

Product datasheet

Specifications



regulated SMPS - single phase -
100..240 V input - 24 V output - 100
W

ABL1RPM24042

❗ Discontinued on: 20 December 2020

❗ End-of-service on: 30 June 2022

❗ Discontinued

Main

Range of product	Phaseo Dedicated
Product or component type	Power supply
Power supply type	Regulated switch mode
Rated power in W	100 W
Main Input Voltage	100...240 V AC single phase 120...370 V DC
Output voltage	24 V DC
Power supply output current	4.2 A
Operating position	Any position
Vibration resistance	2 gn (f= 9...150 Hz) conforming to EN/IEC 61131-2 3.5 mm (f= 5...9 Hz) conforming to EN/IEC 61131-2
Name of test	Conducted interference conforming to EN 61000-4-8 level 4 Electrostatic discharges conforming to EN/IEC 61000-4-2 level 3 Induced electromagnetic field conforming to EN/IEC 61000-4-6 level 3 Radiated electromagnetic field conforming to EN/IEC 61000-4-3 level 3 Rapid transient conforming to IEC 61000-4-4 level 3 Conducted/radiated emissions conforming to EN 55022 class B Conducted/radiated emissions conforming to EN/IEC 55011 Emission conforming to EN/IEC 61000-6-3 Primary outage conforming to IEC 61000-4-11 Surge conforming to EN/IEC 61000-4-5

Complementary

Input voltage limits	85...264 V
Network frequency	47...63 Hz
Inrush current	50 A at 115 V AC 100 A at 230 V AC
Cos phi	0.7...0.95
Efficiency	80 %
Power dissipation in W	25 W
Current consumption	0.7 A at 240 V 1.7 A at 100 V
Input protection type	Integrated fuse (not interchangeable)
Output voltage limits	21.6...26.4 V
Line and load regulation	+/- 3 %

Holding time	>= 10 ms at 100 V >= 40 ms at 240 V
Output protection type	Against overload, protection technology: 1.1...1.5 x In Against overvoltage, protection technology: tripping if U > 1.25 x Un Against short-circuits, protection technology: automatic reset Thermal
Connections - terminals	For ground connection: screw type terminals, connection capacity: 1 x 4 mm² AWG 12 For input connection: screw type terminals, connection capacity: 2 x 4 mm² AWG 12 For output connection: screw type terminals, connection capacity: 4 x 4 mm² AWG 12
Marking	CE
Mounting support	Reversible mounting bracket Panel
Operating altitude	2000 m
Output coupling	Parallel Series
Overvoltage category	II
Meantime between failure [MTBF]	100000 h at 40 °C
Status LED	1 LED (green) output voltage
Net weight	0.64 kg

Environment

Product certifications	TUV 60950-1 RCM UL 508 cCSAus CSA 22-2 No 60950-1 KC EAC
Environmental characteristic	EMC conforming to EN 50081-1 EMC conforming to EN 50082-2 EMC conforming to EN 61000-6-3 EMC conforming to EN/IEC 61000-6-2 Safety conforming to EN/IEC 60950-1 Safety conforming to SELV Low frequency harmonic currents conforming to EN/IEC 61000-3-2
IP degree of protection	IP20 conforming to EN/IEC 60950
Ambient air temperature for operation	0...45 °C (without derating) 45...60 °C (with derating factor)
Ambient air temperature for storage	-25...85 °C
Relative humidity	20...90 % Class I conforming to VDE 0106-1
Pollution degree	2
Dielectric strength	1500 V between input and ground 3000 V between input and output 500 V between output and ground

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.3 cm
Package 1 Width	12 cm
Package 1 Length	23.5 cm
Package 1 Weight	727 g

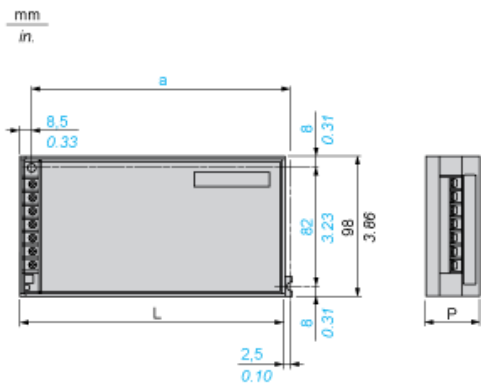
Offer Sustainability

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
China RoHS Regulation	China RoHS declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End of Life Information
PVC free	Yes

Contractual warranty

Warranty	18 months
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Dimensions



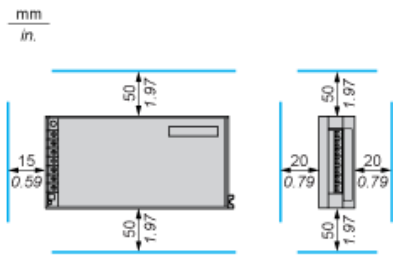
Dimensions in mm

a	L	P
194	200	38

Dimensions in in.

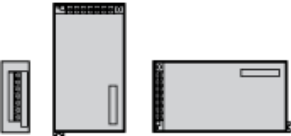
a	L	P
7.64	7.87	1.50

Clearance



Mounting Way

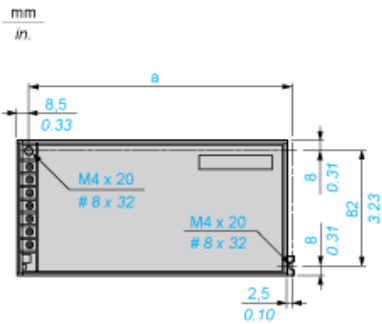
Mounting on Vertical Plane



Mounting on Horizontal Plane



Direct Mounting by 2 M4 x 20 Screws



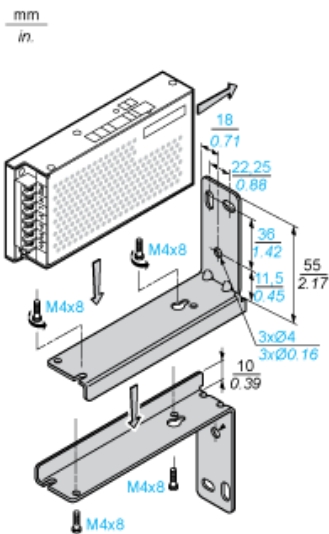
Dimensions in mm

a
194

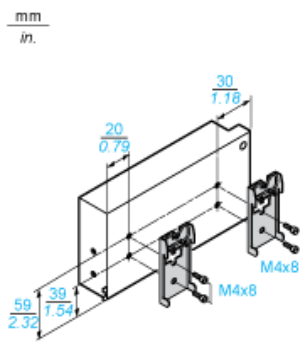
Dimensions in in

a
7.64

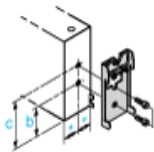
Mounting on the Back on ABL 1A01 Reversible Bracket by Three 4 mm Diameter Screws



Mounting on ABL 1A02 Clip-on Mounting on 35 mm Rail



Mounting by the Back



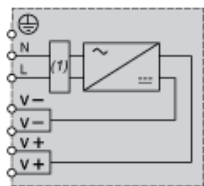
Dimensions in mm

b	c
38	58

Dimensions in in.

b	c
1.50	2.28

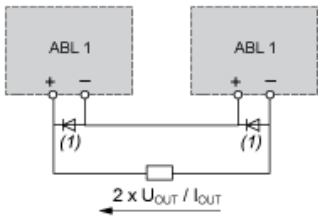
Internal Wiring Diagram



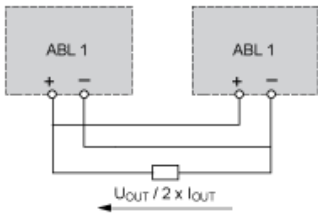
(1) Filter

Series or Parallel Connection

Series Connection



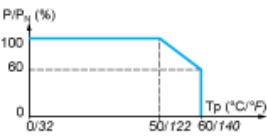
Parallel Connection



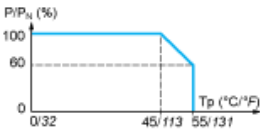
(1) 8 A/100 V Shottky diode

Derating Curves

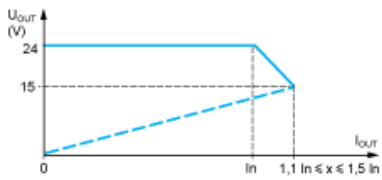
Mounting on Vertical Plane



Mounting on Horizontal Plane



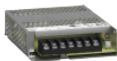
Load Limits Curve



Recommended replacement(s)

ABL1RPM24042 is replaced by:

1x



Regulated Power Supply, modicon power supply, 100...240V AC, 24V, 4.5A, single phase, Panel Mount
ABLP1A24045