Product data sheet
Characteristics

ABL8REM24050
regulated SMPS - 1 or 2-phase - 100..240 V AC - 24 V - 5 A

Main

Range of product	Phaseo
Product or component type	Power supply
Power supply type	Regulated switch mode
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
Output voltage	24 V DC
Rated power in W	120 W
Input protection type	Integrated fuse (not interchangeable)
Power supply output current	5 A
Output protection type	Against overload, protection technology: 1.1 x In Against overvoltage, protection technology: tripping if U > 1.5 x Un Against short-circuits, protection technology: automatic reset Against undervoltage, protection technology: tripping if U < 0.8 x Un
Ambient air temperature for operation	0...50 °C without 50...60 °C with

Complementary

Input voltage limits	100...250 V 85...264 V
Network frequency	47...63 Hz
Inrush current	<= 30 A
Cos phi	0.65
Efficiency	85 %
Output voltage limits	100...120 % adjustable
Power dissipation in W	21.2 W
Current consumption	1.2 A at 240 V 1.9 A at 100 V
Line and load regulation	+/- 3 %
Holding time	>= 10 ms at 100 V >= 10 ms at 240 V
Connections - terminals	Screw type terminals for input connection, connection capacity: 2 x 0.14...2 x 2.5 mm² AWG 26...AWG 14 Screw type terminals for output connection, connection capacity: 4 x 0.14...4 x 2.5 mm² AWG 26...AWG 14

	Screw type terminals for input ground connection, connection capacity: 1 x 0.14...1 x 2.5 mm² AWG 26...AWG 14 Screw type terminals for output ground connection, connection capacity: 2 x 0.14...2 x 2.5 mm² AWG 26...AWG 14
Marking	CE
Mounting support	35 x 15 mm symmetrical DIN rail 35 x 7.5 mm symmetrical DIN rail 75 x 7.5 mm symmetrical DIN rail
Operating position	Vertical
Operating altitude	2000 m
Output coupling	Series Parallel
Name of test	Conducted/Radiated emissions conforming to EN 55011 Conducted/Radiated emissions conforming to EN 55022 Class B Electrostatic discharges conforming to EN/IEC 61000-4-2 Emission conforming to EN 50081-1 Induced electromagnetic field conforming to EN/IEC 61000-4-6 Primary outage conforming to IEC 61000-4-11 Radiated electromagnetic field conforming to EN/IEC 61000-4-3 Rapid transient conforming to IEC 61000-4-4 Surge conforming to EN/IEC 61000-4-5
Status LED	1 LED green for output voltage 1 LED orange for input voltage
Depth	120 mm
Height	120 mm
Width	54 mm
Product weight	1 kg
Compatibility code	ABL8R

Environment

Product certifications	RCM TUV 60950-1 EAC KC
Standards	UL 508 CSA C22.2 No 60950-1
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 SELV
IP degree of protection	IP20 conforming to EN/IEC 60529
Ambient air temperature for storage	-25...70 °C
Relative humidity	0...95 % without condensation or dripping water
Overvoltage category	Class I conforming to VDE 0106-1
Dielectric strength	Between input and ground Between output and ground Between input and output Between outputs

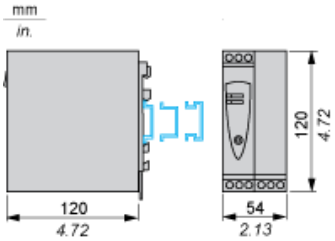
Contractual warranty

Warranty period	18 months

Regulated Switch Mode Power Supply

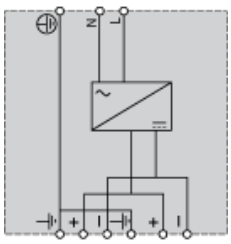
Dimensions and Mounting

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



Regulated Switch Mode Power Supply

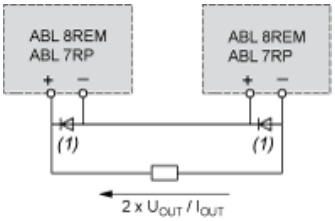
Internal Wiring Diagram



Regulated Switch Mode Power Supplies

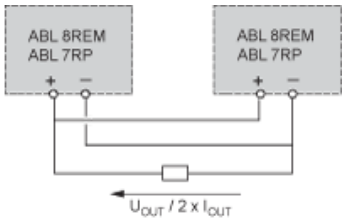
Series or Parallel Connection

Series Connection



(1) Two Shottky diodes Imin = power supply In and Vmin = 50 V

Parallel Connection



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

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

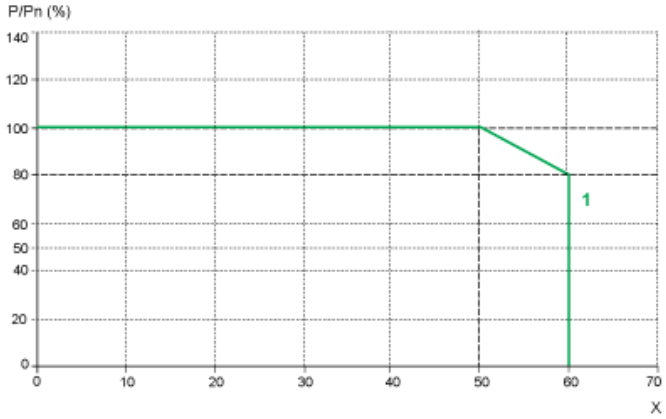
Regulated Switch Mode Power Supplies

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

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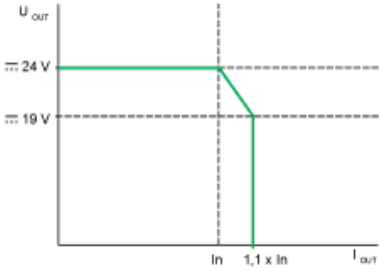
Regulated Switch Mode Power Supply

Load Limit



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Regulated Switch Mode Power Supply

Temporary Overloads