

Product availability : Non-Stock - Not normally stocked in distribution facility



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 2 phases
Input voltage limits	90...264 V AC
Kw Rating	30 W
Output voltage	24 V DC
Power supply output current	1.25 A

Complementary

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 B External protection (recommended) 20 A C External protection (recommended) 4 A B External protection (recommended) 4 A C
Inrush current	25 A 115 V 50 A 230 V
Power factor	0.48 at 115 V AC 0.38 at 230 V AC
Efficiency	87 % 115 V AC

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

	87 % 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
Expected capacitor life time	10 year(s)
Meantime between failure [MTBF]	2500000 h at 77 °F (25 °C), full load 1000000 h at 131 °F (55 °C), 80 % load
Output protection type	Against overload and short-circuits automatic reset Against over temperature manual reset Against overvoltage manual reset
Connections - terminals	Screw connection 0.5...1.5 mm ² , AWG 20...AWG 16) without wire end ferrule input/output Screw connection 0.5...1 mm ² , AWG 20...AWG 18) with wire end ferrule input/output
Line and load regulation	< 0.5 %line < 1 %load
Status LED	Output voltage 1 LED Green)
Maximum Depth	2.19 in (55.6 mm)
Maximum Height	3.58 in (91 mm)
Maximum Width	1.42 in (36 mm)
Net Weight	0.37 lb(US) (0.170 kg)
Output coupling	Serial Parallel
Mounting support	Top hat type TH35-15 rail IEC 60715 Top hat type TH35-7.5 rail IEC 60715 Double-profile DIN rail panel mounting

Environment

Standards	EN 62368-1 EN/IEC 61010-1 EN 61010-2-201 EN/IEC 61204-3 EN 61000-6-1 EN 61000-6-2 EN 61000-6-3 EN 61000-6-4 EN 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
Product certifications	CE CUL Listed CUL Recognized RCM CB Scheme EAC KC NEC class 2
Operating altitude	< 6561.68 ft (2000 m) overvoltage category III 2000 m...5000 m overvoltage category II
Shock resistance	100 m/s ² 11 ms
IP degree of protection	IP20
Ambient air temperature for operation	-13...131 °F (-25...55 °C) without current derating) 131...158 °F (55...70 °C) with current derating of 2.67 % per °C)

Ambient air temperature for storage	-40...185 °F (-40...85 °C)
Relative humidity	0...95 % without condensation
Overvoltage category	II
Electrical shock protection class	Class II without PE connection
Pollution degree	2
Vibration resistance	3 mm 2...9 Hz)IEC 60721-3-3 10 m/s ² 9...200 Hz)IEC 60721-3-3
Electromagnetic immunity	Immunity to electrostatic discharge 6 kV contact discharge) EN/IEC 61000-4-2 Immunity to electrostatic discharge 9 kV air discharge) EN/IEC 61000-4-2 Electromagnetic field immunity test 10 V/m 80 MHz...2 GHz) EN/IEC 61000-4-3 Electromagnetic field immunity test 5 V/m 2...2.7 GHz) EN/IEC 61000-4-3 Electromagnetic field immunity test 3 V/m 2.7...6 GHz) EN/IEC 61000-4-3 Immunity to fast transients 4 kV on input-output) EN/IEC 61000-4-4 Surge immunity test 3 kV between power supply and earth) EN/IEC 61000-4-5 Surge immunity test 1.5 kV between phases) EN/IEC 61000-4-5 Immunity to conducted disturbances 10 Vrms 0.15...80 MHz) EN/IEC 61000-4-6 Immunity to magnetic fields 30 A/m 50...60 Hz) EN/IEC 61000-4-8 Immunity to voltage dips 100 % 1 cycle) EN/IEC 61000-4-11 Immunity to voltage dips 60 % 10 cycles) EN/IEC 61000-4-11 Immunity to voltage dips 30 % 25 cycles) EN/IEC 61000-4-11 Disturbing field emission EN 55016-2-3 Limits for harmonic current emissions EN 61000-3-2 Conducted disturbance emission EN 55016-1-2 Conducted disturbance emission EN 55016-2-1
Electromagnetic emission	Conducted emissions EN 61000-6-3 Radiated emissions EN 61000-6-4
Dielectric strength	3000 V AC input/output

Ordering and shipping details

Category	22525 - ABL8 AND ABL7 POWER SUPPLIE
Discount Schedule	CP12
GTIN	00785901704706
Package weight(Lbs)	1 lb(US) (0.45 kg)
Returnability	Yes
Country of origin	CN

Offer Sustainability

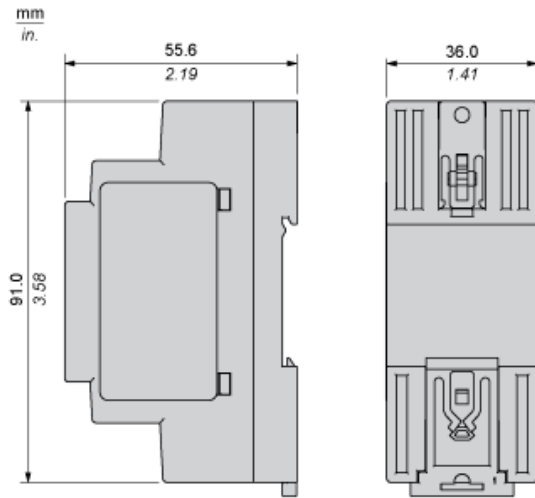
Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS declaration
Environmental Disclosure	Product 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 t
- 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 disconn
- The power supply is only suitable for audio, video, information, communication, industrial and control equipment.

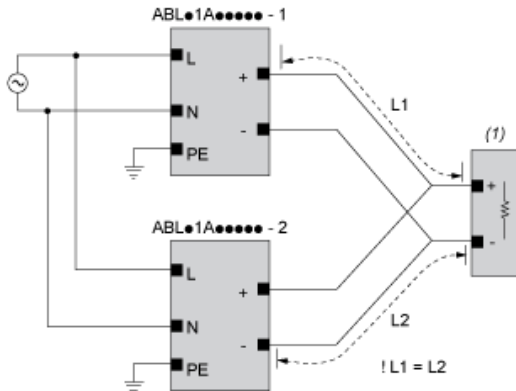
Dimensions

Side and Rear View



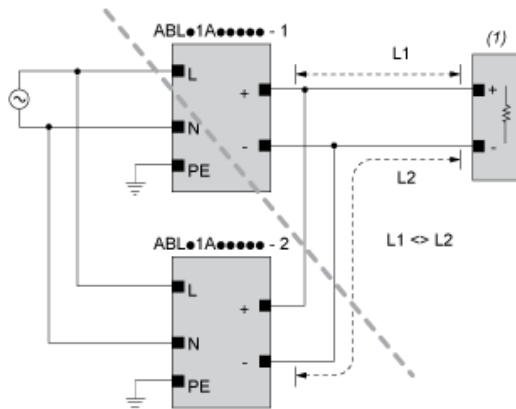
Connections and Schema

Correct Parallel Connection



(1): Load

Incorrect Parallel Connection



(1): Load

$ABLx1Axxxxx-1 = ABLx1Axxxxx-2$

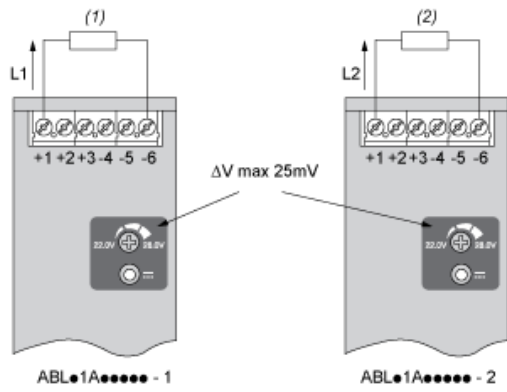
max 2 x ABLx1Axxxxx

$L1 = L2$

ΔV max 25 mV

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

Output Voltage Balancing

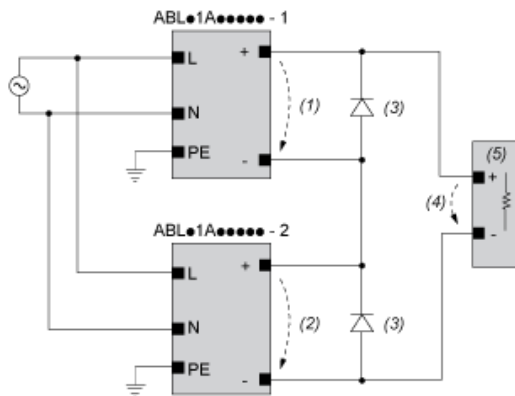


- (1): R_{Load1}
 (2): R_{Load2}

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

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

Series Connection



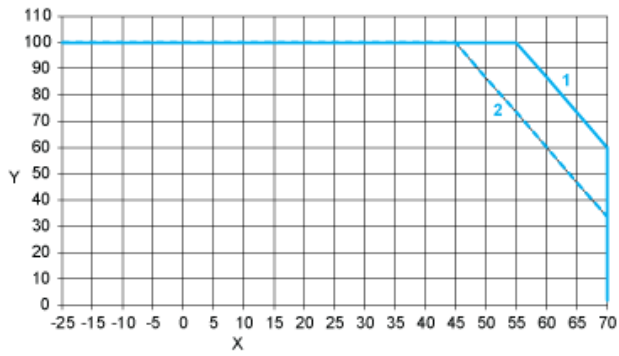
- (1): V_{out1}
 (2): V_{out2}
 (3): $2 \times \text{Diode}, V_{RRM} > 2 \times V_{out1/2}, I_F > 2 \times I_{nom1/2}$
 (4): $V_{Load} = 2 \times V_{out}$
 (5): Load

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

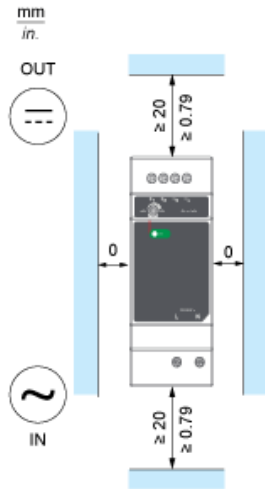
Performance Curve



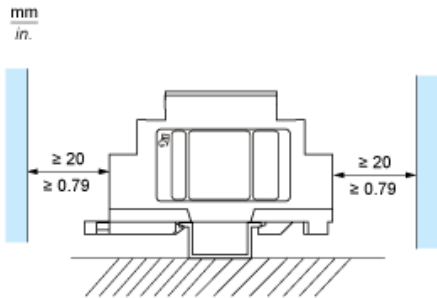
- X : Ambient Temperature (°C)
- Y : Percentage of Max Load (%)
- 1 : Mounting A & B, altitude 2000M
- 2 : Mounting A & B, altitude 5000M

Mounting

Mounting Position A



Mounting Position B



Incorrect Mounting

