# Product data sheet

Specifications



## universal power supply, Phaseo, 1 or 2 phase, 100 to 500 V, 24 V, 3 A

ABL8RPS24030

**Product availability: Stock - Normally stocked in distribution facility**

## Main

| | |
|---|---|
| **Range of Product** | Modicon Power Supply |
| **Product or Component Type** | Power supply |
| **Power supply type** | Regulated switch mode |
| **Nominal input voltage** | 100...120 V AC single phase N-L1<br>200...500 V AC phase to phase L1-L2 |
| **Rated power in W** | 72 W |
| **Output voltage** | 24 V DC |
| **Power supply output current** | 3 A |
| **Permissible temporary current boost** | 1.5 x In for 4 s) |
| **Anti-harmonic filter** | Low frequency harmonic currents |

## Complementary

| | |
|---|---|
| **Efficiency at full load** | 170...550 V AC<br>85...132 V AC |
| **Inrush current** | 30 A |
| **Power factor** | 0.51 at 240 V AC<br>0.59 at 120 V AC |
| **Efficiency** | 87 % |
| **Output voltage adjustment** | 24...28.8 V adjustable |
| **Power dissipation in W** | 7.8 W |
| **Provided equipment** | Power factor correction filter IEC 61000-3-2 |
| **Output protection type** | Against overload, protection technology: manual or automatic reset<br>Against overvoltage, protection technology: 30...32 V, manual reset<br>Against short-circuits, protection technology: manual or automatic reset<br>Against undervoltage, protection technology: tripping if U < 21.6 V<br>Thermal, protection technology: automatic reset |
| **Connections - terminals** | Screw type terminals 3 x 0.5...3 x 4 mm², AWG 22...AWG 12) input connection<br>Screw type terminals 1 x 0.5...1 x 4 mm², AWG 22...AWG 12) input ground connection<br>Screw type terminals 4 x 0.5...4 x 4 mm², AWG 22...AWG 12) output connection<br>Screw type terminals 1 x 0.5...1 x 4 mm², AWG 22...AWG 12) output ground connection |
| **Status LED** | 1 LED (green and red) output voltage<br>1 LED (green, red and orange) output current |
| **Depth** | 4.9 in (125 mm) |
| **Height** | 4.9 in (125 mm) |
| **Width** | 1.8 in (45 mm) |
| **Product Weight** | 0.7 lb(US) (0.3 kg) |

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

| | |
|---|---|
| **Output coupling** | Parallel<br>Series |
| **Marking** | CE |
| **Mounting support** | 35 x 15 mm symmetrical DIN rail<br>35 x 7.5 mm symmetrical DIN rail |
| **Operating position** | Vertical |
| **Supply** | SELV IEC 60950-1<br>SELV IEC 60204-1<br>SELV IEC 60364-4-41 |
| **Dielectric strength** | 3500 V with between input and ground<br>4000 V with between input and output<br>500 V with between output and ground |

## Environment

| | |
|---|---|
| **Standards** | CSA C22.2 No 60950-1<br>UL 508<br>EN/IEC 62368-1 |
| **Product certifications** | CCSAus<br>EAC<br>UL<br>RCM<br>KC |
| **Environmental characteristic** | EMC conforming to IEC 61000-6-1<br>EMC conforming to IEC 61000-6-3<br>EMC conforming to IEC 61000-6-2<br>EMC conforming to IEC 61000-6-4<br>EMC conforming to EN/IEC 61204-3<br>Safety conforming to IEC 60950-1<br>Safety conforming to EN/IEC 61204-3 |
| **Operating altitude** | 6561.68 ft (2000 m) |
| **IP degree of protection** | IP20 conforming to IEC 60529 |
| **Ambient air temperature for operation** | 122…140 °F (50…60 °C) with derating factor mounting position A < 6561.68 ft (2000 m)<br>-13…122 °F (-25…50 °C) without derating mounting position A < 6561.68 ft (2000 m) |

## Ordering and shipping details

| | |
|---|---|
| **Category** | US1CP1222525 |
| **Discount Schedule** | CP12 |
| **GTIN** | 3389119405607 |
| **Returnability** | Yes |
| **Country of origin** | PH |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Nbr. of units in pkg.** | 1 |
| **Package 1 Height** | 2.559 in (6.500 cm) |
| **Package 1 Width** | 6.496 in (16.500 cm) |
| **Package 1 Length** | 5.709 in (14.500 cm) |
| **Package weight(Lbs)** | 27.372 oz (776.000 g) |
| **Number of Units in Package 2** | 120 |
| **Package 2 Height** | 29.528 in (75.000 cm) |

| | |
|---|---|
| **Package 2 Width** | 23.622 in (60.000 cm) |
| **Package 2 Length** | 31.496 in (80.000 cm) |
| **Package 2 Weight** | 233.955 lb(US) (106.120 kg) |

## Contractual warranty

| | |
|---|---|
| **Warranty (in months)** | 18 |

## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

### Environmental footprint

| | |
|---|---|
| Total lifecycle Carbon footprint | **128 kg CO2 eq.** |
| Carbon footprint of the manufacturing phase [A1 to A3] | **21 kg CO2 eq.** |
| Carbon footprint of the distribution phase [A4] | **0.4 kg CO2 eq.** |
| Carbon footprint of the installation phase [A5] | **0.2 kg CO2 eq.** |
| Carbon footprint of the use phase [B2, B3, B4, B6] | **105 kg CO2 eq.** |
| Carbon footprint of the end-of-life phase [C1 to C4] | **1 kg CO2 eq.** |

## Use Better

### Materials and Substances

| | |
|---|---|
| Packaging made with recycled cardboard | **No** |
| Packaging without single use plastic | **Yes** |
| SCIP Number | **974297e5-68e4-4a61-9a40-1443e8973a60** |
| EU RoHS Directive | **Compliant By Exemption** |
| REACh Regulation | **Reference contains Substances of Very High Concern above the threshold** |
| California proposition 65 | **WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov** |
| PVC free | **Yes** |

## Use Longer

### Lifetime extension

| | |
|---|---|
| Repair | **No** |

## Use Again

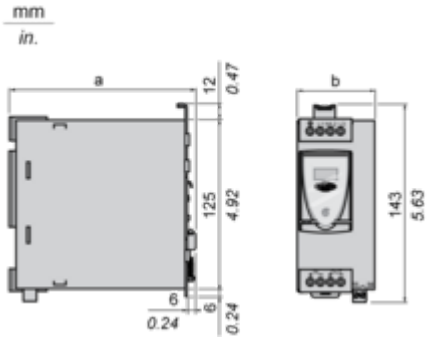
### Repack and remanufacture

| | |
|---|---|
| Recyclability potential, in % | **40** |
| Take-back | **No** |
| WEEE Label | **The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.** |

Dimensions Drawings

## Regulated Switch Mode Power Supplies

### Dimensions

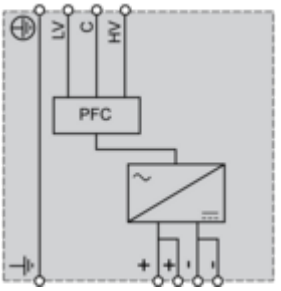



| ABL 8 | a in mm | a in. | b in mm | b in in. |
|---|---|---|---|---|
| **RPS24030** | 125 | 4.92 | 45 | 1.77 |
| **RPS24050** | 125 | 4.92 | 56 | 2.20 |
| **RPS24100** | 145 | 5.71 | 86 | 3.39 |
| **RPM24200** | 145 | 5.71 | 146 | 5.75 |
| **WPS24200** | 160 | 6.30 | 96 | 3.78 |
| **WPS24400** | 160 | 6.30 | 166 | 6.54 |

Connections and Schema

## Regulated Switch Mode Power Supply

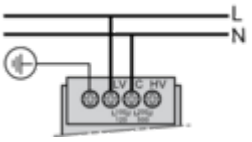
### Internal Wiring Diagram



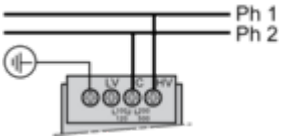
## Regulated Switch Mode Power Supply

### Line Supply Wiring Diagram

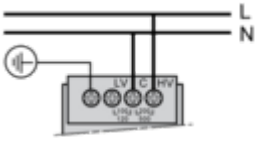
Single-phase (L-N) 100 to 120 V




Phase-to-phase (L1-L2) 200 to 500 V



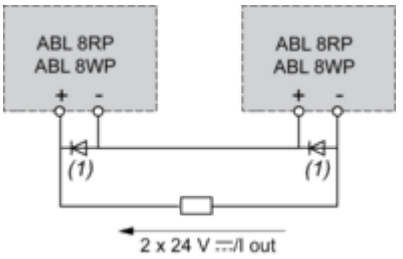

Single-phase (L-N) 200 to 500 V



## Regulated Switch Mode Power Supplies

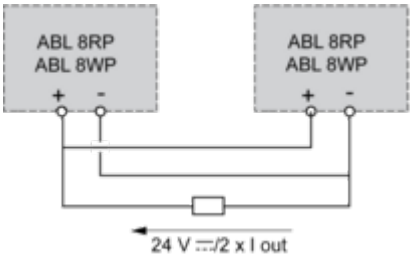
### Series or Parallel Connection

**Series Connection**




**(1)** Two Shottky diodes Imin = power supply In and Vmin = 50 V

**Parallel Connection**




| Family | Series | Parallel |
|---|---|---|
| ABL 8RPS/8RPM/8WPS | 2 products max. (1) | 2 products max. |

**NOTE:** Series or parallel connection is only recommended for products with identical references.

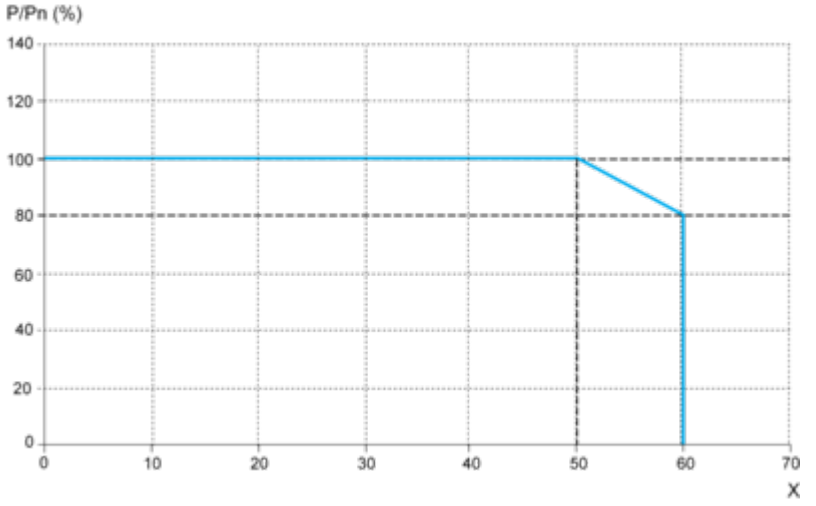
For better availability, the power supplies can also be connected in parallel using the **ABL8RED24400** Redundancy module.

## Performance Curves

### Regulated Switch Mode Power Supplies

### Derating

The ambient temperature is a determining factor that limits the power an electronic power supply can deliver continuously. If the temperature around the electronic components is too high, their life will be significantly reduced.
The nominal ambient temperature for the Universal range of Phaseo power supplies is 50°C. Above this temperature, derating is necessary up to a maximum temperature of 60°C.
The graph below shows the power (in relation to the nominal power) that the power supply can deliver continuously, depending on the ambient temperature.



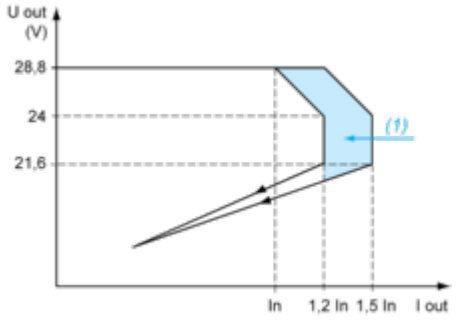

**X** Maximum operating temperature (°C)
ABL 8RPM, ABL 8RPS, ABL 8WPS mounted vertically
Derating should be considered in extreme operating conditions:

- Intensive operation (output current permanently close to the nominal current, combined with a high ambient temperature)
- Output voltage set above 24 Vdc (to compensate for line voltage drops, for example)
- Parallel connection to increase the total power

## Regulated Switch Mode Power Supply

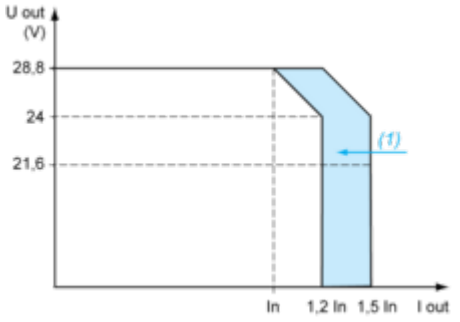
### Load Limit

**Manual Reset Protection Mode**



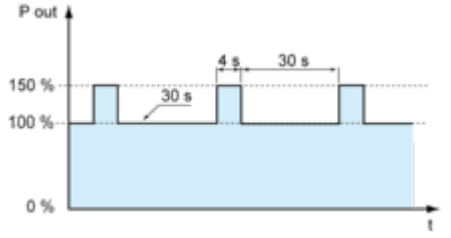

**(1)** Boost 4s

**Automatic Reset Protection Mode**




**(1)** Boost 4s

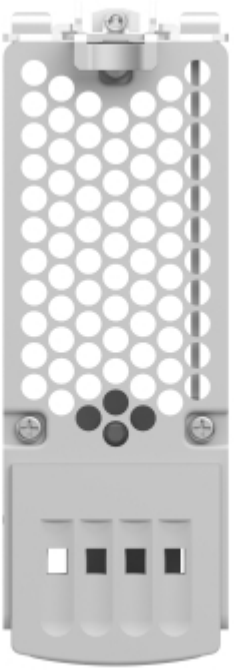
**“Boost” Repeat Accuracy**

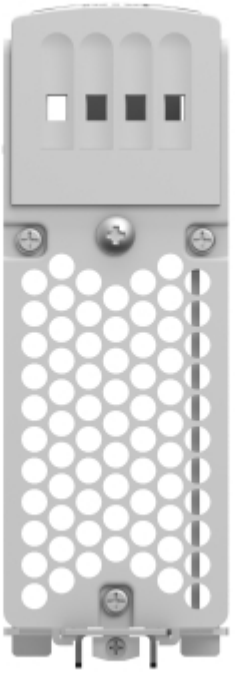


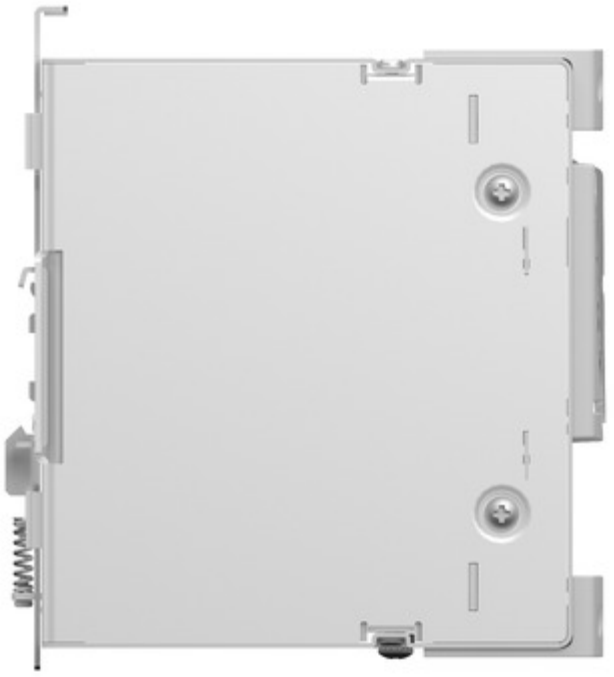

This type of operation is described in detail in the user manual, which can be downloaded from the website.

Image of product / Alternate images

**Alternative**








Schneider Electric
ABL8RPS24030
24VDC-3A
AUTO
MANU
24V


Schneider Electric
Modicon ABL8 RPS24030
INPUT :
OUTPUT :

