Regulated switch mode power supplies

Phaseo Easy ABL2

Catalog

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Schneider Electric

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Presentation

The Phaseo Easy ABL2 electronic switch mode power supply offer is designed to provide the DC voltage necessary for electrical equipment operating in a low voltage automation and control system (PLC, HMI, sensors, etc.).

Our products incorporate advanced technology features: they are compact, and offer high performance and easy maintenance, thus reducing downtime.

■ Phaseo Easy ABL2 power supplies are fully electronic and have a regulated switch mode. The use of electronics makes it possible to significantly improve the efficiency of these power supplies, which offer:
- □ Compact dimensions *(1)*
- □ Wide power range (7 models from 35 to 350 W)
- □ High degree of output voltage stability (precision: ± 1%)
- □ Proven performance (MTBF over 600K hours)
- □ Diagnostics via LEDs at the output terminal
- □ 4 quick and simple mounting types

■ These power supplies also provide the following protection functions:
- □ Integrated output/overload/overvoltage and short-circuit protection with Hiccup restart for all models and overtemperature for models from 200 to 350 W
- □ Input overvoltage protection (for 35 to 150 W models)
- □ Protective terminal cover to prevent direct finger contact, helping to protect against electric shock hazards
- □ Specially designed hole in casing to help prevent risk of short-circuit with long screws

■ Phaseo ABL2 power supplies have been awarded the following certifications:
- □ CE, KC, and EAC
- □ EMS immunity pass, heavy industry level, criteria A
- □ EN 55022 EMC pass, class B

■ They also comply with RoHS directives.

Applications

The ABL2 power supplies range is able to meet the needs encountered in standard commercial machines and conforms to worldwide standards.

This range can be widely used with other electronic appliances and systems in the industry. OEMs and panel builders can easily integrate it into their machines or machine control panels.

■ OEMs can integrate these power supplies in simple machines used in the following fields:
- wind power
- textile industry
- packaging
- machine tools
- food industry

■ Panel builders can integrate them in control panels installed in the following fields:
- electric power
- automobile industry
- chemical industry
- municipal buildings
- infrastructure

(1) See page 4.

Phaseo Easy ABL2 regulated switch mode single-phase power supplies

A user-oriented range of products
Control architecture

A user-oriented range of products

Fit for purpose

The Phaseo Easy ABL2 range now features 7 models (from 35 to 350 W) whereas other equivalent ranges on the market typically offer 4 models.

■ The new Phaseo Easy ABL2 power supplies are more compact than previous Phaseo ABL2 versions (up to 20% smaller). They are also smaller than other models currently available on the market, thus saving space inside a cabinet for other electric appliances.

■ Moreover, the high performance of these products (24 V DC stable output) means less downtime and their high-efficiency design means lower energy consumption.

Ease of use throughout the whole life cycle

■ 4 types of mounting are available for more flexibility:
□ direct mounting on back panel
□ mounting on rear 35 mm *(1.37 in.)* ⊔ rails
□ mounting with 4-corner bracket
□ mounting with L-type accessories

■ Phaseo ABL2 power supplies can be mounted quickly and easily owing to the specially designed mounting holes in their casing which help to prevent mistakes.

■ New, improved labeling and packaging help to ensure quick identification and offer a better view of the products (their appearance is printed on the box).

■ For existing installations, non-Schneider power supplies can easily be replaced (same installation dimensions, same mounting hole locations) *(1)*.

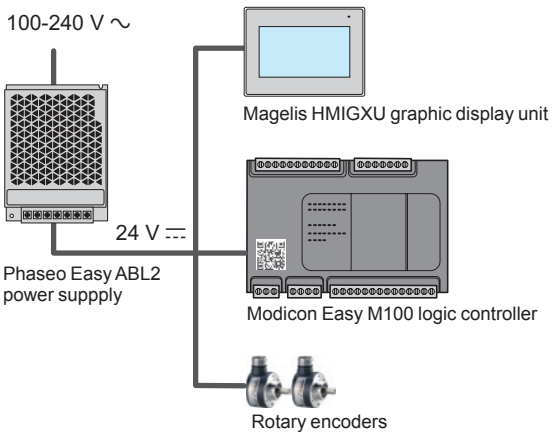
Robustness

■ Phaseo ABL2 power supplies have been designed to meet the majority of customer specifications:
□ They feature short circuit protection as well as overload protection with an auto-recovery mode (automatic protection reset). This means that the protection resets itself automatically on elimination of the detected fault, which avoids the need to take any action or change a fuse.
□ They are equipped with an input voltage (100-240 V ∿) smart switch offering increased performance and durability.
□ They can operate within a wide temperature range.

Widely available

■ Fast delivery through a large distribution network
■ Fast access to information and support through the Partner Relationship Management tool and a dedicated network of engineers

Control architecture



(1) The position of the mounting holes on the casing varies slightly compared with previous ABL2 power supply ranges. Please see dimensions on our website www.schneider-electric.com

Phaseo Easy ABL2 regulated switch mode single-phase power supplies

Main characteristics, description, and dimensions

Main characteristics

- ■ Electrical characteristics:
- □ Input voltage: 100-240 V ∿, single-phase
- □ Output voltage: 24 V ⎓
- □ Efficiency > 88%
- □ Vibration resistance: 4 G

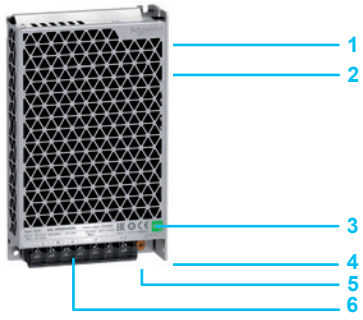
- ■ Environment characteristics:
- □ Ambient air temperature for 150 W model:
  - -30... +45 °C without derating
  - 45... to 70 °C with derating *(1)*
- □ Ambient air temperature for 35 to 100 W and 200 to 350 W models:
  - -30... +50 °C without derating
  - 50... to 70 °C with derating *(1)*
- □ Ambient humidity (around the device): 10...95%
- □ Degree of protection: IP 20 - Insulation class: I
- □ Altitude: 0...5,000 m
- □ Thermal design: more efficient cooling with triangle hole

For more technical information, visit our website www.schneider-electric.com.

Description

Power supplies with natural convection (ABL2REM240●●K)

ABL2REM240●●K switch mode power supplies, with natural convection, have the following on the front panel:



ABL2REM24065K (150 W)

1 100/240 V ∿ input voltage selector (on 150 and 200 W versions only)

2 Four fixing holes for mounting with 4-corner bracket and M3 screws (on 150 and 200 W versions only)

3 Technical information

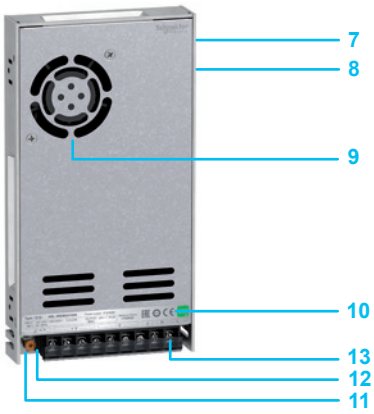
4 A green LED indicating status of the DC output voltages

5 An output voltage adjustment potentiometer (± 15%)

6 A 4 mm^2 screw clamp terminal block (equipped with plastic protective cover as standard) for connection of the AC input voltage and DC output voltage

Power supplies with forced air cooling by built-in DC fan (ABL2REM241●0K)

ABL2REM241●0K switch mode power supplies, with forced air cooling by built-in DC fan, have the following on the front panel:



ABL2REM241●0K (250 W and 350 W)

7 100/240 V ∿ input voltage selector (on 250 and 350 W versions)

8 Four fixing holes for mounting with 4-corner bracket and M4 screws

9 Built-in DC fan

10 Technical information

11 A green LED indicating status of the DC output voltages

12 An output voltage adjustment potentiometer (± 15%)

13 A 4 mm^2 screw clamp terminal block (equipped with plastic protective cover as standard) for connection of the AC input voltage and DC output voltage

Dimensions (overall)

Phaseo Easy ABL2 power supplies		Dimensions (W x H x D)	
Reference	Power (W)	mm	in.
ABL2REM24015K and 24020K	35 and 50	99 x 82 x 30	*3.90 x 3.23 x 1.17*
ABL2REM24020K	100	129 x 97 x 30	*5.08 x 3.78 x 1.17*
ABL2REM24045K and 24065K	150	159 x 97 x 30	*6.20 x 3.78 x 1.17*
ABL2REM24085K	200	215 x 115 x 30	*4.53 x 8.46 x 1.17*
ABL2REM24100K and 24150K	250 and 350	215 x 115 x 30	*4.53 x 8.46 x 1.17*

(1) Please visit our website www.schneider-electric.com for more information about derating.

Phaseo Easy ABL2 regulated switch mode single-phase power supplies
References and options


ABL2REM24015K


ABL2REM241●0K

Phaseo Easy ABL2 regulated switch mode 24 V ⎓ power supplies

Input voltage	Output voltage	Nominal power	Output current	Automatic protection reset	Voltage switching	Cooling design	Reference	Weight kg *lb*
V	V	W	A					
100...240 ∿	**24** ⎓	35	1.5	Yes	Automatic	Natural convection	**ABL2REM24015K**	0.230 *0.507*
		50	2.2	Yes	Automatic	Natural convection	**ABL2REM24020K**	0.250 *0.551*
		100	4.5	Yes	Automatic	Natural convection	**ABL2REM24045K**	0.350 *0.772*
100...120 ∿ **200...240** ∿	**24** ⎓	150	6.5	Yes	Manual	Natural convection	**ABL2REM24065K**	0.440 *0.970*
		200	8.3	Yes	Manual	Natural convection	**ABL2REM24085K**	0.730 *1.609*
		250	10.5	Yes	Manual	Forced air cooling by built-in DC fan	**ABL2REM24100K**	0.750 *1.653*
		350	14.6	Yes	Manual	Forced air cooling by built-in DC fan	**ABL2REM24150K**	0.790 *1.742*

Options for Phaseo Easy ABL2 power supplies

Type of mounting accessory	Description	For power supplies	Sold in lots of	Unit reference	Weight kg *lb*
4-corner bracket	For direct mounting on back panel Mounting screws not provided. Recommended use: M4 (6 mm/*0.24 in*) or M4 (8 mm/*0.31 in*) screws	ABL2REM24085, ABL2REM24100, ABL2REM24150	40	**ABL2K01**	0.003 *0.007*
Clip-on mounting plate	For mounting on 35 mm *(1.37 in.)* DIN rail	All models	5 *(1)*	**ABL2K02**	0.028 *0.062*
L-type accessories	Size: Small L	ABL2REM24015, ABL2REM24020, ABL2REM24045, ABL2REM24065	1	**ABL2K03A**	0.110 *0.240*
	Size: Big L	ABL2REM24085, ABL2REM24100, ABL2REM24150	1	**ABL2K03B**	0.150 *0.331*


ABL2K01


ABL2K02


ABL2K03A


ABL2K03B

(1) ABL2K02 is a pack of 5 accessories usable on 35 mm (1.37 in.) ⊔ rails. Please note that only 1 accessory is necessary for mounting a 35 to 150 W power supply but 2 accessories are needed for the other three models (200, 250, and 350 W).

Product reference index

Schneider Electric Industries SAS

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

www.schneider-electric.com

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