



Regulated Power Supply, 100-240V AC, 24V 0.4 A, single phase, Modular

ABLM1A24004

EAN Code: 3606481500106

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	100240 V AC single phase 100240 V AC phase to phase	
Rated power in W	10 W	
Output voltage	24 V DC	
Power supply output current	0.42 A	

Complementary

Complementary	
Input voltage limits	90264 V AC
Nominal network frequency	5060 Hz
Network system compatibility	TN TT
	п
Maximum leakage current	0.25 mA 240 V AC
Input protection type	Integrated fuse (not interchangeable) 1 A
	External protection (recommended) 20 A Curve B
	External protection (recommended) 20 A Curve C External protection (recommended) 2 A Curve B
	External protection (recommended) 2 A Curve C
	,,
Inrush current	15 A at 115 V
	30 A at 230 V
Power factor	0.52 at 115 V AC
	0.40 at 230 V AC
Efficiency	80 % at 115 V AC
	80 % at 230 V AC
Power dissipation in W	2.5 W
Current consumption	< 0.3 A 115 V AC
	< 0.2 A 230 V AC
Turn-on time	<2s
Holding time	> 10 ms 115 V AC
	> 60 ms 230 V AC
Startup with capacitive loads	3000 μF
Residual ripple	< 100 mV

Meantime between failure [MTBF]	5000000 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 or automatic reset Against overvoltage, protection technology: manual or automatic reset		
Connections - terminals	Screw connection: 0.51.5 mm², (AWG 20AWG 16) without wire end ferrule for input/output Screw connection: 0.51 mm², (AWG 20AWG 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	18 mm		
Net weight	0.099 kg		
Output coupling	Serial		
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			

Environment

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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			
	CUL listed			
	CUL recognized			
	RCM			
	CB Scheme			
	EAC			
	KC			
	NEC: class 2			
Operating altitude	< 2000 m overvoltage category III			
	2000 m5000 m overvoltage category II			
Shock resistance	150 m/s² for 11 ms			
IP degree of protection	IP20			

Ambient air temperature for operation	-2555 °C without current derating mounting position A < 2000 m 5570 °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= 29 Hz) conforming to IEC 60721-3-3 10 m/s² (f= 9200 Hz) conforming to IEC 60721-3-3				
Electromagnetic immunity	Immunity to electrostatic discharge - test level: 8 kV (contact discharge) conforming to IEC 61000-4-2 Immunity to electrostatic discharge - test level: 15 kV (air discharge) conforming to				
	IEC 61000-4-2 Electromagnetic field immunity test - test level: 15 V/m (80 MHz2 GHz) conforming to IEC 61000-4-3				
	Electromagnetic field immunity test - test level: 5 V/m (22.7 GHz) conforming to IEC 61000-4-3				
	Electromagnetic field immunity test - test level: 5 V/m (2.76 GHz) conforming to IEC 61000-4-3				
	Immunity to fast transients - test level: 4 kV (on input-output) conforming to IEC 61000-4-4				
	Surge immunity test - test level: 4 kV (between power supply and earth) conforming to IEC 61000-4-5				
	Surge immunity test - test level: 3 kV (between phases) conforming to IEC 61000-4-5 Immunity to conducted disturbances - test level: 15 V (0.1580 MHz) conforming to IEC 61000-4-6				
	Immunity to magnetic fields - test level: 30 A/m (5060 Hz) conforming to IEC 61000-4-8				
	Immunity to voltage dips - test level: 100 % (1 cycle) conforming to IEC 61000-4-11 Immunity to voltage dips - test level: 60 % (10 cycles) conforming to IEC 61000-4-11 Immunity to voltage dips - test level: 30 % (25 cycles) 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				
Electromagnetic emission	Conducted emissions conforming to IEC 61000-6-3 Radiated emissions conforming to IEC 61000-6-4				

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.000 cm
Package 1 Width	9.000 cm
Package 1 Length	14.000 cm
Package 1 Weight	111.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	28
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	3.365 kg
Unit Type of Package 3	P06
Number of Units in Package 3	448
Package 3 Height	75.000 cm
Package 3 Width	60.000 cm
Package 3 Length	80.000 cm
Package 3 Weight	61.840 kg

Contractual warranty

Warranty

18 months



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Transparency RoHS/REACh

Well-being performance



Mercury Free



Rohs Exemption Information

Yes

Certifications & Standards

Reach Regulation	REACh Declaration		
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)		
China Rohs Regulation	China RoHS declaration		
Environmental Disclosure	Product Environmental Profile		
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins		
Circularity Profile	End of Life Information		

Product datasheet

ABLM1A24004

Dimensions Drawings

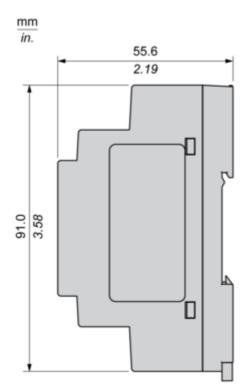
Electrical Safety

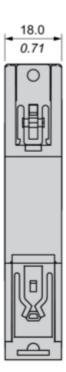
- If the unit is use in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- For means of disconnection a switch or circuit breaker, located near the product, must be included in the installation. A marking as disconnecting device for the product is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

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Dimensions

Side and Rear View

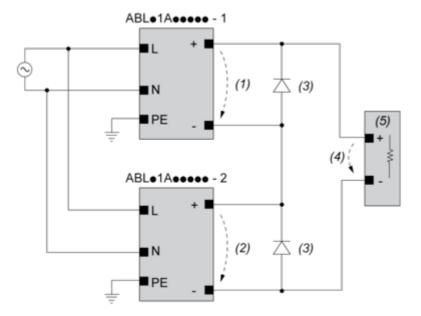




Connections and Schema

Connections and Schema

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

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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
ABEMINOOOO	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

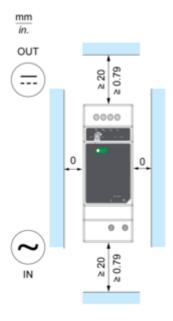
(1): Ambient

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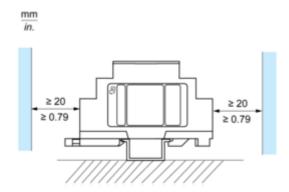
Mounting and Clearance

Mounting

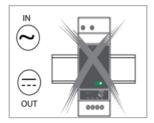
Mounting Position A

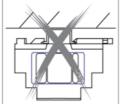


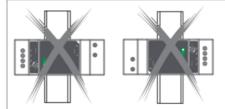
Mounting Position B



Incorrect Mounting





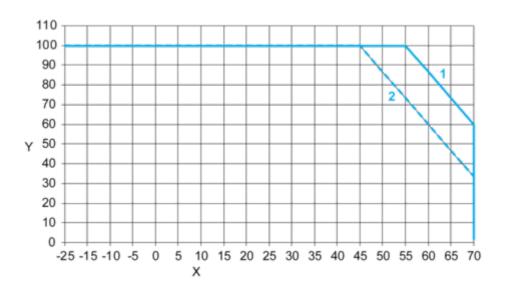


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Performance Curves

Performance Curve



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

Image of product / Alternate images

Alternative











