Product datasheet

Specification





regulated SMPS - 3-phase - 380..500 V - 24 V - 40 A

ABL8WPS24400

Main

Range of product	Modicon Power Supply	
product or component type	Power supply	
Power supply type	Regulated switch mode	
Nominal input voltage	380500 V AC three phase, terminal(s): L1, L2, L3	
Rated power in W	960 W	
Output voltage	24 V DC	
Power supply output current	40 A	
Permissible temporary current boost	1.5 x ln (for 4 s)	
Anti-harmonic filter	Low frequency harmonic currents	

Complementary

Input voltage limits	320550 V AC	
Inrush current	25 A	
Power factor	0.85 at 24 V DC	
Efficiency	92 %	
Output voltage adjustment	2428.8 V adjustable	
Power dissipation in W	76.8 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	Removable screw terminal block: 2 x 2.5 mm², for diagnostic relay 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 10 mm², (AWG 22AWG 8) for output connection	
Status LED	1 LED (green and red) output voltage 1 LED (green, red and orange) output current	
Depth 160 mm		
eight 143 mm		
Width	166 mm	
net weight	2.7 kg	
Output coupling	Parallel Series	

8 Jul 2024 Life Is On Schneider

marking	CE	
Mounting support	35 x 7.5 mm symmetrical DIN rail 35 x 15 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		
Environmental characteristic	EMC conforming to IEC 61000-6-1 EMC conforming to IEC 61000-6-3 EMC conforming to EN 55024 EMC conforming to IEC 61000-6-4 EMC conforming to EN/IEC 61204-3 Safety conforming to EN 61204-4 Safety conforming to IEC 60950-1		
Operating altitude	2000 m		
IP degree of protection	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	15.969 cm
Package 1 Width	18.691 cm
Package 1 Length	19.668 cm
Package 1 Weight	3.35 kg
Unit Type of Package 2	S06
Number of Units in Package 2	22
Package 2 Height	73.5 cm
Package 2 Width	60.0 cm
Package 2 Length	80.0 cm
Package 2 Weight	80.0 kg

Contractual warranty

Warranty 18 months



Green PremiumTM 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-CO₂ 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	
⊘	Rohs Exemption Information	Yes
	Pvc Free	

Certifications & Standards

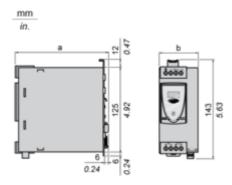
Reach Regulation	REACh Declaration	
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)	
China Rohs Regulation	China RoHS declaration	
Environmental Disclosure	Product Environmental Profile	
Circularity Profile	End of Life Information	

ABL8WPS24400

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

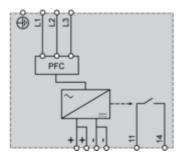
Product datasheet

ABL8WPS24400

Connections and Schema

Regulated Switch Mode Power Supply

Internal Wiring Diagram



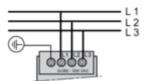
Product datasheet

ABL8WPS24400

Regulated Switch Mode Power Supply

Line Supply Wiring Diagram

Three-phase (L1-L2-L3) 3 x 380 to 500 V

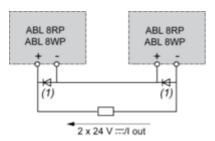


ABL8WPS24400

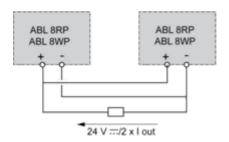
Regulated Switch Mode Power Supplies

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.

ABL8WPS24400

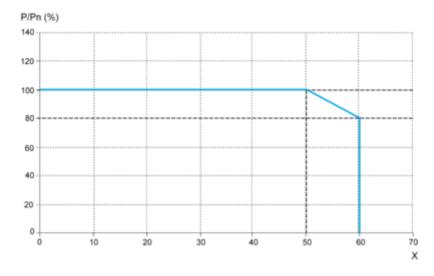
Performance Curves

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.



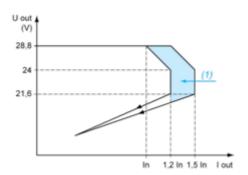
X Maximum operating temperature (°C)
ABL 8RPM, ABL 8RPS, ABL 8WPS mounted vertically
Derating should be considered in extreme operating conditions:

- 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

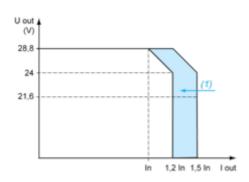
Regulated Switch Mode Power Supply

Load Limit

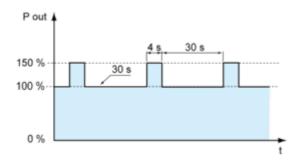
Manual Reset Protection Mode



(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.