



# Modicon Power Supply

Power supply for commercial use,  
Panel mount



# Modicon

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# Quick access to product information

## Get technical information about your product

**References**

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

Number and type of channels	Input range	Resolution	Aperture time (typical)	Reference	Weight (kg)
2 voltage/current inputs	-15...+15 VDC 0...20 mA r.t. 20 mA	16,000 or 10,000 r.t.	0.005 s 0.005 s	TM3AI2H TM3AI2HG	0.110 0.100
4 voltage/current inputs	-15...+15 VDC 0...20 mA r.t. 20 mA	12,000 or 10,000 r.t.	0.005 s 0.005 s	TM3AI4 TM3AI4G	0.100 0.100
4 voltage/current or temperature inputs (T)	-15...+15 VDC 0...20 mA r.t. 20 mA	16,000 or 10,000 r.t.	0.005 s 0.005 s	TM3AI4T TM3AI4TG	0.110 0.100
4 differential temperature inputs (T)	0...125 °C 0...125 °C	16,000 or 10,000 r.t.	0.005 s 0.005 s	TM3TI4 TM3TI4G	0.110 0.100
8 self-diagnosing	-15...+15 VDC	12,000 or 10,000 r.t.	0.005 s 0.005 s	TM3AI8 TM3AI8G	0.110 0.110

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**TM3AI2H**

Module TM3 - 2 analog inputs high resolution

Show more characteristics >

Related Software >

Product Datasheet User guide Catalogue CAD Document

Characteristics Documents and Downloads Technical FAQs Additional Information Dimensions Drawings >

Main

range of product Modicon TM3

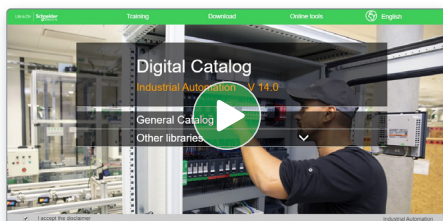
product or component type Analog input module

range compatibility Modicon M251

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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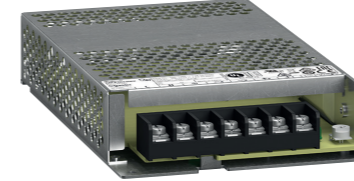
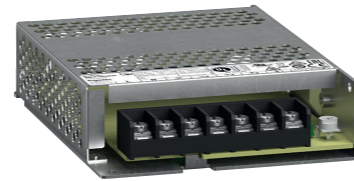
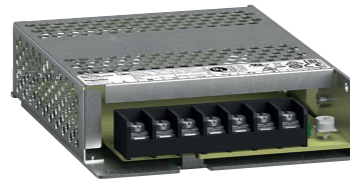
Modicon ABLP

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# Modicon Power Supply

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

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



<b>Connection to world-wide line supplies</b>	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)	–	–		

<b>Protection against overloads and short-circuits</b>	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		
<b>Diagnostic relay</b>	–		–	–	
<b>Power reserve (Boost)</b>	–		–	–	
<b>IEC/EN 61000-3-2 conformity</b>	Yes		Yes		
<b>Certifications (1)</b>	<ul style="list-style-type: none"> <li>- CE marking</li> <li>- CB-Scheme</li> <li>- cULus Listed</li> <li>- cURus Recognized</li> <li>- RCM</li> <li>- EAC</li> </ul>		<ul style="list-style-type: none"> <li>- CE marking</li> <li>- CB-Scheme</li> <li>- cULus Listed</li> <li>- cURus Recognized</li> <li>- RCM</li> <li>- EAC</li> </ul>		<ul style="list-style-type: none"> <li>- CE marking</li> <li>- CB-Scheme</li> <li>- cULus Listed</li> <li>- cURus Recognized</li> <li>- RCM</li> <li>- EAC</li> </ul>

<b>Power supply type</b>	Modicon ABLP power supply				
<b>Output voltage</b>	12 V	<a href="#">ABLP1A12085</a>			
	24 V		<a href="#">ABLP1A24045</a>	<a href="#">ABLP1A24062</a>	<a href="#">ABLP1A24100</a>

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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

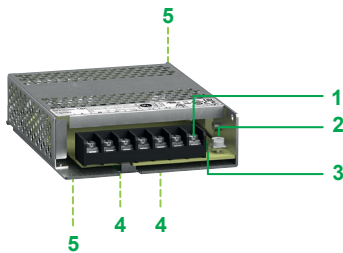
### Presentation

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

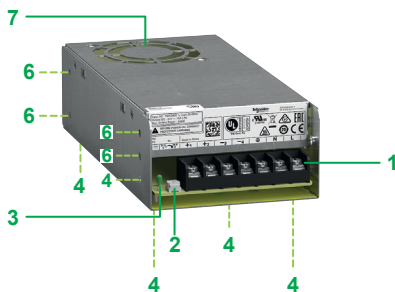
- The range includes four commercial references compliant with IEC 61000-3-2, allowing them to be used even on public distribution networks. Industrial use is also possible
- Installation flexibility: up to 12 threads for fixing screws (1) are distributed on two sides of the Modicon ABLP power supplies. These threads allow mounting on panel and additionally mounting on DIN rails (Omega) with ABLPA01 and ABLPA02 accessories.

### Main Features

Nominal input voltage	<ul style="list-style-type: none"> <li>■ 100...240 Vac (100 W and 240 W type)</li> <li>■ 100...120 Vac and 200...240 Vac (150 W type)</li> </ul>
Network system compatibility	TN, TT, IT
Nominal output voltage	<ul style="list-style-type: none"> <li>12 Vdc (100 W type)</li> <li>24 Vdc (100 W, 150 W and 240 W type)</li> </ul>
Operating temperature	<ul style="list-style-type: none"> <li>-30°C ... +70°C (-22...158°F) (100 W and 150 W type) (2)</li> <li>-10°C...+70°C (14...158°F) (240 W type) (2)</li> </ul>
Operating altitude	<ul style="list-style-type: none"> <li>0...2000 m (6561.6 ft)</li> <li>0...5000 m (16404.2 ft) with Derating (5)</li> </ul>
IP degree of protection	IP10
Product certifications	<ul style="list-style-type: none"> <li><input type="checkbox"/> CE marking</li> <li><input type="checkbox"/> CB-Scheme (3)</li> <li><input type="checkbox"/> cULus Listed (3)</li> <li><input type="checkbox"/> cURus Recognized (3)</li> <li><input type="checkbox"/> RCM</li> <li><input type="checkbox"/> EAC</li> </ul>
Conformity to standards	<ul style="list-style-type: none"> <li><input type="checkbox"/> IEC/EN 62368-1</li> <li><input type="checkbox"/> IEC/EN 61010-1</li> <li><input type="checkbox"/> UL/CSA 61010-1</li> <li><input type="checkbox"/> UL/CSA 61010-2-201</li> <li><input type="checkbox"/> IEC/EN 61204-3</li> <li><input type="checkbox"/> IEC 60335-1 (4)</li> </ul>



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.



ABLPA12085



ABLPA24045



ABLPA24062



ABLPA01



ABLPA24100



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
<a href="#">ABLPA12085</a>	10 A, C-curve or 13 A, B-curve
<a href="#">ABLPA24045</a>	10 A, C-curve or 13 A, B-curve
<a href="#">ABLPA24062</a>	10 A, C-curve or 13 A, B-curve
<a href="#">ABLPA24100</a>	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.	<a href="#">ABLPA12085</a>	0.300 0.661
	24 Vdc	100 W	4.5 A	Auto.	<a href="#">ABLPA24045</a>	0.300 0.661
100...120 Vac / 200...240 Vac - 10%, + 10% 50/60 Hz	24 Vdc	150 W	6.2 A	Auto.	<a href="#">ABLPA24062</a>	0.360 0.793
100...240 Vac - 10%, + 10% 50/60 Hz	24 Vdc	240 W	10 A	Auto.	<a href="#">ABLPA24100</a>	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)	ABLPA12085, ABLPA24045, ABLPA24062	<a href="#">ABLPA01</a>	0.085/ 0.187
	ABLPA24100	<a href="#">ABLPA02</a>	0.035/ 0.077

### Substitution of Phaseo ABL1 with Modicon ABLP power supply

Old reference (End of commercialization)	Replaced with ABLP reference
<a href="#">ABL1REM12050</a>	<a href="#">ABLPA12085</a>
<a href="#">ABL1RPM12083</a>	
<a href="#">ABL1REM24025</a>	<a href="#">ABLPA24045</a>
<a href="#">ABL1REM24042</a>	
<a href="#">ABL1RPM24042</a>	
<a href="#">ABL1REM24062</a>	<a href="#">ABLPA24062</a>
<a href="#">ABL1RPM24062</a>	
<a href="#">ABL1REM24100</a>	<a href="#">ABLPA24100</a>
<a href="#">ABL1RPM24100</a>	

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



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



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



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

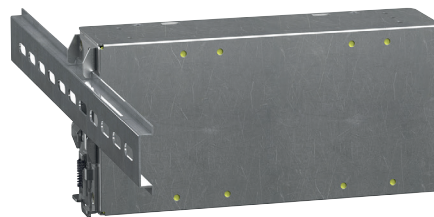


Position	<b>G</b>
Fixing screws	On base
Certifications	CE
<b>Max. temperature without derating (1)</b>	
ABLP1A12085	50°C (122°F)
ABLP1A24045	50°C (122°F)
ABLP1A24062	50°C (122°F)
ABLP1A24100	50°C (122°F)

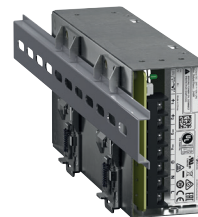
On DIN rail (Omega)



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



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



Position	<b>D2</b>
Certifications	CE
<b>Max. temperature without derating (1)</b>	
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	
<a href="#">ABL1REM12050</a>	6
<a href="#">ABL1REM24025</a>	6
<a href="#">ABL1REM24042</a>	6
<a href="#">ABL1REM24062</a>	6
<a href="#">ABL1REM24100</a>	6
<a href="#">ABL1RPM12083</a>	6
<a href="#">ABL1RPM24042</a>	6
<a href="#">ABL1RPM24062</a>	6
<a href="#">ABL1RPM24100</a>	6
<a href="#">ABLP1A12085</a>	6 7
<a href="#">ABLPA01</a>	7
<a href="#">ABLP1A24045</a>	6 7
<a href="#">ABLP1A24062</a>	6 7
<a href="#">ABLP1A24100</a>	6 7
<a href="#">ABLPA02</a>	7
<a href="#">ABLPA01</a>	6
<a href="#">ABLPA02</a>	6

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