# **Product datasheet**

Specification





# regulated SMPS - 1 or 2-phase - 100..500 V - 24 V - 3 A

ABL8RPS24030

## Main

Dames Of Deadwel		
Range Of Product	Modicon Power Supply	
Product Or Component Type	Power supply	
Power Supply Type	Regulated switch mode	
Nominal Input Voltage	100120 V AC single phase, terminal(s): N-L1	
	200500 V AC phase to phase, terminal(s): 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

oompiomentary		
Input Voltage Limits	170550 V AC 85132 V AC	
Inrush Current	30 A	
Power Factor	0.51 at 240 V AC 0.59 at 120 V AC	
Efficiency	87 %	
Output Voltage Adjustment	2428.8 V adjustable	
Power Dissipation In W	7.8 W	
Provided Equipment	Power factor correction filter conforming to IEC 61000-3-2	
Output Protection Type	Against overload, protection technology: manual or automatic reset Against overvoltage, protection technology: 3032 V, manual reset Against short-circuits, protection technology: manual or automatic reset Against undervoltage, protection technology: tripping if U < 21.6 V Thermal, protection technology: automatic reset	
Connections - Terminals	Screw type terminals: 3 x 0.53 x 4 mm², (AWG 22AWG 12) for input connection Screw type terminals: 1 x 0.51 x 4 mm², (AWG 22AWG 12) for input ground connection Screw type terminals: 4 x 0.54 x 4 mm², (AWG 22AWG 12) for output connection Screw type terminals: 1 x 0.51 x 4 mm², (AWG 22AWG 12) for output ground connection	
Status Led	LED (green and red) output voltage     LED (green, red and orange) output current	
Depth	125 mm	
Height	125 mm	
Width	45 mm	

Net Weight	0.3 kg	
Output Coupling	Parallel Series	
Marking	CE	
Mounting Support	35 x 15 mm symmetrical DIN rail 35 x 7.5 mm symmetrical DIN rail	
Operating Position	Vertical	
Supply	SELV conforming to IEC 60950-1 SELV conforming to IEC 60204-1 SELV conforming to IEC 60364-4-41	
Dielectric Strength	3500 V with between input and ground 4000 V with between input and output 500 V with between output and ground	

## **Environment**

Standards	CSA C22.2 No 60950-1 UL 508 EN/IEC 62368-1	
Product Certifications	CCSAus EAC UL RCM KC	
Environmental Characteristic	EMC conforming to IEC 61000-6-1 EMC conforming to IEC 61000-6-3 EMC conforming to IEC 61000-6-2 EMC conforming to IEC 61000-6-4 EMC conforming to EN/IEC 61204-3 Safety conforming to IEC 60950-1 Safety conforming to EN/IEC 61204-3	
Operating Altitude	2000 m	
Ip Degree Of Protection	tection IP20 conforming to IEC 60529	
Ambient Air Temperature For Operation	5060 °C with derating factor mounting position A < 2000 m -2550 °C without derating mounting position A < 2000 m	

## **Packing Units**

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	6.437 cm
Package 1 Width	14.493 cm
Package 1 Length	16.458 cm
Package 1 Weight	780.0 g
Unit Type Of Package 2	S06
Number Of Units In Package 2	120
Package 2 Height	73.5 cm
Package 2 Width	60.0 cm
Package 2 Length	80.0 cm
Package 2 Weight	100.0 kg

# **Contractual warranty**

Warranty 12 months



**Green Premium<sup>TM</sup> label** is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >





Transparency RoHS/REACh

## Well-being performance

	Mercury Free	
<b>⊘</b>	Rohs Exemption Information	Yes
<b>②</b>	Pvc Free	

## **Certifications & Standards**

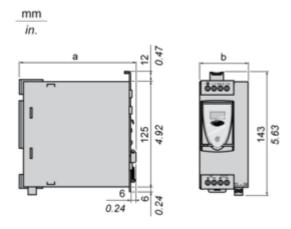
Reach Regulation	REACh Declaration		
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)		
China Rohs Regulation	China RoHS declaration		
Environmental Disclosure	Product Environmental Profile		
Circularity Profile	End of Life Information		

## **ABL8RPS24030**

## **Dimensions Drawings**

## **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

## **Product datasheet**

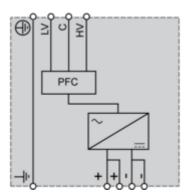
## **ABL8RPS24030**

Connections and Schema

## Regulated Switch Mode Power Supply

## **Internal Wiring Diagram**

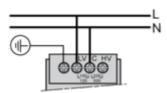
23 Apr 2024



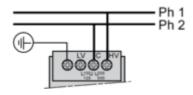
## Regulated Switch Mode Power Supply

#### **Line Supply Wiring Diagram**

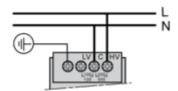
Single-phase (L-N) 100 to 120 V



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



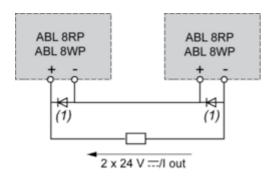
Single-phase (L-N) 200 to 500 V



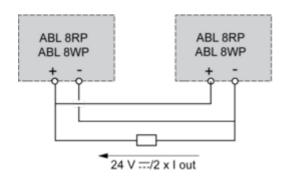
#### **Regulated Switch Mode Power Supplies**

#### **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.

#### **ABL8RPS24030**

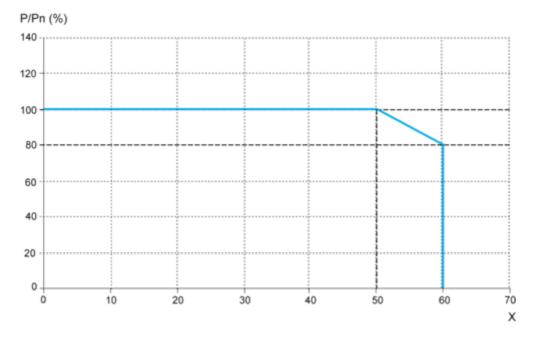
#### Performance Curves

#### **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.

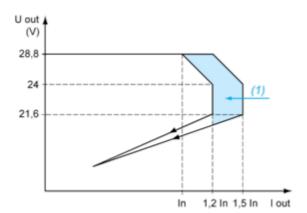


**X** Maximum operating temperature (°C)
ABL 8RPM, ABL 8RPS, ABL 8WPS mounted vertically
Derating should be considered in extreme operating conditions:

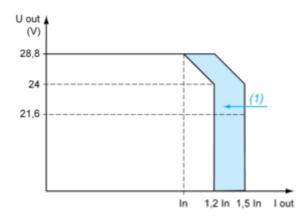
- Intensive operation (output current permanently close to the nominal current, combined with a high ambient temperature)
- Output voltage set above 24 Vdc (to compensate for line voltage drops, for example)
- Parallel connection to increase the total power

## **Regulated Switch Mode Power Supply**

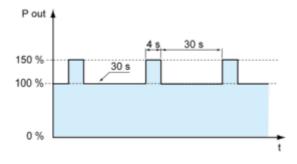
**Load Limit Manual Reset Protection Mode** 



(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.