

Power supplies

Phaseo ABL8

Single phase and 3-Phase power supplies
230 V to 400 V - 12 W to 1440 W

Catalog

June 2018



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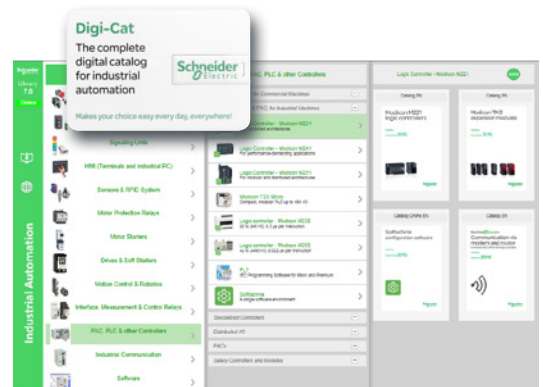
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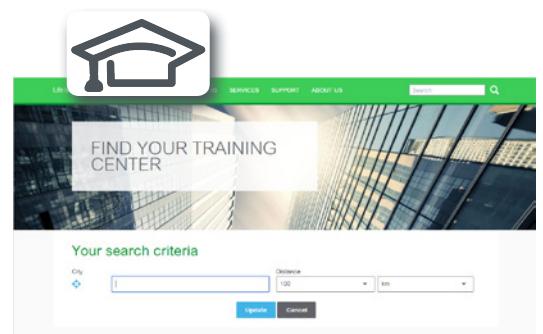
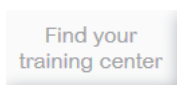


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Power supplies

Phaseo ABL8

Filtered rectified power supplies ABL8FEQ/8TEQ, 12 to 1440 W - Mounting on panel or rail

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Power supplies

Phaseo ABL8

ABL8FEQ/ABL8TEQ filtered rectified power supplies,
12 to 1440 W - Rail or panel mounting



ABL8FEQ24040



ABL8FEQ●●●●●



ABL8TEQ24●00

ABL8FEQ/ABL8TEQ power supplies

The **ABL8FEQ/ABL8TEQ** range of power supplies is designed to provide the DC voltage required by the control circuits of automation system equipment. Comprising two families, this range meets the needs encountered in industrial, commercial, and residential applications. With phase-to-neutral or 3-phase connection, of the conventional type with rectifier, they provide a quality of output current that is suitable for the loads supplied and compatible with the line supply available in the equipment. Clear guidelines are given for selecting the protection devices that are often used with them to provide a comprehensive, usable solution.

Filtered rectified power supplies

Filtered rectified power supplies are built using a SELV (safety extra low voltage) transformer equipped with a bridge rectifier and smoothing capacitors. With no regulation system, and of simple and rugged construction, their output voltage will withstand line voltage variations and load variations while remaining within the range defined in standard IEC/EN 61131-2. These power supplies are split into two families:

- **ABL8FEQ**, with phase-to-neutral or phase-to-phase connection, rectified and filtered, for connection to European 230/400 V line supplies. Power supplies from 0.5 A to 4 A are available for direct mounting on a DIN rail.
- **ABL8TEQ**, with 3-phase connection, filtered and rectified, which is particularly suitable where a high power level is required for controlling actuators and preactuators. This is especially true for "24 V DC " equipment, or for pilot operation of DC valves and solenoid valves.

Selection of power supplies

Quality of the line supply

Rectified power supplies provide a non-regulated voltage, sensitive to load and line supply fluctuations. They can only be used on good-quality line supplies, with fluctuations limited to -10%...+10% of the nominal value. Graphs showing the output voltage as a function of the current, load, and input voltage for each **ABL8FEQ** and **ABL8TEQ** power supply are available on our website: www.schneider-electric.com. If the quality of the line supply is not suitable for a rectified power supply, a regulated supply must be used.

Harmonic pollution (power factor)

By design, **ABL8FEQ** and **ABL8TEQ** rectified power supplies consume very little harmonic current; they meet the requirements of standard IEC/EN 61000-3-2 and can therefore be connected directly to public distribution systems.

Behavior in the event of short circuits

In the event of an overload or short-circuit, rectified power supplies need a downstream fuse or circuit-breaker to prevent their destruction. **ABL8FEQ** models up to 6 A are equipped with a 5 x 20 glass fuse and do not need any external downstream protection.

Power supplies

Phaseo ABL8

ABL8FEQ/ABL8TEQ filtered rectified power supplies,
12 to 1440 W - Rail or panel mounting

Selection of protection							
ABL8TEQ power supplies: protection of the primary and secondary voltages							
Line supply type		400 V ~ 3-phase, primary voltage				24 V $\overline{\text{---}}$, secondary voltage	
Type of protection	Nominal power	3-pole thermal-magnetic circuit breaker TeSys	Miniature circuit breaker Multi9 C60 (IEC, UL/CSA)	UL listed FNQ type fuse	aM type fuse	gC type fuse	T type fuse
ABL8TEQ24100	240 W	GV2RT04	M9F23302	0.8 A	1 A	12 A	12 A
ABL8TEQ24200	480 W	GV2RT06	M9F23302	1.5 A	1 A	25 A	25 A
ABL8TEQ24300	720 W	GV2RT07	M9F23302	2 A	2 A	40 A	–
ABL8TEQ24400	960 W	GV2RT07	M9F23302	3 A	2 A	50 A	–
ABL8TEQ24600	1440 W	GV2RT08	M9F23306	4 A	4 A	80 A	–

ABL8FEQ power supplies: protection of the primary and secondary voltages									
Line supply type		400 V ~ single-phase, primary voltage				230 V ~ single-phase, primary voltage			
Type of protection	Nominal power	3-pole thermal-magnetic circuit breaker TeSys	Miniature circuit breaker Multi9 C60 (IEC, UL/CSA)	UL listed FNQ type fuse	aM type fuse	3-pole thermal-magnetic circuit breaker TeSys	Miniature circuit breaker Multi9 C60 (IEC, UL/CSA)	UL listed MDL type fuse	aM type fuse
ABL8FEQ24005	12 W	GB2DB05	M9F23201	0.1 A	0.25 A	GB2CB05 (1)	M9F23170	0.125 A	0.25 A
ABL8FEQ24010	24 W	GB2DB05	M9F23201	0.15 A	0.25 A	GB2CD05 (1)	M9F23170	0.2 A	0.25 A
ABL8FEQ24020	48 W	GB2DB05	M9F23201	0.3 A	0.25 A	GB2DB05 (1) GB2CS05 (1)	M9F23170	0.5 A	0.25 A
ABL8FEQ24040	96 W	GB2DB06	M9F23201	0.5 A	0.5 A	GB2CB06 (1) GB2CD06 (1) GB2DB06 (1) GB2CS06 (1)	M9F23101	1 A	0.5 A
ABL8FEQ24060	144 W	GB2DB06	M9F23201	1 A	0.5 A	GB2CB07 (1)	M9F23101	1.25 A	1 A
ABL8FEQ24100	240 W	GB2DB06	M9F23201	1.25 A	1 A	GB2CD07 (1) GB2DB07 (1) GB2CS07 (1)	M9F23102	2 A	1 A
ABL8FEQ24150	360 W	GB2DB07	M9F23202	2 A	1 A	GB2CB08 (1) GB2CD08 (1) GB2DB08 (1) GB2CS08 (1)	M9F23103	3 A	2 A
ABL8FEQ24200	480 W	GB2DB07	M9F23202	2.5 A	1 A	GB2CB09 (1) GB2CD09 (1) GB2DB09 (1) GB2CS09 (1)	M9F23104	4 A	2 A

Line supply type		24 V $\overline{\text{---}}$, secondary voltage	
Type of protection	Nominal power	gC type fuse	T type fuse
ABL8FEQ24005	12 W	–	0.5 A (internal fuse)
ABL8FEQ24010	24 W	–	1 A (internal fuse)
ABL8FEQ24020	48 W	–	2 A (internal fuse)
ABL8FEQ24040	96 W	–	4 A (internal fuse)
ABL8FEQ24060	144 W	–	6.3 A (internal fuse)
ABL8FEQ24100	240 W	12 A	12 A
ABL8FEQ24150	360 W	20 A	20 A
ABL8FEQ24200	480 W	25 A	25 A

(1) CB: for single-pole circuit breaker with magnetic trip threshold 12 to 16 In; CD: for single-pole + neutral circuit breaker with magnetic trip threshold 12 to 16 In; DB: for 2-pole circuit breaker with magnetic trip threshold 12 to 16 In; CS: for single-pole circuit breaker with magnetic trip threshold 5 to 7 In

References for ABL8FEQ/ABL8TEQ filtered rectified power supplies							
Input voltage	Secondary		Nominal power	Output current	Protection by 5 x 20 fuse	Reference	Weight kg/lb
	Output voltage						
Filtered rectified power supplies							
Single-phase (N-L1) or 2-phase (L1-L2) connection							
230...400 V ~ ± 15 V 50/60 Hz	24 V $\overline{\text{---}}$		12 W	0.5 A	Yes	ABL8FEQ24005	1.280/2.822
			24 W	1 A	Yes	ABL8FEQ24010	1.300/2.866
			48 W	2 A	Yes	ABL8FEQ24020	2.200/4.850
			96 W	4 A	Yes	ABL8FEQ24040	2.900/6.393
			144 W	6 A	Yes	ABL8FEQ24060	4.940/10.891
			240 W	10 A	No	ABL8FEQ24100	7.660/16.887
			360 W	15 A	No	ABL8FEQ24150	8.820/19.445
		480 W	20 A	No	ABL8FEQ24200	13.220/29.145	
3-phase connection (L1-L2-L3)							
400 V ~ ± 20 V 50/60 Hz	24 V $\overline{\text{---}}$		240 W	10 A	No	ABL8TEQ24100	4.720/10.406
			480 W	20 A	No	ABL8TEQ24200	9.900/21.826
			720 W	30 A	No	ABL8TEQ24300	13.000/28.660
			960 W	40 A	No	ABL8TEQ24400	17.500/38.581
			1440 W	60 A	No	ABL8TEQ24600	26.500/58.422
Marking accessory							
Description	Size	Order in multiples of	Unit reference	Weight kg/lb			
Self-adhesive marker tag holder	20 x 10 mm/0.4 in.	50	AR1SB3	0.010/0.022			



ABL8FEQ24005



ABL8TEQ24000

A	
ABL8FEQ24005	3
ABL8FEQ24010	3
ABL8FEQ24020	3
ABL8FEQ24040	3
ABL8FEQ24060	3
ABL8FEQ24100	3
ABL8FEQ24150	3
ABL8FEQ24200	3
ABL8TEQ24100	3
ABL8TEQ24200	3
ABL8TEQ24300	3
ABL8TEQ24400	3
ABL8TEQ24600	3
AR1SB3	3



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