  |     |     |                                  |     |     |
| Vibration *3                         | 5-10Hz:10mm double amplitude,10-50Hz / 2G (optional for higher grade)    |     |     |                                  |     |     |                                  |     |     |
| Shock [G]                            | 30   |     |     |                                  |     |     |                                  |     |     |
| Cooling                              | Convection   |     |     |                                  |     |     |                                  |     |     |
| Leakage Current                      | 1mA(maximum) at 25°C, rated input/output and rated input frequency       |     |     |                                  |     |     |                                  |     |     |
| Line Conducted Noise                 | FCC Part15-B Class B   |     |     |                                  |     |     |                                  |     |     |
|                                      | VCCI Class B   |     |     |                                  |     |     |                                  |     |     |
|                                      | VDE0871 Class B  |     |     |                                  |     |     |                                  |     |     |
| Line Harmonic Distortion             | IEC950   |     |     |                                  |     |     |                                  |     |     |
| Safety                               | UL: UL1950   |     |     |                                  |     |     |                                  |     |     |
|                                      | C-UL: CSA C22.2 No.234 (Level3)  |     |     |                                  |     |     |                                  |     |     |
|                                      | VDE: EN60950, IEC950, VDE0805  |     |     |                                  |     |     |                                  |     |     |
| Weight (typical)                     | 170g   |     |     |                                  |     |     |                                  |     |     |
| MTBF [H]                             | 400,000  |     |     |                                  |     |     |                                  |     |     |
| Switching Frequency[kHz](typical)    | 130  |     |     |                                  |     |     |                                  |     |     |

Conditions:

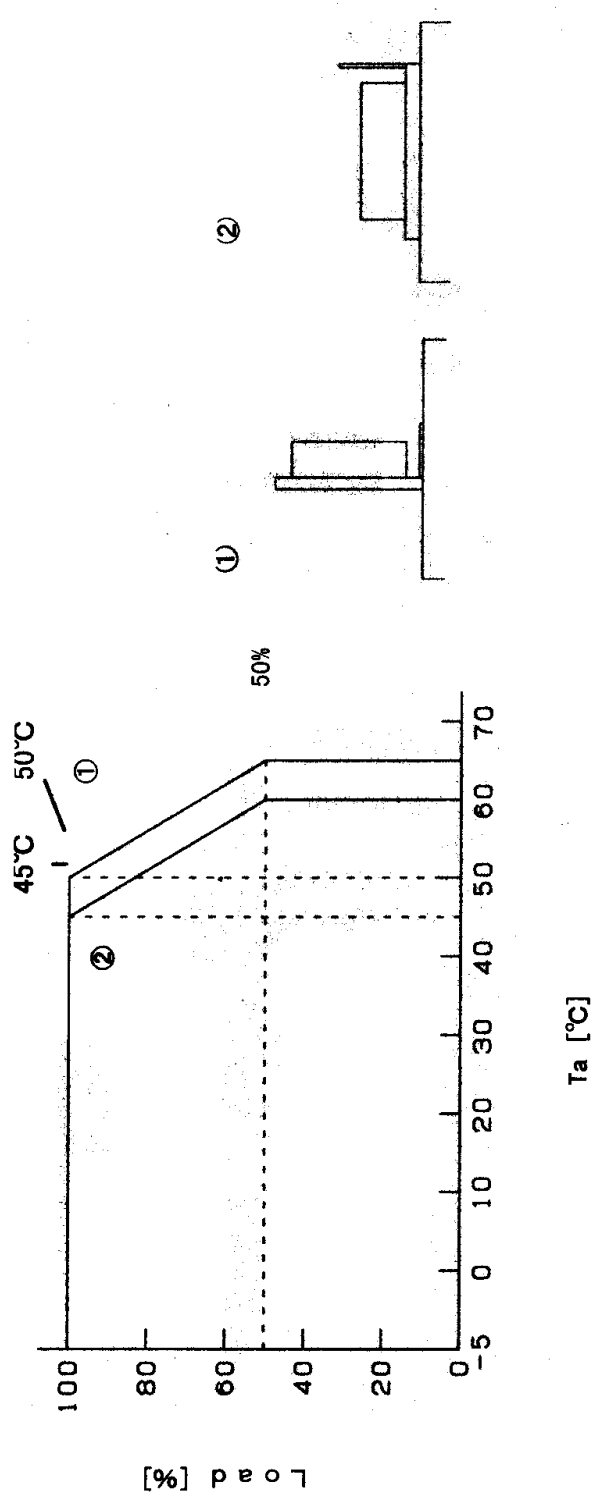
\*1 V2, V3: Short circuit protection for a while (not longer than 10 minutes)

\*2 Using bayonet type probe (DC~100MHz)

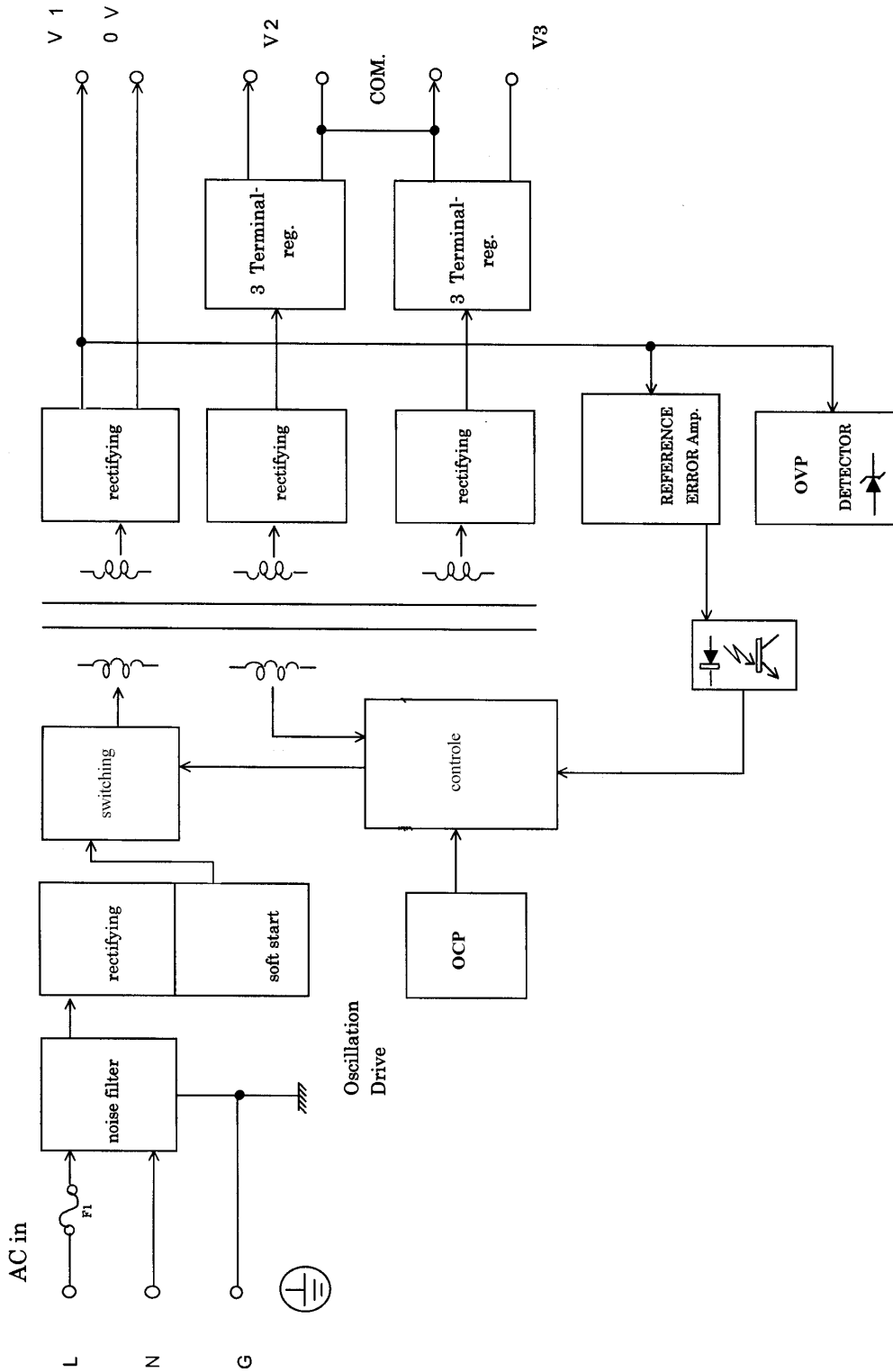
\*3 Optional for higher grade



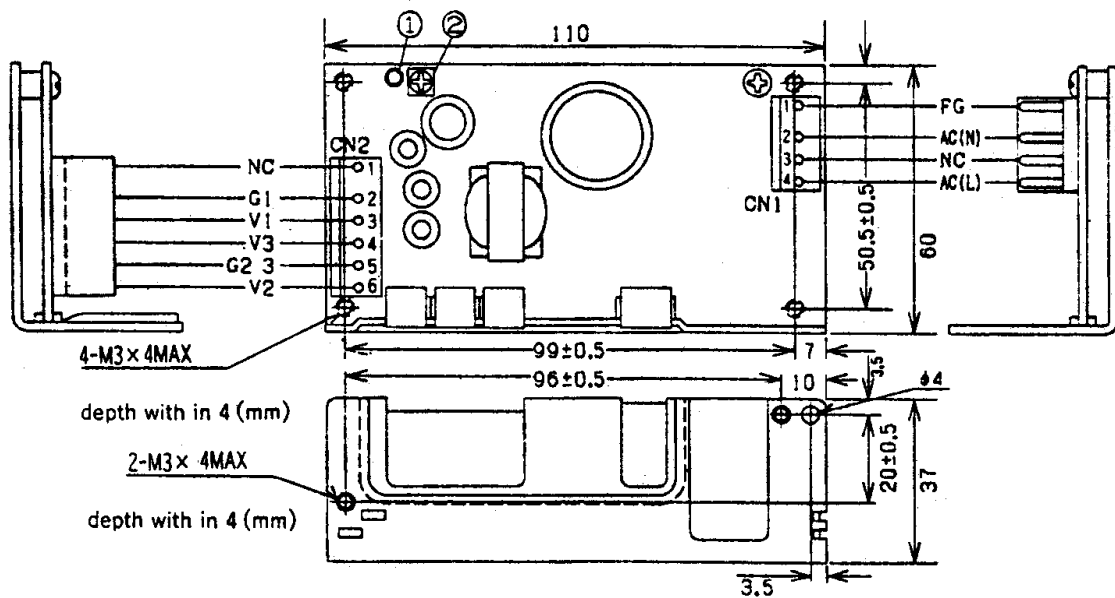
Derating



Block diagram



## Dimension



| Mounted Connector | Features                     |
|-------------------|------------------------------|
| CN1: Input        | 1) LED (V1)                  |
| CN2: Output       | 2) Variable V1; V2, V3 fixed |

Option:  
Applied housing contact: Wire harness (lead wire 40cm)