



Modicon Power Supply

Power supply for commercial use,
Panel mount



Modicon

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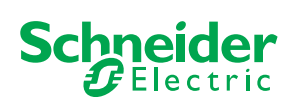
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Modicon IIoT-native edge controllers manage complex interfaces across assets and devices or directly into the cloud, with embedded safety and cybersecurity. Modicon provides performance and scalability for a wide range of industrial applications up to high-performance multi-axis machines and high-available redundant processes.

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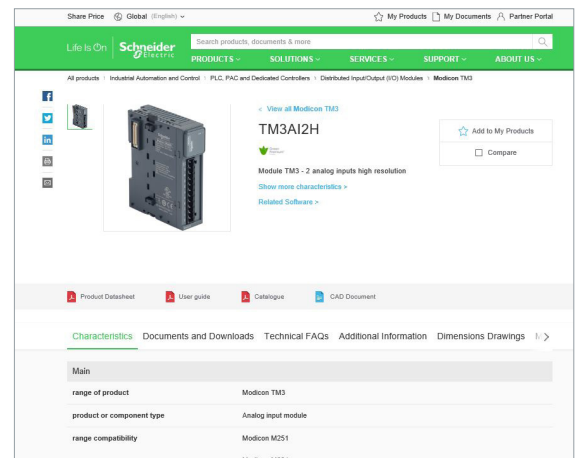
Quick access to product information

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References

Modicon TM3
I/O expansion modules for Modicon controllers
Analog I/O modules

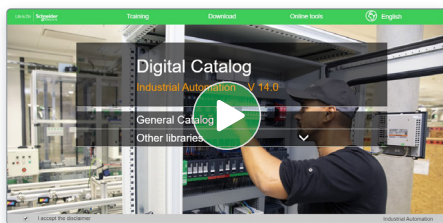
Number and type of channels	Input range	Resolution	Input format (internal product)	Reference	Weight (kg)
2 voltage/current inputs	-15...+10 VDC 0...20 mA A, 20 mA	16,000 or 10,000 1/2	0/0/0/0 0/0/0/0	TM3AI2H TM3AI2HG	0.110 0.100
4 voltage/current inputs	-15...+10 VDC 0...20 mA A, 20 mA	12,000 or 10,000 1/2	0/0/0/0 0/0/0/0	TM3AI4 TM3AI4G	0.100 0.100
4 voltage/current or temperature inputs (I ² C, N, S, T, A, E, C, I, Pt100, RTD, Ni100, Pt1000)	-15...+10 VDC 0...20 mA A, 20 mA	16,000 or 10,000 1/2	0/0/0/0 0/0/0/0	TM3AI4T TM3AI4TG	0.110 0.100
4 differential temperature inputs (I ² C, N, S, T, A, E, C, I, Pt100, RTD, Ni100, Pt1000)	-15...+10 VDC 0...20 mA A, 20 mA	16,000 or 10,000 1/2	0/0/0/0 0/0/0/0	TM3AI4D TM3AI4DG	0.110 0.100
8 voltage/current	-15...+10 VDC	12,000 or 10,000 1/2	0/0/0/0 0/0/0/0	TM3AI8 TM3AI8G	0.110 0.110



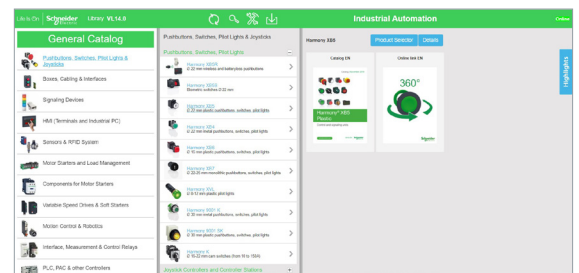
Each commercial reference presented in a catalog contains a hyperlink. Click on it to obtain the technical information of the product:

- Characteristics, Dimensions and drawings, Mounting and clearance, Connections and schemas, Performance curves
- Product image, Instruction sheet, User guide, Product certifications, End of life manual

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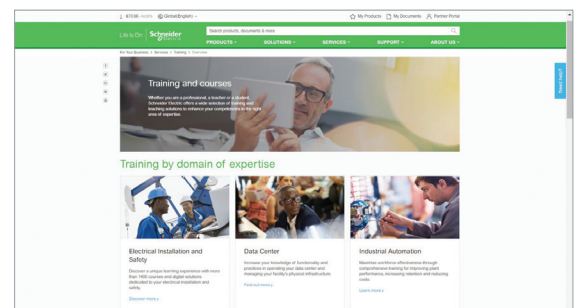


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Content

Modicon Power Supply for commercial use, Panel mount

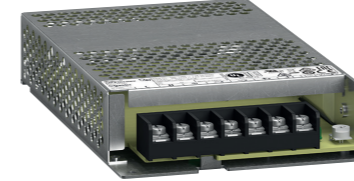
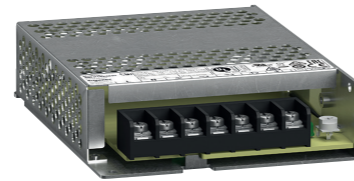
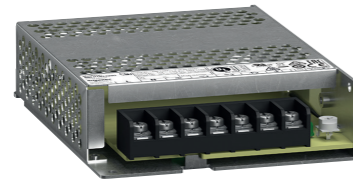
Modicon ABLP

Selection guide	page 2
■ Presentation	page 4
■ Description	page 4
■ Protective extra low voltage (PELV) and Safety extra low voltage (SELV)	page 5
■ Harmonic pollution (power factor)	page 5
■ Output characteristics and conditions of use	page 5
■ Selection of protection	page 6
■ References	page 6
■ Mounting positions	
- Mounting on panel	page 7
- Mounting on DIN rail	page 7
■ Product reference index	page 8

Modicon Power Supply

Power supply for commercial use, Panel mount
Modicon ABLP Power Supply

Input voltage	100...240 Vac		100...120 Vac / 200...240 Vac		100...240 Vac	
Nominal output power	100 W	100 W	150 W		240 W	



Connection to world-wide line supplies	United States: 120 V (in phase-to-neutral) / 240 V (in phase-to-phase)	Single-phase (N-L1) or 2-phase (L1-L2) connection	Single-phase (N-L1) or 2-phase (L1-L2) connection		
	Europe: 230 V (in phase-to-neutral) / 400 V (in phase-to-phase)	Single-phase (N-L1)	Single-phase (N-L1)		
	United States: 277 V (in phase-to-neutral) / 480 V (in phase-to-phase)	–	–		

Protection against overloads and short-circuits	Yes, with automatic restart after the source of overload/short-circuit has been corrected		Yes, with automatic restart after the source of overload/short-circuit has been corrected		
Diagnostic relay	–		–	–	
Power reserve (Boost)	–		–	–	
IEC/EN 61000-3-2 conformity	Yes		Yes		
Certifications (1)	<ul style="list-style-type: none"> - CE marking - CB-Scheme - cULus Listed - cURus Recognized - RCM - EAC 		<ul style="list-style-type: none"> - CE marking - CB-Scheme - cULus Listed - cURus Recognized - RCM - EAC 		<ul style="list-style-type: none"> - CE marking - CB-Scheme - cULus Listed - cURus Recognized - RCM - EAC

Power supply type	Modicon ABLP power supply				
Output voltage	12 V	ABLP1A12085			
	24 V		ABLP1A24045	ABLP1A24062	ABLP1A24100

Page	6	6
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(1) Please consult detail on conformity to standards for each reference in the product data sheet, click on [product reference](#) to open it.

Modicon ABLP power supply

Presentation

The Modicon ABLP Panel mount power supplies are designed to supply control circuits in commercial applications from 100 W up to 240 W.

■ The range includes four commercial references compliant with IEC 61000-3-2, allowing them to be used even on public distribution networks. Industrial use is also possible

■ Installation flexibility: up to 12 threads for fixing screws (1) are distributed on two sides of the Modicon ABLP power supplies. These threads allow mounting on panel and additionally mounting on DIN rails (Omega) with ABLPA01 and ABLPA02 accessories.

Main Features

Nominal input voltage ■ 100...240 Vac (100 W and 240 W type)
■ 100...120 Vac and 200...240 Vac (150 W type)

Network system compatibility TN, TT, IT

Nominal output voltage 12 Vdc (100 W type)
24 Vdc (100 W, 150 W and 240 W type)

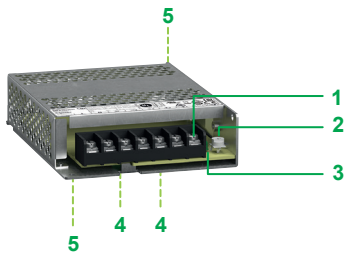
Operating temperature -30°C ... +70°C (-22...158°F) (100 W and 150 W type) (2)
-10°C...+70°C (14...158°F) (240 W type) (2)

Operating altitude 0...2000 m (6561.6 ft)
0...5000 m (16404.2 ft) with Derating (5)

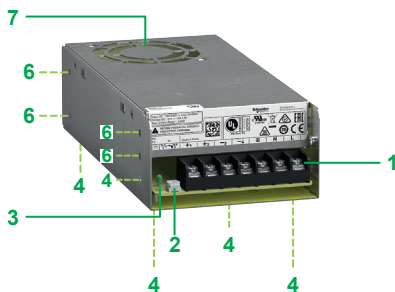
IP degree of protection IP10

Product certifications CE marking
 CB-Scheme (3)
 cULus Listed (3)
 cURus Recognized (3)
 RCM
 EAC

Conformity to standards IEC/EN 62368-1
 IEC/EN 61010-1
 UL/CSA 61010-1
 UL/CSA 61010-2-201
 IEC/EN 61204-3
 IEC 60335-1 (4)



ABLP1A12085, ABLP1A24045, ABLP1A24062



ABLP1A24100

Description

- 1 Screw clamp terminal block for connecting the input and output voltages
- 2 Output voltage adjustment potentiometer ($\pm 10\%$)
- 3 Green LED indicating presence of the DC output voltage
- 4 Fixing thread for M3 screws
- 5 Fixing hole $\varnothing 3.5$ mm (0.14 inch)
- 6 Fixing thread for M4 screws
- 7 Ventilation fan

(1) Consult the possible operating positions on [page 6](#).

(2) Derating for temperature from 35 to 50°C (95 to 122°F) depending on mounting position, consult the [product data sheet](#) ([click on product reference to open it](#)).

(3) The certification is valid for 3 positions, see [page 7](#) for allowed positions.

(4) 100 W type only.

(5) Derating for altitude greater than 2000 m (6561.6 ft), consult the [product data sheet](#) ([click on product reference to open it](#)).

Modicon ABLP power supply

Protective extra low voltage (PELV) and Safety extra low voltage (SELV)

The Modicon power supplies can be used to supply protective extra low voltage (PELV) or safety extra low voltage (SELV) control circuits in compliance with standard IEC/EN 60364-4-41.

They have the following characteristics:

- Double insulated between the input circuit (connected to the line supply) and the low voltage output circuit via an integrated isolation transformer
- Internal circuitry limiting the output voltage to less than 60 V under single fault conditions

Harmonic pollution (power factor)

The current drawn by a power supply is not sinusoidal. This leads to the generation of harmonic currents that pollute the distribution network.

European standard IEC/EN 61000-3-2 limits the harmonic currents produced by power supplies.

This standard covers devices between 75 and 1000 W, drawing up to 16 A per phase, and connected directly to the public distribution network.

Modicon ABLP power supplies conform to IEC/EN 61000-3-2 and can therefore be connected directly to public distribution networks.

Output characteristics and conditions of use

The ambient temperature is a determining factor that limits the power an electronic power supply can deliver continuously.

If the temperature around the electronic components is too high, the integrated overtemperature protection could activate and/or the lifetime of the power supply may be significantly reduced.

Depending on product type and mounting position, the upper nominal ambient temperature is 35, 40, 45 or 50 °C (95, 104, 113 or 122°F) at 230 Vac input voltage. Above this temperature or with different input voltages, derating is necessary up to a maximum temperature of 70 °C (158 °F).

In most cases, there must be adequate convection and sufficient clearance around the products to assist cooling.

Derating is also necessary in case of altitudes greater than 2000 m (6561.6 ft). The derating curves are given in each product data sheet, available on our website. It is considered good practice to select a power supply with a nominal output current at least 20% greater than required.



ABLP1A12085



ABLP1A24045



ABLP1A24062



ABLPA01



ABLP1A24100



ABLPA02

Modicon ABLP power supply

Selection of protection on the power supply primary

The device is designed, tested and approved for branch circuits up to 16 A (IEC) and 20 A (UL) without additional protection devices. If external protection is used, do not use circuit breakers smaller than those indicated in the table below to avoid spurious over-current/short-circuit detection by the circuit breaker. Use the Acti9 iC60 range of Miniature Circuit Breakers (1).

Modicon ABLP power supply	Type of protection
ABLP1A12085	10 A, C-curve or 13 A, B-curve
ABLP1A24045	10 A, C-curve or 13 A, B-curve
ABLP1A24062	10 A, C-curve or 13 A, B-curve
ABLP1A24100	10 A, C-curve or 13 A, B-curve

References

Modicon ABLP power supply						
Input voltage	Secondary			Reset after overload or short circuit (3)	Reference	Weight kg/lb
	Output voltage	Nominal power (2)	Nominal current			
100...240 Vac - 10%, + 10% 50/60 Hz	12 Vdc	100 W	8.5 A	Auto.	ABLP1A12085	0.300 0.661
	24 Vdc	100 W	4.5 A	Auto.	ABLP1A24045	0.300 0.661
100...120 Vac / 200...240 Vac - 10%, + 10% 50/60 Hz	24 Vdc	150 W	6.2 A	Auto.	ABLP1A24062	0.360 0.793
	24 Vdc	240 W	10 A	Auto.	ABLP1A24100	0.850 1.873

Mounting accessories

Description	For use with	Unit reference	Weight kg/lb
Mounting kits: mounting plate for 35 mm (1.37 in.) DIN rail (4)	ABLP1A12085, ABLP1A24045, ABLP1A24062	ABLPA01	0.085/ 0.187
	ABLP1A24100	ABLPA02	0.035/ 0.077

Substitution of Phaseo ABL1 with Modicon ABLP power supply

Old reference (End of commercialization)	Replaced with ABLP reference
ABL1REM12050	ABLP1A12085
ABL1RPM12083	
ABL1REM24025	ABLP1A24045
ABL1REM24042	
ABL1RPM24042	
ABL1REM24062	ABLP1A24062
ABL1RPM24062	
ABL1REM24100	ABLP1A24100
ABL1RPM24100	

Note: in case of substitution into an existing machine, the external protection has to be adapted also.

(1) More information on Acti9 iC60 range on our [website](#).

(2) Nominal power given for mounting on Vertical plane (mounting B position, see [page 7](#)), for 230 Vac input voltage and for +50°C (131°F) ambient temperature. For other temperatures and mounting positions, consult the product data sheet (click on [product reference](#) to open it).

(3) In case of overtemperature or overvoltage the input voltage must be cycled to reset the detected error.

(4) Provided with screws to fix the plate on the power supply.

Modicon ABLP power supply

Mounting positions

On panel



Position	A
Fixing screws	On side
Certifications	UL, CB, CE
Max. temperature without derating (1)	
ABLP1A12085	50°C (122°F)
ABLP1A24045	50°C (122°F)
ABLP1A24062	Not possible
ABLP1A24100	50°C (122°F)



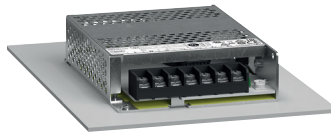
Position	B
Fixing screws	On base
Certifications	UL, CB, CE
Max. temperature without derating (1)	
ABLP1A12085	50°C (122°F)
ABLP1A24045	50°C (122°F)
ABLP1A24062	50°C (122°F)
ABLP1A24100	50°C (122°F)



Position	C
Fixing screws	On side
Certifications	UL, CB, CE
Max. temperature without derating (1)	
ABLP1A12085	45°C (113°F)
ABLP1A24045	45°C (113°F)
ABLP1A24062	Not possible
ABLP1A24100	50°C (122°F)



Position	F
Fixing screws	On base
Certifications	CE
Max. temperature without derating (1)	
ABLP1A12085	45°C (113°F)
ABLP1A24045	50°C (122°F)
ABLP1A24062	40°C (104°F)
ABLP1A24100	50°C (122°F)

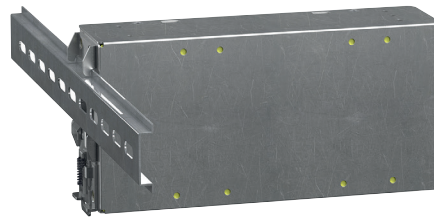


Position	G
Fixing screws	On base
Certifications	CE
Max. temperature without derating (1)	
ABLP1A12085	50°C (122°F)
ABLP1A24045	50°C (122°F)
ABLP1A24062	50°C (122°F)
ABLP1A24100	50°C (122°F)

On DIN rail (Omega)



Position	H
Certifications	CE
Max. temperature without derating (1)	
ABLP1A12085 + ABLPA01	40°C (104°F)
ABLP1A24045 + ABLPA01	40°C (104°F)
ABLP1A24062 + ABLPA01	35°C (95°F) (2)



Position	D1
Certifications	CE
Max. temperature without derating (1)	
ABLP1A24100 + ABLPA02	50°C (122°F)



Position	D2
Certifications	CE
Max. temperature without derating (1)	
ABLP1A24100 + 2x ABLPA02	50°C (122°F)

(1) Values given for input voltage higher than 115 Vac and altitude lower than 2000 m (6561.67 ft). For other values, consult the derating curves on the product data sheets (click on [product reference](#) to open it).

(2) This mounting position is only possible for input voltage setting 230 V.

A	
ABL1REM12050	6
ABL1REM24025	6
ABL1REM24042	6
ABL1REM24062	6
ABL1REM24100	6
ABL1RPM12083	6
ABL1RPM24042	6
ABL1RPM24062	6
ABL1RPM24100	6
ABLP1A12085	6 7
ABLPA01	7
ABLP1A24045	6 7
ABLP1A24062	6 7
ABLP1A24100	6 7
ABLPA02	7
ABLPA01	6
ABLPA02	6

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Schneider Electric Industries SAS

Head Office
35, rue Joseph Monier - CS 30323
F-92500 Rueil-Malmaison Cedex
France

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