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Data Sheet

August 13, 2026

LAMBDA / TDK

Lambda / TDK / EMI EMHP80-600-D-41212

The Lambda/TDK EMHP80-600-D-41212 is a 48 kW three-phase DC power supply engineered for high-current industrial and laboratory applications requiring stable, regulated output across demanding duty cycles. Part of the EMHP series, this unit delivers 0–80 VDC at 0–600 A using standard components configured to customer specifications without prototype engineering overhead. Input: 3-phase 400 VAC, 30–60 Hz (operates 440–480 VAC within full specification) Output Ripple: Voltage ripple and current ripple within series specifications Control & Programming Resistance-based programming supports constant-voltage and constant-current modes. External reference voltage programming (0–5 V or 0–1 mA) enables analog and digital control. Digital programming via IEEE 488 or RS232 available on request. Protection Standard overcurrent and overtemperature protection. Overvoltage protection offered as an op

**MODEL****Lambda / TDK
EMHP80-600-D-
41212****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****EMHP80-600-D-
41212****LISTING**[https://aumictechlabs.c
om/products/emhp80-
600-d-41212-2/](https://aumictechlabs.com/products/emhp80-600-d-41212-2/)

NIST-traceable cal

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NAICS 423690 • 811210 • 541380

This unit

The Lambda/TDK EMHP80-600-D-41212 is a 48 kW three-phase DC power supply engineered for high-current industrial and laboratory applications requiring stable, regulated output across demanding duty cycles. Part of the EMHP series, this unit delivers 0–80 VDC at 0–600 A using standard components configured to customer specifications without prototype engineering

overhead. Technical Specifications Electrical Performance Output: 0–80 VDC, 0–600 A (48 kW) Input: 3-phase 400 VAC, 30–60 Hz (operates 440–480 VAC within full specification) Efficiency: 91% typical Line/Load Regulation: $\pm 0.1\%$ Output Stability: $\pm 0.05\%$ over 8 hours under constant external conditions Temperature Coefficient: $0.02\%/^{\circ}\text{C}$ of maximum rating Output Ripple: Voltage ripple and current ripple within series specifications Control & Programming Resistance-based programming supports constant-voltage and constant-current modes. External reference voltage programming (0–5 V or 0–1 mA) enables analog and digital control. Digital programming via IEEE 488 or RS232 available on request. Protection Standard overcurrent and overtemperature protection. Overvoltage protection offered as an option. Key Features Heavy-duty terminal blocks for high-current connections Rear-panel programming terminals for flexible integration Configurable operating modes without design iteration costs Tight regulation ($\pm 0.1\%$) across line and load variations Low drift stability maintained over extended periods Physical & Environmental Unit weight ranges 750–1500 lbs depending on configuration class within the EMHP series. Typical Applications Electrowinning and electroplating operations, DC motor testing and control, battery charging systems, materials testing under sustained high-current conditions, and industrial process power delivery requiring precision voltage and current control.

Features & description

From manufacturer datasheet

Features

- 0 to 80 V, 0 to 600 A, 60 kW class

EMHP80600D41212 Characteristics / Specifications

PARAMETER	VALUE
Model	EMHP80-600-D-41212
Manufacturer	Lambda EMI / TDK-Lambda Americas
Instrument Type	High Power SCR DC Power Supply
Series	EMHP
Alias	EMHP80-600-D-41212; EMHP 80-600; EMI EMHP80-600; TDK-Lambda EMHP80-600
Rated Output Voltage	0 to 80 Vdc
Rated Output Current	0 to 600 A
Rated Power	60 kW maximum class
Output Ripple RMS	120 mVrms (60 Hz ripple column)
Frame Class	Size 3 up to 60 kW
Topology	SCR phase control on transformer primary; rectified and L/C filtered DC
Output Mode	constant voltage / constant current automatic crossover
Regulation	0.1% line and load (within ratings)
Stability	0.05% for 8 hours with constant external effects
Transient	recover to within 1% of final value within 200 ms for 50-100% load class (EMHP datasheet)
Operating Temperature	0 to 50 C; derate above 50 C
AC Input Standard	440/480 Vac three phase 60 Hz; optional inputs available
Softstart	AC inrush softstart
Cooling	forced air
Protection	overvoltage, overtemperature, overcurrent
Remote Program	resistance, voltage, and current programming standard
Analog Optional	0-5 V and 0-10 V
Digital Optional	RS-232 and IEEE-488

PARAMETER	VALUE
Meters	analog or digital meter packages (D suffix commonly digital/analog meter type)
Mechanical Size	34.625 inHx 27.5 inWx 29.25 in D, 750-900 lb (30 kW class)
Interlock	contactor on/off interlock control
RFI	built-in RFI protection
Agency	not recommended for new designs; TDK points to Genesys / GENESYS+
Order String	EMHP 80-600-D-41212 (voltage-current-meter-special program)
Meter Type D	meter package per EMI ordering (D on the string)
Special Program	41212 factory special programming suffix; confirm against the installed rear interface
Neighbor 20 kW	EMHP 80-250 is 0-80 V, 0-250 A, 120 mVrms, 20 kW
Neighbor 90 kW	EMHP 80-1125 is 0-80 V, 0-1125 A, 120 mVrms, 90 kW Notes

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 50 C; derate above 50 C
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AC Input Standard	440/480 Vac three phase 60 Hz; optional inputs available
Softstart	AC inrush softstart
Cooling	forced air
Protection	overvoltage, overtemperature, overcurrent
Remote Program	resistance, voltage, and current programming standard
Analog Optional	0-5 V and 0-10 V
Digital Optional	RS-232 and IEEE-488
Meters	analog or digital meter packages (D suffix commonly digital/analog meter type)
Mechanical Size	34.625 inHx 27.5 inWx 29.25 in D, 750-900 lb (30 kW class)
Interlock	contactor on/off interlock control
RFI	built-in RFI protection
Agency	not recommended for new designs; TDK points to Genesys / GENESYS+
Order String	EMHP 80-600-D-41212 (voltage-current-meter-special program)
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Special Program	41212 factory special programming suffix; confirm against the installed rear interface
Neighbor 20 kW	EMHP 80-250 is 0-80 V, 0-250 A, 120 mVrms, 20 kW
Neighbor 90 kW	EMHP 80-1125 is 0-80 V, 0-1125 A, 120 mVrms, 90 kW Notes

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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PARAMETER	VALUE
Model	EMHP80-600-D-41212
Manufacturer	Lambda EMI / TDK-Lambda Americas
Instrument Type	High Power SCR DC Power Supply
Specifications	
PARAMETER	VALUE
Series	EMHP
Alias	EMHP80-600-D-41212; EMHP 80-600; EMI EMHP80-600; TDK-Lambda EMHP80-600
Rated Output Voltage	0 to 80 Vdc
Specifications	
PARAMETER	VALUE
Rated Output Current	0 to 600 A
Rated Power	60 kW maximum class
Output Ripple RMS	120 mVrms (60 Hz ripple column)
Specifications	
PARAMETER	VALUE
Frame Class	Size 3 up to 60 kW
Topology	SCR phase control on transformer primary; rectified and L/C filtered DC
Output Mode	constant voltage / constant current automatic crossover
Specifications	
PARAMETER	VALUE
Regulation	0.1% line and load (within ratings)
Stability	0.05% for 8 hours with constant external effects

PARAMETER	VALUE
Transient	recover to within 1% of final value within 200 ms for 50-100% load class (EMHP datasheet)

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Softstart	AC inrush softstart

Specifications

PARAMETER	VALUE
Cooling	forced air
Protection	overvoltage, overtemperature, overcurrent
Remote Program	resistance, voltage, and current programming standard

Specifications

PARAMETER	VALUE
Analog Optional	0-5 V and 0-10 V
Digital Optional	RS-232 and IEEE-488
Meters	analog or digital meter packages (D suffix commonly digital/analog meter type)

Specifications

PARAMETER	VALUE
Mechanical Size 1	30 inHx 22.25 inWx 27.75 in D, 500-750 lb (20 kW class)
Mechanical Size 2	34.625 inHx 27.5 inWx 29.25 in D, 750-900 lb (30 kW class)
Mechanical Size 3	44.5 inHx 27.5 inWx 33.25 in D, 1000-1500 lb (60 kW class)

Specifications

PARAMETER	VALUE
Interlock	contactor on/off interlock control
RFI	built-in RFI protection
Agency	not recommended for new designs; TDK points to Genesys / GENESYS+

Specifications

PARAMETER	VALUE
Order String	EMHP 80-600-D-41212 (voltage-current-meter-special program)
Meter Type D	meter package per EMI ordering (D on the string)
Special Program	41212 factory special programming suffix; confirm against the installed rear interface

Neighbor 20 kW: EMHP 80-250 is 0-80 V, 0-250 A, 120 mVrms, 20 kW

Neighbor 90 kW: EMHP 80-1125 is 0-80 V, 0-1125 A, 120 mVrms, 90 kW

Notes

Specs from the live TDK-Lambda EMHP table (EMHP 80-600: 60 kW, 0-80 V, 0-600 A, 120 mVrms) and EMHP datasheet. Confirm meter type D, AC input option, and special program 41212 on the nameplate.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.