

# Product data sheet

## Characteristics

# ABL7RM24025

## regulated SMPS with auto reset - 1 or 2-phase - 100...240 V AC - 24 V - 2.5 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
Output voltage	24 V DC
Rated power in W	60 W
Provided equipment	Power factor correction filter conforming to IEC 61000-3-2
Input protection type	Integrated fuse (not interchangeable)
Power supply output current	2.5 A
Output protection type	Against undervoltage, protection technology: tripping if $U < 19\text{ V}$ Against short-circuits
Ambient air temperature for operation	-25...55 °C (without) 55...70 °C (with derating factor)

### Complementary

Input voltage limits	170...264 V
Network frequency	47...63 Hz
Inrush current	90 A 1 ms
Cos phi	0.5
Efficiency	84 %
Output voltage limits	22.2...28.8 V adjustable
Power dissipation in W	11.4 W
Current consumption	0.7 A at 240 V
Line and load regulation	+/- 3 %
Residual ripple	200 mV
Holding time	$\geq 150\text{ ms}$ at 230 V
Connections - terminals	For input connection: screw type terminals, connection capacity: 2 x 0.14...2 x 2.5 mm <sup>2</sup> AWG 26...AWG 14 For output connection: screw type terminals, connection capacity: 4 x 0.14...4 x 2.5 mm <sup>2</sup> AWG 26...AWG 14
Marking	CE
Mounting support	35 x 7.5 mm symmetrical DIN rail Panel 2 screws, diameter : 4 mm 35 x 15 mm symmetrical DIN rail
Operating position	Vertical
Operating altitude	2000 m
Output coupling	Series Parallel

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Name of test	Electrostatic discharges conforming to EN/IEC 61000-4-2 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 Conducted emissions on the power line conforming to EN 55022 class B Emission conforming to EN 50081-1 Radiated emissions conforming to EN 55022 class B Harmonic current emission conforming to EN/IEC 61000-3-2
Status LED	1 LED (green)output voltage:
Depth	59 mm
Height	100 mm
Width	74 mm
Net weight	0.255 kg

## Environment

Product certifications	EAC CULus 508 TUV 60950-1 RCM KC
Standards	CSA C22.2 No 60950-1 UL 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 Safety conforming to SELV
IP degree of protection	IP20 conforming to EN/IEC 60529
Ambient air temperature for storage	-40...70 °C
Relative humidity	0...90 % during operation 0...95 % in storage
Overvoltage category	Class II conforming to VDE 0106-1
Dielectric strength	3000 V between input and output

## Offer Sustainability

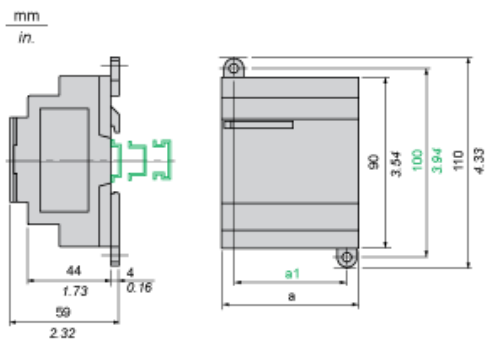
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	<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>

## Contractual warranty

Warranty	18 months
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Regulated Switch Mode Power Supplies

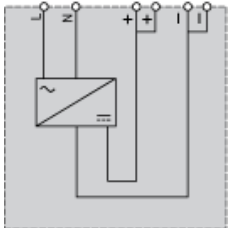
Dimensions



	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

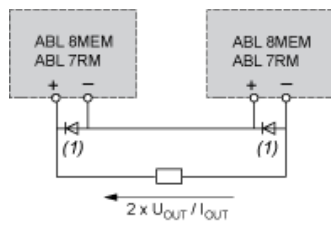
Internal Wiring Diagram



Regulated Switch Mode Power Supplies

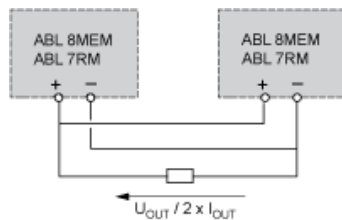
Series or Parallel Connection

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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Regulated Switch Mode Power Supplies

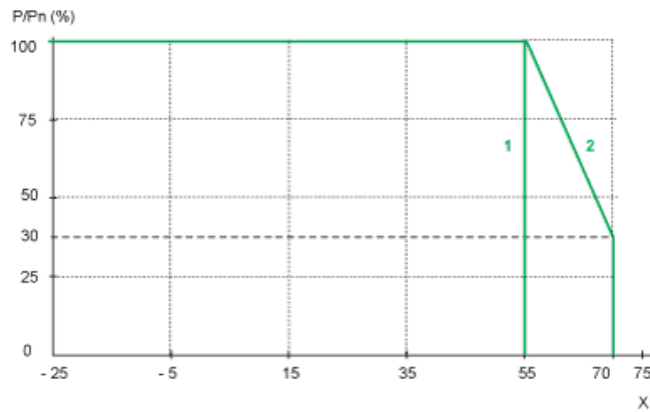
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Derating

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\*\*\*\*\*