

# LRS Series

## Low-Profile Enclosed Switching Power Supply

**Low-profile single-output enclosed switching power supply** for industrial automation, control systems and electromechanical equipment. Available in **35W – 1200W**, with **3.3 / 4.2 / 5 / 12 / 15 / 24 / 27 / 36 / 48 VDC** output, **30mm 1U** low-profile design, efficiency up to **94%**, **200%** peak power on N2 series, and **3 years warranty**.

### DOCUMENT

|          |                      |
|----------|----------------------|
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AT A GLANCE

|                                  |                                     |                                 |                                |
|----------------------------------|-------------------------------------|---------------------------------|--------------------------------|
| <b>35–1200 W</b><br>OUTPUT POWER | <b>3.3–48 VDC</b><br>OUTPUT VOLTAGE | <b>up to 94 %</b><br>EFFICIENCY | <b>200 %</b><br>PEAK LOAD (N2) |
|----------------------------------|-------------------------------------|---------------------------------|--------------------------------|

# LRS Series Overview

Low-profile single-output enclosed switching power supply for industrial automation, control systems and electromechanical equipment.

The DAPPRA LRS Series is a low-profile single-output enclosed switching power supply series with 30mm of low-profile design (1U). It covers a wide power range from 35W to 1200W with output voltages of 3.3V, 4.2V, 5V, 12V, 15V, 24V, 27V, 36V and 48V, and is compliant with international safety regulations such as IEC/UL 62368-1, BS EN/EN61558-1/-2-16 and BS EN/EN60335-1.

The series uses a metallic mesh case to enhance heat dissipation. Small and medium power models (35W to 200W) operate with free air convection without a fan, while higher power models (350W and above) use forced air cooling with built-in DC fan and Fan ON/OFF control. The N2 series (100N2 / 200N2 / 350N2 / 600N2) provides up to 200% short-duration peak power for motor applications and electromechanical loads.

CORE SPECIFICATIONS

|                 |                                                                   |
|-----------------|-------------------------------------------------------------------|
| Series          | DAPPRA LRS Series                                                 |
| Product Type    | Low-Profile Enclosed Switching Power Supply                       |
| Output Power    | 35 / 50 / 75 / 100 / 150 / 200 / 350 / 450 / 600 / 1200 W (+N2)   |
| Output Voltage  | 3.3 / 4.2 / 5 / 12 / 15 / 24 / 27 / 36 / 48 VDC                   |
| Input Voltage   | 85–264 VAC (universal) / selectable / 180–305 VAC                 |
| Efficiency      | 79.5% to 94% (model dependent)                                    |
| Peak Power      | Up to 200% short-duration peak on N2 series                       |
| Cooling         | Fanless (35W–200W) · Forced air with fan (350W+)                  |
| Protection      | Short circuit / Overload / Over voltage / Over temperature        |
| Housing         | Metal mesh case, 30mm 1U low profile                              |
| Operating Temp. | –30 to +70 °C (derating above +50 °C)                             |
| Certification   | IEC/UL 62368-1 · TUV BS EN/EN62368-1 · BS EN/EN60335-1 · SEMI F47 |
| Warranty        | 3 years                                                           |

## LRS Series Key Features

Engineered for low-profile, high-efficiency industrial power supply applications.

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### 1U LOW-PROFILE DESIGN (30MM)

The entire series uses a 30mm (1U) low-profile metal mesh case that saves installation space in electrical cabinets and equipment. The metallic mesh construction enhances heat dissipation for reliable operation.

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### UNIVERSAL AC INPUT (SMALL/MEDIUM POWER)

LRS-35/50/75/100 and LRS-150F use full-range 85–264 VAC universal input. LRS-150/200/350/450/600 use selectable 90–132 VAC / 180–264 VAC via switch. LRS-1200 supports 180–305 VAC input.

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### HIGH EFFICIENCY UP TO 94%

Efficiency ranges from 79.5% (LRS-350-3.3) up to 94% (LRS-1200 models), reducing energy consumption and heat generation.

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### 200% PEAK POWER CAPABILITY (N2 SERIES)

LRS-100N2, LRS-200N2, LRS-350N2 and LRS-600N2 provide up to 200% short-duration peak power for motor and electromechanical loads requiring much higher power during startup.

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### FANLESS / FAN-COOLED OPTIONS

LRS-35 through LRS-200 use free air convection cooling. LRS-350/450/600/1200 use forced air cooling with built-in DC fan and Fan ON/OFF control (fan turns ON at RTH3  $\geq 50^{\circ}\text{C}$ , OFF at  $\leq 40^{\circ}\text{C}$ ).

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### COMPLETE PROTECTION FUNCTIONS

Short circuit protection, overload protection (hiccup mode or constant current limiting, auto-recovery), over voltage protection and over temperature protection are built in.

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### WIDE OPERATING TEMPERATURE RANGE

Most models operate from  $-30^{\circ}\text{C}$  or  $-25^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  with derating above  $+50^{\circ}\text{C}$ . LRS-1200 supports  $-30^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ . 5G vibration resistance.

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### HIGH OPERATING ALTITUDE

Some models support up to 5000 meters operating altitude. LRS-1200 supports 5000 meters with conformal coating.

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### 3 YEARS WARRANTY

Standard 3 years warranty for all LRS Series models.

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# LRS Series Model Code & Selection

Select the appropriate LRS model according to the required output power, output voltage and peak power requirement.

## Model Code Structure

LRS - 200 N2 - 24

| FIELD | MEANING                                      | AVAILABLE VALUES                                        |
|-------|----------------------------------------------|---------------------------------------------------------|
| LRS   | Series prefix                                | LRS                                                     |
| 200   | Output Wattage — rated output power in Watts | 35 / 50 / 75 / 100 / 150 / 200 / 350 / 450 / 600 / 1200 |
| N2    | Peak Power Suffix (Optional)                 | Blank / N2 / F (full-range input on 150 series)         |
| 24    | Output Voltage — nominal DC output voltage   | 3.3 / 4.2 / 5 / 12 / 15 / 24 / 27 / 36 / 48 VDC         |

Example: LRS-200N2-24 = LRS Series, 200W output power, N2 peak-power version, 24V DC output.

### MODEL LIST - LRS-35 (35W)

| MODEL     | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT      | COOLING |
|-----------|----------|----------|-------------|------------|------------|---------|
| LRS-35-5  | 5 VDC    | 7 A      | 35 W        | 82%        | 85-264 VAC | Fanless |
| LRS-35-12 | 12 VDC   | 3 A      | 36 W        | 86%        | 85-264 VAC | Fanless |
| LRS-35-15 | 15 VDC   | 2.4 A    | 36 W        | 86%        | 85-264 VAC | Fanless |
| LRS-35-24 | 24 VDC   | 1.5 A    | 36 W        | 88%        | 85-264 VAC | Fanless |
| LRS-35-36 | 36 VDC   | 1 A      | 36 W        | 88%        | 85-264 VAC | Fanless |
| LRS-35-48 | 48 VDC   | 0.8 A    | 38.4 W      | 89%        | 85-264 VAC | Fanless |

### MODEL LIST - LRS-50 (50W)

| MODEL      | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT      | COOLING |
|------------|----------|----------|-------------|------------|------------|---------|
| LRS-50-3.3 | 3.3 VDC  | 10 A     | 33 W        | 81%        | 85-264 VAC | Fanless |
| LRS-50-5   | 5 VDC    | 10 A     | 50 W        | 83%        | 85-264 VAC | Fanless |
| LRS-50-12  | 12 VDC   | 4.2 A    | 50.4 W      | 86%        | 85-264 VAC | Fanless |
| LRS-50-15  | 15 VDC   | 3.4 A    | 51 W        | 86%        | 85-264 VAC | Fanless |
| LRS-50-24  | 24 VDC   | 2.2 A    | 52.8 W      | 88%        | 85-264 VAC | Fanless |
| LRS-50-36  | 36 VDC   | 1.45 A   | 52.2 W      | 89%        | 85-264 VAC | Fanless |
| LRS-50-48  | 48 VDC   | 1.1 A    | 52.8 W      | 90%        | 85-264 VAC | Fanless |

# LRS-75 / LRS-100 / LRS-100N2

Medium-power fanless models with universal AC input 85-264 VAC. LRS-100N2 adds 200% short-duration peak power.

MODEL LIST — LRS-75 (75W)

| MODEL     | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT      | COOLING |
|-----------|----------|----------|-------------|------------|------------|---------|
| LRS-75-5  | 5 VDC    | 14 A     | 70 W        | 86.5%      | 85-264 VAC | Fanless |
| LRS-75-12 | 12 VDC   | 6 A      | 72 W        | 89%        | 85-264 VAC | Fanless |
| LRS-75-15 | 15 VDC   | 5 A      | 75 W        | 89%        | 85-264 VAC | Fanless |
| LRS-75-24 | 24 VDC   | 3.2 A    | 76.8 W      | 90%        | 85-264 VAC | Fanless |
| LRS-75-36 | 36 VDC   | 2.1 A    | 75.6 W      | 91.5%      | 85-264 VAC | Fanless |
| LRS-75-48 | 48 VDC   | 1.6 A    | 76.8 W      | 91.5%      | 85-264 VAC | Fanless |

MODEL LIST — LRS-100 (100W)

| MODEL       | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT      | COOLING |
|-------------|----------|----------|-------------|------------|------------|---------|
| LRS-100-3.3 | 3.3 VDC  | 20 A     | 66 W        | 84.5%      | 85-264 VAC | Fanless |
| LRS-100-5   | 5 VDC    | 18 A     | 90 W        | 86%        | 85-264 VAC | Fanless |
| LRS-100-12  | 12 VDC   | 8.5 A    | 102 W       | 88%        | 85-264 VAC | Fanless |
| LRS-100-15  | 15 VDC   | 7 A      | 105 W       | 88.5%      | 85-264 VAC | Fanless |
| LRS-100-24  | 24 VDC   | 4.5 A    | 108 W       | 90%        | 85-264 VAC | Fanless |
| LRS-100-36  | 36 VDC   | 2.8 A    | 100.8 W     | 90.5%      | 85-264 VAC | Fanless |
| LRS-100-48  | 48 VDC   | 2.3 A    | 110.4 W     | 91%        | 85-264 VAC | Fanless |

MODEL LIST — LRS-100N2 (100W, 200% PEAK)

| MODEL        | OUTPUT V | OUTPUT A | RATED POWER | PEAK (200%) | EFFICIENCY | COOLING |
|--------------|----------|----------|-------------|-------------|------------|---------|
| LRS-100N2-12 | 12 VDC   | 8.5 A    | 102 W       | 200 W       | 88%        | Fanless |
| LRS-100N2-24 | 24 VDC   | 4.2 A    | 100.8 W     | 200 W       | 90%        | Fanless |
| LRS-100N2-36 | 36 VDC   | 2.8 A    | 100.8 W     | 200 W       | 90%        | Fanless |
| LRS-100N2-48 | 48 VDC   | 2.1 A    | 100.8 W     | 200 W       | 90.5%      | Fanless |

# LRS-150 / LRS-150F

LRS-150 uses selectable AC input by switch; LRS-150F uses full-range universal AC input.  
Both fanless.

MODEL LIST — LRS-150 (SELECTABLE INPUT)

| MODEL      | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT                | COOLING |
|------------|----------|----------|-------------|------------|----------------------|---------|
| LRS-150-12 | 12 VDC   | 12.5 A   | 150 W       | 87.5%      | 85-132 / 170-264 VAC | Fanless |
| LRS-150-15 | 15 VDC   | 10 A     | 150 W       | 88.5%      | 85-132 / 170-264 VAC | Fanless |
| LRS-150-24 | 24 VDC   | 6.5 A    | 156 W       | 89%        | 85-132 / 170-264 VAC | Fanless |
| LRS-150-36 | 36 VDC   | 4.3 A    | 154.8 W     | 89%        | 85-132 / 170-264 VAC | Fanless |
| LRS-150-48 | 48 VDC   | 3.3 A    | 158.4 W     | 90%        | 85-132 / 170-264 VAC | Fanless |

MODEL LIST — LRS-150F (FULL-RANGE INPUT)

| MODEL       | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT      | COOLING |
|-------------|----------|----------|-------------|------------|------------|---------|
| LRS-150F-5  | 5 VDC    | 22 A     | 110 W       | 85%        | 85-264 VAC | Fanless |
| LRS-150F-12 | 12 VDC   | 12.5 A   | 150 W       | 87.5%      | 85-264 VAC | Fanless |
| LRS-150F-15 | 15 VDC   | 10 A     | 150 W       | 89%        | 85-264 VAC | Fanless |
| LRS-150F-24 | 24 VDC   | 6.5 A    | 156 W       | 89%        | 85-264 VAC | Fanless |
| LRS-150F-36 | 36 VDC   | 4.3 A    | 154.8 W     | 89%        | 85-264 VAC | Fanless |
| LRS-150F-48 | 48 VDC   | 3.3 A    | 158.4 W     | 90%        | 85-264 VAC | Fanless |

LRS-150 and LRS-150F are two distinct model lines with different input voltage handling. Choose LRS-150F when the application requires full-range 85-264 VAC without switching.

# LRS-200 / LRS-200N2

High power density fanless 200W models with selectable AC input. LRS-200N2 adds 200% short-duration peak power.

MODEL LIST — LRS-200 (200W)

| MODEL       | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT                | COOLING |
|-------------|----------|----------|-------------|------------|----------------------|---------|
| LRS-200-3.3 | 3.3 VDC  | 40 A     | 132 W       | 83%        | 90-132 / 180-264 VAC | Fanless |
| LRS-200-4.2 | 4.2 VDC  | 40 A     | 168 W       | 86%        | 90-132 / 180-264 VAC | Fanless |
| LRS-200-5   | 5 VDC    | 40 A     | 200 W       | 87%        | 90-132 / 180-264 VAC | Fanless |
| LRS-200-12  | 12 VDC   | 17 A     | 204 W       | 87.5%      | 90-132 / 180-264 VAC | Fanless |
| LRS-200-15  | 15 VDC   | 14 A     | 210 W       | 88%        | 90-132 / 180-264 VAC | Fanless |
| LRS-200-24  | 24 VDC   | 8.8 A    | 211.2 W     | 89.5%      | 90-132 / 180-264 VAC | Fanless |
| LRS-200-36  | 36 VDC   | 5.9 A    | 212.4 W     | 89.5%      | 90-132 / 180-264 VAC | Fanless |
| LRS-200-48  | 48 VDC   | 4.4 A    | 211.2 W     | 90%        | 90-132 / 180-264 VAC | Fanless |

MODEL LIST — LRS-200N2 (200W, 200% PEAK)

| MODEL        | OUTPUT V | OUTPUT A | RATED POWER | PEAK (200%) | EFFICIENCY | COOLING |
|--------------|----------|----------|-------------|-------------|------------|---------|
| LRS-200N2-12 | 12 VDC   | 17 A     | 204 W       | 408 W       | 87.5%      | Fanless |
| LRS-200N2-24 | 24 VDC   | 8.8 A    | 211.2 W     | 422 W       | 89.5%      | Fanless |
| LRS-200N2-36 | 36 VDC   | 5.9 A    | 212.4 W     | 425 W       | 89.5%      | Fanless |
| LRS-200N2-48 | 48 VDC   | 4.4 A    | 211.2 W     | 422 W       | 90%        | Fanless |

# LRS-350 / LRS-350N2

350W models with built-in DC fan for forced-air cooling. LRS-350N2 adds 200% short-duration peak power.

MODEL LIST — LRS-350 (350W)

| MODEL       | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT                | COOLING |
|-------------|----------|----------|-------------|------------|----------------------|---------|
| LRS-350-3.3 | 3.3 VDC  | 60 A     | 198 W       | 79.5%      | 90-132 / 180-264 VAC | Fan     |
| LRS-350-4.2 | 4.2 VDC  | 60 A     | 252 W       | 81.5%      | 90-132 / 180-264 VAC | Fan     |
| LRS-350-5   | 5 VDC    | 60 A     | 300 W       | 83.5%      | 90-132 / 180-264 VAC | Fan     |
| LRS-350-12  | 12 VDC   | 29 A     | 348 W       | 85%        | 90-132 / 180-264 VAC | Fan     |
| LRS-350-15  | 15 VDC   | 23.2 A   | 348 W       | 86%        | 90-132 / 180-264 VAC | Fan     |
| LRS-350-24  | 24 VDC   | 14.6 A   | 350.4 W     | 88%        | 90-132 / 180-264 VAC | Fan     |
| LRS-350-36  | 36 VDC   | 9.7 A    | 349.2 W     | 88.5%      | 90-132 / 180-264 VAC | Fan     |
| LRS-350-48  | 48 VDC   | 7.3 A    | 350.4 W     | 89%        | 90-132 / 180-264 VAC | Fan     |

MODEL LIST — LRS-350N2 (350W, 200% PEAK)

| MODEL        | OUTPUT V | OUTPUT A | RATED POWER | PEAK (200%) | EFFICIENCY | COOLING |
|--------------|----------|----------|-------------|-------------|------------|---------|
| LRS-350N2-12 | 12 VDC   | 29 A     | 348 W       | 696 W       | 85%        | Fan     |
| LRS-350N2-24 | 24 VDC   | 14.6 A   | 350.4 W     | 700 W       | 88%        | Fan     |
| LRS-350N2-36 | 36 VDC   | 9.7 A    | 349.2 W     | 698 W       | 88.5%      | Fan     |
| LRS-350N2-48 | 48 VDC   | 7.3 A    | 350.4 W     | 700 W       | 89%        | Fan     |

## LRS-450 / LRS-600

High-power models with built-in DC fan. Selectable AC input 90–132 VAC / 180–264 VAC by switch.

### MODEL LIST — LRS-450 (450W)

| MODEL      | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT                | COOLING |
|------------|----------|----------|-------------|------------|----------------------|---------|
| LRS-450-5  | 5 VDC    | 75 A     | 375 W       | 87%        | 90-132 / 180-264 VAC | Fan     |
| LRS-450-12 | 12 VDC   | 37.5 A   | 450 W       | 90%        | 90-132 / 180-264 VAC | Fan     |
| LRS-450-15 | 15 VDC   | 30 A     | 450 W       | 90%        | 90-132 / 180-264 VAC | Fan     |
| LRS-450-24 | 24 VDC   | 18.8 A   | 451.2 W     | 91%        | 90-132 / 180-264 VAC | Fan     |
| LRS-450-36 | 36 VDC   | 12.5 A   | 450 W       | 92%        | 90-132 / 180-264 VAC | Fan     |
| LRS-450-48 | 48 VDC   | 9.4 A    | 451.2 W     | 92%        | 90-132 / 180-264 VAC | Fan     |

### MODEL LIST — LRS-600 (600W)

| MODEL      | OUTPUT V | OUTPUT A | RATED POWER | EFFICIENCY | INPUT                | COOLING |
|------------|----------|----------|-------------|------------|----------------------|---------|
| LRS-600-5  | 5 VDC    | 100 A    | 500 W       | 86%        | 90-132 / 180-264 VAC | Fan     |
| LRS-600-12 | 12 VDC   | 50 A     | 600 W       | 90%        | 90-132 / 180-264 VAC | Fan     |
| LRS-600-15 | 15 VDC   | 40 A     | 600 W       | 90%        | 90-132 / 180-264 VAC | Fan     |
| LRS-600-24 | 24 VDC   | 25 A     | 600 W       | 91%        | 90-132 / 180-264 VAC | Fan     |
| LRS-600-27 | 27 VDC   | 22.2 A   | 599.4 W     | 91%        | 90-132 / 180-264 VAC | Fan     |
| LRS-600-36 | 36 VDC   | 16.6 A   | 597.6 W     | 92%        | 90-132 / 180-264 VAC | Fan     |
| LRS-600-48 | 48 VDC   | 12.5 A   | 600 W       | 92%        | 90-132 / 180-264 VAC | Fan     |

# LRS-600N2 / LRS-1200

LRS-600N2 adds 200% peak power. LRS-1200 is the flagship model with 150% peak, DC OK / Remote Control / Remote Sense, conformal coating and up to 5000m operating altitude.

MODEL LIST - LRS-600N2 (600W, 200% PEAK)

| MODEL        | OUTPUT V | OUTPUT A | RATED POWER | PEAK (200%) | EFFICIENCY | COOLING |
|--------------|----------|----------|-------------|-------------|------------|---------|
| LRS-600N2-12 | 12 VDC   | 50 A     | 600 W       | 1200 W      | 90%        | Fan     |
| LRS-600N2-24 | 24 VDC   | 25 A     | 600 W       | 1200 W      | 91%        | Fan     |
| LRS-600N2-36 | 36 VDC   | 16.6 A   | 597.6 W     | 1195 W      | 92%        | Fan     |
| LRS-600N2-48 | 48 VDC   | 12.5 A   | 600 W       | 1200 W      | 92%        | Fan     |

MODEL LIST - LRS-1200 (1200W)

| MODEL       | OUTPUT V | OUTPUT A | RATED POWER | PEAK (150%) | EFFICIENCY | INPUT       |
|-------------|----------|----------|-------------|-------------|------------|-------------|
| LRS-1200-12 | 12 VDC   | 92 A     | 1104 W      | 1656 W      | 91%        | 180-305 VAC |
| LRS-1200-24 | 24 VDC   | 50 A     | 1200 W      | 1800 W      | 93%        | 180-305 VAC |
| LRS-1200-36 | 36 VDC   | 33.3 A   | 1198.8 W    | 1800 W      | 94%        | 180-305 VAC |
| LRS-1200-48 | 48 VDC   | 25 A     | 1200 W      | 1800 W      | 94%        | 180-305 VAC |

LRS-1200 supports 150% peak power @5s (1800W peak), built-in DC OK / Remote Control / Remote Sense, conformal coating, up to 5000m operating altitude, -30 to +70°C wide range operation.

**N2 Series Note:** The N2 series (LRS-100N2, LRS-200N2, LRS-350N2, LRS-600N2) is designed for high peak power applications — motors and electromechanical loads that require much higher power during startup. Peak power is short-duration only; continuous power must remain within rated limits.

# LRS Series Dimensions

Low-profile 1U enclosed metal mesh case with perforated ventilation design. All dimensions in mm, tolerance ±1 mm.

|                 |                     |
|-----------------|---------------------|
| LRS-35 / LRS-50 |                     |
| Length (L)      | 99 mm               |
| Width (W)       | 82 mm               |
| Height (H)      | 30 mm (1U)          |
| Housing         | Metal mesh case     |
| Cooling         | Free air convection |

|            |                     |
|------------|---------------------|
| LRS-75     |                     |
| Length (L) | 99 mm               |
| Width (W)  | 97 mm               |
| Height (H) | 30 mm (1U)          |
| Housing    | Metal mesh case     |
| Cooling    | Free air convection |

|                 |                     |
|-----------------|---------------------|
| LRS-100 / 100N2 |                     |
| Length (L)      | 129 mm              |
| Width (W)       | 97 mm               |
| Height (H)      | 30 mm (1U)          |
| Housing         | Metal mesh case     |
| Cooling         | Free air convection |

|                |                     |
|----------------|---------------------|
| LRS-150 / 150F |                     |
| Length (L)     | 159 mm              |
| Width (W)      | 97 mm               |
| Height (H)     | 30 mm (1U)          |
| Housing        | Metal mesh case     |
| Cooling        | Free air convection |

|                 |                     |
|-----------------|---------------------|
| LRS-200 / 200N2 |                     |
| Length (L)      | 215 mm              |
| Width (W)       | 115 mm              |
| Height (H)      | 30 mm (1U)          |
| Housing         | Metal mesh case     |
| Cooling         | Free air convection |

|                 |                  |
|-----------------|------------------|
| LRS-350 / 350N2 |                  |
| Length (L)      | 215 mm           |
| Width (W)       | 115 mm           |
| Height (H)      | 30 mm (1U)       |
| Housing         | Metal mesh case  |
| Cooling         | Forced air (fan) |

|            |                  |
|------------|------------------|
| LRS-450    |                  |
| Length (L) | 225 mm           |
| Width (W)  | 124 mm           |
| Height (H) | 35 mm (1U)       |
| Housing    | Metal mesh case  |
| Cooling    | Forced air (fan) |

|                 |                  |
|-----------------|------------------|
| LRS-600 / 600N2 |                  |
| Length (L)      | 225 mm           |
| Width (W)       | 124 mm           |
| Height (H)      | 41 mm (1U)       |
| Housing         | Metal mesh case  |
| Cooling         | Forced air (fan) |

|            |                              |
|------------|------------------------------|
| LRS-1200   |                              |
| Length (L) | 225 mm                       |
| Width (W)  | 124 mm                       |
| Height (H) | 41 mm (1U)                   |
| Housing    | Conformal coating            |
| Cooling    | Forced air (intelligent fan) |

Measurement unit: mm. Data is manually measured and may contain minor deviations — please refer to the actual product for final dimensions.

# LRS Series Installation

The LRS Series uses an enclosed chassis design for standalone mounting inside industrial equipment. Adequate ventilation clearance is required.

01 / 06

**Chassis Mounting**

Mount the unit on a flat metal surface using the mounting holes on the chassis base.  
Recommended mounting screws: M4. Ensure secure fixing to prevent vibration.

02 / 06

**Ventilation Clearance**

Always allow good ventilation clearances around the unit: at least 5 mm left/right, 40 mm above and 20 mm below, to prevent overheating.

03 / 06

**Airflow Direction**

For fan-cooled models (350W and above), ensure airflow direction is not blocked. The built-in fan pulls air through the chassis from the vented sides.

04 / 06

**FG Must Be Connected to PE**

The FG (Frame Ground) terminal must be connected to PE (Protective Earth) for safety and to ensure proper EMC performance.

05 / 06

**Operating Temperature Limits**

Small/medium models (35W–100W): -30 to +70°C. LRS-150/200/350/450/600: -25 or -20 to +70°C. LRS-1200: -30 to +70°C. Derating above +50°C.

06 / 06

**Indoor Use Only**

Install only in dry, well-ventilated locations. Do not install near water or high moisture. Operating altitude up to 5000m (some models, with derating).

The LRS Series requires adequate ventilation clearance. Ensure the perforated ventilation openings and fan intake/exhaust are not blocked. Do not install in orientations other than the recommended position.

# LRS Series Wiring & Terminal

The LRS Series uses screw-type terminal blocks for input and output connections. Use copper wire only and ensure all strands enter the terminal connection securely.

LRS-35 / 50 / 75 – 5 PINS

| PIN | ASSIGNMENT        |
|-----|-------------------|
| 1   | AC/L              |
| 2   | AC/N              |
| 3   | FG (Frame Ground) |
| 4   | DC OUTPUT –V      |
| 5   | DC OUTPUT +V      |

LRS-100 / 100N2 – 7 PINS

| PIN  | ASSIGNMENT        |
|------|-------------------|
| 1    | AC/L              |
| 2    | AC/N              |
| 3    | FG (Frame Ground) |
| 4, 5 | DC OUTPUT –V      |
| 6, 7 | DC OUTPUT +V      |

LRS-150 / 150F / 200 / 200N2 / 350 / 350N2 / 450 / 600 / 600N2 – 9 PINS

| PIN     | ASSIGNMENT        |
|---------|-------------------|
| 1       | AC/L              |
| 2       | AC/N              |
| 3       | FG (Frame Ground) |
| 4, 5, 6 | DC OUTPUT –V      |
| 7, 8, 9 | DC OUTPUT +V      |

LRS-1200 – TERMINAL + CN1 CONTROL

| TERMINAL / PIN | ASSIGNMENT             |
|----------------|------------------------|
| TB1            | 1=AC/L, 2=AC/N, 3=FG   |
| TB2/TB3        | +Vo / –Vo (M5 screw)   |
| CN1 (1)        | –RS (Remote Sense –)   |
| CN1 (2)        | +RS (Remote Sense +)   |
| CN1 (3)        | GND                    |
| CN1 (4)        | DC OK                  |
| CN1 (5)        | RC– (Remote Control –) |
| CN1 (6)        | RC+ (Remote Control +) |

**Wiring Note:** The FG pin must be connected to PE (Protective Earth). The number of output terminals varies by model — always verify the terminal label. Multiple DC output pins (e.g., 4,5,6 and 7,8,9) should all be connected to prevent excessive current stress on a single contact.

# LRS Series Wiring Specification

Recommended wire gauge, terminal torque settings, and input configuration for the LRS Series.

| RECOMMENDED WIRE                                      |         |                      |
|-------------------------------------------------------|---------|----------------------|
| AWG                                                   | CURRENT | SECTION              |
| 18                                                    | 0–6 A   | 0.75 mm <sup>2</sup> |
| 16                                                    | 6–10 A  | 1.00 mm <sup>2</sup> |
| 14                                                    | 13–16 A | 1.52 mm <sup>2</sup> |
| 12                                                    | 16–25 A | 2.5 mm <sup>2</sup>  |
| Use stranded copper wire, ≥80 °C rated (e.g. UL1007). |         |                      |

| TERMINAL TORQUE                                  |             |
|--------------------------------------------------|-------------|
| MODEL GROUP                                      | TORQUE      |
| LRS-35 – LRS-200                                 | 5–6 kgf-cm  |
| LRS-350 – LRS-600                                | 8–10 kgf-cm |
| LRS-1200                                         | 8–10 kgf-cm |
| 3 mm / 4 mm slotted. M3.5 AC, M5 DC on LRS-1200. |             |

| INPUT CONFIGURATION         |                      |
|-----------------------------|----------------------|
| 35/50/75/100/150F           | Universal 85–264 VAC |
| 150 / 200 / 350 / 450 / 600 | Selectable by switch |
| LRS-1200                    | 180–305 VAC          |
| Frequency                   | 47–63 Hz             |

## OUTPUT VOLTAGE ADJUSTMENT

|                        |                                                                                 |
|------------------------|---------------------------------------------------------------------------------|
| +V ADJ Potentiometer   | All LRS models include a front-panel DC output voltage adjustment potentiometer |
| Power LED              | Green power-on indicator LED on all models                                      |
| Adjustment Range       | Typically ±10% of nominal (refer to specific model datasheet)                   |
| Output Current / Power | Must not exceed the rated value on the specification                            |

**DC Output Voltage Adjustment:** The rated output voltage can be adjusted within the voltage adjustment range specified for each model. Output current and output power must not exceed the rated value on the specification.

## LRS Series Safety & Industrial Applications

Read and follow all safety instructions before installing, wiring, maintaining or modifying the LRS Series power supply.

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### 01 • ELECTRICAL SHOCK HAZARD

Risk of electrical shock and energy hazard. All failures should be examined by a qualified technician. Do not remove the case.

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### 02 • PRIMARY / SECONDARY ISOLATION

Connecting both the primary and the secondary sides together is not allowed — risk of electric arcs and electric shock (danger to life).

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### 03 • BURN HAZARD

Do not touch the unit in operation and shortly after disconnection.

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### 04 • FIRE & SHORT CIRCUIT

The openings should be protected from foreign objects or dripping liquids.

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### 05 • PROTECTIVE EARTH

The FG (Frame Ground) must be connected to PE (Protective Earth).

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### 06 • RATED OUTPUT

Output current and output power must not exceed the rated value on its specification.

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### 07 • BEFORE SERVICING

Disconnect the system from supply voltage before any installation, maintenance or modification work.

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### 08 • FUSE REPLACEMENT

For continued protection against risk of fire, replace only with the same type and rating of fuse.

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### 09 • EN61000-3-2 NOTE

This power supply does not meet the harmonic current requirements outlined by EN61000-3-2 for EU end-devices with average input power above 75W. Refer to the datasheet for exceptions.

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## TYPICAL APPLICATIONS

|                                   |                              |                                     |
|-----------------------------------|------------------------------|-------------------------------------|
| ▣ Industrial Automation Machinery | ▣ Industrial Control Systems | ▣ Mechanical & Electrical Equipment |
| ▣ Electronic Instruments          | ▣ Household Appliances       | ▣ LED Lighting                      |
| ▣ Security Systems                | ▣ Communication Equipment    | ▣ Test & Measurement                |

# FAQ & Contact Information

Frequently asked questions and DAPPRA contact details.

### What is the DAPPRA LRS Series?

The DAPPRA LRS Series is a low-profile single-output enclosed switching power supply series. It covers 35W to 1200W power ratings with 3.3V, 4.2V, 5V, 12V, 15V, 24V, 27V, 36V and 48V output configurations, with a 30mm 1U low-profile design.

### What is the input voltage range of the LRS Series?

Most LRS models support a universal AC input range of 85–264 VAC or 120–373 VDC. The LRS-150 and LRS-350 and above use selectable AC input 90–132 VAC / 180–264 VAC by switch. The LRS-1200 supports 180–305 VAC input.

### What is the difference between the LRS standard series and the LRS-N2 series?

The LRS-N2 series (LRS-100N2, LRS-200N2, LRS-350N2, LRS-600N2) is designed for high peak power applications, providing up to 200% short-duration peak power for motor and electromechanical loads requiring much higher power during startup.

### Which LRS models use a built-in cooling fan?

The LRS-35, LRS-50, LRS-75, LRS-100, LRS-150, LRS-200 series use free air convection cooling without a fan. The LRS-350, LRS-450, LRS-600 and LRS-1200 series use forced air cooling with built-in DC fan and Fan ON/OFF control.

### What is the efficiency of the LRS Series?

Efficiency ranges from 79.5% (LRS-350-3.3) up to 94% (LRS-1200 models), depending on the model and output voltage.

### What is the no-load power consumption of the LRS Series?

No-load power consumption is below 0.2W for LRS-35, below 0.3W for LRS-75 and LRS-100, below 0.5W for LRS-100N2 and LRS-150F, below 0.75W for LRS-50/150/200/350/450 and below 1W for LRS-350N2 and LRS-600N2.

### What is the operating temperature range of the LRS Series?

LRS-35 through LRS-100 series operate from -30°C to +70°C with derating above +50°C. LRS-200/350/450/600 series operate from -25°C or -20°C to +70°C. LRS-1200 operates from -30°C to +70°C.

### What is the terminal pin assignment of the LRS Series?

The standard LRS terminal assignment is: Pin 1 = AC/L, Pin 2 = AC/N, Pin 3 = FG (Frame Ground), Pins 4-6 = DC OUTPUT -V, Pins 7-9 = DC OUTPUT +V. The exact pin count depends on the model (LRS-35/50/75 use 5 pins, LRS-100 uses 7 pins, LRS-150 and above use 9 pins).

### What certifications does the LRS Series have?

The LRS Series is certified to IEC/UL 62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1, BS EN/EN61558-1/-2-16, GB 4943.1, BSMI CNS15598-1, EAC TP TC 004 and BIS IS13252. The series also meets BS EN/EN61000-6-2 industrial immunity level and is SEMI F47 approved on some models.

### What is the warranty period for the LRS Series?

All LRS Series models come with a 3 years warranty.

### How do I choose the right LRS Series model?

Select the LRS model according to the required output power (35W to 1200W), output voltage, whether peak power capability is needed (choose N2 series), whether full-range or selectable AC input is required, and available mounting space.

## Contact DAPPRA

For product selection, technical support, samples or quotation, please contact us through the channels below.

#### EMAIL

[sales@dappra.com](mailto:sales@dappra.com)

#### WHATSAPP

[+62 878 5542 7784](https://wa.me/87855427784)

#### WEBSITE

[www.dappra.com](http://www.dappra.com)

**Notice:** Specifications, dimensions and model availability in this datasheet are subject to change without prior notice. Please refer to the latest DAPPRA official documentation or contact DAPPRA for the most current information. LRS Series Datasheet · Doc No. LRS-DS-001 · Rev. 1.0 · 2024-01.