

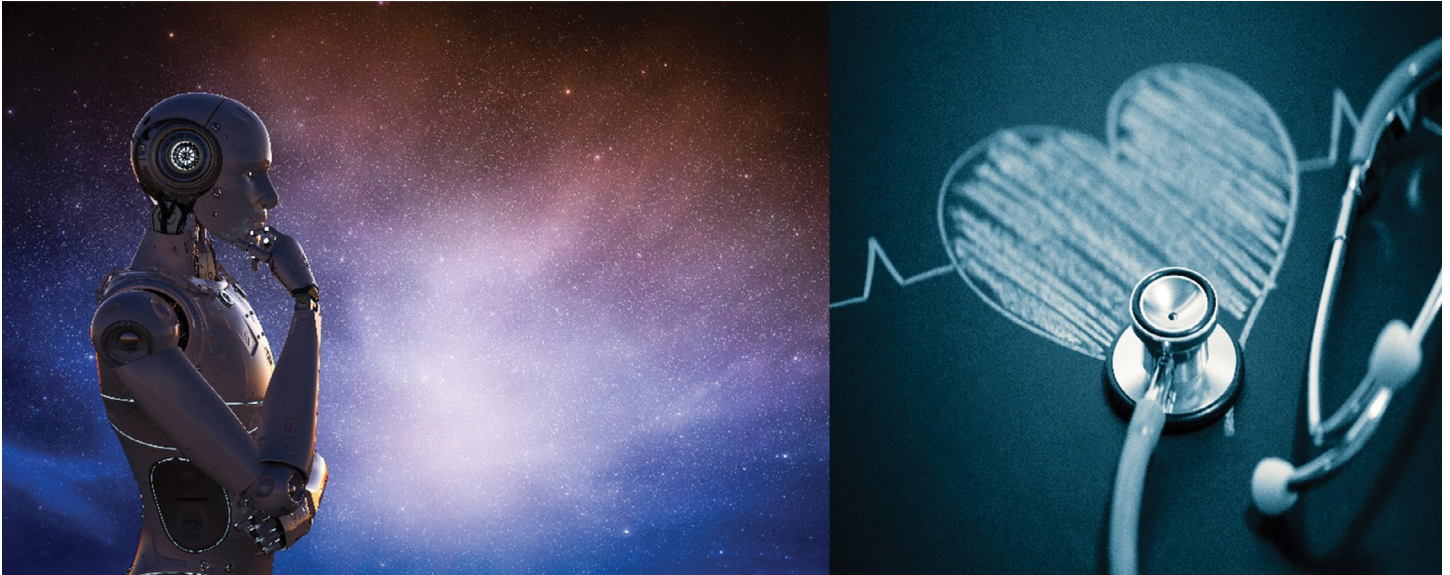


TDK-Lambda Value Add Solutions & Capabilities

TRUSTED • INNOVATIVE • RELIABLE

Company Overview

At TDK-Lambda, a “Power Supply” is more than just an electronic device. It is the “heart” of our customers’ systems and the core element of safety and reliability.



TDK-Lambda Corporation, a group company of TDK Corporation, is a leading global power supply company providing highly reliable power supplies worldwide. TDK-Lambda Corporation meets the various needs of customers with our entire range of activities, from research and development through to manufacturing, sales, and service with bases in five key areas, covering Japan, EMEA, North America, China, and SE Asia.

Since 1948, as a leading global manufacturer, we have been developing and producing innovative and highly reliable power supplies for a wide spectrum of applications. TDK-Lambda is one of the oldest and most trusted manufacturers of high-quality power supply solutions used in critical applications.

<https://www.us.lambda.tdk.com>

Organization

- ◆ Founded in 1948; offering long term financial stability
- ◆ An independently recognized market leader
- ◆ Worldwide recognition for high reliability
- ◆ Outstanding customer support
- ◆ International organization with strong local presence
- ◆ Local design capability
- ◆ Experts in power supply solutions
- ◆ Local inventory / local buffer



Value Add Overview

What if a standard power supply does not meet your requirements?

Explore TDK-Lambda's **Value Add Solutions & Capabilities** to support your requirements.

With over 6,000 standard products, our breadth of product strength provides us with the largest selection of standard power platforms to leverage our **Value Add Solutions & Capabilities**. Any TDK-Lambda standard power supply may be used as a starting point of your modified standard or value add power solution, leveraging the strength of the proven reliability from the original standard product platform.

As a leading global supplier of standard and configurable power products for over 60 years, TDK-Lambda can capitalize on our extensive Advanced Technology research and over 700 patents to provide innovative leading edge custom power solutions with high power density, high efficiency and digital control.

<https://us.lambda.tdk.com/products/value-add/>

Benefits of using TDK-Lambda

- ◆ World Class Design and Engineering Support
- ◆ Leaders in Development of Advanced Technologies
- ◆ Global Presence for Local Support
- ◆ Faster Time to Market
- ◆ Low-Cost Manufacturing (Reduced System Cost)
- ◆ Increase Customer Productivity with High Level Assembly and Turnkey Solutions
- ◆ Lower Development Risk
- ◆ Extensive Catalog of Innovative Field Proven Designs
- ◆ Comprehensive In-House Qualification/Testing
- ◆ Highly Experienced Global Logistics Capability
- ◆ Vendor Reduction – Single Source for Custom and Standard Solutions

Key Market Segments Include

- ◆ Medical and Life Science
- ◆ Industrial
- ◆ Factory/Building Automation
- ◆ Process Control
- ◆ Robotics
- ◆ Test and Measurement
- ◆ Transportation
- ◆ Renewable Energy
- ◆ LED Applications & Signage
- ◆ Avionics & Defense/COTS
- ◆ Semiconductor Fabrication Equipment
- ◆ Information & Communications Technology

Project Management

Empowered with TDK-Lambda, the leader in developing Advanced Technologies.

Our engineering team will be an extension of your engineering team for Power.

Technical Proposal

- ◆ Detailed proposal to support your requirements
- ◆ SPICE circuit simulation
- ◆ Mechanical Concept in 3D CAD
- ◆ Solid Works models, detailing connectors, signaling and fixtures

Field-Proven Standard Technology

- ◆ Flyback/Forward/Boost Converters
- ◆ Resonant and Multi-Resonant
- ◆ Synchronous Rectifier
- ◆ Digital Control and Monitoring
- ◆ High Efficiency and Low Audible Noise

Component Selection

- ◆ Optimized cost with standard components
- ◆ In-house lab for component evaluation
- ◆ Rigid component Approved Vendor List (AVL) selection and management process
- ◆ RoHS/REACH certification labs

CAD: Computer Aided Design

EMC: Electromagnetic Compatibility

ESD: Electrostatic Discharge

Design Verification Testing

- ◆ Electrical performance for all operating conditions
- ◆ Thermal characteristics for all operating conditions
- ◆ EMC compliance verified in-house
- ◆ Immunity – surge, burst, ESD, ring wave
- ◆ Mechanical stability with vibration, shock resistance
- ◆ Highly Accelerated Life Test (HALT)
- ◆ Ingress protection (IP) testing

Approvals

- ◆ Certified in-house lab for safety testing
- ◆ IECEE SMT program under UL for IEC/EN62368-1, IEC/EN60601-1, IEC/EN61010-1 and CB
- ◆ CTDP (Client Test Data Program) for UL/CSA62368-1, UL/CSA60601-1, UL/CSA61010-1
- ◆ CE Certification
- ◆ Other certifications on request

Special Requirements

- ◆ Production Part Approval Process (PPAP)
- ◆ Medical Part Approval Process (MPAP)
- ◆ Copy Exact
- ◆ Special Packaging
- ◆ Special Labeling/Barcoding
- ◆ First Article Inspection
- ◆ Source Inspection

SMT: Supervised Manufacturer's Testing

CTDP: Client Test Data Program

IECEE: International Electrotechnical Commission for Electrical Equipment

Building the Specification

Let TDK-Lambda help you specify your custom power supply requirements.

Attach your specifications to our Sales Support form at the link below or provide it to your local sales representative for TDK-Lambda. <https://us.lambda.tdk.com/contact/#support>

Request for Modified Standard

TDK-Lambda Model(s):

Modification Request:
(Custom harnesses and connectors, output voltage adjustments, etc.)

Additional Comments:

Commercial

Est. Annual Usage:

Target Price:

Schedule

Prototypes Due:

Mass Prod. Date:

Request for Value Add Solution

AC-DC or DC-DC:

Single-Phase or 3-Phase:

Electrical

of Inputs:

Input Voltage(s):

of Outputs:

Output Requirement(s): #1 #2 #3 #4 #5 #6
(DC Volts/Amps)

Total Output Power:

Conducted/Radiated EMI:

Immunity:

Safety Approvals

UL/CSA/IEC/EN60601-1:

UL/CSA/IEC/EN61010-1:

UL/CSA/IEC/EN62368-1:

CE Mark / UKCA Mark:

Other:

TDK-Lambda Model(s):
(if applicable)

Additional Comments:

Mechanical

Dimensions:

Shock/Vibration:

Form Factor:
(Enclosed, PCB Mount,
Open-Frame, DIN Rail,
Rack Mount)

Other (please specify):

Cooling:
(Fan, Convection,
Conduction, Liquid)

Other (please specify):

Commercial

Est. Annual Usage:

Target Price:

Schedule

Prototypes Due:

Mass Production Date:

Examples of Solutions & Capabilities

From Modified Standards to Brick-on-Board and Value Add Solutions for your application.

Leverage our expertise early in the design cycle!

Modified Standards

A slight modification (electrical and mechanical) to our standard products.

- ◆ Custom harnesses and connectors
- ◆ Output voltage adjustments
- ◆ Conformal coating
- ◆ Firmware changes
- ◆ LED indicators
- ◆ Ruggedization for harsh environments
- ◆ Country specific safety marks (PSE, CCC, etc.)

Value Add Solutions & Capabilities

An extension of our standard product platforms, where we integrate more of the assembly and external features around the power supply.

- ◆ Custom racks and enclosures
- ◆ Brick-On-Board solutions
- ◆ N + 1 power redundancy
- ◆ Addition of relay contacts, fans, fuses, etc.
- ◆ Ruggedization for harsh environments
- ◆ Customized assembly for field replacements

Modified Standard

300W Single Output – Ruggedized Connector

General Info

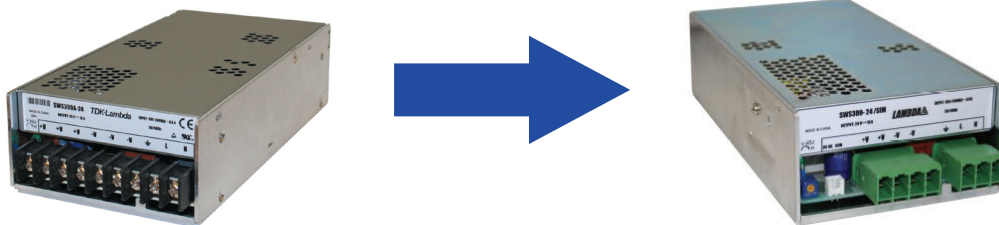
Market Segment: Industrial

Application: Postal Sorting System

Standard Platform: SWS300-24 (AC-DC)

Key Features

- ◆ Modified connectors to support ruggedized mounting connection
- ◆ Fully tested by TDK-Lambda to increase customer productivity



Value Add

Conduction Cooled for Fully Sealed Outdoor Application

General Info

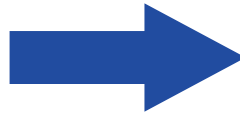
Market Segment: LED Signage

Application: Outdoor Ruggedized Display

Standard Platform: PFE1000Fi (AC-DC)

Key Features

- ◆ Conduction cooled for fan-less operation
- ◆ Conformal coated for extra protection
- N+1 redundancy for improved reliability



Dual Input (AC & DC), 260W, 52VDC Output

General Info

Market Segment: Defense

Application: Outdoor Radio Communication

Standard Platform: PFE300 (AC-DC) and PX (DC-DC)

Key Features

- ◆ Quick turnaround for faster time to market
- ◆ Lower development risk with proven reliability of standard products



Value Add

Low Profile 1kW Turnkey Solution

General Info

Market Segment: ICT

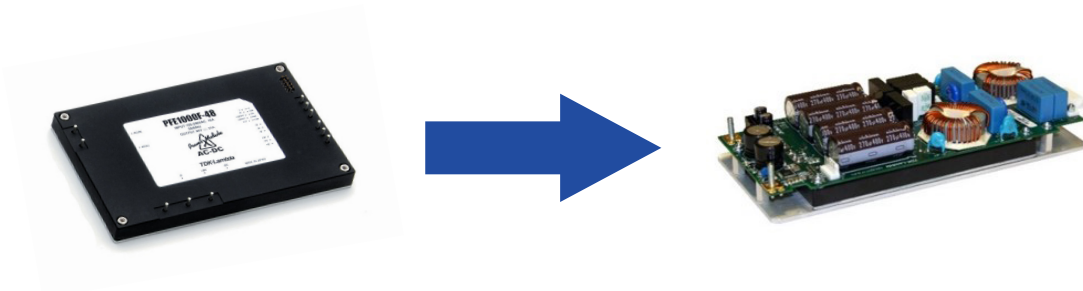
Application: DAS

(Distributed Antenna System)

Standard Platform: PFE1000Fi (AC-DC)

Key Features

- ◆ Conduction Cooled
- ◆ Low profile and compact size
- ◆ Quick turnaround for faster time to market



1.5kW Turnkey Solution – Supports Water Cooling

General Info

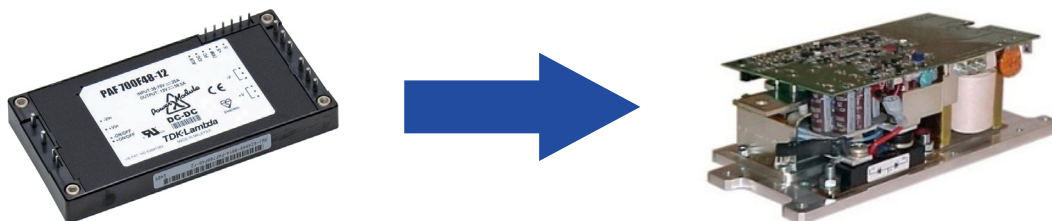
Market Segment: Industrial

Application: DC/DC Hybrid Electric Vehicle

Standard Platform: PAF700F48-12 (DC-DC)

Key Features

- ◆ 240VDC to 390VDC input, 15VDC output
- ◆ Conduction cooled solution that mounts to water cooled plate



Value Add

1.5kW Solution with Programmable Constant Current Mode

General Info

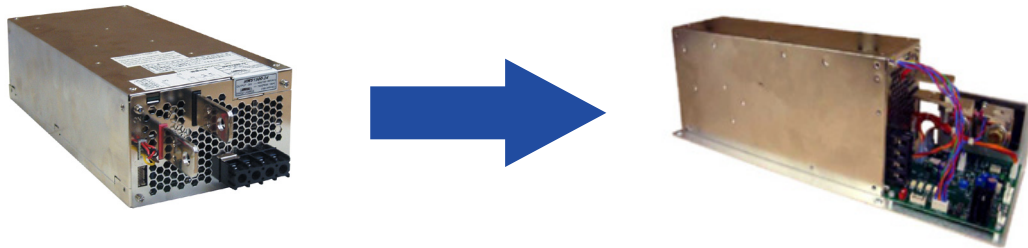
Market Segment: Industrial

Application: Water Purification System

Standard Platform: HWS1500 (AC-DC)

Key Features

- ◆ Add programmable constant current feature to standard product
- ◆ Includes LED indicators and relay contacts



1kW Single Output Solution in Ruggedized Power Box

General Info

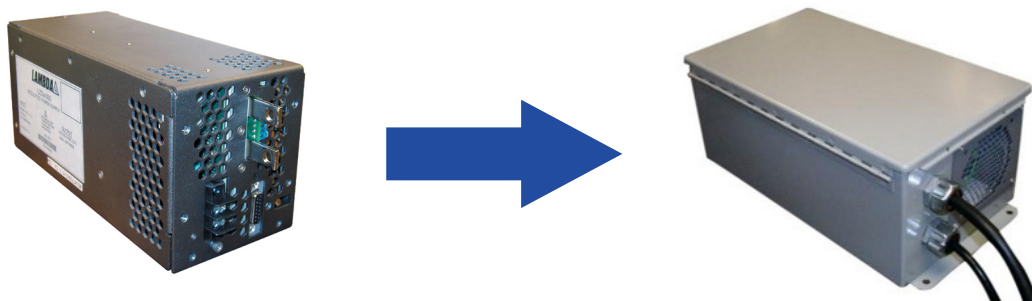
Market Segment: Defense

Application: Communication System

Standard Platform: LZSA1000A (AC/DC)

Key Features

- ◆ Includes robust connectors and enclosure
- ◆ Fully tested by TDK-Lambda to increase customer productivity



Value Add

High Level Assembly with Custom Harnesses and Connectors

General Info

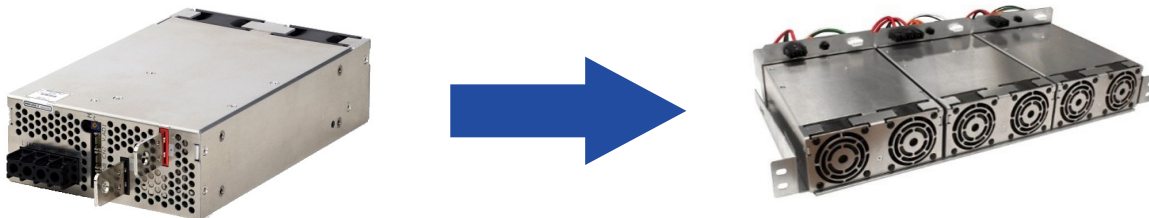
Market Segment: Medical

Application: Medical Diagnostic Imaging

Standard Platform: SWS1000L (AC-DC)

Key Features

- ◆ Full turnkey solution to support rack mount application
- ◆ Management and support of customer requested design revisions



Scalable Power System for Interactive Video Wall Display

General Info

Market Segment: ICT

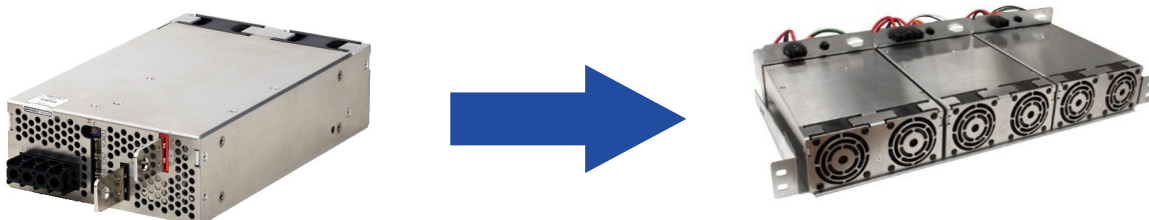
(Information & Communications Technology)

Application: Interactive Video Wall Display

Standard Platform: SWS1000L (AC-DC)

Key Features

- ◆ Three SWS1000L units connected in parallel
- ◆ Full turnkey solution to support 19" rack mount application
- ◆ Low Audible Noise



Value Add

150W Solution with Custom Enclosure and Connectors

General Info

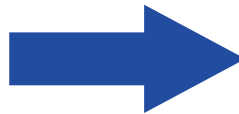
Market Segment: Industrial

Application: Vending / Cash Machines

Standard Platform: HWS150 (AC-DC)

Key Features

- ◆ Custom enclosure, cables and connectors for easy field installation
- ◆ NEC Class 2



300W Solution in Custom Enclosure for Harsh Environments

General Info

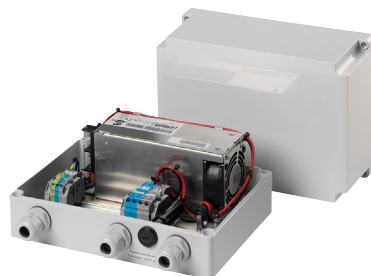
Market Segment: Industrial

Application: Food Industry

Standard Platform: HWS300 (AC-DC)

Key Features

- ◆ IP54 Enclosure
- ◆ Suitable for harsh environments
- ◆ Wide operating temperature range



Value Add

Single Phase Input – Motion Control Power System

General Info

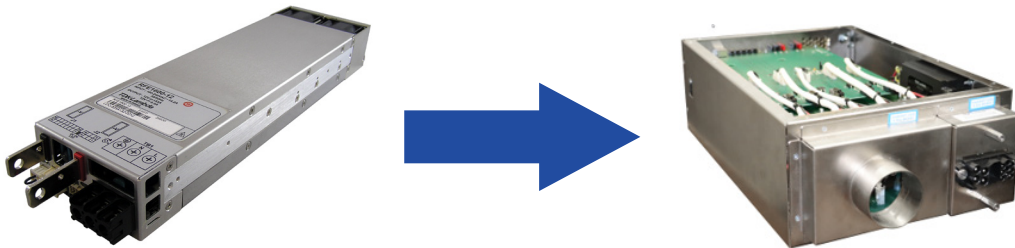
Market Segment: Semi-Fab

Application: Wafer Inspection System

Standard Platform: RFE1600-36 (AC-DC)

Key Features

- ◆ Multiple Outputs ($\pm 72\text{VDC}$ & 36VDC)
- ◆ Lower development risk with proven reliability of standard products



1.5kW Turnkey Solution – Supports Water Cooling

General Info

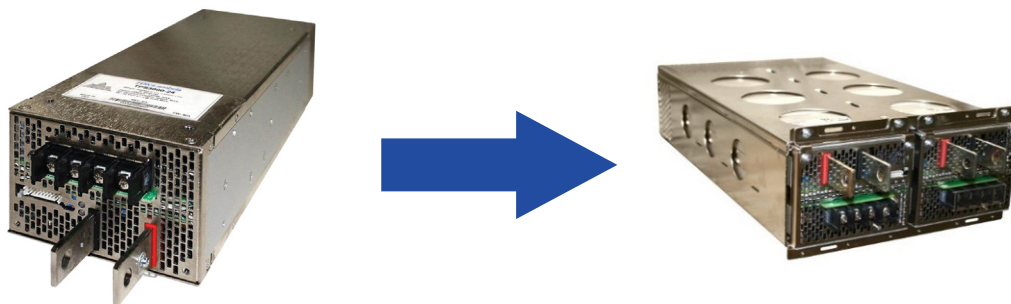
Market Segment: Industrial

Application: Web Press Printer

Standard Platform: TPS3000-48 (AC-DC)

Key Features

- ◆ Support customer's unique mounting requirement
- ◆ Up to 8 racks connected in parallel



Design Tools and Product Collaterals

Written by Engineers, for Engineers. Find the part you need and get to market faster!

Download our Brochures at <https://www.us.lambda.tdk.com/resources/catalogs/>



Product Catalog



Healthcare Products



Convection/Conduction Cooled Products



EMI Filters



DIN Rail




Configurable



CUS-M Series



Board Mount

A solid blue diagonal bar that starts from the bottom left and extends towards the top right, covering the bottom portion of the page.

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