

Power supplies

Phaseo ABL8

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

Catalog

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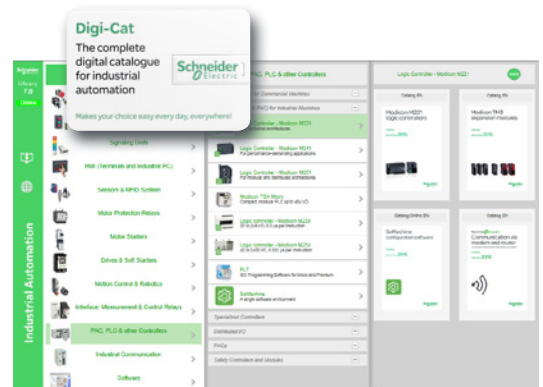
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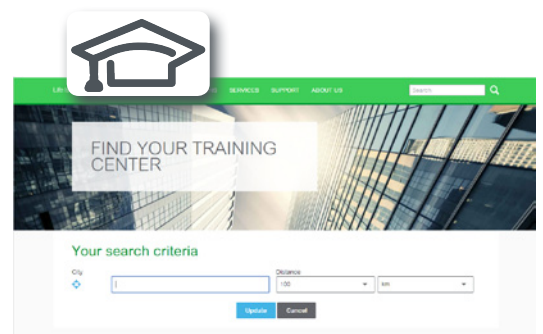
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Phaseo ABL8

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

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Power supplies

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



ABL8FEQ24040



ABL8FEQ●●●●●



ABL8TEQ24●00

ABL8FEQ/8TEQ power supplies

The **ABL8FEQ/8TEQ** range of power supplies is designed to provide the DC voltage necessary for 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 three-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 protection devices which are often used with them, and thus a comprehensive solution is provided.

Filtered rectified power supplies

Filtered rectified power supplies are built using a SELV transformer (Safety Extra Low Voltage) 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 standards IEC/EN 61131-2.

These power supplies are split into two families:

- The **ABL8FEQ** family, with phase-to-neutral or phase-to-phase connection, rectified and filtered, enables connection to European 230/400 V line supplies. Power supplies from 0.5 A to 4 A are available for direct mounting on a rail.
- The **ABL8TEQ** family, with three-phase connection, filtered and rectified, is particularly suitable where a high power level is required for controlling actuators and preactuators. This is especially true for "24 V $\overline{\text{---}}$ " 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, the load and the input voltage for **ABL8FEQ** and **ABL8TEQ** supplies are given on our web site 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 fitted with a 5 x 20 mm glass fuse and do not need any external downstream protection.

Power supplies

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Selection

ABL8TEQ power supplies: protection of the primary and secondary voltages

Type of line supply		400 V ~ 3-phase, primary voltage				24 V ~, secondary voltage	
Type of protection	Nominal power	3-pole thermal-magnetic circuit-breaker		UL listed FNQ type fuse	aM type fuse	gC type fuse	T type fuse
		TeSys	C60N (1)				
ABL8TEQ24100	240 W	GV2RT04	24532	0.8 A	1 A	12 A	12 A
ABL8TEQ24200	480 W	GV2RT06	17470	1.5 A	1 A	25 A	25 A
ABL8TEQ24300	720 W	GV2RT07	24533	2 A	2 A	40 A	—
ABL8TEQ24400	960 W	GV2RT07	24534	3 A	2 A	50 A	—
ABL8TEQ24600	1440 W	GV2RT08	24535	4 A	4 A	80 A	—

ABL8FEQ power supplies: protection of the primary and secondary voltages

Type of line supply		400 V ~ single-phase, primary voltage				230 V ~ single-phase, primary voltage			
Type of protection	Nominal power	3-pole thermal-magnetic circuit-breaker		UL listed FNQ type fuse	aM type fuse	Thermal-magnetic circuit-breaker		UL listed MDL type fuse	aM type fuse
		TeSys	C60N 2 poles (1)			TeSys	C60N 1 pole (1)		
ABL8FEQ24005	12 W	GB2DB05	17451	0.1 A	0.25 A	GB2●●05	17421	0.125 A	0.25 A
ABL8FEQ24010	24 W	GB2DB05	17451	0.15 A	0.25 A	GB2●●05	17421	0.2 A	0.25 A
ABL8FEQ24020	48 W	GB2DB05	17451	0.3 A	0.25 A	GB2●●05	17421	0.5 A	0.25 A
ABL8FEQ24040	96 W	GB2DB06	24516	0.5 A	0.5 A	GB2●●06	24500	1 A	0.5 A
ABL8FEQ24060	144 W	GB2DB06	24516	1 A	0.5 A	GB2●●07	17422	1.25 A	1 A
ABL8FEQ24100	240 W	GB2DB06	24516	1.25 A	1 A	GB2●●07	24501	2 A	1 A
ABL8FEQ24150	360 W	GB2DB07	24517	2 A	1 A	GB2●●08	24502	3 A	2 A
ABL8FEQ24200	480 W	GB2DB07	24517	2.5 A	1 A	GB2●●09	24503	4 A	2 A

Type of line supply		24 V ~, 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) UL certified circuit-breaker

References



ABL8FEQ24●●●



ABL8TEQ24●00

Input voltage	Secondary			Reference	Weight kg/lb	
	Output voltage	Nominal power	Output current			
Protection by 5 x 20 fuse						
Rectified and filtered power supplies						
Single-phase (N-L1) or phase-to-phase (L1-L2) connection						
230/400 V ~ ±15 V 50/60 Hz	24 V ~	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 ~	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						
Designation		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	

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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