

# Product datasheet

Specifications



## regulated SMPS - 1 or 2-phase - 100..240 V AC - 24 V - 5 A

ABL8REM24050

! Discontinued on: 09 November 2020

! End-of-service on: 30 June 2022

! Discontinued

### Main

Range of product	Modicon Power Supply
Product or component type	Power supply
Power supply type	Regulated switch mode
Nominal input voltage	100...240 V AC phase to phase, terminal(s): L1-L2 100...240 V AC single phase, terminal(s): N-L1 110...220 V DC
Rated power in W	120 W
Output voltage	24 V DC
Power supply output current	5 A

### Complementary

Input voltage limits	85...264 V AC 100...250 V AC
Input protection type	Integrated fuse (not interchangeable)
Inrush current	30 A
Power factor	0.65 at 24 V DC
Efficiency	85 %
Output voltage adjustment	100...120 % adjustable
Power dissipation in W	21.2 W
Current consumption	1.2 A 240 V AC 1.9 A 100 V AC
Output protection type	Against overload, protection technology: $1.1 \times I_n$ Against overvoltage, protection technology: tripping if $U > 1.5 \times U_n$ Against short-circuits, protection technology: automatic reset Against undervoltage, protection technology: tripping if $U < 0.8 \times U_n$
Connections - terminals	Screw type terminals: $2 \times 0.14...2 \times 2.5 \text{ mm}^2$ , (AWG 26...AWG 14) for input connection Screw type terminals: $4 \times 0.14...4 \times 2.5 \text{ mm}^2$ , (AWG 26...AWG 14) for output connection Screw type terminals: $1 \times 0.14...1 \times 2.5 \text{ mm}^2$ , (AWG 26...AWG 14) for input ground connection Screw type terminals: $2 \times 0.14...2 \times 2.5 \text{ mm}^2$ , (AWG 26...AWG 14) for output ground connection
Status LED	1 LED (green) output voltage 1 LED (orange) input voltage
Depth	120 mm
Height	120 mm
Width	54 mm

<b>Net weight</b>	1 kg
<b>Output coupling</b>	Series Parallel
<b>Marking</b>	CE
<b>Mounting support</b>	35 x 15 mm symmetrical DIN rail 75 x 7.5 mm symmetrical DIN rail 35 x 7.5 mm symmetrical DIN rail
<b>Operating position</b>	Vertical
<b>Supply</b>	SELV conforming to EN/IEC 60950-1 SELV conforming to EN/IEC 60204-1 SELV conforming to IEC 60364-4-41
<b>Dielectric strength</b>	3000 V with between input and ground 3000 V with between input and output 500 V with between output and ground 500 V with between outputs

## Environment

<b>Standards</b>	UL 508 CSA C22.2 No 60950-1 EN/IEC 62368-1
<b>Product certifications</b>	RCM EAC KC CCSAus UL
<b>Environmental characteristic</b>	EMC conforming to EN 50081-1 EMC conforming to EN 50082-2 EMC conforming to EN 55024 Safety conforming to EN/IEC 60950
<b>Operating altitude</b>	2000 m
<b>IP degree of protection</b>	IP20 conforming to EN/IEC 60529
<b>Ambient air temperature for operation</b>	0...50 °C without derating mounting position A < 2000 m 50...60 °C with derating factor mounting position A < 2000 m

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	6.7 cm
<b>Package 1 Width</b>	13.3 cm
<b>Package 1 Length</b>	14.5 cm
<b>Package 1 Weight</b>	803 g

## Offer Sustainability

<b>Sustainable offer status</b>	Green Premium product
<b>REACH Regulation</b>	<a href="#">REACH Declaration</a>
<b>EU RoHS Directive</b>	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
<b>Mercury free</b>	Yes
<b>China RoHS Regulation</b>	<a href="#">China RoHS declaration</a>
<b>RoHS exemption information</b>	<a href="#">Yes</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>
<b>PVC free</b>	Yes

# Contractual warranty

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Warranty

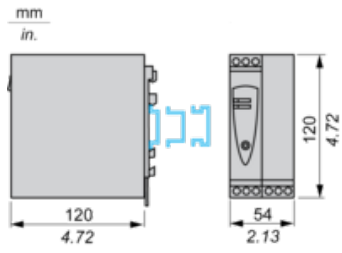
18 months

**Regulated Switch Mode Power Supply**

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**Dimensions and Mounting**

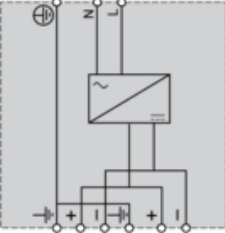
Mounting on 35 mm/1.37 in. or 75 mm/2.95 in. Rail



**Regulated Switch Mode Power Supply**

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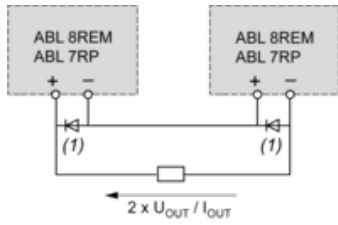
**Internal Wiring Diagram**



**Regulated Switch Mode Power Supplies**

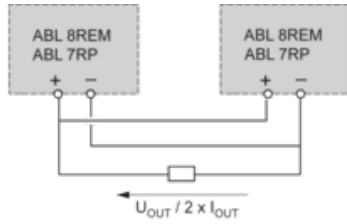
**Series or Parallel Connection**

**Series Connection**



(1) Two Schottky diodes  $I_{min}$  = power supply  $I_n$  and  $V_{min}$  = 50 V

**Parallel Connection**



Family	Series	Parallel
ABL 8REM/7RP	2 products max.	2 products max.

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

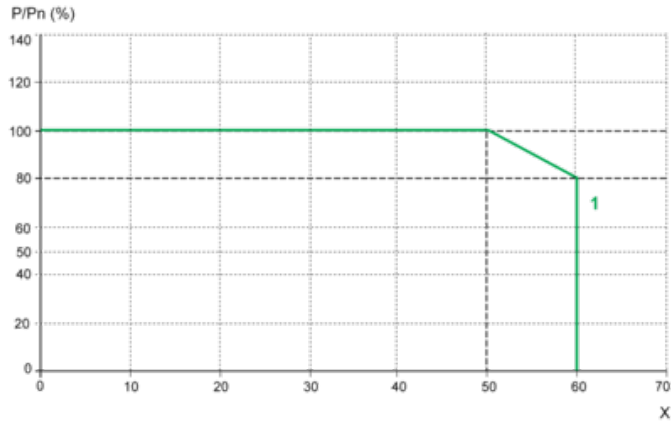
### Regulated Switch Mode Power Supplies

#### 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 Optimum 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 as a percentage of the nominal power that the power supply can deliver continuously, depending on the ambient temperature.



X Maximum operating temperature (°C)

(1) ABL 8REM, ABL 7RP mounted vertically

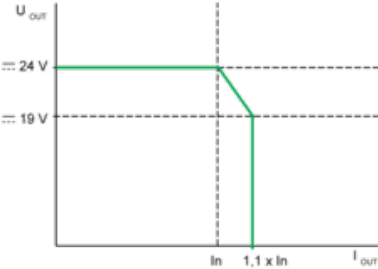
Derating should be considered in extreme operating conditions:

- 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

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Load Limit

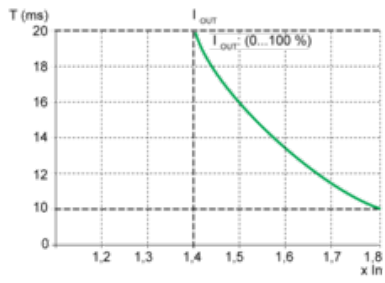




**Regulated Switch Mode Power Supply**

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**Temporary Overloads**



**Recommended replacement(s)**

ABL8REM24050 is replaced by:

1x



Regulated Power Supply, 100-240V AC, 24V 5 A, single phase, Optimized  
ABLS1A24050

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