

LAMBDA (TDK-LAMDA)

ESS Series 10 KW Models

The TDK-Lambda ESS Series 10 kW models are high-performance, high-density constant voltage/constant current (CV/CC) programmable DC power supplies. Housed in a compact 5U rack-mount chassis, these systems deliver reliable power ranging from 7.5V to 600V DC and currents up to 1000A. Standard analog programming and monitoring, multiple protection diagnostics, and optional digital interfaces make the ESS Series ideal for demanding industrial and laboratory applications.

SPECIFICATIONS

General

Interfaces	Analog programming & monitoring (standard); RS-232 / IEEE-488 GPIB (optional)
Display	Separate analog meters for voltage and current (standard); digital LED meters (optional)

Physical

Power Supply	190 - 250 VAC or 342 - 456 VAC (option dependent), 3-phase, 47 - 63 Hz
Operating Temperature	0 to 50 °C °C
Dimensions (W×H×D)	482.6 x 222.2 x 558.8 mm (19" x 8.75" x 22") mm
Weight	38.6 kg (85 lbs) kg

DC Output Specifications

Maximum Output Power	10 kW
Output Voltage Range	10 to 600 VDC (model dependent)
Output Current Range	16 to 1000 A (model dependent)
Line Regulation (Voltage)	0.1% of maximum rated output voltage
Load Regulation (Voltage)	0.1% of maximum rated output voltage
Line Regulation (Current)	0.1% of maximum rated output current
Load Regulation (Current)	0.1% of maximum rated output current

AC Input Specifications

Input Voltage Range	190 - 250 VAC (standard) or 342 - 456 VAC (optional), 3-Phase
Input Frequency Range	47 - 63 Hz

Analog Programming and Control

Remote Analog Programming Voltage	0 - 5 V or 0 - 10 V (selectable)
Remote Analog Programming Resistance	0 - 5k Ohm or 0 - 10k Ohm (selectable)
Output Voltage Monitor Signal Level	0 - 5 V or 0 - 10 V
Output Current Monitor Signal Level	0 - 5 V or 0 - 10 V
Remote On/Off Control Interface	Standard contact closure or TTL signal compatibility
Standard Front Panel Control	Ten-turn potentiometers for voltage and current adjustment

Protection and Diagnostics

Over-Voltage Protection (OVP) Trip Range	Adjustable
Over-Voltage Indicator	Standard LED indicator
Phase Loss Protection	Standard LED indicator and shutdown protection

Physical and Mechanical

Chassis Rack Units (U)	5 U
Cooling System Type	Internal fan forced cooling
Multi-Unit Connectivity	Capable of series or parallel operation for higher power systems

Environmental Conditions

Storage Temperature Range	-40 to +85 °C
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Performance

Voltage Programming Accuracy	0.5% of maximum rated output voltage
Current Programming Accuracy	1.0% of maximum rated output current
Voltage Temperature Coefficient	0.02% of rated output voltage per °C
Voltage Stability	0.05% of rated output voltage over 8 hours
Current Stability	0.1% of rated output current over 8 hours
Efficiency	85% typical at full load

TECHNOLOGY

Switch-mode High Power Inverter

APPLICATIONS

RF Amplifiers, DC Motors, Magnetic Coils, OEM, and Laboratory DC Power

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.