

ABLS1A12100

Switchmode strømforsyning optimalisert for
DIN-skinne, 12VDC 120W-10A 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	120 W
Utgangsspenning	12 V DC
Strømforsyningens utgangsstrøm	10 A

Komplementær

Toleranse forsyningsspenning	85 - 264 V AC without temperature derating 120...375 V DC without temperature derating 85...120 V DC with 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) 4 A External protection (recommended) 20 A Curve C External protection (recommended) 13 A Curve C
Startstrøm	30,0 A på 115 V 60,0 A på 230 V
18 mm avstand	0,55 at 115 V AC 0,45 at 230 V AC
Effektivitet	84 % på 115 V AC 86 % på 230 V AC
Output voltage adjustment	11...14 V
Effekttap i W	25 W
Strømforbruk	< 2.5 A 115 V AC < 1.4 A 230 V AC < 1.3 A 140 V DC
Turn-on time	< 1 s
Holdetid	> 20 ms 115 V AC > 40 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: 0.5...4 mm ² , (AWG 20...AWG 12) without wire end ferrule for utgang Skrutilkopling: 0.5...2.5 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	117,6 mm
Høyde	123,6 mm
Bredde	40 mm
Vekt	0,52 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...-10 °C med strømlastreduksjon på 2 % per °C mounting position A < 2000 m -10...40 °C uten lastreduksjon mounting position A 115 V AC < 2000 m -10...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	5,4 cm
Pakke 1 Bredde	17,5 cm
Pakke 1 Vekt	18,0 cm
Package 1 Weight	674,0 g
Enhetstype pakke 2	S03
Antall enheter i pakke 2	13
Pakke 2 Høyde	30,0 cm
Pakke 2 Bredde	30,0 cm
Pakke 2 Lengde	40,0 cm
Pakke 2 Vekt	9,37 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

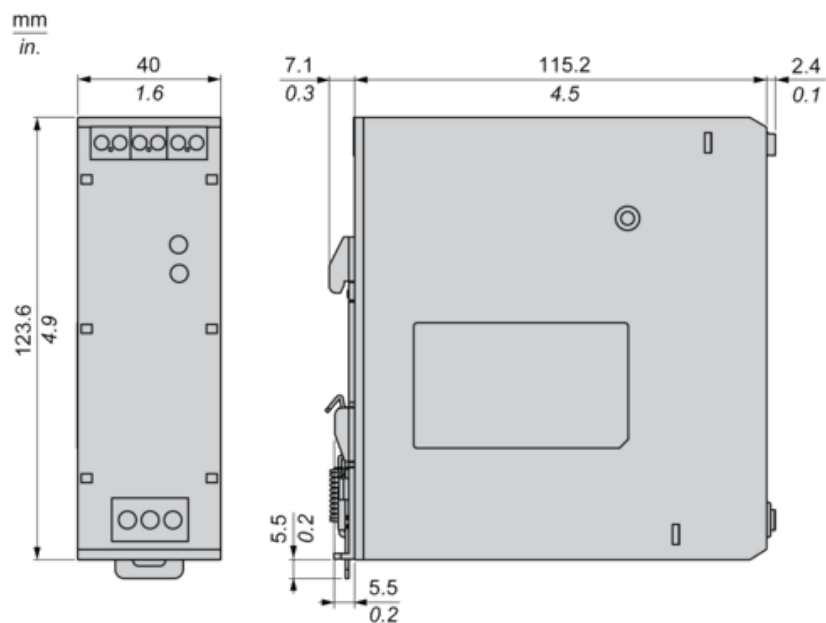
Garanti	18 måneder
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Electrical Safety

- 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.

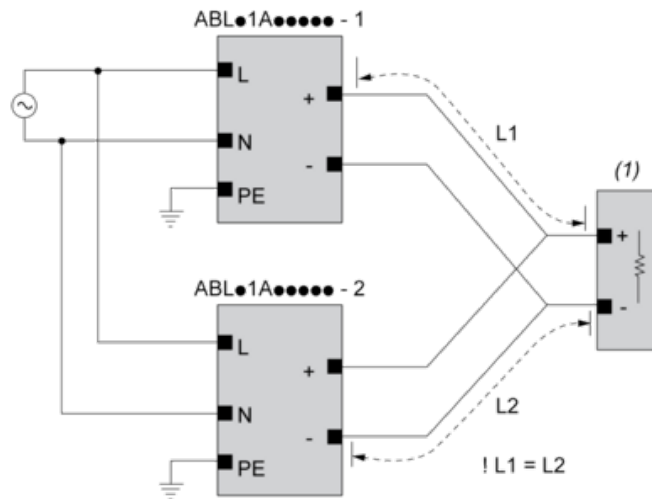
Dimensions

Front and Side Views



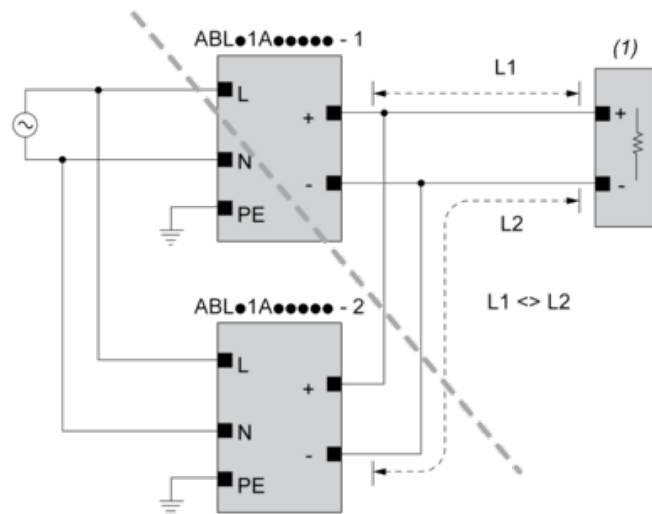
Connections and Schema

Correct Parallel Connection



(1) : Load

Incorrect Parallel Connection



(1) : Load

ABLx1Axxxxx-1 = ABLx1Axxxxx-2

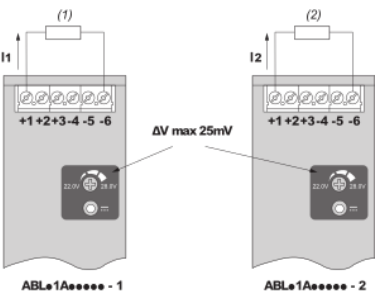
max 2 x ABLx1Axxxxx

$L1 = L2$

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

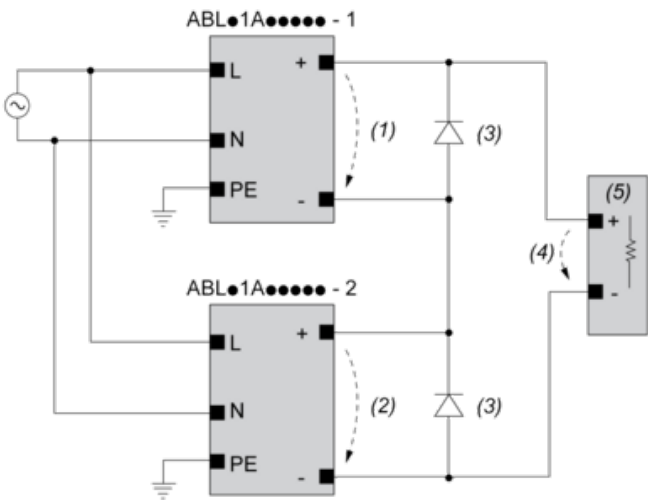
$I_{\text{Load}} < 90\% \times 2 \times I_{\text{nom}}$

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

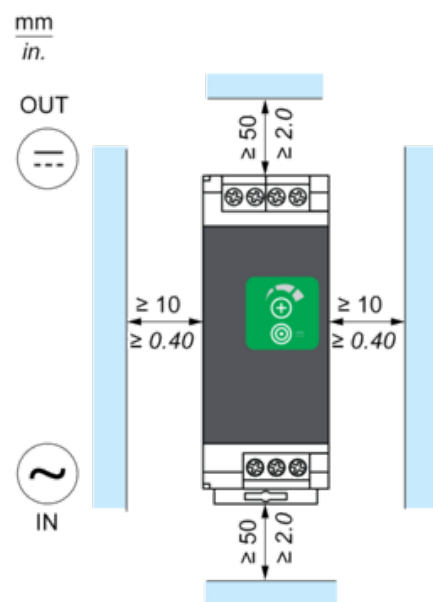
Connections and Schema

	(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

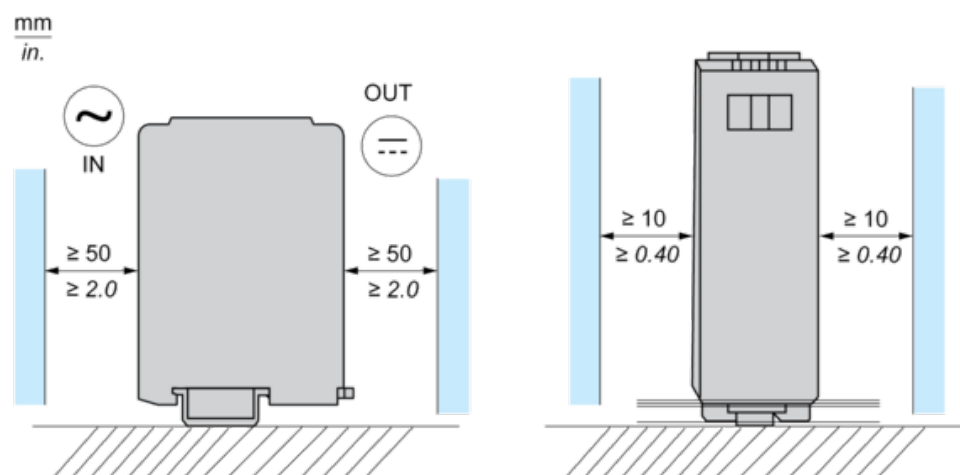
- (1) : Ambient

Mounting

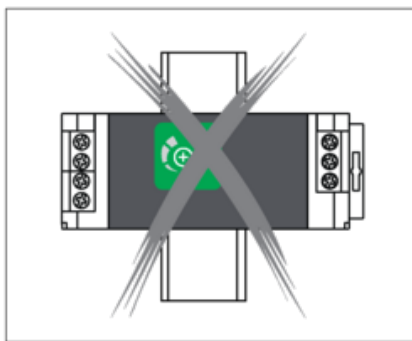
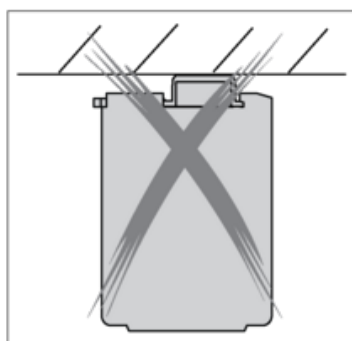
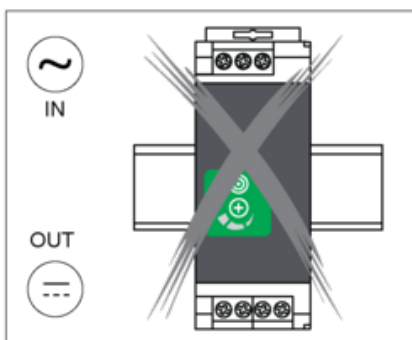
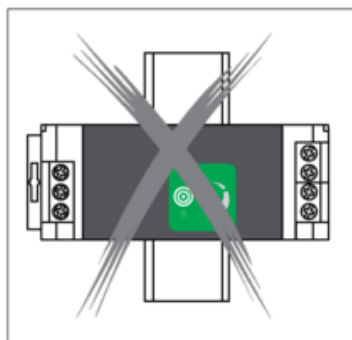
Mounting Position A



Mounting Position B

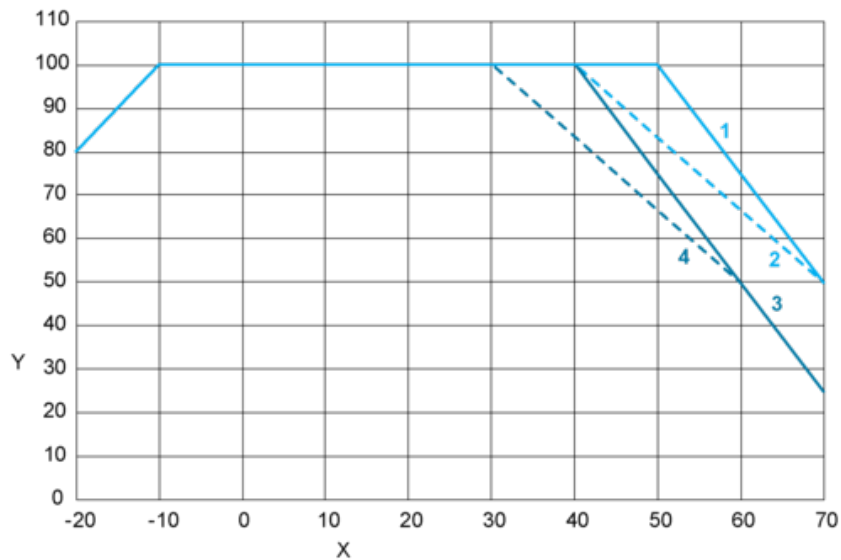


Incorrect Mounting

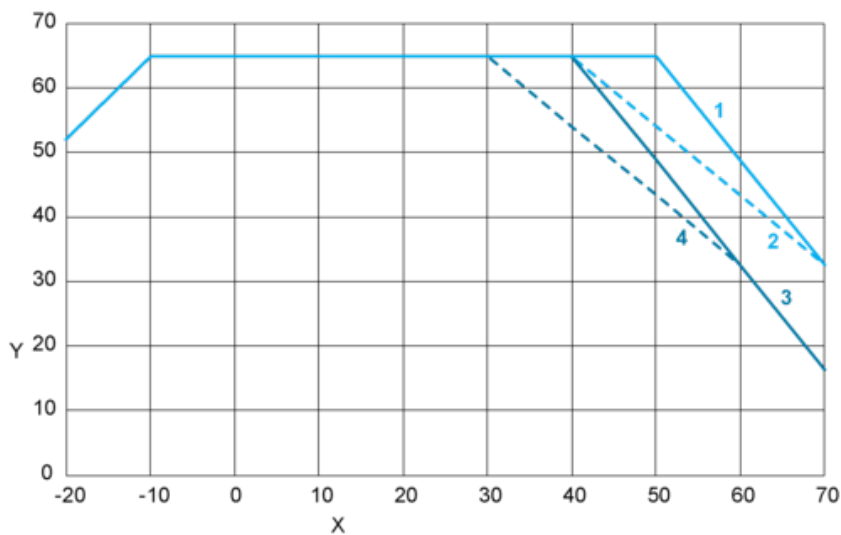


Performance Curve

Mounting Position A



Mounting Position B



X : Surrounding Air Temperature (°C)

Y : Percentage of Maximum Load (%)

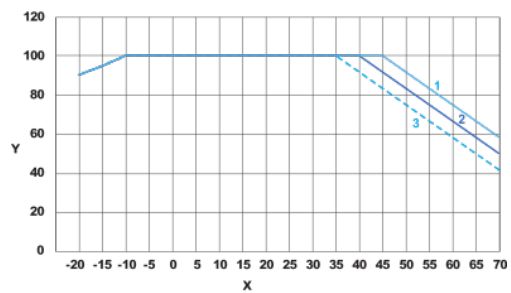
1 : Altitude ≤ 2000 m (6561 ft), Input voltage = 230 VAC / 325 VDC

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