

## ABL8RPS24050

regulirani prekidački izvor napajanja - 1 ili 2-fazni -  
100...500 V - 24 V - 5 A



### Glavno

|                                       |   |
|---------------------------------------|---|
| Range of product                      | Phaseo  |
| Product or component type             | Power supply  |
| Power supply type                     | Regulated switch mode   |
| Input voltage                         | 100...120 V AC single phase, terminal(s): N-L1<br>200...500 V AC phase to phase, terminal(s): L1-L2   |
| Output voltage                        | 24 V DC   |
| Rated power in W                      | 120 W   |
| Provided equipment                    | Power factor correction filter conforming to IEC 61000-3-2  |
| Power supply output current           | 5 A   |
| 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 |
| Ambient air temperature for operation | 50...60 °C with<br>-25...50 °C without  |

### Komplementarno

|                                     |   |
|-------------------------------------|---|
| Input voltage limits                | 170...550 V<br>85...132 V   |
| Network frequency                   | 47...63 Hz  |
| Inrush current                      | 30 A for 2 ms   |
| Cos phi                             | 0.51 at 240 V<br>0.59 at 120 V  |
| Efficiency                          | 87 %  |
| Output voltage limits               | 24...28.8 V adjustable  |
| Power dissipation in W              | 15.5 W  |
| Line and load regulation            | 1...3 %   |
| Holding time                        | $\geq 120$ ms at 400 V<br>$\geq 20$ ms at 100 V<br>$\geq 40$ ms at 240 V  |
| Permissible temporary current boost | 1.5 x $I_n$ for 4 s   |
| Connections - terminals             | Removable screw terminal block for diagnostic relay, connection capacity: 2 x 2.5 mm <sup>2</sup><br>Screw type terminals for input connection, connection capacity: 3 x 0.5...3 x 4 mm <sup>2</sup> AWG 22...AWG 12<br>Screw type terminals for input ground connection, connection capacity: 1 x 0.5...1 x 4 mm <sup>2</sup> AWG 22...AWG 12<br>Screw type terminals for output connection, connection capacity: 4 x 0.5...4 x 4 mm <sup>2</sup> AWG 22...AWG 12<br>Screw type terminals for output ground connection, connection capacity: 1 x 0.5...1 x 4 mm <sup>2</sup> AWG 22...AWG 12 |
| Marking                             | CE  |
| Mounting support                    | 35 x 15 mm symmetrical DIN rail<br>35 x 7.5 mm symmetrical DIN rail   |
| Operating position                  | Vertical  |
| Operating altitude                  | 2000 m  |

Informacije dane u ovoj dokumentaciji sadrže opće opise i/ili tehničke karakteristike o performansama ovdje sadržanih proizvoda. Ova dokumentacija nije namijenjena kao zamjena za niti bi se trebala koristiti za određivanje prikladnosti ili pouzdanosti predmetnih proizvoda za konkretne korisničke primjene. Svaki takav korisnik ili integrator dužan je provesti odgovarajuću i potpunu analizu rizika, procjenu i ispitivanje proizvoda u odnosu na odgovarajuću specifičnu primjenu ili uporabu istog. Niti društvo Schneider Electric Industries SAS niti bilo koje od njegovih povezanih poduzeća ili podružnica neće preuzeti obvezu ili snositi odgovornost za pogrešnu upotrebu ovdje sadržanih informacija.

|                 |  |
|-----------------|--|
| Output coupling | Parallel Series  |
| Name of test    | Conducted emissions on the power line conforming to EN 55022 Class B<br>Electrostatic discharges conforming to EN/IEC 61000-4-2<br>Induced electromagnetic field conforming to EN/IEC 61000-4-6<br>Magnetic field conforming to EN 61000-4-8<br>Primary outage conforming to IEC 61000-4-11<br>Radiated electromagnetic field conforming to EN/IEC 61000-4-3<br>Radiated emissions conforming to EN 55022 Class B<br>Rapid transient conforming to IEC 61000-4-4<br>Surge conforming to EN/IEC 61000-4-5<br>Harmonic current emission conforming to EN/IEC 61000-3-2 |
| Status LED      | 1 LED green and red for output voltage<br>1 LED green, red and orange for output current   |
| Depth           | 125 mm   |
| Height          | 143 mm   |
| Width           | 56 mm  |
| Product weight  | 0.7 kg   |

## Okolina

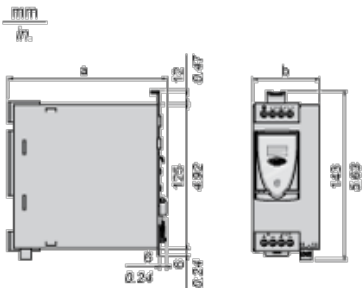
|                                     |   |
|-------------------------------------|---|
| product certifications              | CCSAus<br>UL<br>KC  |
| standards                           | UL 508<br>CSA C22.2 No 60950-1  |
| environmental characteristic        | EMC conforming to EN 61000-6-1<br>EMC conforming to EN 61000-6-3<br>EMC conforming to EN/IEC 61000-6-2<br>EMC conforming to EN/IEC 61000-6-4<br>EMC conforming to EN/IEC 61204-3<br>Safety conforming to EN/IEC 60950-1<br>Safety conforming to EN/IEC 61204-3<br>Safety conforming to SELV |
| IP degree of protection             | IP20 conforming to EN/IEC 60529   |
| ambient air temperature for storage | -40...70 °C   |
| relative humidity                   | 0...90 % during operation<br>0...95 % in storage  |
| overvoltage category                | Class I conforming to VDE 0106-1  |
| dielectric strength                 | Between input and ground<br>Between output and ground<br>Between input and output   |
| MTBF reliability                    | 915000 H at 100 V AC with UTE C80-810 calculation method<br>950000 H at 200...500 V AC with UTE C80-810 calculation method  |

## Offer Sustainability

|   |   |
|---|---|
| Green Premium product   | Green Premium product   |
| Compliant - since 0501 - Schneider Electric declaration of conformity | Compliant - since 0501 - Schneider Electric declaration of conformity |
| Reference not containing SVHC above the threshold                     | Reference not containing SVHC above the threshold                     |
| Available   | Available   |
| Available   | Available   |

## Regulated Switch Mode Power Supplies

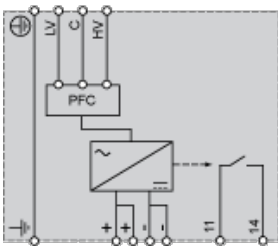
### Dimensions



| ABL 8    | a in mm | a in 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     |

## Regulated Switch Mode Power Supply

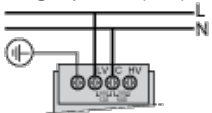
### Internal Wiring Diagram



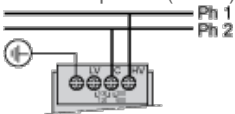
## Regulated Switch Mode Power Supply

### Line Supply Wiring Diagram

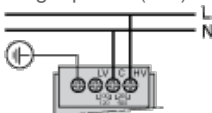
Single-phase (L-N) 100 to 120 V



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



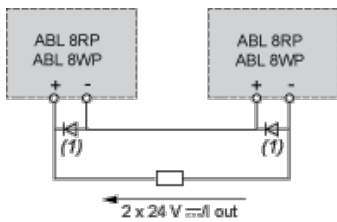
Single-phase (L-N) 200 to 500 V



## Regulated Switch Mode Power Supplies

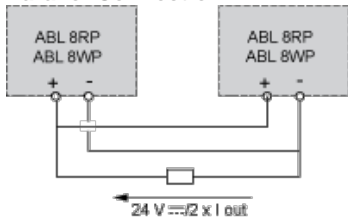
### Series or Parallel Connection

#### Series Connection



(1) Two Shottky diodes  $I_{min}$  = power supply  $I_n$  and  $V_{min}$  = 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.

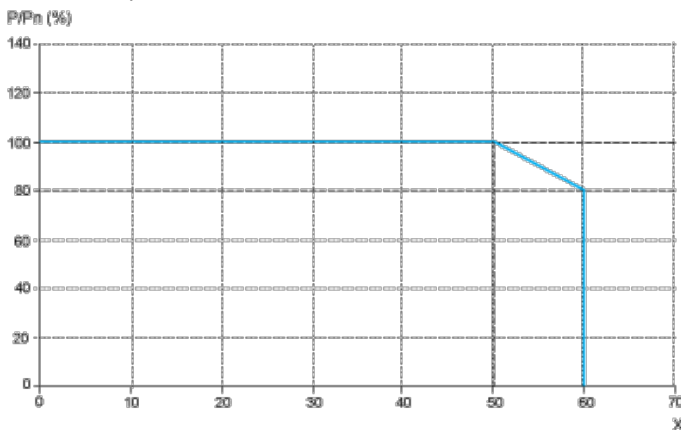
## Regulated Switch Mode Power Supplies

### 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

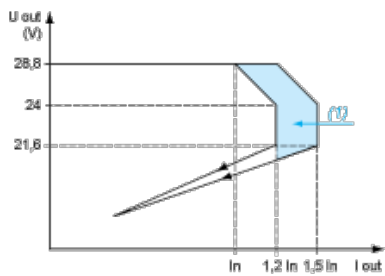
Derating should be considered in extreme operating conditions:

- | 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

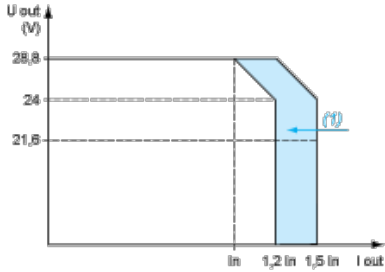
### Load Limit

### Manual Reset Protection Mode



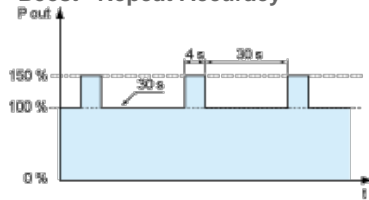
(1) Boost 4s

**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.