

Modicon Power Supply

Rectified power supply for industrial use, rail mounting

Modicon ABL8F/T Rectified Power Supply

Modicon ABL8F/T Rectified power supply

Presentation

The Modicon ABL8F/T power supplies are designed to provide the DC voltage required by the control circuits of automation system equipment and to meet 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

- The Modicon ABL8F/T rectified and filtered power supplies are built using a SELV (safety extra low voltage) transformer equipped with a bridge rectifier and smoothing capacitors

With no regulation system, their output voltage will withstand line voltage variations and load variations while remaining within the range defined in standard IEC/EN 61131-2.

Main Features

Nominal input voltage	<ul style="list-style-type: none"> ■ ABL8FEQ: 230/400 Vac, Single-phase (N-L1) or 2-phase (L1-L2) connection, for connection to European 230/400 V line supplies ■ ABL8TEQ: 400 Vdc, 3-phase connection (L1-L2-L3) suitable where a high power level is required for controlling actuators and preactuators ("24 Vdc" equipment, or for pilot operation of DC valves and solenoid valves)
-----------------------	---

Network system compatibility	TN, TT, IT
------------------------------	------------

Nominal output voltage	24 Vdc
------------------------	--------

Operating temperature	-25 °C...+ 70 °C (-13 ... 158 °F) (1)
-----------------------	---------------------------------------

Product certifications	<ul style="list-style-type: none"> - CE marking - UL - EAC
------------------------	---

Conformity to standards	<ul style="list-style-type: none"> - EN 61558-1 - EN 61558-2-6 - EN 62041
-------------------------	--

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 Modicon **ABL8F/T** power supplies are available on the product data sheet (click on [product reference](#) to open it)

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, Modicon **ABL8F/T** 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 5x 20 glass fuse and do not need any external downstream protection.

(1) Derating for temperature higher than 55°C (131°F), Consult the product data sheet (click on [product reference](#) to open it)..

Note: Phaseo Rectified power supplies shown in this document are identified as Modicon as they will undergo a future brand change. All other product documentation will reference Phaseo until the brand change occurs.



Modicon ABL8F Rectified power supply



Modicon ABL8T Rectified and filtered power supply

Description

Modicon Power Supply

Rectified power supply for industrial use, rail mounting

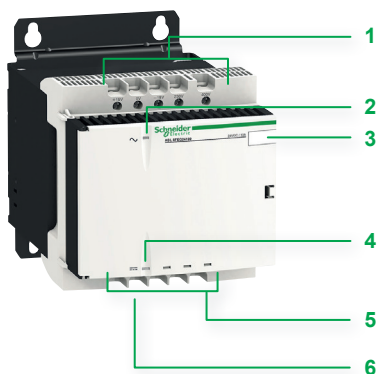
Modicon ABL8F/T Rectified Power Supply

Modicon ABL8F/T Rectified power supply

Description

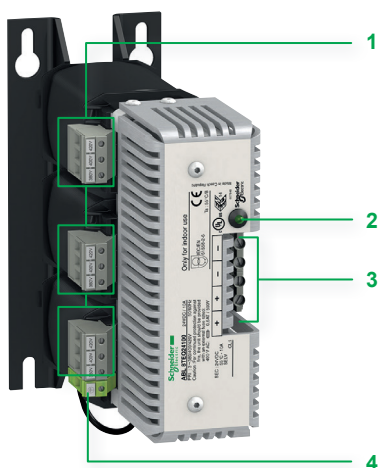
Modicon ABL8F Rectified power supply

- 1 Screw terminals for connection of the DC output voltage
- 2 LED indicating presence of DC output voltage (orange)
- 3 Label holder
- 4 Signaling LED (green) - output voltage status
- 5 Screw terminal for connection of the AC input voltage
- 6 35 mm (1.37 in) rail mounting clip



Modicon ABL8T Rectified power supply

- 1 Screw terminals for connection of the DC output voltage
- 2 Signaling LED (green) - output voltage status
- 3 Screw terminal for connection of the AC input voltage
- 4 Functional earth connector



Modicon Power Supply

Rectified power supply for industrial use, rail mounting

Modicon ABL8F/T Rectified Power Supply

Modicon ABL8F/T Rectified power supply

Selection of protection

ABL8F power supply: 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	Miniature circuit breaker	UL listed FNQ type fuse	aM type fuse	3-pole thermal-magnetic circuit breaker	Miniature circuit breaker	UL listed MDL type fuse	aM type fuse
		TeSys	Multi9 C60 (IEC, UL/CSA)			TeSys	Multi9 C60 (IEC, UL/CSA)		
ABL8FEQ24005	12 W	GB2DB05	M9F23201	0.1 A	0.25 A	GB2CB05 (1) GB2CD05 (1) GB2DB05 (1) GB2CS05 (1)	M9F23170	0.125 A	0.25 A
ABL8FEQ24010	24 W	GB2DB05	M9F23201	0.15 A	0.25 A		M9F23170	0.2 A	0.25 A
ABL8FEQ24020	48 W	GB2DB05	M9F23201	0.3 A	0.25 A		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) GB2CD07 (1) GB2DB07 (1) GB2CS07 (1)	M9F23101	1.25 A	1 A
ABL8FEQ24100	240 W	GB2DB06	M9F23201	1.25 A	1 A		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 ~, 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				

ABL8T power supply: protection of the primary and secondary voltages

Line supply type		400 V ~ 3-phase, primary voltage				24 V ~, secondary voltage	
Type of protection	Nominal power	3-pole thermal-magnetic circuit breaker		Miniature circuit breaker		gC type fuse	T type fuse
		TeSys	Multi9 C60 (IEC, UL/CSA)	UL listed FNQ type fuse	aM 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	-

(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.

Modicon Power Supply

Rectified power supply for industrial use, rail mounting

Modicon ABL8F/T Rectified Power Supply



ABL8FEQ24005
ABL8FEQ24010
ABL8FEQ24020
ABL8FEQ24040



ABL8FEQ24060
ABL8FEQ24100



ABL8FEQ24150
ABL8FEQ24200



ABL8TEQ24100



ABL8TEQ24200
ABL8TEQ24300



ABL8TEQ24400
ABL8TEQ24600

Modicon ABL8F/T Rectified power supply

References							
Input voltage	Secondary		Nominal power	Output current	Protection by 5 x 20 fuse	Reference	Weight kg/lb
	Output voltage						
Modicon ABL8F Rectified power supply							
Single-phase (N-L1) or 2-phase (L1-L2) connection							
230...400 Vac ±15 V 50/60 Hz	24 Vdc		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	

Modicon ABL8T Rectified power supply

3-phase connection (L1-L2-L3)							
400 Vac ± 20 V 50/60 Hz	24 Vdc		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
Marking support adhesive	20 x 10 mm/0.4 in	50	AR1SB3	0.010/0.022