



### Main

Range of product	Modicon Power Supply
Product or component type	Power supply
Power supply type	Regulated switch mode
Variant option	Modular
Enclosure material	Plastic
Nominal input voltage	100...240 V AC single phase 100...240 V AC phase to phase
Rated power in W	30 W
Output voltage	24 V DC
Power supply output current	1.25 A

### Complementary

Input voltage limits	90...264 V AC
Nominal network frequency	50...60 Hz
Network system compatibility	TN TT IT
Maximum leakage current	0.25 mA 240 V AC
Input protection type	Integrated fuse (not interchangeable) 3.15 A External protection (recommended) 20 A Curve B External protection (recommended) 20 A Curve C External protection (recommended) 4 A Curve B External protection (recommended) 4 A Curve C
Inrush current	25 A at 115 V 50 A at 230 V
Power factor	0.48 at 115 V AC 0.38 at 230 V AC
Efficiency	87 % at 115 V AC 87 % at 230 V AC
Output voltage adjustment	24...28 V
Power dissipation in W	5 W
Current consumption	< 0.8 A 115 V AC < 0.6 A 230 V AC
Turn-on time	< 2 s
Holding time	> 20 ms 115 V AC > 60 ms 230 V AC
Startup with capacitive loads	3000 µF
Residual ripple	< 100 mV
Meantime between failure [MTBF]	2500000 H at 25 °C, full load 1000000 h at 55 °C, 80 % load
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...1.5 mm², (AWG 20...AWG 16) without wire end ferrule for input/output Screw connection: 0.5...1 mm², (AWG 20...AWG 18) with wire end ferrule for input/output
Line and load regulation	< 0.5 % at in line < 1 % at 0 to 100 % load
Status LED	1 LED (green) output voltage

Depth	55.6 mm
Height	91 mm
Width	36 mm
Net weight	0.170 kg
Output coupling	Serial Parallel
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 Panel mounting
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 input/output
Service life	10 year(s)
Overvoltage category	II

## Environment

Standards	IEC 62368-1 EN/IEC 61010-1 EN 61010-2-201 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 UL 61010-1 UL 61010-2-201 CSA C22.2 No 62368-1 CSA C22.2 No 61010-1 CSA C22.2 No 61010-2-201 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 overvoltage category III 2000 m...5000 m overvoltage category II
Shock resistance	150 m/s <sup>2</sup> for 11 ms
IP degree of protection	IP20
Ambient air temperature for operation	-25...55 °C without current derating mounting position A < 2000 m 55...70 °C with current derating of 2.67 % per °C mounting position A < 2000 m
Electrical shock protection class	Class II without PE connection
Pollution degree	2
Vibration resistance	3 mm (f= 2...9 Hz) conforming to IEC 60721-3-3 10 m/s <sup>2</sup> (f= 9...200 Hz) conforming to IEC 60721-3-3

Electromagnetic immunity	<p>Immunity to electrostatic discharge - test level: 8 kV (contact discharge) conforming to IEC 61000-4-2</p> <p>Immunity to electrostatic discharge - test level: 15 kV (air discharge) conforming to IEC 61000-4-2</p> <p>Electromagnetic field immunity test - test level: 15 V/m (80 MHz...2 GHz) conforming to IEC 61000-4-3</p> <p>Electromagnetic field immunity test - test level: 5 V/m (2...2.7 GHz) conforming to IEC 61000-4-3</p> <p>Electromagnetic field immunity test - test level: 5 V/m (2.7...6 GHz) conforming to IEC 61000-4-3</p> <p>Immunity to fast transients - test level: 4 kV (on input-output) conforming to IEC 61000-4-4</p> <p>Surge immunity test - test level: 4 kV (between power supply and earth) conforming to IEC 61000-4-5</p> <p>Surge immunity test - test level: 3 kV (between phases) conforming to IEC 61000-4-5</p> <p>Immunity to conducted disturbances - test level: 15 V (0.15...80 MHz) conforming to IEC 61000-4-6</p> <p>Immunity to magnetic fields - test level: 30 A/m (50...60 Hz) conforming to IEC 61000-4-8</p> <p>Immunity to voltage dips - test level: 100 % (1 cycle) conforming to IEC 61000-4-11</p> <p>Immunity to voltage dips - test level: 60 % (10 cycles) conforming to IEC 61000-4-11</p> <p>Immunity to voltage dips - test level: 30 % (25 cycles) conforming to IEC 61000-4-11</p> <p>Disturbing field emission conforming to EN 55016-2-3</p> <p>Limits for harmonic current emissions conforming to IEC 61000-3-2</p> <p>Conforming to EN 55016-1-2</p> <p>Conforming to EN 55016-2-1</p>
Electromagnetic emission	<p>Conducted emissions conforming to IEC 61000-6-3</p> <p>Radiated emissions conforming to IEC 61000-6-4</p>

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.000 cm
Package 1 Width	6.000 cm
Package 1 Length	11.000 cm
Package 1 Weight	172.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	29
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	5.332 kg
Unit Type of Package 3	P12
Number of Units in Package 3	464
Package 3 Height	45.000 cm
Package 3 Width	80.000 cm
Package 3 Length	120.000 cm
Package 3 Weight	97.312 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
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

---

## Electrical Safety

---

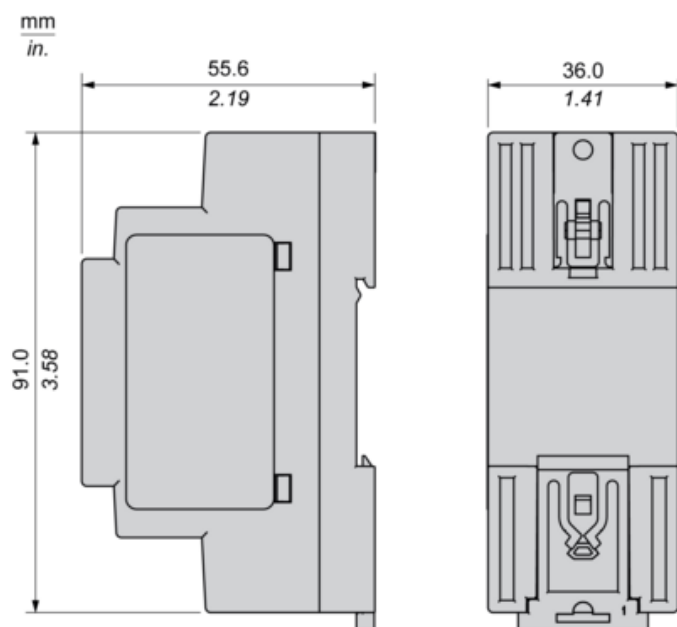
- If the unit is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- For means of disconnection a switch or circuit breaker, located near the product, must be included in the installation. A marking as disconnecting device for the product is 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.

---

## Dimensions

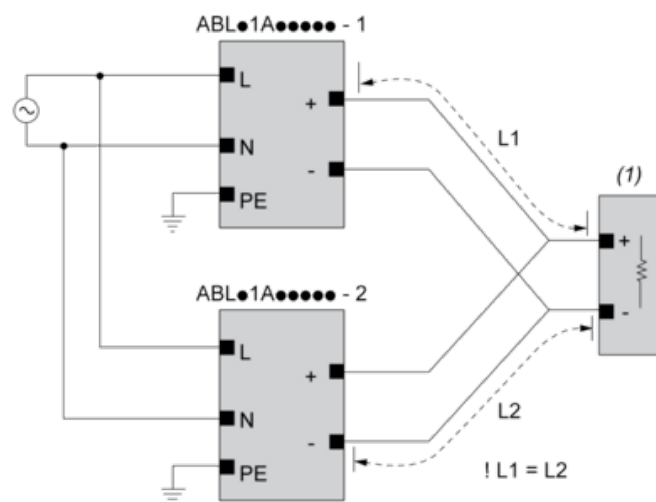
---

### Side and Rear View



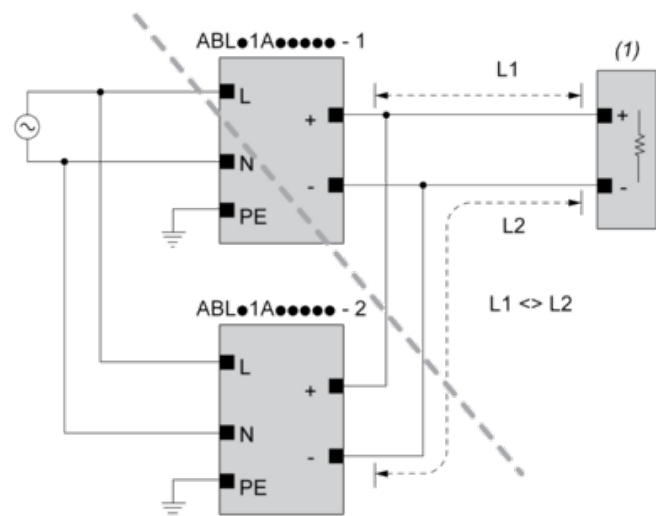
## Connections and Schema

### Correct Parallel Connection



(1) : Load

### Incorrect Parallel Connection



(1) : Load

$ABLx1Axxxx-1 = ABLx1Axxxx-2$

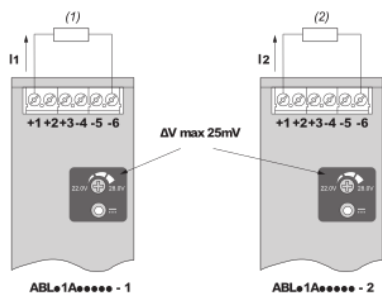
max 2 x ABLx1Axxxx

$I_{L1} = I_{L2}$

$\Delta V$  max 25 mV

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

## Output Voltage Balancing



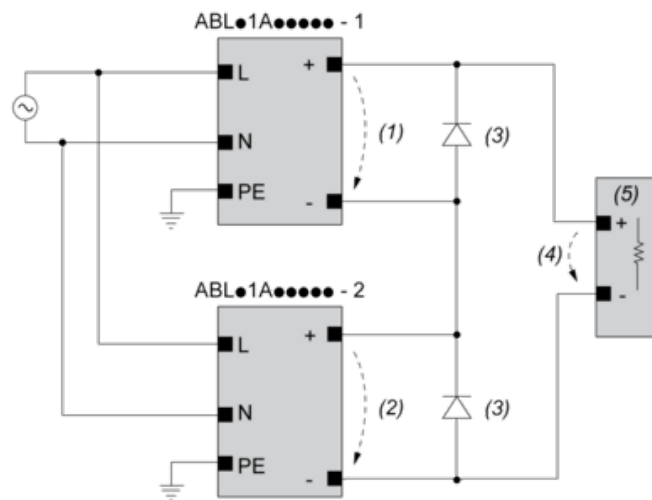
(1) :  $R_{\text{Load1}}$

(2) :  $R_{\text{Load2}}$

$R_{\text{Load1}} = R_{\text{Load2}}$

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

## Series Connection



(1) :  $V_{\text{out1}}$

(2) :  $V_{\text{out2}}$

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

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

(5) : Load

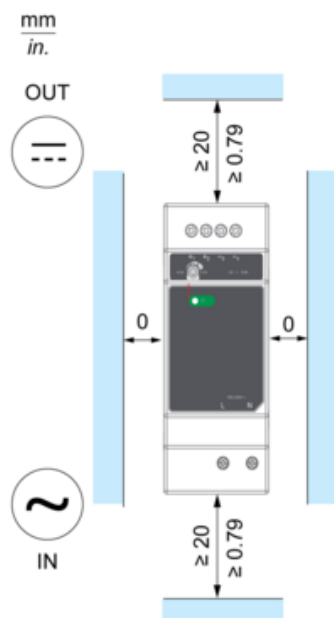
## Connections and Schema

		(1)		
		<40°C	<50°C	<70°C
ABLM1A24004		60°C	75°C	75°C
ABLM1A12010		60°C	75°C	90°C
ABLM1A24006		60°C	75°C	90°C
ABLM1A05036	Input	60°C	75°C	90°C
	Output	75°C	90°C	90°C
ABLM1A12021		60°C	75°C	90°C
ABLM1A24012		60°C	75°C	90°C
ABLM1A12042		60°C	75°C	90°C
ABLM1A24025		60°C	75°C	90°C

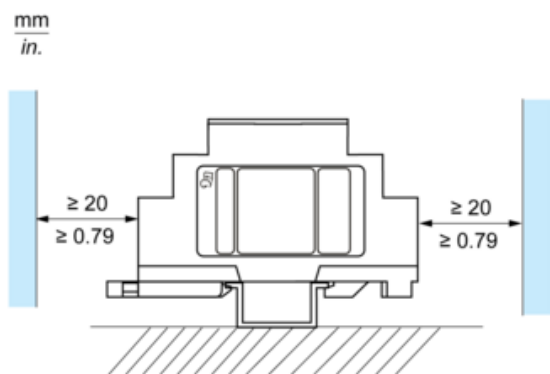
(1) : Ambient

## Mounting

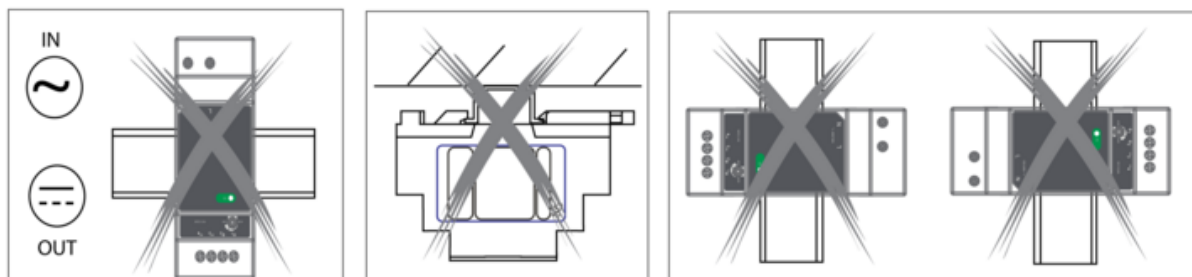
### Mounting Position A



### Mounting Position B

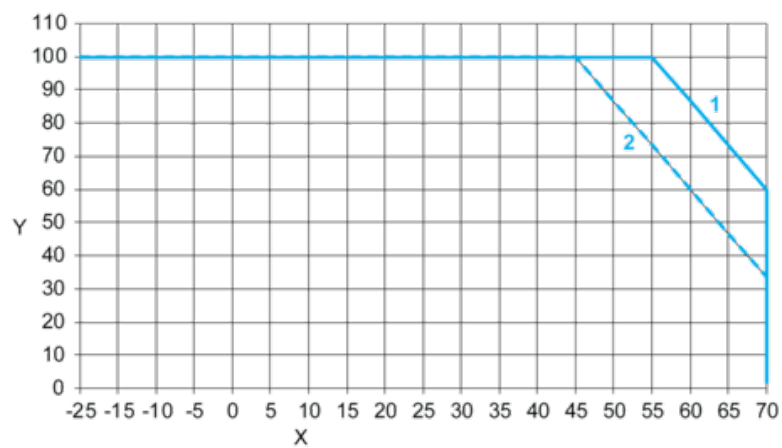


### Incorrect Mounting





### Performance Curve



X : Ambient Temperature (°C)

Y : Percentage of Max Load (%)

1 : Mounting A & B, altitude 2000M

2 : Mounting A & B, altitude 5000M