



## 15ACDRSS\_4 series

15W - Single Output AC-DC Converter

### AC-DC Converter

15 Watt

- ⊕ Isolation class II
- ⊕ Class 2/Pass LPS
- ⊕ Ultra slim step shape
- ⊕ DC Output voltage adjustable
- ⊕ 15W output power
- ⊕ Protection: short circuit, overload and over voltage
- ⊕ Over voltage category II
- ⊕ 4kVAC isolation

Introducing our state-of-the-art 15ACDRSS\_4 series, designed to meet the highest safety and performance standards. This power supply unit boasts Isolation Class II, offering robust protection for a variety of applications. Additionally, it adheres to the Class 2/Pass LPS certification, ensuring low power source compliance, making it a reliable option for installations requiring stringent safety measures. Built with an ultra-slim step shape, this module fits easily into space-constrained environments. The DC output voltage is adjustable, providing flexibility to meet specific output requirements. With an impressive 15W output power, it delivers consistent, high-performance energy conversion suitable for a wide range of electronic systems. The module is equipped with comprehensive protection features, including short circuit protection, overload protection, and over-voltage protection, ensuring the safety and longevity of connected devices. Its over-voltage category II classification further enhances protection against surges, making it ideal for residential, commercial, and light industrial use.



#### Common specifications

Short circuit protection:

Over load 110 ~ 145% rated output power. Hiccup mode when output voltage <50%, recovers automatically after fault condition is removed. Constant current limiting within 50%-100% rated output voltage, recovers automatically after fault condition is removed.

Over temperature 95C ≤ 5°C (TSW) detect on heatsink of power switch  
Protection type : Shut down o/p voltage, recovers automatically after temperature goes down

Over voltage 15ACDRSS\_05S4 5.75 ~ 6.75V  
15ACDRSS\_12S4 14.2 ~ 16.2V  
15ACDRSS\_15S4 18.8 ~ 22.5V  
15ACDRSS\_24S4 30 ~ 36V  
15ACDRSS\_48S4 56.5 ~ 64.8V  
Protection type : Shut off o/p voltage, clamping by zener diode

Operating temperature -20~+70°C (with derating)

Storage Temperature -40~+85°C

Operating humidity 20%~90%RH, non considering

Storage humidity 10%~95%RH

Operating altitude 5000 meters

Over voltage category II; According to EN62368-1; altitude up to 2000 meters

Temp. coefficient ±0.03%/°C (0 ~ 50°C) RH non-condensing

Vibration 10 ~ 500Hz, 2G 10min./cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6

Safety regulations UL62368-1, BS EN/EN62368-1

Dimension: 18 x 90 x 58 mm

Weight 78g

#### Example:

**15ACDRSS\_05S4**

15 = 15Watt; AC = AC-DC; DR = Din Rail, SS = Step shape;  
05 = 5Vout; S = Single output; 4 = 4kVAC isolation

#### Output specifications

| Item            | Operating condition                        | Min  | Typ  | Max | Units |
|-----------------|--|------|------|-----|-------|
| Line regulation |  |      | ±1.0 |     | %     |
| Load regulation |  |      | ±1.0 |     | %     |
| Setup rise time | 230VAC at full load<br>115VAC at full load | 2000 |      | 80  | ms    |
| Hold up time    | 230VAC at full load<br>115VAC at full load |      | 30   | 12  | ms    |

#### Input specifications

| Item                        | Operating condition | Min | Typ | Max  | Units |
|-----------------------------|---------------------|-----|-----|------|-------|
| Voltage range               |                     | 90  |     | 264  | VAC   |
|                             |                     | 127 |     | 370  | VDC   |
| Frequency range             |                     | 47  |     | 63   | Hz    |
| Inrush current (Cold start) | 115 VAC<br>230VAC   |     | 25  | 45   | A     |
| AC Current                  | 115 VAC<br>230VAC   |     | 0.5 | 0.25 | A     |

#### Isolation specifications

| Item                 | Operating conditions                        | Min | Typ  | Max | Units |
|----------------------|---|-----|------|-----|-------|
| Withstand voltage    | I/P-O/P                                     |     | 4000 |     | VAC   |
| Isolation Resistance | I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH |     |      |     |       |

#### EMC specifications

|               |  |
|---------------|--|
| EMC Emissions | BS EN/EN 55032 class B, BS EN/EN IEC 61000-3-2,3 |
| EMC Immunity  | BS EN/EN61000-4-2, 3, 4, 5, 6, 8, 11             |

# 15ACDRSS\_4 series

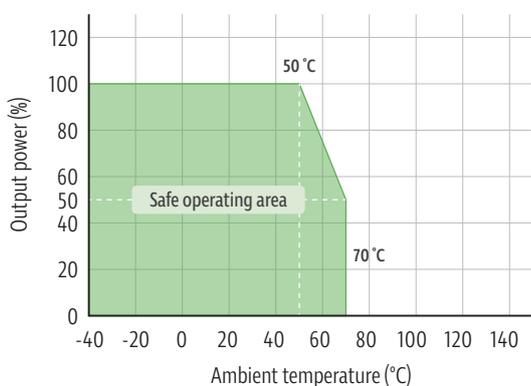
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## Product Selection Guide

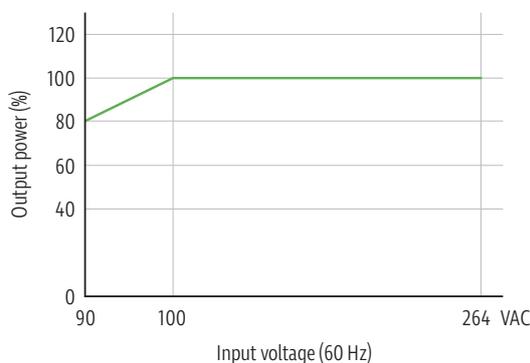
| Certification | Part number   | DC Voltage (Vin) | Rated Current (max) A | Rated Power (W) | Voltage tolerance (%) | Voltage Adj. Range (V) | Efficiency (typ) % | Ripple & Noise (max.) mVp-p |
|---------------|---------------|------------------|-----------------------|-----------------|-----------------------|------------------------|--------------------|-----------------------------|
| UL            | 15ACDRSS_05S4 | 5                | 2.4                   | 12              | ±2.0                  | 4.5-5.5                | 80                 | 80                          |
| UL            | 15ACDRSS_12S4 | 12               | 1.25                  | 15              | ±2.0                  | 10.8-13.8              | 85                 | 120                         |
| UL            | 15ACDRSS_15S4 | 15               | 1                     | 15              | ±2.0                  | 13.5-18                | 85.5               | 120                         |
| UL            | 15ACDRSS_24S4 | 24               | 0.63                  | 15              | ±2.0                  | 21.6-29                | 86                 | 150                         |
| UL            | 15ACDRSS_48S4 | 48               | 0.31                  | 15              | ±2.0                  | 43.2-55.2              | 87                 | 240                         |

## Product characteristic curve

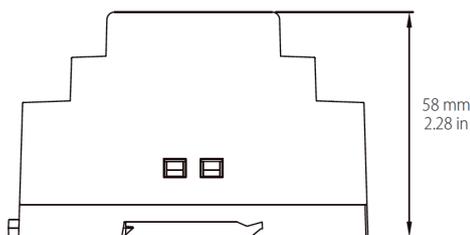
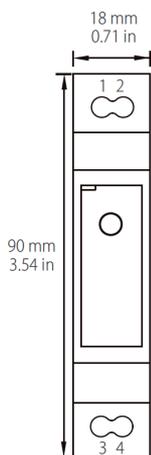
Temperature derating graph



Input voltage derating curve



## Dimensions and recommended layout



| Input |      |
|-------|------|
| PIN   | Mark |
| 1     | +V   |
| 2     | -V   |

| Output |      |
|--------|------|
| PIN    | Mark |
| 3      | AC/N |
| 4      | AC/L |

## Functional diagram

