

ABLS1A24200

Switchmode strømforsyning optimalisert for
DIN-skinne, 24VDC 480W-20A utgang og
100-240VAC forsyning



Teknisk informasjon

Produktspekter	Modicon Power Supply
Produkt eller type komponent	Strømforsyning
Type strømforsyning	Regulert switch mode
Variant alternativ	Optimized
Kapslingsmateriale	Alu
Nominal input voltage	100...240 V AC enfase 100...240 V AC fase til fase 140...340 V DC
Merkeeffekt i W	480 W
Utgangsspenning	24 V DC
Strømforsyningens utgangsstrøm	20 A

Komplementær

Toleranse forsyningsspenning	85 - 264 V AC without temperature derating 120...375 V DC without temperature derating
Nominal network frequency	50...60 Hz
Network system compatibility	TN TT IT
Maksimal lekkasjestrøm	1 mA 240 V AC
Verntype på inngang	Integret sikring (kan ikke skiftes) 10 A External protection (recommended) 20 A Curve C External protection (recommended) 16 A Curve B External protection (recommended) 13 A Curve C
Startstrøm	45,0 A på 115 V 90,0 A på 230 V
18 mm avstand	0,95 at 115 V AC 0,95 at 230 V AC
Effektivitet	85 % på 115 V AC 88 % på 230 V AC
Output voltage adjustment	22...28 V
Effekttap i W	60 W
Strømforbruk	< 5.4 A 115 V AC < 2.7 A 230 V AC < 5 A 140 V DC
Turn-on time	< 1.5 s
Holdetid	> 20 ms 115 V AC > 20 ms 230 V AC
Startup with capacitive loads	8000 µF
Diff ripple	< 120 mV
Gjennomsnittlig tid mellom feil (MTBF)	700000 t at 25 °C, fullastet conforming to SR 332
Verntype utgang	Against overload and short-circuits, vern teknologi: automatisk reset Against over temperature, vern teknologi: manual reset Mot overspenning, vern teknologi: manual reset

Tilkoblingsklemmer	Skrutilkopling: 0.75...4 mm ² , (AWG 20...AWG 12) without wire end ferrule for utgang Skrutilkopling: 0.75...4 mm ² , (AWG 20...AWG 14) med lederendehylse for utgang Skrutilkopling: 0.75...4 mm ² , (AWG 18...AWG 12) without wire end ferrule for inngang Skrutilkopling: 0.75...4 mm ² , (AWG 18...AWG 12) med lederendehylse for inngang
Line and load regulation	< 0.5 % network 0 til 100 % last at 25 °C < 1 % network full voltage range in line at 25 °C
Status LED	1 LED (grønn) utgangsspenning
Dybde	128,5 mm
Høyde	123,6 mm
Bredde	85,5 mm
Vekt	1,25 kg
Utgangs sammenkobling	Parallell Serie
Monteringssupport	Topp type TH32-15 skinne i samsvar med IEC 60715 Top hat type TH35-7.5 skinne i samsvar med IEC 60715 Double-profil DIN skinne
Forsyning	SELV i samsvar med IEC 60950-1 SELV i samsvar med IEC 60204-1 SELV i samsvar med IEC 60364-4-41
Dielektrisk styrke	3000 V AC med input to output issolasjon
Service life	10 år
Overspenningskategori	II

Miljø

Standarder	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
Produktsertifikater	CE[RETURN]CUL listed[RETURN]CUL recognized[RETURN]RCM[RETURN]CB Scheme[RETURN]EAC[RETURN]KC
Driftshøyde	< 5000 m
Støtmotstand	150 m/s ² for 11 ms
IP-grad	IP20
Ambient air temperature for operation	-20...40 °C uten lastreduksjon mounting position A 115 V AC < 2000 m -20...50 °C uten lastreduksjon mounting position A 230 V AC < 2000 m 40...70 °C with current derating of 1.67 % per °C mounting position A 115 V AC < 2000 m 50...70 °C with current derating of 2.5 % per °C mounting position A 230 V AC < 2000 m
Beskyttelsesgrad mot elektrisk støt	Klasse I
Forurensningsgrad	2
Vibrasjonsmotstand	3 mm (f= 2...9 Hz) i samsvar med IEC 60068-2-6 10 m/s ² (f= 9...200 Hz) i samsvar med IEC 60068-2-6

Electromagnetic immunity	Immunity to electrostatic discharge - test level: 8 kV (kontakt utfloed) conforming to IEC 61000-4-2 Immunity to electrostatic discharge - test level: 15 kV (luft utslipp) 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 Immunitet mot raske transienter - test level: 4 kV (på input-output) conforming to IEC 61000-4-4 Surge immunitet test - test level: 4 kV (mellom strømforsyningen og jord) conforming to IEC 61000-4-5 Surge immunitet test - test level: 3 kV (mellom fasene) 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 Immunitet mot magnetiske felter - 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
Elektromagnetiske utslipp	Conducted emissions i samsvar med IEC 61000-6-3 Radiated emissions i samsvar med IEC 61000-6-4

Forpakkingsinformasjon

Enhetstype pakke 1	PCE
Antall enheter i pakke 1	1
Pakke 1 Høyde	9,5 cm
Pakke 1 Bredde	17,5 cm
Pakke 1 Vekt	18,0 cm
Package 1 Weight	1,419 kg
Enhetstype pakke 2	S03
Antall enheter i pakke 2	7
Pakke 2 Høyde	30 cm
Pakke 2 Bredde	30 cm
Pakke 2 Lengde	40 cm
Pakke 2 Vekt	10,517 kg

Bærekraftig

Produktets miljøstatus	Green Premium miljømerket produkt
REACH-regelverk	REACH-erklæring
EU RoHS-direktiv	Proaktivt i samsvar (Produktet inngår ikke i EUs RoHS direktivet)
Kvikksølvfri	Ja
Kinas RoHS-forskrift	Kinas RoHS-Erklæring
Informasjon om RoHS-unntak	Ja
Miljøinformasjon	Produktmiljøprofil
Produktets livssyklus	Informasjon Om Levetidsslutt
WEEE	Innen EU må produktet avhendes i henhold til bestemte regler for avfallshåndtering og aldri kastes som husholdningsavfall.

Logistisk informasjon

Opprinnelsesland	TH
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Garantiperiode

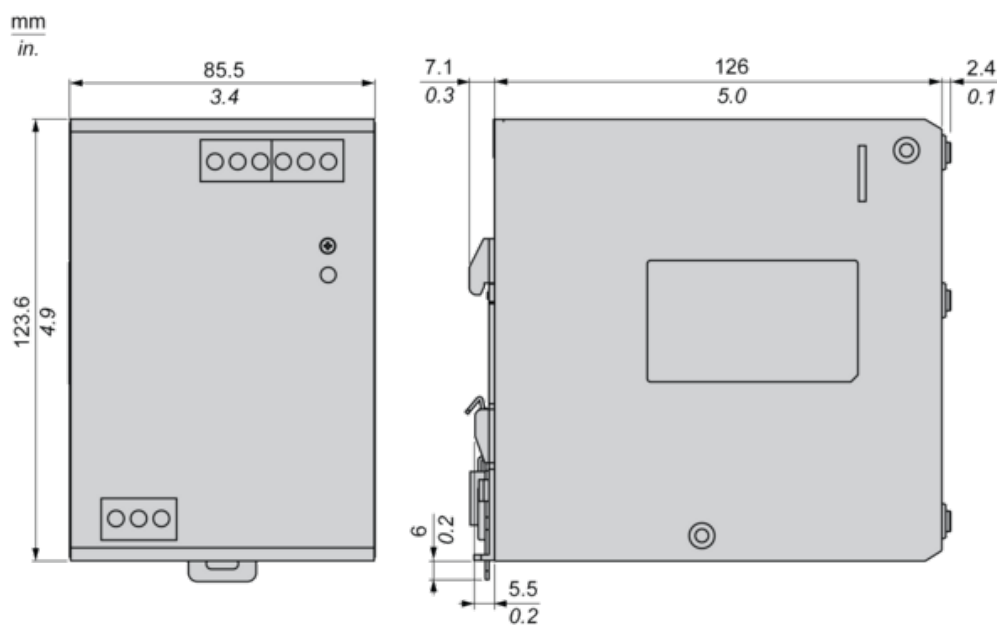
Garanti	18 måneder
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Electrical Safety

- 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.

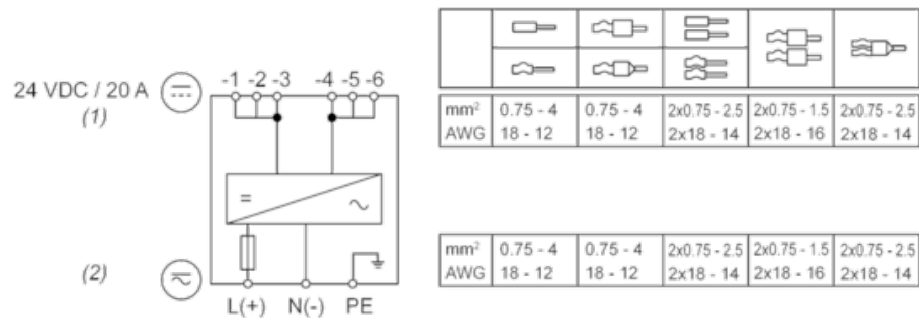
Dimensions

Front and Side Views



Connections and Schema

Wiring

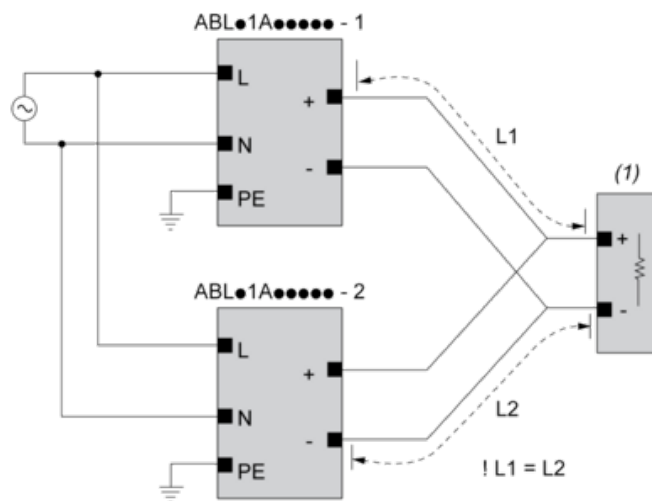


(1) : Output wiring

(2) : Input wiring

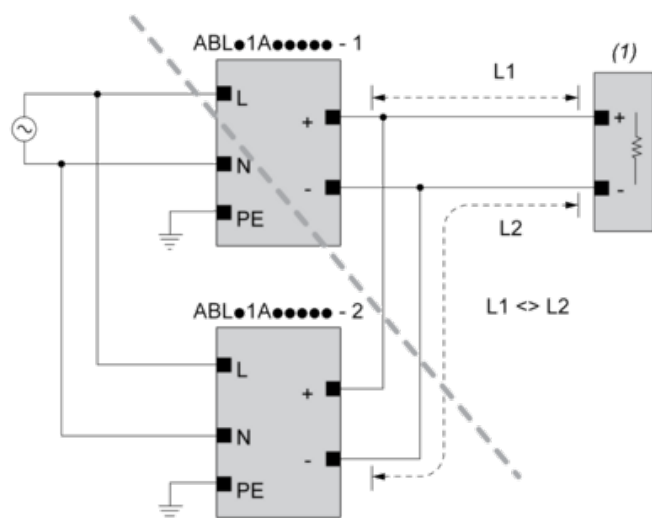
This is only the terminal wire rating. The wire size to be used in the application must be selected by the machine builder according to the ambient temperature, the wiring method and the end-use product standard. The unit has been tested and approved with input wire (80°C) and output wire 1 x 12AWG (95°C) or 3 x 18 AWG copper wire.

Correct Parallel Connection



(1) : Load

Incorrect Parallel Connection



(1) : Load

$ABL1Axxxx-1 = ABL1Axxxx-2$

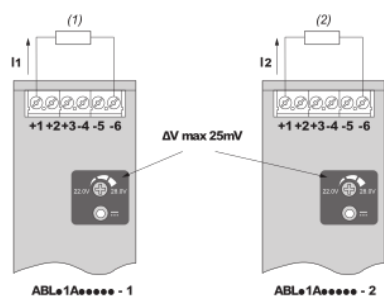
$\max 2 \times ABL1Axxxx$

$L1 = L2$

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

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

Output Voltage Balancing



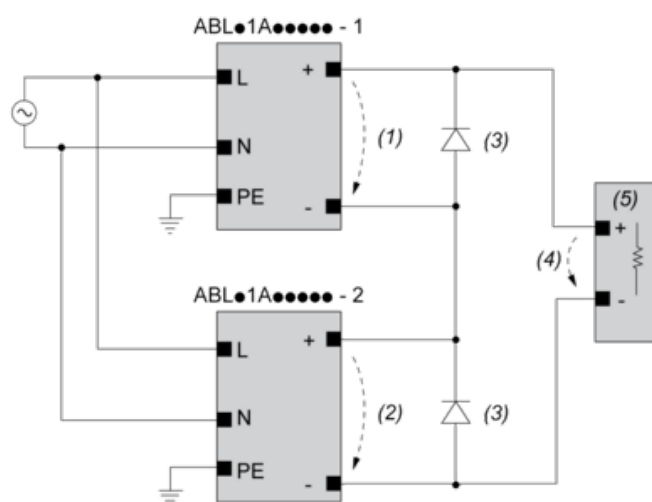
(1) : R_{Load1}

(2) : R_{Load2}

$R_{Load1} = R_{Load2}$

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

Series Connection



(1) : V_{out1}

(2) : V_{out2}

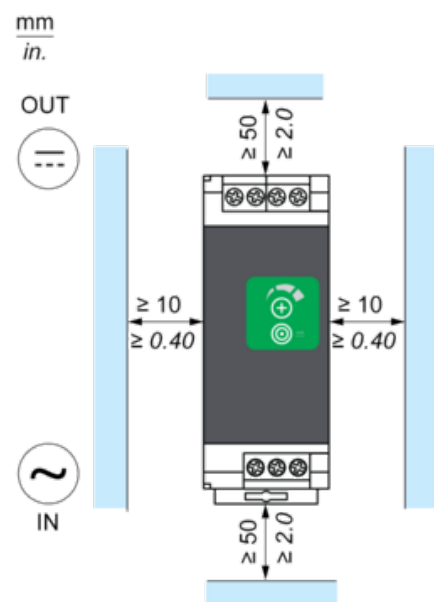
(3) : $2 \times \text{Diode}$, $V_{RRM} > 2 \times V_{out1/2}$, $I_F > 2 \times I_{nom1/2}$

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

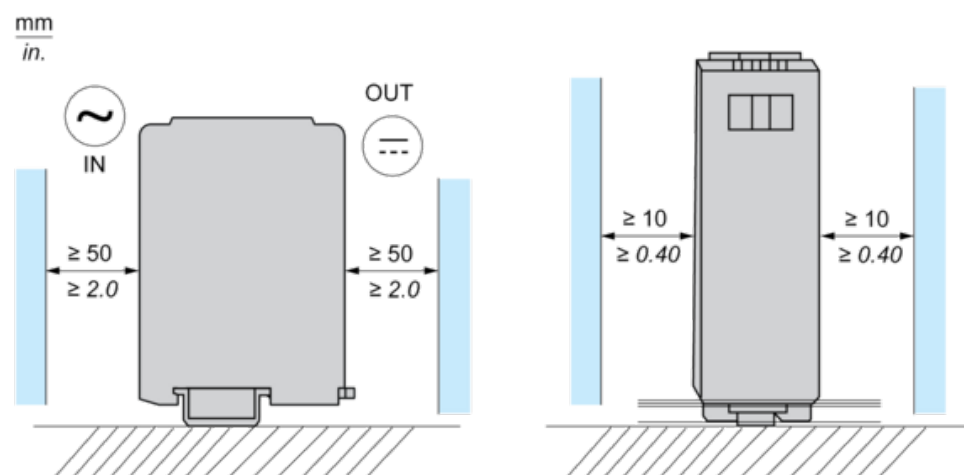
(5) : Load

Mounting

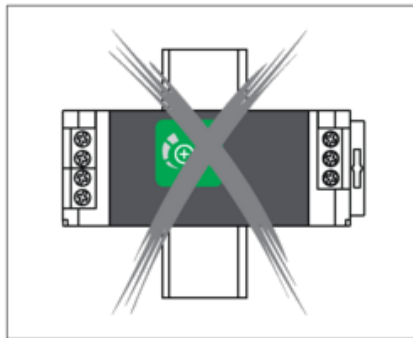
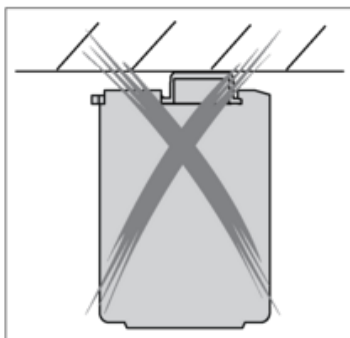
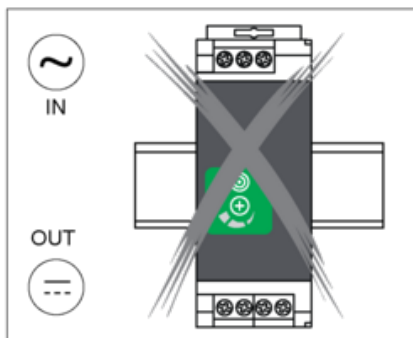
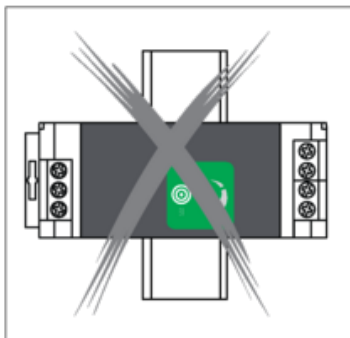
Mounting Position A



Mounting Position B

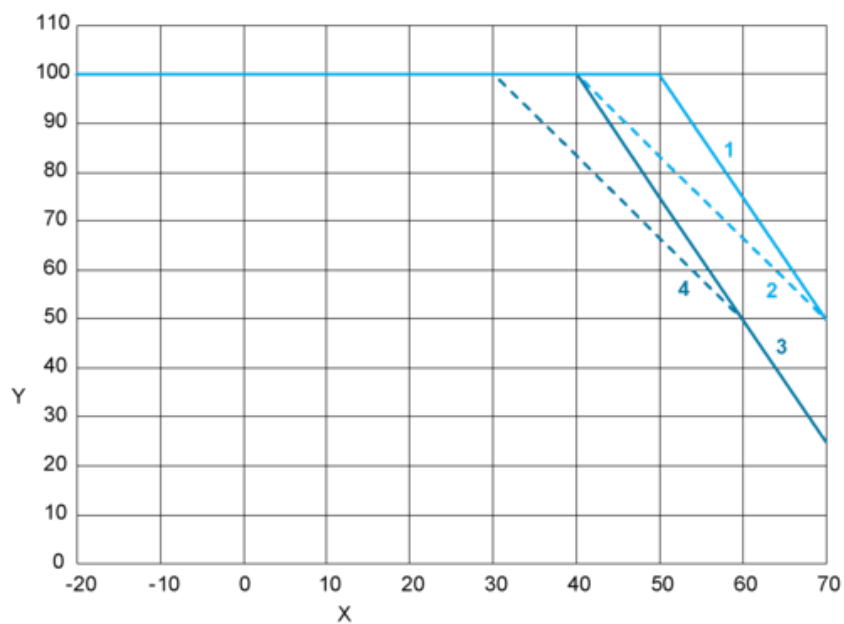


Incorrect Mounting

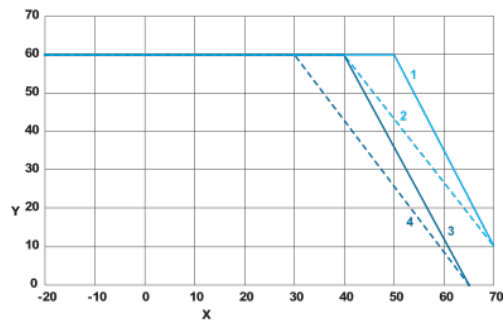


Performance Curve

Mounting Position A



Mounting Position B



X : Surrounding Air Temperature (°C)

Y : Percentage of Maximum Load (%)

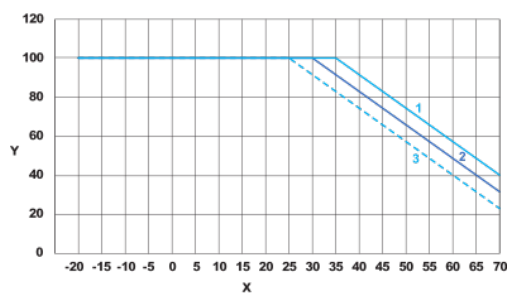
1 : Altitude ≤ 2000 m (6561 ft), Input voltage = 230 VAC / 325 VDC

2 : Altitude ≤ 2000 m (6561 ft), 115 VAC / 162 VDC

3 : Altitude ≤ 5000 m (16404 ft), Input voltage = 230 VAC / 325 VDC

4 : Altitude ≤ 5000 m (16404 ft), 115 VAC / 162 VDC

DC input voltage



X : Surrounding Air Temperature (°C)

Y : Percentage of Maximum Load (%)

1 : 110 VDC

2 : 90 VDC

3 : 85 VDC