

# Product data sheet

## Characteristics

# ABL8MEM12020

Regulated Switch Power Supply, 1 or 2-phase,  
100..240V AC, 12V, 2 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 120...250 V DC
Input voltage limits	85...264 V AC
Rated power in W	25 W
Output voltage	12...15 V DC
Power supply output current	2.1 A

### Complementary

Input protection type	Integrated fuse (not interchangeable)
Inrush current	20 A
Power factor	0.5 at 12...15 V DC
Efficiency	80 %
Output voltage adjustment	11.4...15 V adjustable
Power dissipation in W	6.2 W
Current consumption	0.35 A 240 V AC 0.6 A 100 V AC
Residual ripple	250 mV
Output protection type	Against short-circuits
Connections - terminals	Screw type terminals: 2 x 0.14...2 x 2.5 mm <sup>2</sup> , (AWG 26...AWG 14) for input connection Screw type terminals: 4 x 0.14...4 x 2.5 mm <sup>2</sup> , (AWG 26...AWG 14) for output connection
Status LED	1 LED (green)output voltage
Depth	59 mm
Height	100 mm
Width	54 mm
Product weight	0.195 kg
Output coupling	Parallel Series
Marking	CE
Mounting support	35 x 7.5 mm symmetrical DIN rail 35 x 15 mm symmetrical DIN rail Panel 2 screws, diameter : 4 mm
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	EAC RCM KC TUV 60950-1 CCSAus CSA 22-2 No 950 CULus 508
Environmental characteristic	EMC conforming to EN 55022 class B EMC conforming to EN 61000-6-3 EMC conforming to EN/IEC 61000-6-2 EMC conforming to EN/IEC 61204-3 Safety conforming to EN/IEC 60950-1
Operating altitude	2000 m
IP degree of protection	IP20 conforming to EN/IEC 60529
Ambient air temperature for operation	-25...55 °C (without) 55...70 °C (with derating factor)
Ambient air temperature for storage	-40...70 °C
Relative humidity	0...90 % during operation 0...95 % in storage
Electrical energy source class conforming to IEC 62368-1	ES1
Dielectric strength	3000 V between input and output

## Packing Units

Package 1 Weight	0.227 kg
Package 1 Height	0.750 dm
Package 1 width	1.000 dm
Package 1 Length	0.700 dm

## Offer Sustainability

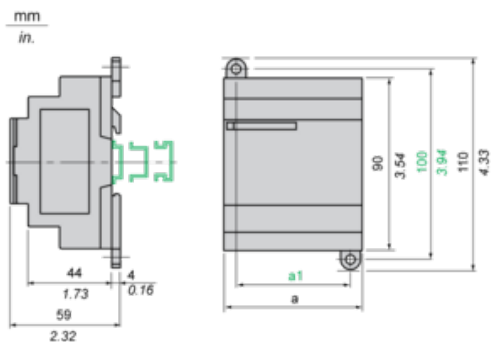
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China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

## Contractual warranty

Warranty	18 months
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Regulated Switch Mode Power Supplies

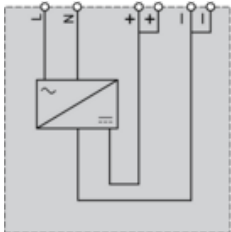
Dimensions



	a in mm	a in in.	a1 in mm	a1 in in.
ABL8MEM05040	54	2.12	42	1.65
ABL8MEM12020	54	2.12	42	1.65
ABL8MEM24003	36	1.41	24	0.94
ABL8MEM24006	36	1.41	24	0.94
ABL8MEM24012	54	2.12	42	1.65
ABL7RM24025	74	2.91	60	2.36

Regulated Switch Mode Power Supply

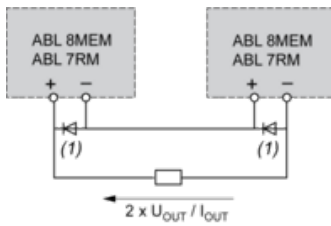
Internal Wiring Diagram



Regulated Switch Mode Power Supplies

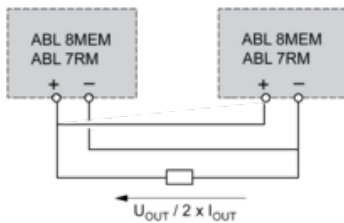
Series or Parallel Connection

Series Connection



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

Parallel Connection



Family	Series	Parallel
ABL 7RM/8MEM	2 products max.	2 products max.

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

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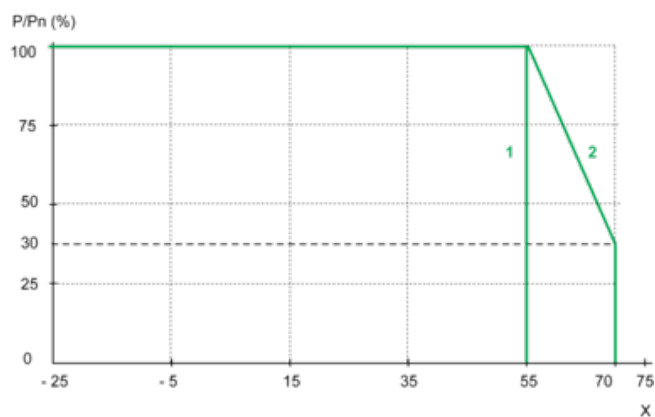
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### Derating

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 Modular range of Phaseo power supplies is 55°C. Above this temperature, derating is necessary up to a maximum temperature of 70°C (except for the ABL7RM24025 model).

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) With an ABL7RM24025

(2) With an ABL8MEM•••••