# Product data sheet
## Characteristics

# ABLP1A24100
## Regulated Power Supply, 100...240V AC, 24V 10A, single phase, Panel Mount

## Main

| | |
|---|---|
| Range of Product | Modicon Power Supply |
| Product or Component Type | Power supply |
| Power supply type | Regulated switch mode |
| Variant option | Panel mount |
| Enclosure Material | Aluminum |
| Nominal input voltage | 100...240 V AC single phase |
| Kw Rating | 240 W |
| Output voltage | 24 V DC |
| Power supply output current | 10 A |

## Complementary

| | |
|---|---|
| Input voltage limits | 85...264 V AC |
| Nominal network frequency | 50…60 Hz |
| Network system compatibility | TN<br>TT<br>IT |
| Maximum leakage current | 1 mA 240 V AC |
| Input protection type | Integrated fuse (not interchangeable) 6.3 A |
| Inrush current | 35 A 115 V<br>60 A 230 V |
| Power factor | 0.95 at 115 V AC<br>0.91 at 230 V AC |
| Efficiency | 87 % 230 V AC |
| Output voltage adjustment | 21.6...26.4 V |
| Power dissipation in W | 36 W |
| Current consumption | < 3.6 A 115 V AC<br>< 1.8 A 230 V AC |
| Turn-on time | < 1.2 s |
| Holding time | > 20 ms 115 V AC<br>> 40 ms 230 V AC |
| Startup with capacitive loads | 8000 µF |
| Residual ripple | < 150 mV |
| Expected capacitor life time | 10 year(s) |
| Meantime between failure [MTBF] | 700000 h at 77 °F (25 °C), full load conforming to SR 332 |
| Output protection type | Against overload and short-circuits automatic reset<br>Against over temperature manual reset<br>Against overvoltage manual reset |
| Connections - terminals | Screw connection 0.75...2.5 mm², AWG 18...AWG 14) without wire end ferrule<br>Screw connection 0.75...1.5 mm², AWG 18...AWG 16) with wire end ferrule |
| Line and load regulation | < 0.5 % network 0 to 100 % load at 77 °F (25 °C)<br>< 1 % network full voltage range in line at 77 °F (25 °C) |
| Status LED | 1 LED (Green) output voltage |
| Depth | 7.48 in (190 mm) |
| Height | 1.97 in (50 mm) |
| Width | 3.66 in (93 mm) |
| Net Weight | 1.87 lb(US) (0.85 kg) |
| Output coupling | Parallel<br>Serial |

| | |
|---|---|
| Mounting support | Top hat type TH35-15 rail IEC 60715<br>Top hat type TH35-7.5 rail IEC 60715<br>Double-profile DIN rail<br>Panel mounting |
| Supply | SELV EN/IEC 60950-1<br>SELV EN/IEC 60204-1<br>SELV IEC 60364-4-41 |
| Dielectric strength | 3000 V AC with input to output |

## Environment

| | |
|---|---|
| Standards | EN 62368-1<br>EN/IEC 61010-1<br>EN 61010-2-201<br>EN/IEC 61204-3<br>EN 61000-6-1<br>EN 61000-6-2<br>EN 61000-6-3<br>EN 61000-6-4<br>EN 61000-3-2<br>EN 61000-3-3<br>UL 62368-1<br>UL 61010-1<br>UL 61010-2-201<br>CSA C22.2 No 62368-1<br>CSA C22.2 No 61010-1<br>CSA C22.2 No 61010-2-201<br>IEC 60335-1<br>EN/IEC 62368-1 |
| Product certifications | CE<br>CULus<br>EAC<br>RCM<br>CB Scheme<br>KC |
| Environmental characteristic | 3M4 IEC 60721-3-3 |
| Operating altitude | 5000 m |
| Shock resistance | 100 m/s² 11 ms |
| IP degree of protection | IP10 |
| Ambient air temperature for operation | 14…122 °F (-10…50 °C) without derating mounting position A, B, C, D, F, G < 6561.68 ft (2000 m)<br>122…158 °F (50…70 °C) with current derating of 2.5 % per °C mounting position A, B, C, D, F, G < 6561.68 ft (2000 m)<br>122…158 °F (50…70 °C) with current derating of 2.5 % per °C < 6561.68 ft (2000 m) |
| Electrical shock protection class | Class I |
| Pollution degree | 2 |
| Vibration resistance | 3 mm 2…9 Hz)IEC 60068-2-6<br>10 m/s² 9…200 Hz)IEC 60068-2-6 |
| Electromagnetic immunity | Immunity to electrostatic discharge 6 kV contact discharge) EN/IEC 61000-4-2<br>Immunity to electrostatic discharge 9 kV air discharge) EN/IEC 61000-4-2<br>Immunity to conducted RF disturbances 10 V/m 80 MHz...2 GHz) EN/IEC 61000-4-3<br>Immunity to conducted RF disturbances 5 V/m 2...2.7 GHz) EN/IEC 61000-4-3<br>Immunity to conducted RF disturbances 3 V/m 2.7...6 GHz) EN/IEC 61000-4-3<br>Immunity to fast transients 4 kV on input-output) EN/IEC 61000-4-4<br>Surge immunity test 3 kV between power supply and earth) EN/IEC 61000-4-5<br>Surge immunity test 1.5 kV between phases) EN/IEC 61000-4-5<br>Immunity to conducted RF disturbances 10 V 0.15...80 MHz) EN/IEC 61000-4-6<br>Immunity to magnetic fields 30 A/m 50...60 Hz) EN/IEC 61000-4-8<br>Immunity to voltage dips EN/IEC 61000-4-11<br>Disturbing field emission EN 55016-2-3<br>Limits for harmonic current emissions EN 61000-3-2<br>Conducted disturbance emission EN 55016-1-2<br>Conducted disturbance emission EN 55016-2-1 |
| Electromagnetic emission | Conducted emissions EN 61000-6-3<br>Radiated emissions EN 61000-6-4 |

## Ordering and shipping details

| | |
|---|---|
| Category | 22524-ABL1 DEDICATED POWER SUPPLIES |
| Discount Schedule | CP12 |
| GTIN | 3606481500304 |
| Nbr. of units in pkg. | 1 |
| Package weight(Lbs) | 34.71 oz (984.0 g) |
| Returnability | Yes |
| Country of origin | CN |

## Packing Units

| | |
|---|---|
| Unit Type of Package 1 | PCE |
| Package 1 Height | 2.36 in (6 cm) |
| Package 1 width | 5.51 in (14 cm) |
| Package 1 Length | 9.65 in (24.5 cm) |
| Unit Type of Package 2 | S03 |
| Number of Units in Package 2 | 9 |
| Package 2 Weight | 20.43 lb(US) (9.269 kg) |
| Package 2 Height | 11.81 in (30 cm) |
| Package 2 width | 11.81 in (30 cm) |
| Package 2 Length | 15.75 in (40 cm) |

## Offer Sustainability

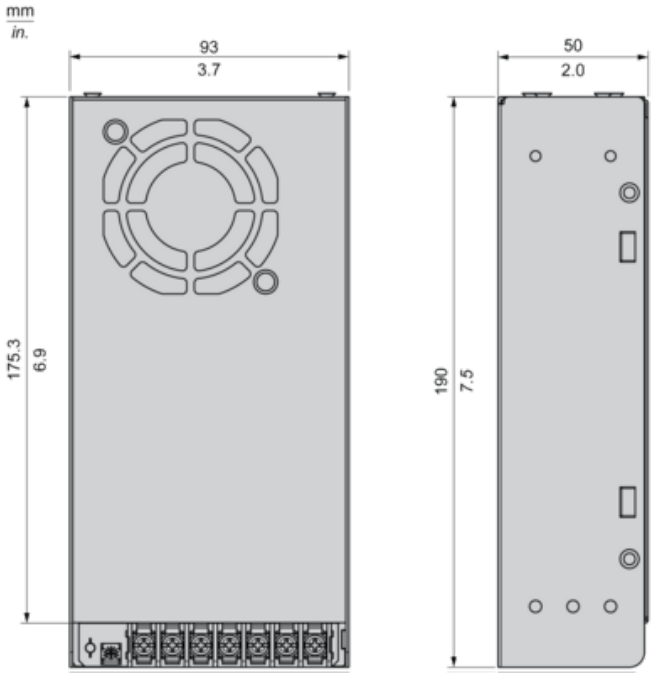
| | |
|---|---|
| Sustainable offer status | Green Premium product |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |
| REACh Regulation | REACh Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS Declaration |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |

## Electrical Safety

- 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.

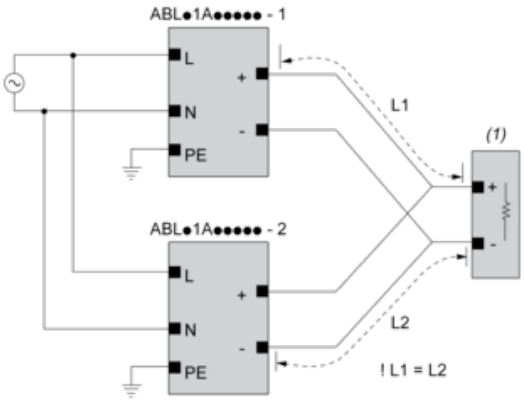
## Dimensions

### Front and Side Views



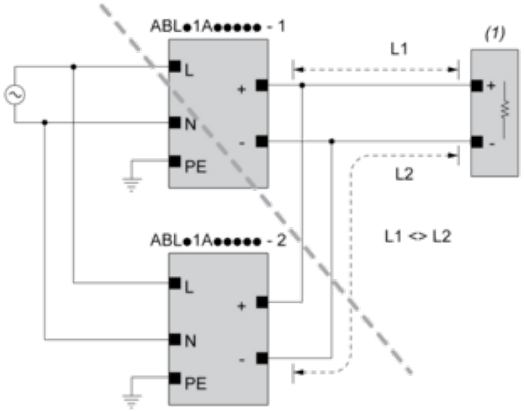
## Connections and Schema

### Correct Parallel Connection




(1) : Load

### Incorrect Parallel Connection




(1) : Load

ABLx1Axxxxx-1 = ABLx1Axxxxx-2

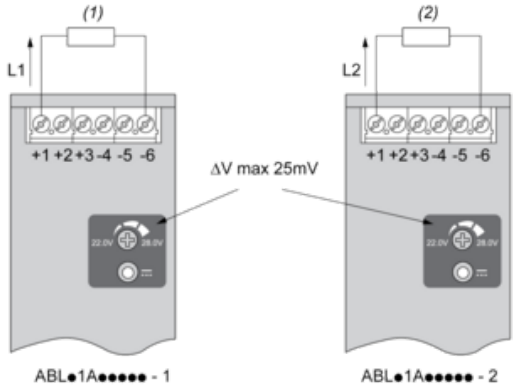
max 2 x ABLx1Axxxxx

L1 = L2

ΔV max 25 mV

$L_{Load}$ < 90% 2 x $L_{nom}$

### Output Voltage Balancing



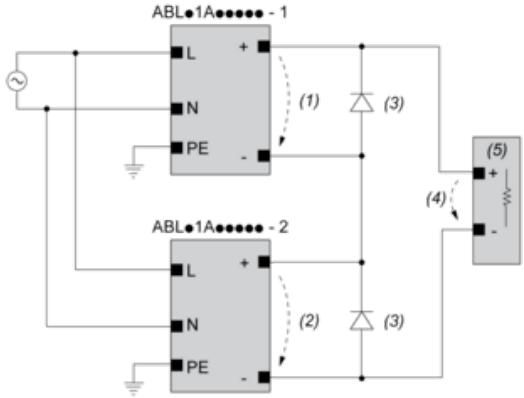

(1) : $R_{Load1}$

(2) : $R_{Load2}$

$R_{Load1}$= $R_{Load2}$

$I_1$= $I_2$= ~ $I_{nom}$

## Series Connection




(1) : $V_{out1}$

(2) : $V_{out2}$

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

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

(5) : Load

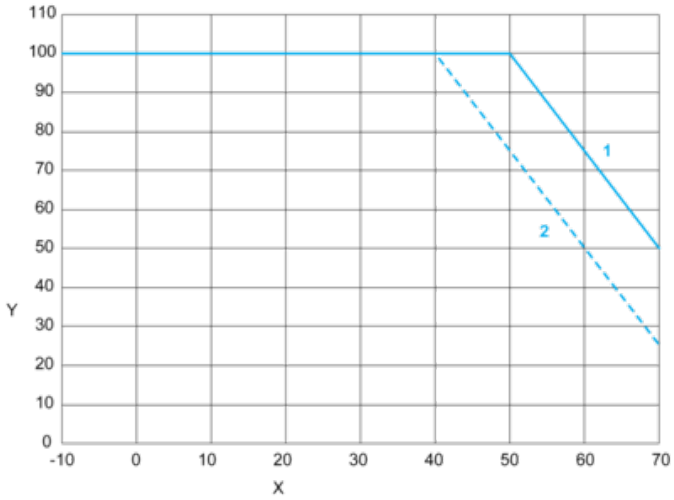
## Connections and Schema

| | (1) | | |
|---|---|---|---|
| | <40ºC | <50ºC | <70ºC |
| ABLP1A12085 | 60ºC | 70ºC | 90ºC |
| ABLP1A24045 | 60ºC | 70ºC | 90ºC |
| ABLP1A24062 | 60ºC | 70ºC | 90ºC |
| ABLP1A24100 | 60ºC | 70ºC | 90ºC |

(1) : Ambient

## Performance Curves

### Mounting Positions A, B, C, D, F and G




X : Surrounding Air Temperature

Y : Percentage of Max Load (%)

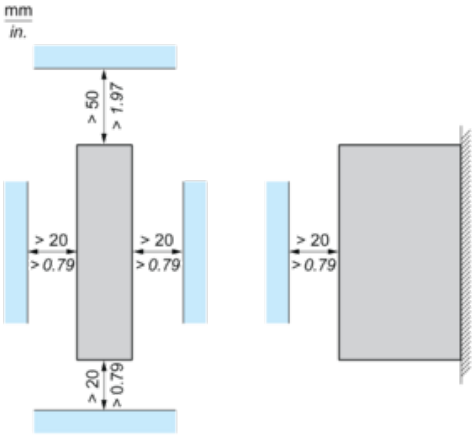
1 : Altitude 2000 m

2 : Altitude 5000 m

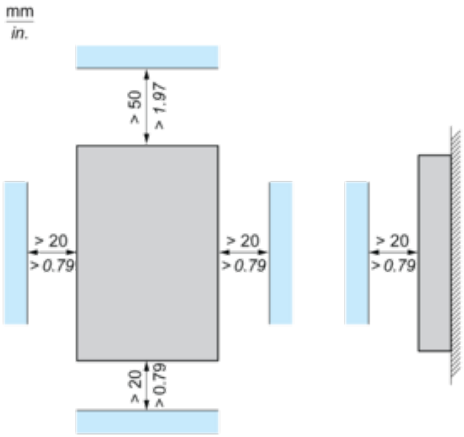
Note : < 100 VAC additional derating by 1.33% / VAC

## Mounting

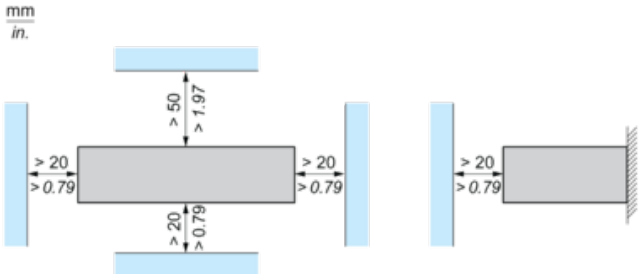
### Mounting Position A



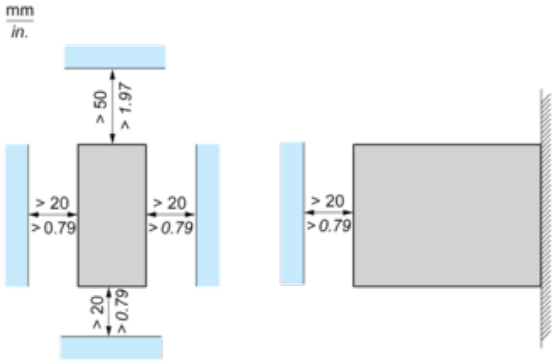

### Mounting Position B



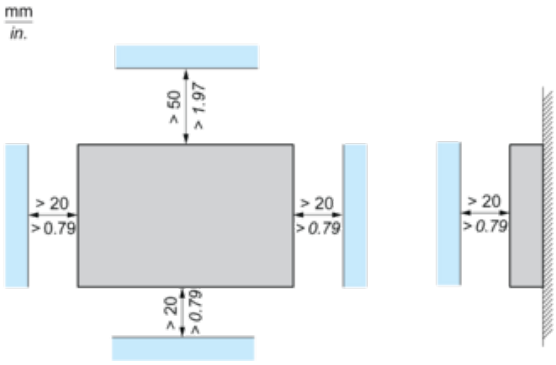

### Mounting Position C



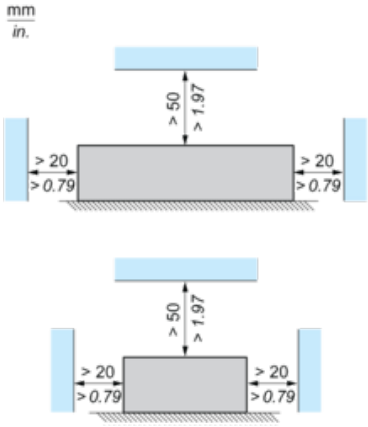
## Mounting Position D1




## Mounting Position D2 and F




## Mounting Position G



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Schneider Electric:

ABLP1A24100