Power Supply
579603 (8821-20)

LabVolt Series

Datasheet

Festo Didactic
en 120 V - 60 Hz
07/2019

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General Description

The Power Supply is enclosed in a full-size EMS module. It can be used to power most of the EMS modules of the Electricity and New Energy Training Equipment. This Power Supply provides dc power and ac power, both fixed and variable, single-phase and three-phase. Color-coded safety banana jacks provide access to all the power sources in the Power Supply. All these power sources can be used simultaneously, provided that the total current drawn does not exceed the maximum current rating. A built-in voltmeter with selector switch and liquid crystal display (LCD) indicates the voltage provided by any of the power sources. The input and outputs of the Power Supply are protected by independent circuit breakers.

The main power switch/supplementary protector protects all power lines of the Power Supply against overcurrents. Three LED indicators on the front panel of the Power Supply light up when the main power is turned on. There is one LED per phase. A 24 V ac output provides a low voltage required to power certain EMS modules like the Data Acquisition and Control Interface, Model 9063.

A five-wire flexible ac power cord, terminated with a five-prong twist-lock plug and line cap, is used to feed the Power Supply. For safety purpose, a mechanical interlock on the line cap prevents students from removing the Power Supply from the EMS workstation while it is energized by keeping it locked to the workstation.

The Power Supply requires a three-phase, wye-connected, five-wire service installation. An appropriate plug or wall outlet is provided with the Power Supply so that the ac power network connection point in your classroom can be properly terminated to match the ac power cord of the Power Supply. In addition to the three-phase and neutral legs, a separate copper ground allows proper grounding of the Power Supply chassis and workstation compartments, thus providing added safety for students using the Power Supply.

Power connections provided with the module

Wall connectors provided with the module.

Each model comprises a three-phase wall connector with the corresponding three-phase power cable. These components allow the model's connection to the local ac power network. The provided connector type depends on the exact part number of the ordered Power Supply and the countries for which the model is designed, as shown in the picture.

From left to right: 120/208 V (P/N 579603), 220/380 V (P/N 579606), and 240/415 V (P/N 579609).

Specifications

Parameter	Value
Module Requirements	
AC Power Network Installation	3 phases (120/208 V – 60 Hz), star (wye) configuration including neutral and ground wires, protected by a 20 A circuit breaker
AC Power Network Connector	NEMA L21-20
Maximum Current	15 A

Parameter	Value
Outputs (*see note)	
Three-Phase Fixed AC	120/208 V – 15 A - 60 Hz
Three-Phase Variable AC	0-120/208 V – 5 A - 60 Hz
Variable DC	0-120 V – 8 A
Fixed DC	120 V – 2 A
Low Power AC	24 V – 3 A - 60 Hz
Included Accessories	
	3 m (10 ft) ac power cord (1)
	NEMA L21-20 wall connector with wall plate (1)
	Padlock (1)
Physical Characteristics	
Dimensions (H x W x D)	308 x 287 x 495 mm (12.1 x 11.3 x 19.5 in)
Net Weight	18.4 kg (40.5 lb)
***Note**	The Power Supply cannot supply all the amounts of current indicated by the current ratings on its front panel at the same time. The current indicated for the fixed ac three-phase output section can only be obtained if no current is drawn from any other section, because this section is protected by the main circuit breaker common to every section. If currents flow in other sections, the available current for the fixed ac three-phase output section decreases. The variable ac output section and the variable dc output section are protected by a common set of circuit breakers placed after the fixed ac three-phase output section, which means that the current capacity has to be shared between the two sections. For instance, if current of the variable dc output section is at 70% of its nominal value, current drawn from the variable ac output section should not exceed 30% of its nominal value. The fixed dc output section is also protected by circuit breakers placed after the fixed ac three-phase output section.

Reflecting the commitment of Festo Didactic to high quality standards in product, design, development, production, installation, and service, our manufacturing and distribution facility has received the ISO 9001 certification.

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