



## Main

Range of product	Modicon Power Supply
Product or component type	Power supply
Power supply type	Regulated switch mode
Variant option	Optimized
Enclosure material	Plastic
Nominal input voltage	100...240 V AC single phase 100...240 V AC phase to phase
Rated power in W	91.2 W
Output voltage	24 V DC
Power supply output current	3.8 A

## Complementary

Input voltage limits	85...264 V AC
Nominal network frequency	50...60 Hz
Network system compatibility	TN TT IT
Maximum leakage current	1 mA 240 V AC
Input protection type	Integrated fuse (not interchangeable) 3.15 A External protection (recommended) 20 A Curve C External protection (recommended) 10 A Curve B External protection (recommended) 6 A Curve C
Inrush current	45.0 A at 115 V 70.0 A at 230 V
Power factor	0.90 at 115 V AC 0.85 at 230 V AC
Efficiency	87 % at 115 V AC 89 % at 230 V AC
Output voltage adjustment	24 V
Power dissipation in W	13 W
Current consumption	< 1.2 A 115 V AC < 0.6 A 230 V AC
Turn-on time	< 3 s
Holding time	> 20 ms 100 V AC > 50 ms 230 V AC
Startup with capacitive loads	3000 $\mu$ F
Residual ripple	< 75 mV
Meantime between failure [MTBF]	1500000 H at 25 °C, full load conforming to SR 332 600000 h at 55 °C, 80 % load conforming to SR 332
Output protection type	Against overload and short-circuits, protection technology: automatic reset Against over temperature, protection technology: manual reset Against overvoltage, protection technology: manual reset
Connections - terminals	Screw connection: 0.5...2.5 mm <sup>2</sup> , (AWG 20...AWG 14) for input/output
Line and load regulation	< 1 % at 0 to 100 % load at 25 °C < 2 % at full voltage range in line at 25 °C
Status LED	1 LED (green) output voltage
Depth	100 mm
Height	75 mm
Width	45 mm

Net weight	0.325 kg
Output coupling	Serial
Mounting support	Top hat type TH35-15 rail conforming to IEC 60715 Top hat type TH35-7.5 rail conforming to IEC 60715 Double-profile DIN rail
Supply	SELV conforming to IEC 60950-1 SELV conforming to IEC 60204-1 SELV conforming to IEC 60364-4-41
Dielectric strength	3000 V AC with input to output
Service life	10 year(s)
Overvoltage category	II

## Environment

Standards	IEC 62368-1 EN/IEC 61204-3 IEC 61000-6-1 IEC 61000-6-2 IEC 61000-6-3 IEC 61000-6-4 IEC 61000-3-2 EN 61000-3-3 UL 62368-1 CSA C22.2 No 62368-1 UL 508 CSA C22.2 No 107.1 EN/IEC 62368-1
Product certifications	CE[RETURN]CUL listed[RETURN]CUL recognized[RETURN]RCM[RETURN]CB Scheme[RETURN]EAC[RETURN]KC[RETURN]NEC: class 2
Operating altitude	< 2000 m
Shock resistance	150 m/s <sup>2</sup> for 11 ms
IP degree of protection	IP20
Ambient air temperature for operation	-20...-10 °C with current derating of 2 % per °C mounting position A < 2000 m -10...55 °C without derating mounting position A < 2000 m 55...70 °C with current derating of 3.33 % per °C mounting position A < 2000 m
Electrical shock protection class	Class I
Pollution degree	2
Vibration resistance	3 mm (f= 2...9 Hz) conforming to IEC 60068-2-6 10 m/s <sup>2</sup> (f= 9...200 Hz) conforming to IEC 60068-2-6
Electromagnetic immunity	Immunity to electrostatic discharge - test level: 8 kV (contact discharge) conforming to IEC 61000-4-2 Immunity to electrostatic discharge - test level: 15 kV (air discharge) conforming to IEC 61000-4-2 Immunity to conducted RF disturbances - test level: 15 V/m (80 MHz...2 GHz) conforming to IEC 61000-4-3 Immunity to conducted RF disturbances - test level: 5 V/m (2...2.7 GHz) conforming to IEC 61000-4-3 Immunity to conducted RF disturbances - test level: 5 V/m (2.7...6 GHz) conforming to IEC 61000-4-3 Immunity to fast transients - test level: 4 kV (on input-output) conforming to IEC 61000-4-4 Surge immunity test - test level: 4 kV (between power supply and earth) conforming to IEC 61000-4-5 Surge immunity test - test level: 3 kV (between phases) conforming to IEC 61000-4-5 Immunity to conducted RF disturbances - test level: 15 V (0.15...80 MHz) conforming to IEC 61000-4-6 Immunity to magnetic fields - test level: 30 A/m (50...60 Hz) conforming to IEC 61000-4-8 Immunity to voltage dips conforming to IEC 61000-4-11 Disturbing field emission conforming to EN 55016-2-3 Limits for harmonic current emissions conforming to IEC 61000-3-2 Conforming to EN 55016-1-2 Conforming to EN 55016-2-1
Electromagnetic emission	Conducted emissions conforming to IEC 61000-6-3 Radiated emissions conforming to IEC 61000-6-4

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.25 cm
Package 1 Width	8.6 cm
Package 1 Length	11.9 cm
Package 1 Weight	374.0 g
Unit Type of Package 2	S02
Number of Units in Package 2	21
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	8.197 kg

## 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)
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

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### Electrical Safety

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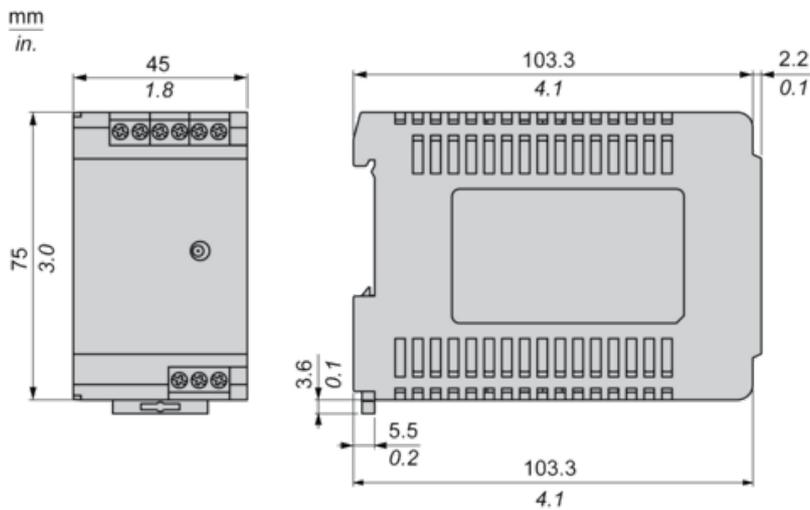
- If the unit is use in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- For means of disconnection a switch or circuit breaker, located near the product, must be included in the installation. A marking as disconnecting device for the product is required.
- The device has an internal fuse. The unit is tested and approved with branch circuit protective device up to 20A. This circuit breaker can be used as disconnecting device.
- The power supply is only suitable for audio, video, information, communication, industrial and control equipment.

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### Dimensions

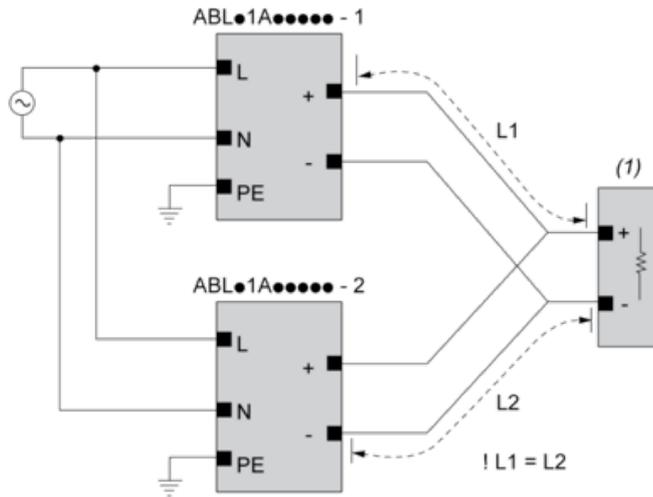
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#### Front and Side Views



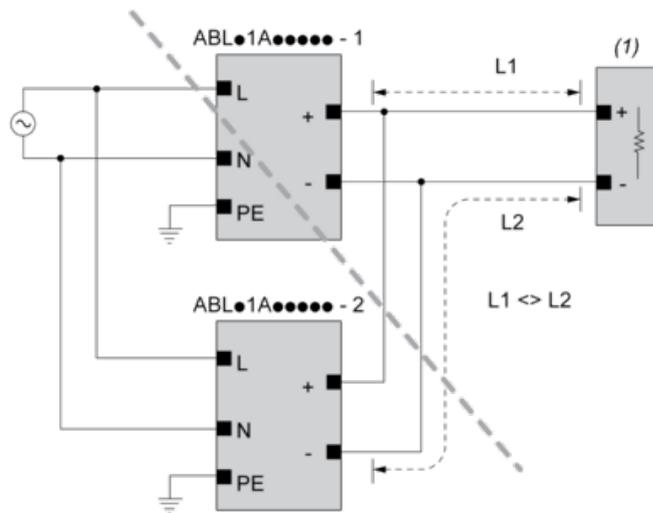
Connections and Schema

Correct Parallel Connection



(1) : Load

Incorrect Parallel Connection



(1) : Load

$ABLx1Axxxxx-1 = ABLx1Axxxxx-2$

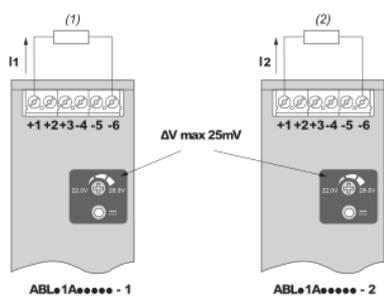
max 2 x ABLx1Axxxxx

$L1 = L2$

$\Delta V \text{ max } 25 \text{ mV}$

$I_{Load} < 90\% \cdot 2 \cdot I_{nom}$

## Output Voltage Balancing



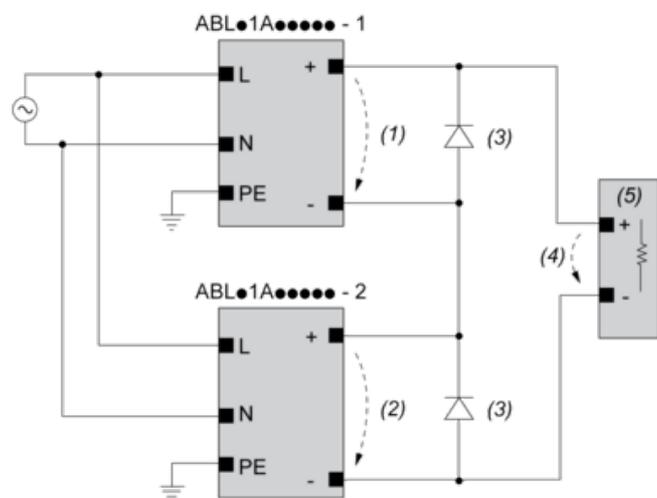
(1) :  $R_{Load1}$

(2) :  $R_{Load2}$

$R_{Load1} = R_{Load2}$

$I_1 = I_2 = \sim I_{nom}$

## Series Connection



(1) :  $V_{out1}$

(2) :  $V_{out2}$

(3) : 2 x Diode,  $V_{RRM} > 2 \times V_{out1/2}$ ,  $I_F > 2 \times I_{nom1/2}$

(4) :  $V_{Load} = 2 \times V_{out}$

(5) : Load

## Connections and Schema

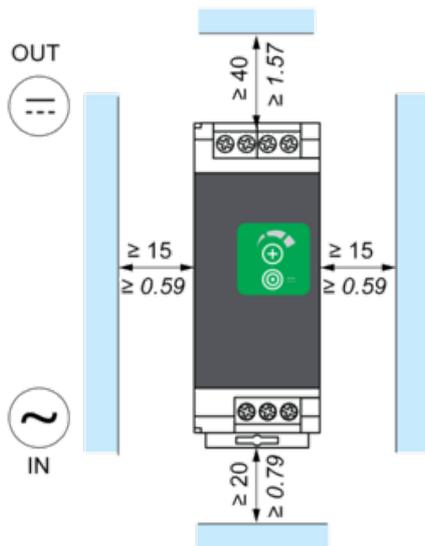
	(1)		
	<40°C	<50°C	<70°C
ABLS1A24021	50°C	60°C	75°C
ABLS1A24038	50°C	60°C	75°C
ABLS1A12062	50°C	60°C	80°C
ABLS1A24031	50°C	60°C	80°C
ABLS1A12100	60°C	70°C	90°C
ABLS1A24050	60°C	70°C	90°C
ABLS1A48025	60°C	70°C	90°C
ABLS1A24100	60°C	70°C	90°C
ABLS1A24200	95°C	95°C	90°C

(1) : Ambient

Mounting

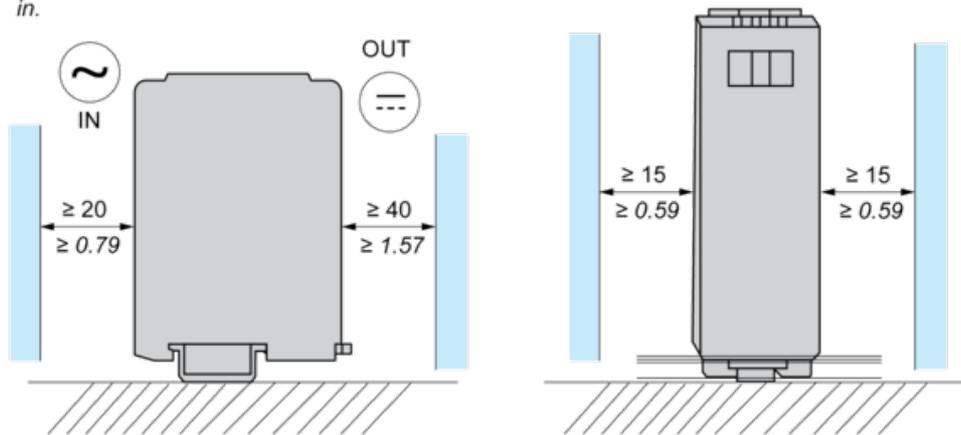
Mounting Position A

mm  
in.

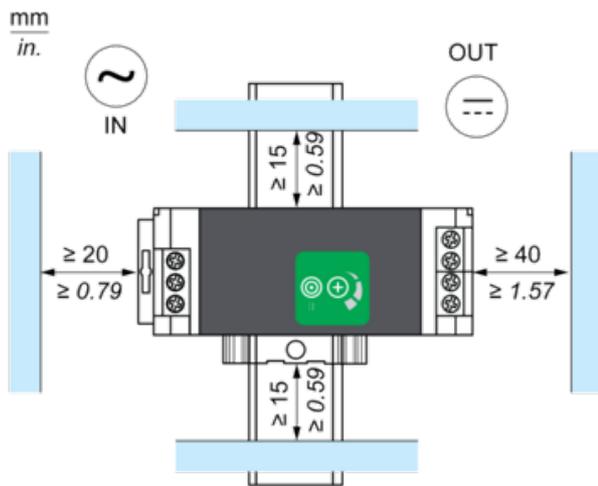


Mounting Position B

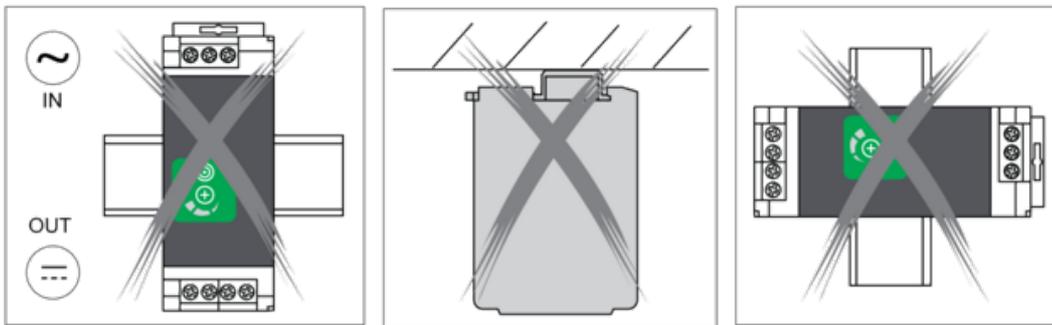
mm  
in.



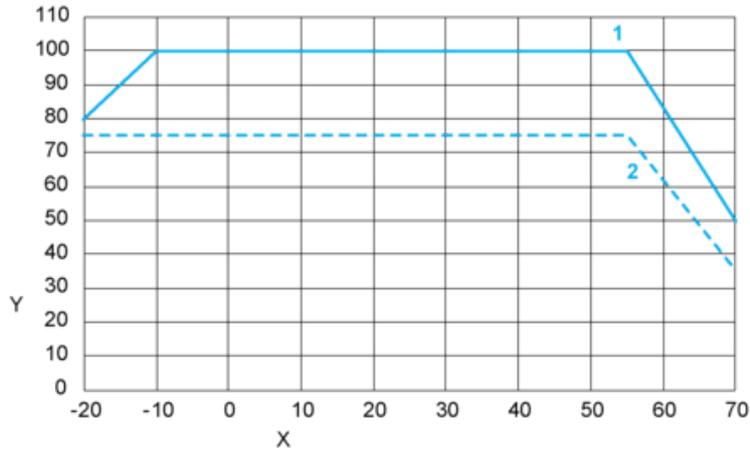
## Mounting Position C



## Incorrect Mounting



Performance Curve



X : Surrounding Air Temperature (°C)

Y : Percentage of Maximum Load (%)

1 : Position A

2 : Position B + C

Note : Altitude ≤ 2000 m (6561 ft)