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Data Sheet

August 13, 2026

LAMBDA / TDK

Lambda / TDK / EMI EMHP50-1000-D-42212

The Lambda/TKD EMHP50-1000-D-42212 is a 20 kW regulated power supply built on SCR phase control topology for high-current DC applications. It delivers 0–1000 A output current with constant voltage and constant current modes, automatic crossover control, and $\pm 0.1\%$ line and load regulation. Forced air cooling, built-in RFI protection, and fully programmable operation make it suitable for applications demanding raw bulk power delivery. The unit features fully metered output with mode indicator lights, contactor-based interlock control, and lifting eye-bolt provisions for installation. Three-phase AC input accepts 440–480 VAC at 50/60 Hz. Output voltage capability extends up to 600 VDC. Transient response recovers to within 1% of final value in 200 ms under $\pm 10\%$ line variation or 50–100% load change. Output voltage stability holds $\pm 0.05\%$ for 8 hours under constant external conditions. Note:



MODEL

**Lambda / TDK
EMHP50-1000-D-
42212**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

**EMHP50-1000-D-
42212**

LISTING

<https://aumictechlabs.com/products/emhp50-1000-d-42212-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Lambda/TKD EMHP50-1000-D-42212 is a 20 kW regulated power supply built on SCR phase control topology for high-current DC applications. It delivers 0–1000 A output current with constant voltage and constant current modes, automatic crossover control, and $\pm 0.1\%$ line and load regulation. Forced air cooling, built-in RFI protection, and fully programmable operation make

it suitable for applications demanding raw bulk power delivery. The unit features fully metered output with mode indicator lights, contactor-based interlock control, and lifting eye-bolt provisions for installation. Three-phase AC input accepts 440–480 VAC at 50/60 Hz. Output voltage capability extends up to 600 VDC. Transient response recovers to within 1% of final value in 200 ms under $\pm 10\%$ line variation or 50–100% load change. Output voltage stability holds $\pm 0.05\%$ for 8 hours under constant external conditions. Note: This model is not recommended for new designs; Genesys™ or GENESYS+™ series are preferred alternatives. Technical Specifications Model: EMHP50-1000-D-42212 Topology: Regulated SCR phase control Output Power: 20 kW maximum Output Voltage: Up to 600 VDC Output Current: 0–1000 A Input: Three-phase AC, 440–480 VAC $\pm 10\%$, 50/60 Hz Line Regulation: $\pm 0.1\%$ Load Regulation: $\pm 0.1\%$ Long-term Stability: $\pm 0.05\%$ over 8 hours Transient Response: Recovery to 1% within 200 ms ($\pm 10\%$ line or 50–100% load variation) Output Ripple: 50 mV RMS (EMHP 10-1000 reference) Cooling: Forced air Efficiency: Up to 89% Key Features Constant Voltage / Constant Current with automatic crossover Fully programmable control Built-in RFI filtering for EMI compliance Metered output with mode indicator lights Contactor on/off interlock Lifting eye-bolt for mechanical handling Typical Applications High-current DC power for industrial testing and process control Raw bulk power delivery in manufacturing environments Applications requiring tight voltage and current regulation Compatibility & Integration Three-phase AC input design suits industrial facility power distribution. Programmable control enables integration into automated test and manufacturing systems. For new designs, TDK-Lambda recommends evaluation of Genesys™ or GENESYS+™ series.

Features & description

From manufacturer datasheet

Features

- Decoder identity 50 V, 1000 A (50000 W class)

EMHP501000D42212 Characteristics / Specifications

PARAMETER	VALUE
Model	EMHP50-1000-D-42212
Manufacturer	Lambda EMI / TDK-Lambda Americas
Instrument Type	High Power SCR DC Power Supply
Series	EMHP
Alias	EMHP50-1000-D-42212; EMHP 50-1000; Lambda EMI EMHP 50-1000
Rated Output Voltage	0 to 50 Vdc (decoder); confirm 50 V vs 40/60 V neighbors on the nameplate
Rated Output Current	0 to 1000 A (decoder)
Rated Power Class	50000 W class (50 V x 1000 A)
Table Note	live TDK EMHP grid has 40 V and 60 V 1000 A rows, not a 50 V row
Neighbor 40 V 60 kW	EMHP 40-1000, 0-40 V, 0-1000 A, 80 mVrms
Neighbor 60 V 60 kW	EMHP 60-1000, 0-60 V, 0-1000 A, 100 mVrms
Output Mode	CV/CC automatic crossover
Topology	SCR phase control, L/C filtered
Regulation	0.1%
Stability	0.05% for 8 hours
Operating Temperature	0 to 50 C
AC Input Standard	440/480 Vac three phase 60 Hz
Cooling	forced air
Protection	OVP, OTP, OCP
Remote Program	resistance, voltage, current
Analog Optional	0-5 V and 0-10 V
Digital Optional	RS-232 / IEEE-488
Meters	D suffix meter package per EMI ordering
Special Program	42212 factory special programming suffix; confirm against the installed rear interface

PARAMETER	VALUE
Mechanical	Size 1/2/3 per kW
Interlock	contactor on/off
RFI	built-in
Ripple	not published on a 50 V EMHP web row; do not copy 80 mV or 100 mV from 40/60 V neighbors
Agency	not recommended for new designs; TDK points to Genesys / GENESYS+
Order String	EMHP 50-1000-D-42212 Notes 50 V / 1000 A is from the EMHP decoder (50 kW class). Live TDK table neighbors are 40-1000 and 60-1000 at 60 kW. Do not invent a 50 V ripple figure. Confirm faceplate voltage, current, kW, D meters, and 42212 suffix.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to 50 C
Operating Temperature	0 to 50 C
AC Input Standard	440/480 Vac three phase 60 Hz
Cooling	forced air
Protection	OVP, OTP, OCP
Remote Program	resistance, voltage, current
Analog Optional	0-5 V and 0-10 V
Digital Optional	RS-232 / IEEE-488
Meters	D suffix meter package per EMI ordering
Special Program	42212 factory special programming suffix; confirm against the installed rear interface
Mechanical	Size 1/2/3 per kW
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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	
Specifications	
PARAMETER	VALUE
Model	EMHP50-1000-D-42212
Manufacturer	Lambda EMI / TDK-Lambda Americas
Instrument Type	High Power SCR DC Power Supply
Specifications	
PARAMETER	VALUE
Series	EMHP
Alias	EMHP50-1000-D-42212; EMHP 50-1000; Lambda EMI EMHP 50-1000
Rated Output Voltage	0 to 50 Vdc (decoder); confirm 50 V vs 40/60 V neighbors on the nameplate
Specifications	
PARAMETER	VALUE
Rated Output Current	0 to 1000 A (decoder)
Rated Power Class	50000 W class (50 V x 1000 A)
Table Note	live TDK EMHP grid has 40 V and 60 V 1000 A rows, not a 50 V row
Specifications	
PARAMETER	VALUE
Neighbor 40 V 60 kW	EMHP 40-1000, 0-40 V, 0-1000 A, 80 mVrms
Neighbor 60 V 60 kW	EMHP 60-1000, 0-60 V, 0-1000 A, 100 mVrms
Output Mode	CV/CC automatic crossover
Specifications	
PARAMETER	VALUE
Topology	SCR phase control, L/C filtered
Regulation	0.1%
Stability	0.05% for 8 hours

Specifications

PARAMETER	VALUE
Operating Temperature	0 to 50 C
AC Input Standard	440/480 Vac three phase 60 Hz
Cooling	forced air

Specifications

PARAMETER	VALUE
Protection	OVP, OTP, OCP
Remote Program	resistance, voltage, current
Analog Optional	0-5 V and 0-10 V

Specifications

PARAMETER	VALUE
Digital Optional	RS-232 / IEEE-488
Meters	D suffix meter package per EMI ordering
Special Program	42212 factory special programming suffix; confirm against the installed rear interface

Specifications

PARAMETER	VALUE
Mechanical	Size 1/2/3 per kW
Interlock	contactor on/off
RFI	built-in

Specifications

PARAMETER	VALUE
Ripple	not published on a 50 V EMHP web row; do not copy 80 mV or 100 mV from 40/60 V neighbors
Agency	not recommended for new designs; TDK points to Genesys / GENESYS+
Order String	EMHP 50-1000-D-42212

Notes

50 V / 1000 A is from the EMHP decoder (50 kW class). Live TDK table neighbors are 40-1000 and 60-1000 at 60 kW. Do not invent a 50 V ripple figure. Confirm faceplate voltage, current, kW, D meters, and 42212 suffix.

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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<https://aumictechlabs.com>

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30-day returns
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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.