

Product data sheet

Characteristics

ABL7RP4803

Regulated Switch Power Supply, 1 or 2-phase,
100.240V AC- 48V, 2.5 A



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
Input voltage limits	85...264 V AC 100...250 V AC
Rated power in W	120 W
Output voltage	48 V DC
Power supply output current	2.5 A

Complementary

Input protection type	Integrated fuse (not interchangeable)
Inrush current	30 A
Power factor	0.98 at 48 V DC
Efficiency	85 %
Output voltage adjustment	100...120 % adjustable
Power dissipation in W	25.4 W
Current consumption	1 A 100 V AC 0.6 A 240 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: manual or 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
Net weight	1 kg
Output coupling	Series Parallel
Marking	CE
Mounting support	75 x 7.5 mm symmetrical DIN rail 35 x 7.5 mm symmetrical DIN rail 35 x 15 mm symmetrical DIN rail
Operating position	Vertical
Supply	SELV conforming to EN/IEC 60950-1 SELV conforming to EN/IEC 60204-1 SELV conforming to IEC 60364-4-41

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Environment

Standards	UL 508 CSA C22.2 No 60950-1 EN/IEC 62368-1
Product certifications	CSA 22-2 No 950 EAC RCM KC UL 508 TÜV
Environmental characteristic	EMC conforming to EN 50081-1 EMC conforming to EN 50082-2 EMC conforming to EN/IEC 61000-6-2 Safety conforming to EN/IEC 60950 Safety conforming to IEC 61496-1-2
Operating altitude	2000 m
IP degree of protection	IP20 conforming to EN/IEC 60529
Ambient air temperature for operation	0...50 °C (without) 50...60 °C (with derating factor)
Ambient air temperature for storage	-25...70 °C
Relative humidity	0...95 % without condensation or dripping water
Electrical energy source class conforming to IEC 62368-1	ES1
Dielectric strength	3000 V between input and ground 3000 V between input and output 500 V between output and ground 500 V between outputs

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	1.076 kg
Package 1 Height	6.5 cm
Package 1 width	13.3 cm
Package 1 Length	14.5 cm
Unit Type of Package 2	S03
Number of Units in Package 2	14
Package 2 Weight	15.716 kg
Package 2 Height	30 cm
Package 2 width	30 cm
Package 2 Length	40 cm
Unit Type of Package 3	P06
Number of Units in Package 3	112
Package 3 Weight	134.228 kg
Package 3 Height	77 cm
Package 3 width	80 cm
Package 3 Length	60 cm

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)  EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	 Yes
China RoHS Regulation	 China RoHS Declaration
Environmental Disclosure	 Product Environmental Profile

Circularity Profile	End Of Life Information
PVC free	Yes

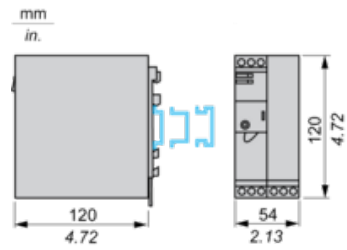
Contractual warranty

Warranty	18 months
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Regulated Switch Mode Power Supply

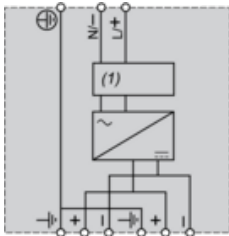
Dimensions and Mounting

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



Regulated Switch Mode Power Supply

Internal Wiring Diagram

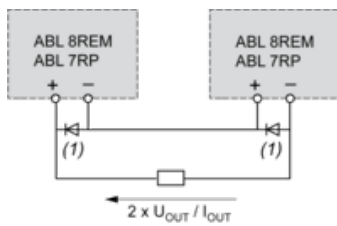


(1) Filter

Regulated Switch Mode Power Supplies

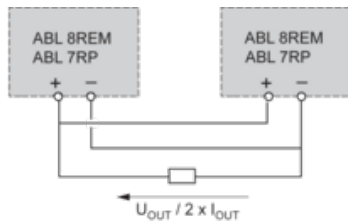
Series or Parallel Connection

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.

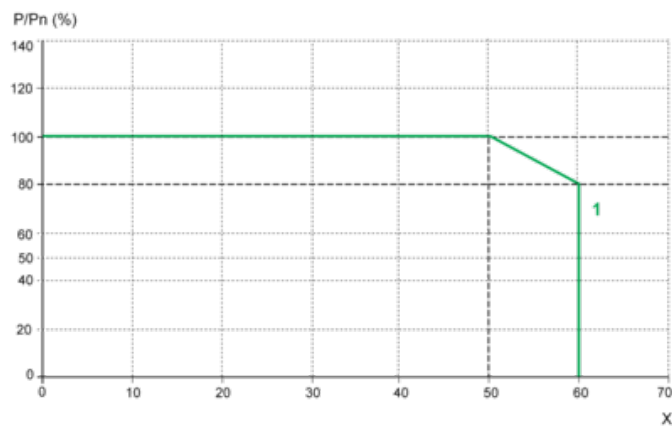
Regulated Switch Mode Power Supplies

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

Temporary Overloads

