

# Power Supplies, DC-DC Converters and EMC/EMI Filters



# Power Supply Solutions.

Worldwide





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 Asia.

This Catalogue is designed to provide a quick overview of the complete product range. Individual product information is supplied to make a selection of possible models for your application. For additional technical data, please follow the web link at the bottom of each product.

Each product page contains the following symbols to indicate the main applications that each product is designed for. The symbols are intended to give a quick guideline for many applications. For assistance in finding a product for your application, you are welcome to contact our technical sales department.



















www.emea.tdk-lambda.com









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# **AC-DC Power Supplies**

#### **Applications**

- Industrial
- Automation
- Medical
- Test & Measurement
- Communications
- Broadcast
- · Display & Signage
- Renewables
- Marine
- Railway

#### **Features**

- · Very broad product offering
- High reliability & quality
- Single & three phase input models
- · Industrial & medical safety approvals
- · Convection, conduction & forced air cooled
- Enclosed, open frame & module types
- Operating altitude up to 5000m
- High MTBF
- · High efficiency
- · Excellent warranties





# Configurable Power Supplies

#### **Features**

- 100W to 1500W output power
- 1 to 16 separate output voltages
- · Single-phase, wide-range input
- Broad range of output voltages from 1.2V to 62Vdc
- Signal options on primary and secondary side
- Filter options with low leakage current for medical applications
- · Cooling with integrated fans or external airflow (customer air)

- · Safety approvals for international use
- Fast time to market
- · Easy to configure with Quick Product Finder on TDK-Lambda website
- Combining outputs in parallel (for increased current or N+1 redundancy) and series (for increased output voltage) is possible with many of the product ranges, contact technical support for details

# QM5/QM7 - Series

700 - 1500W

















#### 1 to 16 Outputs + standby option

Safety: full medical design IEC60601-1

EMC: meets Class B conducted and radiated emissions (to EN55011

and EN55022) and has  $300\mu\text{A}$  earth leakage current.

Isolation: 4kVac Input to output (2x MoPPs)

1.5kVac Input to ground (1x MoPP) and output to ground (1 x MoPP)



Output power: 700 or 1200W with wide range input (converter dependent), 1100 / 1500W at high line

Input voltage: 85 - 264Vac, 47 - 63Hz

Output voltage: 2.8 to 105.6Vdc, wide range adjustable Efficiency: Up to 91%, configuration dependent

Warranty: 7 years

More information: www.emea.tdk-lambda.com/gm



### XMS500 - Series

500W

















### Class I or Class II configurable power supply

EMC: EN55011/22 Class B

Medical EN60601-1 2x MoPP Safety: and Industrial EN60950-1







Output power: 500W

90 - 264Vac, 47-63Hz Input voltage: Output voltage: 12, 24 or 48Vdc Up to 92 % Efficiency: Warranty: 5 years

More information: www.emea.tdk-lambda.com/xms500

### NVM175 - Series

#### 180W















#### 1 Output + standby

Isolation: 4.5kVac input to output (2 x MOPPs for IEC60601-1)

1.5kVac output to ground, 1.5kVac input to ground

Leakage current: <170µA

Input fuse: **Dual fuses (live and NEWtral)** 



180W Output power:

Input voltage: 90 - 264Vac, 45 - 63Hz

Output voltage: 12 or 24Vdc

Up to 90%, configuration dependent Efficiency:

Warranty: 3 years

More information: www.emea.tdk-lambda.com/nv

### CFE400M - Series

300W, 400W, 450W

















#### 1 Output + standby

**Environment:** ErP compliant & 80+ Gold

Isolation: 4kVac input to output (2 x MOPPs for IEC60601-1)

1.5kVac output to ground, 1.5kVac input to ground







Output power: 300W convection, 400W fan cooled, 450W peak 85 - 264Vac, 47 - 63Hz (440Hz with reduced PFC) Input voltage: 12, 24 or 48Vdc (see datasheet for adjustment range) Output voltage:

Up to 94% for 48Vdc and 24Vdc (91% for 12Vdc). At 230Vac, 80% load Efficiency:

Warranty: 5 years

More information: www.emea.tdk-lambda.com/cfe

# EFE300 - Series

300W, 400W













#### 1 Output

High power density: 300W on 5 x 3 inch footprint Input fuse: **Dual fuses (live and NEWtral)** 

Peak power: 400W for up to 10 sec.





Output power: 300W continuous, 400W peak

Input voltage: 90 - 264Vac, 45 - 63Hz (440Hz with reduced PFC), 120 - 350Vdc

Output voltage: 12 or 24Vdc (non standard voltages available)

Efficiency: Up to 90% Warranty: 5 years

More information: www.emea.tdk-lambda.com/efe

# EFE300M - Series

300W, 400W

















#### 1 Output

High power density: 300W medical power on 6 x 3 inch footprint Isolation: 4kVac input to output (2 x MOPPs for IEC60601-1) 1.5kVac output to ground, 1.5kVac input to ground





Output power: 300W continuous, 400W peak power

90 - 264Vac, 45 - 63Hz (440Hz with reduced PFC), 120 - 350Vdc Input voltage:

Output voltage: 12, 24, 28, 48 or 50Vdc (non standard voltages available)

Up to 90% (87% if Standby Supply is fully loaded) Efficiency:

Warranty: 5 years

More information: www.emea.tdk-lambda.com/efe-m

# EFE400 - Series

400W, 530W













#### 1 Output + standby

High power density: 400W on 6 x 3 inch footprint Input fuse: **Dual fuses (live and NEWtral)** 

Peak power: 530W for up to 10 sec.





400W continuous, 530W peak power Output power:

Input voltage: 90 - 264Vac, 45 - 63Hz (440Hz with reduced PFC), 120 - 350Vdc

Output voltage: 12 or 24Vdc (non standard voltages available)

Efficiency: Up to 90% Warranty: 5 years

More information: www.emea.tdk-lambda.com/efe

# EFE400M - Series

400W, 530W

















#### 1 Output

High power density: 400W on 6.5 x 3.5 inch footprint

Isolation: 4kVac input to output (2 x MOPPs for IEC60601-1)

1.5kVac output to ground, 1.5kVac input to ground





Output power: 400W continuous, 530W peak power

90 - 264Vac, 45 - 63Hz (440Hz with reduced PFC), 120 - 350Vdc Input voltage:

Output voltage: 12, 24 or 48Vdc (non standard voltages available) Up to 90% (87% if Standby Supply is fully loaded) Efficiency:

Warranty: 5 years

More information: www.emea.tdk-lambda.com/efe-m

### NV175M - Series

180W, 200W















#### 1 to 3 Outputs

Isolation: 4kVac input to output (2 x MOPPs for IEC60601-1)

200Vdc output to ground, 1.5kVac input to ground

Case Styles: Multiple options from open frame, to closed case with IEC and fan.





Output power: 180W fan cooled, 200W peak power

Input voltage: 90 – 264Vac, 45 – 63Hz

Output voltage: Output 1: 12, 15 or 24Vdc; Output 2: 12, 15 or 24Vdc; Output 3: 3.3, 5, 12, 15Vdc

Efficiency: Up to 90%, configuration dependent

Warranty: 3 years

More information: www.emea.tdk-lambda.com/nv

# NV100 - Series

100W













#### 4 Outputs

Efficiency: Up to 90%
Working altitude: -200 to 3000m

Connection: Single output connector





Output power: 100W fan cooled, 50W convection cooled

Input voltage: 90 – 264Vac, 45 – 63Hz, (440Hz with reduced PFC), 120 – 350Vdc

Output voltage: Output 1: 5 or 24Vdc, Output 2: 3.3 or 5Vdc

Output 3: 12, 15 or 24.5Vdc, Output 4: 12 or 15Vdc

Efficiency: Up to 90%, configuration dependent

Warranty: 3 years

More information: www.emea.tdk-lambda.com/nv

### NV175 - Series

#### 180W, 200W

















#### 1 to 4 Outputs + standby option

Isolation: 3kVac input to output (2 x MOOPs for IEC60601-1)

200Vdc output to ground, 1.5kVac input to ground

Controls & signals: Industry standard or ATX compatible

Case Styles: Multiple options from open frame, to closed case with IEC and fan.



5V channel 1 are 175W (no peak power), all others are 180W (200W peak power) Output power:

Input voltage: 90 - 264Vac, 45 - 63Hz, (440Hz with reduced PFC), 120 - 350Vdc

Output voltage: Output 1: 5, 12, 15 or 24Vdc; Output 2: 1.8, 2.7, 3.3 or 5Vdc;

Output 3: 12, 15, 24Vdc; Output 4: 3.3, 5, 12 or 15Vdc

Efficiency: Up to 90%, configuration dependent

Warranty: 3 years

More information: www.emea.tdk-lambda.com/nv

### NV300 - Series

#### 300W

















# 1 to 4 Outputs + standby option

Isolation: 3kVac input to output (2 x MOOPs for IEC60601-1)

200Vdc output to ground, 1.5kVac input to ground

Controls & signals: **ATX** compatible



Output power: 300W

Input voltage: 90 - 264Vac, 45 - 63Hz, (440Hz with reduced PFC), 120 - 350Vdc

Output voltage: Output 1: 5, 12 or 24Vdc; Output 2: 1.8, 2.7, 3.3, 5, 12 or 15Vdc;

Output 3: 12, 15 or 24Vdc; Output 4: 3.3, 5, 12 or 15Vdc

Up to 90%, configuration dependent Efficiency:

Warranty: 3 years

More information: www.emea.tdk-lambda.com/nv

### NV350 - Series

350W, 660W, 740W















#### 1 to 6 Outputs + standby option

High flexibility: 10 single and 14 dual output modules available

Isolation: 3kVac input to output (2 x MOOPs for IEC60601-1)

4kVac input to output (2 x MOPPs) products available

Controls & signals: 8 primary (global) and 4 secondary options





Output power: 350W at wide range input, 660W at high line, 740W peak power, fan cooled

Input voltage: 90 – 264Vac, 47 – 63Hz, (440Hz with reduced PFC)

Output voltage: 3.2 to 63Vdc / up to 40A

Efficiency: Up to 90%, configuration dependent

Warranty: 3 years

**More information:** www.emea.tdk-lambda.com/nv350-700

### NV700 - Series

700W, 1150W, 1450W

















#### 1 to 8 Outputs + standby option

High flexibility: 10 single and 14 dual output modules available
Isolation: 3kVac input to output (2 x MOOPs for IEC60601-1)
4kVac input to output (2 x MOPPs) products available

Controls & signals: 8 primary (global) and 4 secondary options





Output power: 700W at wide range input, 1150W at high line, 1450W peak power, fan cooled

Input voltage: 90 – 264Vac, 47 – 63Hz, (440Hz with reduced PFC)

Output voltage: 3.2 to 63Vdc / up to 40A

Efficiency: Up to 90%, configuration dependent

Warranty: 3 years

**More information:** www.emea.tdk-lambda.com/nv350-700

# Vega Lite - Series

550W, 750W, 900W















#### 1 to 11 Outputs + standby option

**High flexibility:** 21 single and 7 dual output modules available Isolation: 4kVac input to output (2 x MOPPs for IEC60601-1) 200Vdc output to ground, 1.5kVac input to ground

**Operational Altitude:** Up to 5000m, application dependent



Output power: 550 or 750W with wide range input (converter dependent), 900W at high line Input voltage: 85 - 264Vac, 47 - 63Hz, (440Hz with reduced PFC)

Output voltage: 1.8 to 56Vdc up to 60A, wide range adjustable

Up to 75%, 230Vac & 100% rated power, configuration dependent Efficiency:

Warranty: 3 years

More information: www.emea.tdk-lambda.com/vega-lite

### Vega – Series

450W, 650W, 900W

















#### 1 to 11 Outputs + standby option

**Highest flexibility:** 45 single and 25 dual output modules available Isolation: 4kVac input to output (2 x MOPPs for IEC60601-1) 200Vdc output to ground, 1.5kVac input to ground

**Operational Altitude:** Up to 5000m, application dependent



Output power: 450 or 650W with wide range input (converter dependent), 900W at high line Input voltage: 90 - 264Vac, 47 - 63Hz, (440Hz with reduced PFC) Output voltage: 1.8 to 62Vdc up to 40A, programmable modules also available Up to 75%, at 230Vac & 100% rated power, configuration dependent Efficiency: Warranty: 3 years

More information: www.emea.tdk-lambda.com/vega

# Vega-DC - Series

#### 450W













#### 1 to 11 Outputs + standby option

Highest flexibility: 45 single and 25 dual output modules available

Operational Altitude: Up to 5000m, application dependent





Output power: 450W

Input voltage: 34 – 75Vdc (derating below 44Vdc to 340W)

Output voltage: 1.8 to 62Vdc up to 40A, programmable modules also available

Efficiency: Up to 75%, at 48Vdc & 100% rated power, configuration dependent

Warranty: 3 years

More information: www.emea.tdk-lambda.com/vega

# Alpha - Series

1000W, 1500W

















#### 1 to 14 and 1 to 16 Outputs + standby option

High flexibility: 21 single and 5 dual output modules available Number of outputs: 1 to 14 with Alpha1000, 1 to 16 with Alpha1500



Output power: 1000W with wide range input, 1500W at high line

Input voltage: 85 – 264Vac, 47 – 63Hz

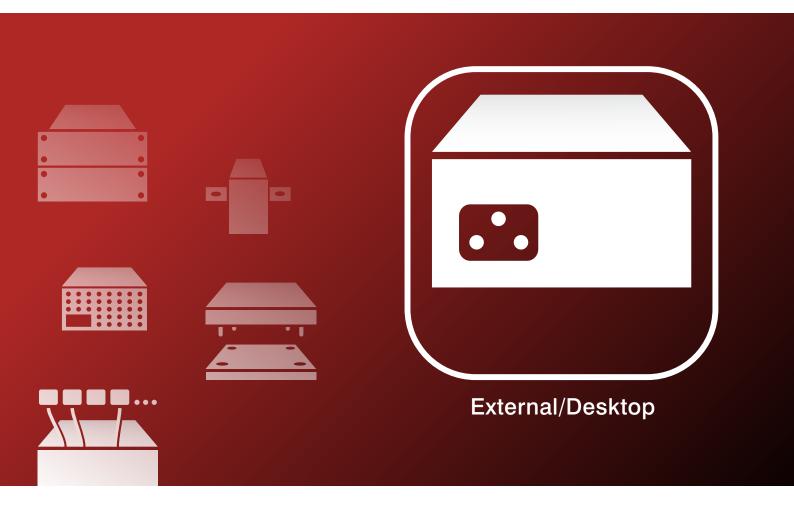
Output voltage: 1.8 to 48Vdc up to 60A, wide range adjustable

Efficiency: Up to 75%, at 230Vac & 100% rated power, configuration dependent

Warranty: 3 years

More information: www.emea.tdk-lambda.com/alpha





# External/Desktop Power Supplies

#### **Features**

- Fully enclosed plastic case
- Plug and play no input range setting or output voltage adjustment required
- IEC mains input connection
- DC output cable and connector
- ErP, CEC and EISA compliant models
- DTM series suitable for medical equipment



# DTM65-C8 - Series

40 - 65W















Case: **Enclosed plastic case** 

IEC320-C8 input connector

Class II powersupply

ErP, CEC and EISA Level V, DoE Level VI **Energy management:** 

Safety: EN/UL/IEC 60601-1 for medical equipment

**CE marked for Low Voltage Directive** 



Output power: 40 - 65W, convection cooled

90 - 264Vac, 47 - 63Hz Input voltage:

Output voltage: 5, 12, 15, 19, 24, 28 or 48Vdc

Efficiency: >88% average efficiency (5V model: >83.8%)

Warranty: 2 years

More information: www.emea.tdk-lambda.com/dtm

### DTM65-C - Series

60 - 65W















IEC320-C14 input connector

**Power losses:** Conforms to ErP, CEC and EISA regulations

Safety: EN/UL 60601-1 for medical equipment

**CE marked for Low Voltage Directive** 



Output power: 60 - 65W, convection cooled Input voltage: 90 - 264Vac, 47 - 63Hz Output voltage: 12, 15, 18, 24, 36 or 48Vdc Efficiency: 87% average efficiency Warranty: 2 years

More information: www.emea.tdk-lambda.com/dtm



# DTM110-C - Series

90 - 110W















Case: Enclosed plastic case

IEC320-C14 input connector

Power losses: Conforms to ErP, CEC and EISA regulations

87% average efficiency

Safety: EN60601-1 for medical equipment

**CE marked for Low Voltage Directive** 



Output power: 90 – 110W, convection cooled

Input voltage: 90 – 264Vac, 47 – 63Hz

Output voltage: 12, 13.5, 15, 19, 20 or 24Vdc

Warranty: 2 years

**More information:** www.emea.tdk-lambda.com/dtm



Efficiency:

### DTM165-C - Series

160 - 165W















IEC320-C14 input connector

Energy management: Conforms to ErP, CEC and EISA Level V regulations

Safety: EN60601-1 for medical equipment
CE marked for Low Voltage Directive



Output power: 160 – 165W, convection cooled Input voltage: 90– 264Vac, 47 – 63Hz

Output voltage: 12, 15, 19, 24, 28, 36 or 48Vdc

Efficiency: >87% average efficiency

Warranty: 2 years

More information: www.emea.tdk-lambda.com/dtm



# DT150-C - Series

140 - 150W



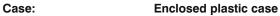












IEC320-C14 input connector

Power losses: Conforms to ErP, CEC and EISA regulations
Safety: EN/CSA60950-1 for ITE / industrial equipment

**CE** marked for Low Voltage Directive



Output power: 140 – 150W, convection cooled

Input voltage: 90– 264Vac, 47 – 63Hz

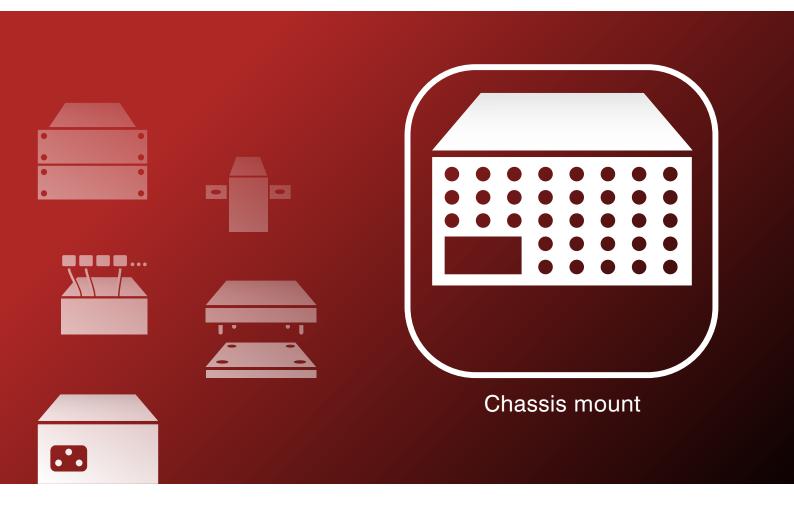
Output voltage: 12, 16, 19, 24, 36 or 48Vdc

Efficiency: 87% average efficiency

Warranty: 2 years

**More information:** www.emea.tdk-lambda.com/dt-c





# **Chassis mount Power Supplies**

#### **Features**

- 5 to 3200W output power
- Single-phase wide range input 85 265Vac
- 3-phase input 350 528Vac
- Power factor correction meets EN61000-3-2 class A harmonics
- Input/output connection with screw terminals or PCB connectors
- Enclosed or open frame case style
- Industrial & medical safety approvals

# HWS-15A to HWS-150A - Series

15 - 150W













New:

A-version with enhanced efficiency up to 91%

Direct replacement for HWS15-HWS150

Input:

Wide range 85 - 265Vac without derating

Operating temperature: Up to 70°C



Output power: 15, 30, 50, 100, 150W

Input voltage: 85 - 264Vac, 47 - 63Hz or 120 - 370Vdc

Output voltage: 3.3, 5, 12, 15, 24 or 48Vdc

Up to 91% Efficiency:

Warranty: Limited Lifetime Warranty\*

More information: www.emea.tdk-lambda.com/hws a

### HWS300 to HWS600 - Series

300 - 600W













High efficiency: **Up to 86%** 

Size: Unique height of 82mm

Input: Wide range 85 - 265Vac without derating





Output power: 300, 600W

Input voltage: 85 - 264Vac, 47 - 63Hz or 120 - 330Vdc

Output voltage: 3.3, 5, 12, 15, 24 or 48Vdc

Efficiency: Up to 86%

Warranty: Limited Lifetime Warranty\*

More information: www.emea.tdk-lambda.com/hws

<sup>\*</sup> See TDK-Lambda's Terms & Conditions on our Website

# HWS1000 to HWS1500 - Series

1000 - 1500W













dustrial Automation Test

Size: Unique height of 82mm

Output: Remote voltage programming



Output power: 1000, 1500W

Input voltage: 85 – 264Vac, 47 – 63Hz or 120 – 330Vdc Output voltage: 3.3, 5, 6, 7, 12, 15, 24, 36, 48 or 60Vdc

Efficiency: Up to 90%

Warranty: Limited Lifetime Warranty\*

More information: www.emea.tdk-lambda.com/hws

# HWS300P / HWS600P - Series

300 / 600W







Peak power capability:

Up to 1008 Watt for 5 sec. for HWS-300P Up to 1998 Watt for 5 sec. for HWS-600P



Output power: 300, 600W

Input voltage: 85 – 264Vac, 47 – 63Hz or 120 – 330Vdc

Output voltage: 24, 36 or 48Vdc Efficiency: Up to 87%

Warranty: Limited Lifetime Warranty\*

More information: www.emea.tdk-lambda.com/hws-p

<sup>\*</sup> See TDK-Lambda's Terms & Conditions on our Website

# HWS-A/ME / HWS/ME - Series

30-150W / 300-1500W



Warranty: Limited Lifetime Warranty

**Highest reliability** 

Medical use: Reduced leakage current for medical applications

Safety: EN60601-1 for basic insulation





Output power: 30, 50, 100, 150, 300, 600, 1000, 1500W Input voltage: 85 – 264Vac, 47 – 63Hz or 120 – 370Vdc

Output voltage: 3.3, 5, 12, 15, 24 or 48Vdc

Efficiency: Up to 91%

Warranty: Limited Lifetime Warranty\*

**More information:** www.emea.tdk-lambda.com/hws-me

### HWS-A/HD / HWS/HD - Series

30-150W / 300-1500W















Operation: Coating for harsh environmental conditions
Input: Wide range 85 – 265Vac without derating

Safety: EN/IEC/UL609501-1





Output power: 30, 50, 100, 150, 300, 600, 1000, 1500W Input voltage: 85 – 264Vac, 47 – 63Hz or 120 – 370Vdc

Output voltage: 3.3, 5, 12, 15, 24 or 48Vdc

Efficiency: Up to 91%

Warranty: Limited Lifetime Warranty\*

More information: www.emea.tdk-lambda.com/hws-hd

<sup>\*</sup> See TDK-Lambda's Terms & Conditions on our Website

# HWS600L/BAT - Series

#### 600W













#### Suitable for battery-charging

Current limit: Constant current mode

Adjustable with internal potentiometer

Output voltage control: Analog input to program 20 – 120%

of nominal output with 1 - 6Vdc



Output power: 600W

Input voltage: 85 – 265Vac, 47 – 63Hz or 120 – 350Vdc

Output voltage: 36 or 60Vdc
Efficiency: Up to 86%
Warranty: 3 years

# HWS1000L/BAT - Series

#### 1000W















#### Suitable for battery-charging

Current limit: Constant current mode

Adjustable with internal potentiometer

Output voltage control: Analog input to program 20 – 120%

of nominal output with 1 - 6Vdc



Output power: 1000W

Input voltage: 85 – 265Vac, 47 – 63Hz or 120 – 350Vdc

Output voltage: 36 or 60Vdc
Efficiency: Up to 86%
Warranty: 3 years



# EVS - Series (300W)

300W













Constant current power supply Suitable for battery charging

Current limit: adjustable via potentiometer

Safety: EN/UL/CSA60950-1



Output power: 300W

Input voltage: 85 – 265Vac, 47 – 63Hz

Output voltage: 18, 36 or 57Vdc
Efficiency: Up to 91%
Warranty: 5 years

**More information:** www.emea.tdk-lambda.com/evs



# EVS - Series (600W)

600W













Constant current power supply Suitable for battery charging

Current limit: adjustable via potentiometer

Safety: EN/UL/CSA60950-1

Fan

Output power: 600W

Input voltage: 85 – 265Vac, 47 – 63Hz

Output voltage: 36 or 57Vdc
Efficiency: Up to 88%
Warranty: 5 years

More information: www.emea.tdk-lambda.com/evs



# **EVS-RP** – Series

20A











#### Blocking diode module

**Low Voltage Drop ORIng FET** 

**Compact Size** 

**Open Frame or L Bracket Construction** 



Output power:	20A
Input voltage:	7 – 60Vdc
Output voltage:	0.2V
Efficiency:	50μA max.
Warranty:	5 years

More information: www.emea.tdk-lambda.com/evs-rp



# CPFE-F/-FI - Series

500 - 1000W













Cooling: **Fanless operation** 

Conduction cooling via baseplate

Parallel operation with active current share

Control: I<sup>2</sup>C Interface on CPFE1000F and CPFE1000FI



Output power: 500, 1000W Input voltage: 90 - 265Vac, 47 - 63Hz Output voltage: 12, 28 or 48Vdc Efficiency: Up to 86% Warranty: 2 years

More information: www.emea.tdk-lambda.com/cpfe www.emea.tdk-lambda.com/cpfe1000fi

# LZSa - Series

500 - 1500W









trial Automation COT

Line dips: SEMI F47 compliant above 100VAC input

Operation temperature: -40°C to +71°C Vibration / shock: MIL-STD-810E

Output: Wide output voltage adjustment range



Output power: 500, 1000, 1500W

Input voltage: 85 – 264Vac, 47 – 63Hz or 100 – 400Vdc

Output voltage: 12, 24 or 48Vdc
Efficiency: Up to 84%
Warranty: 5 years

More information: www.emea.tdk-lambda.com/lzsa

#### Coming soon

### TPS 3000 - Series

3200W









**₹** 

Operating temperature: -40°C to +70°C
Redundancy: built in ORing-FETs
Control: PMBus™ Interface

Analog and Digital V / I programming



Output power: 3200W

Input voltage: 350 – 528 Vac 3 Phase (Delta or Wye input), 47 – 63Hz

Output voltage: 24 or 48Vdc
Efficiency: Up to 92.5%
Warranty: 3 years



# RWS-B - Series

50W, 100W, 150W















Size: High power density Reliability: Long E-Cap lifetime Mounting: **Optional DIN-Rail bracket** 

50, 100, 150W Output power:

85 - 265Vac, 47 - 63Hz or 120 - 370Vdc Input voltage:

Output voltage: 5, 12, 15, 24 or 48Vdc

Efficiency: Up to 89% Warranty: 7 years

More information: www.emea.tdk-lambda.com/rws-b

# **RWS-B** – Series

300 - 600W













Size: High power density

Low noise: Minimal fan-speed at no load operation

Reliability: Long E-Cap lifetime Optional: Signals (RWS-600B)



Output power: 300 - 600W

Input voltage: 85 - 265Vac, 47 - 63Hz or 120 - 370Vdc

Output voltage: 5, 12, 15, 24, 36 or 48Vdc

Efficiency: Up to 88% Warranty: 7 years

More information: www.emea.tdk-lambda.com/rws-b



### 1000W, 1500W













Size: very compact case with high power density

Operating temperature: -20°C to +60°C

Reliability: Long E-Cap lifetime

Optional: Control and Alarm signals

Output power: 1000, 1500W

Input voltage: 85 – 265Vac, 47 – 63Hz
Output voltage: 12, 15, 24, 36 or 48Vdc

Efficiency: Up to 89% Warranty: 7 years

**More information:** www.emea.tdk-lambda.com/rws-b

# SWS600L - Series

#### 600W













**Dimensions:** 

Low profile

Temperature: Wide operating temperature range up to 74°C Output voltage control: Analog input for remote programming of

output voltage from 20-120%

3.3, 5, 12, 15, 24, 36, 48 or 60Vdc



Output power:

600W

Input voltage: 85 - 265Vac, 47 - 63Hz or 120 - 350Vdc Output voltage:

Efficiency: Up to 86% Warranty: 3 years

More information: www.emea.tdk-lambda.com/sws

### SWS1000L - Series

#### 1000W





Output voltage control:









Display &

Temperature:

Wide operating temperature range up to 74°C

Safety:

Medical approval EN/IEC/UL 60601-1 Analog input for remote programming of

output voltage from 20-120%



Output power:

1000W

Input voltage:

85 - 265Vac, 47 - 63Hz or 120 - 350Vdc

Output voltage:

3.3, 5, 12, 15, 24, 36, 48 or 60Vdc

Efficiency:

Up to 86%

Warranty:

3 years

More information:

www.emea.tdk-lambda.com/sws

# LS25 to LS150 - Series

25 – 150W













High efficiency: **Up to 87%** 

Temperature: Wide operating temperature range up to 70°C

Low cost



Output power: 25, 35, 50, 75, 100, 150W

Input voltage: 88 - 264Vac, 47 - 63Hz or 125 - 373Vdc

Output voltage: 3.3, 5, 12, 15, 24, 36 or 48Vdc

Efficiency: Up to 87% Warranty: 5 years

More information: www.emea.tdk-lambda.com/ls

### LS200 - Series

#### 200W













Peak-Power: 250W peak rating on 24V & 36V models

High efficiency: **Up to 85%** 

Size: Only 41mm high for 1U integration





Output power: 200W

Input voltage: 85 - 264Vac, 47 - 63Hz or 120 - 373Vdc Output voltage: 3.3, 5, 7.5, 12, 15, 24, 36 or 48Vdc

Efficiency: Up to 85% Warranty: 5 years

More information: www.emea.tdk-lambda.com/ls

# GWS250 - Series

#### 250W















Dimensions: 1U height

Eco-design: Standby Power Draw < 0.5 Watt

**Built to meet ErP directive** 

Harmonics: Conforms to class C for lighting equipment

Convection

Output power: 250W

Input voltage: 85 – 264Vac (300Vac for 5 sec.), 47 – 63Hz or 120 – 373Vdc

Output voltage: 12, 24, 36 or 48Vdc

Efficiency: Up to 93% Warranty: 5 years

**More information:** www.emea.tdk-lambda.com/gws

### GWS500 - Series

#### 500W















Eco-design: Standby Power Draw < 0.5 Watt

**Built to meet ErP directive** 

Harmonics: Conforms to class C for lighting equipment



Output power: 500W

Input voltage: 85 – 264Vac (300Vac for 5 sec.), 47 – 63Hz or 120 – 373Vdc

Output voltage: 5, 7.5, 12, 24, 36 or 48Vdc

Efficiency: Up to 90% Warranty: 5 years

More information: www.emea.tdk-lambda.com/gws

# **GWS/BAT - Series**

#### 250 - 500W















Dimensions: 1U height

Suitable: For battery-charging
Current limit: Constant current mode

Output voltage control: Output voltage can be varied by applying an external voltage (3-6V)





Output power: 250W, 500W

Input voltage: 85 – 264Vac (300Vac for 5 sec.), 47 – 63Hz or 120 – 373Vdc

Output voltage: 24 (28.8) or 48 (57.6)Vdc

Efficiency: Up to 93% Warranty: 5 years

### CUS250LD - Series

#### 250W













Low profile: Only 30mm height
Operation temperature: -25°C to +70°C
Cooling: Natural convection

Output: Typical voltages for LED supply



Output power: Up to 250W

Input voltage: 85 – 265Vac, 47 – 63Hz or 120 – 370Vdc

Output voltage: 3.3, 4.2, 5, 12 or 24Vdc

Efficiency: Up to 90% Warranty: 3 years

More information: www.emea.tdk-lambda.com/cus

### **ZMS** – Series

#### 100W

















ErP compliant 2" x 4" power supply

Isolation: 2 MOPP for medical applications

Safety: EN60601-1 for Medical EN60950-1 for Industrial /IT

Tested to EN60335-1 (12V, 15V, 24V)





Output power: 100W (80W with convection cooling)

90 - 265Vac, 47 - 63Hz Input voltage: 12, 15, 24, 36 or 48Vdc Output voltage:

Efficiency: Up to 90% Warranty: 3 years

More information: www.emea.tdk-lambda.com/zms



### CUS150M - Series

120W (150W)



















Mechanical: 2x4" pcb, U channel chassis

Cooling: Convection (up to 150 W with U chassis), cover and top fan option

EMI: Curve B conducted and radiated Installation: Suitable for Class I and Class II







Output power: 120W, 150W depending on cooling

85 - 264Vac, 47 - 63Hz Input voltage:

Output voltage: 12, 24 or 48Vdc (15, 28, 36Vdc coming soon)

Efficiency: >93 % Warranty: 5 years

More information: www.emea.tdk-lambda.com/cus150m



# CUS200M - Series

### 200 (250)W

Eco-design:







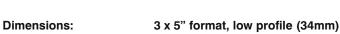








high efficiency up to 94%, Standby Power Draw < 0.5 W



Safety: Medical IEC60601-1 (2x MoPP)

and Industrial IEC60950-1



Output power: 200W convection cooling, 250W forced air cooling (not 12V)

Input voltage: 85 – 265Vac, 47 – 63Hz
Output voltage: 12, 18, 24, 36 or 48Vdc

Efficiency: Up to 94% Warranty: 3 years

More information: www.emea.tdk-lambda.com/cus200m



### CUS350M - Series

350 (420)W













Comms



Eco-design: high efficiency up to 94%, Standby Power Draw < 0.5 W

Safety: Medical IEC60601-1 (2x MoPP) and Industrial IEC60950-1



Output power: 350W convection cooling, 420W forced air cooling

Input voltage: 85 – 265Vac, 47 – 63Hz
Output voltage: 12, 18, 24, 36 or 48Vdc

Efficiency: Up to 94% Warranty: 3 years

More information: www.emea.tdk-lambda.com/cus350m

# RFE2500 - Series

#### 2500W











High efficiency: Meet 80+ Standard platinum/gold

Redundancy: n+1 operation with integrated ORing FET

Paralleling: With active current share Signalling: Full array of signals

2500W Output power:

85 - 265Vac, 47 - 63Hz Input voltage: 12, 24, 32 or 48Vdc Output voltage:

Efficiency: Up to 92% Warranty: 3 years

More information: www.emea.tdk-lambda.com/rfe









### RFE1600 - Series

#### 1600W









High efficiency: Meet 80+ Standard gold

Redundancy: n+1 operation with integrated ORing FET

Size: Flat shape for 1U integration Input: Wide range 85 - 265Vac





Output power: 1600W

Input voltage: 85 - 265Vac, 47 - 63Hz Output voltage: 12, 24 or 48Vdc

Efficiency: Up to 92% Warranty: 3 years

More information: www.emea.tdk-lambda.com/rfe

# RFE1000 - Series

#### 1000W











High efficiency: Up to 89%

Redundancy: n+1 operation with integrated ORing diode

Size: Flat shape for 1U integration

Input: Wide range 85 – 265Vac without derating



Output power: 1000W

Input voltage: 85 – 264Vac, 47 – 63Hz

Output voltage: 24, 32 or 48Vdc Efficiency: Up to 89%

Warranty: 2 years

More information: www.emea.tdk-lambda.com/rfe

## **ZWS-B** – Series

10 - 30W



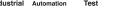












Warranty: **Highest reliability** 

-10°C to +70°C Operating temperature:

Eco-design: No load input power <0,5W



Output power: 10, 15, 30W

85 - 264Vac, 47 - 63Hz or 120 - 370Vdc Input voltage:

Long E-Cap lifetime

Output voltage: 3.3, 5, 12, 15, 24 or 48Vdc

Efficiency: Up to 88% Warranty: 5 years

More information: www.emea.tdk-lambda.com/zws-b

### **ZWS-BAF - Series**

50 - 300W



Warranty:

High efficiency:











5 years

**Up to 88%** 85 - 264Vac, 47 - 63Hz or 120 - 370Vdc Input:



Output power: 50, 75, 100, 150, 300W

Input voltage: 85 - 264Vac, 47 - 63Hz or 120 - 370Vdc

Output voltage: 3.3, 5, 12, 15, 24 or 48Vdc

Efficiency: Up to 91% Warranty: 5 years

More information: www.emea.tdk-lambda.com/zws-baf

## **ZWS-BP** – Series

150 - 240W















Warranty: High reliability

Long E-Cap lifetime

Peak power capability: 200% for up to 5 sec. (duty: 0.35)

Operating temperature: -10°C to +70°C

Convection

Output power: 150, 240W

Input voltage: 85 – 264Vac, 47 – 63Hz or 120 – 370Vdc

Output voltage: 24, 36 or 48Vdc
Efficiency: Up to 88%
Warranty: 5 years

**More information:** www.emea.tdk-lambda.com/zws-bp

### **ZWD-PAF - Series**

100 - 225W







Peak power capability: 200% for up to 5 sec. (duty: 0.35)

on main output

Operating temperature:

-10°C to +70°C

Input:

Wide range 85 – 265Vac



Output power: 100, 150, 225W

Input voltage: 85 – 265Vac, 47 – 63Hz or 120 – 370Vdc

Output voltage: 5Vdc main, 24Vdc second

Efficiency: 83% Warranty: 2 years

More information: www.emea.tdk-lambda.com/zwd-paf



35 - 75W













Output: Triple output power supply without minimum load requirement

Case: L-bracket and cover option



Output power: 35, 75W

Input voltage: 85 – 265Vac, 47 – 63Hz or 120 – 370Vdc

Output voltage: 5Vdc,  $\pm$  12Vdc or 5Vdc,  $\pm$  15Vdc

Efficiency: Up to 85% Warranty: 3 years

More information: www.emea.tdk-lambda.com/cut

## **ZWQ** – Series

80 - 130W











Quad output: Output one and four adjustable

Floating adjustable fourth output

Input: Wide range 85-265Vac
Case: L-bracket and cover option



Output power: 80, 130W

Input voltage: 85 – 265Vac, 47– 63Hz or 120 – 370Vdc

Output voltage: 5Vdc main, ± 12/15Vdc and 3.3, 5, 12 or 24Vdc

Efficiency: Up to 72% Warranty: 1 year

More information: www.emea.tdk-lambda.com/zwq

## **ZPSA** – Series

20 - 100W



Size:









Low profile, industry standard footprint

2" x 4" and 3" x 5"

Meets EN61000-4 Immunity:



20, 40, 60, 100W Output power:

Input voltage: 90 - 264Vac, 47 - 63Hz or 120 - 370Vdc Output voltage: 3.3, 5, 9, 12, 15, 18, 24, 28, 30, 36 or 48Vdc

Efficiency: Up to 90% Warranty: 2 years

More information: www.emea.tdk-lambda.com/zpsa

### **ZPD** – Series

40W











Size:

Low profile, industry standard footprint

2" x 4"

Safety: Global approvals Immunity: Meets EN61000-4



Output power: 40W

Input voltage: 85 - 264Vac, 47 - 440Hz or 120 - 370Vdc

Output voltage: 5Vdc main and 12 or 24Vdc

Efficiency: Up to 78% Warranty: 2 years

More information: www.emea.tdk-lambda.com/zpd

### **ZPT** – Series

#### 40W













Size: Low profile, industry standard footprint

2" x 4"

Safety: Global approvals Immunity: Meets EN61000-4



40W Output power:

Input voltage: 85 - 264Vac, 47 - 440Hz or 120 - 370Vdc Output voltage: 5 or 3.3Vdc main and 5, 12, 15, 24Vdc

Efficiency: Up to 75% Warranty: 2 years

More information: www.emea.tdk-lambda.com/zpt

### **CSS** – Series

65 - 150W















Size:

Low profile, industry standard footprint

2" x 4" and 3" x 5"

Safety: Global medical approvals

**Protection: Dual input fuses** 



Output power: 65, 150W

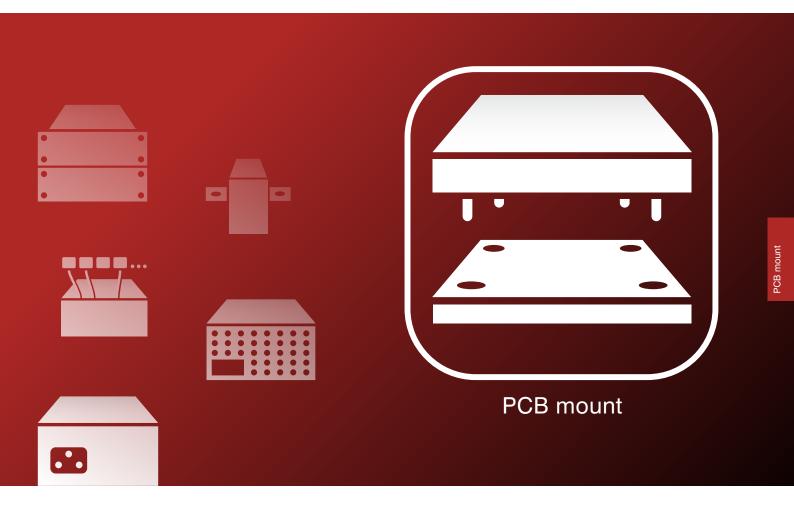
Input voltage: 85 - 265Vac, 47 - 63Hz or 120 - 370Vdc

Output voltage: 65W: 12, 15, 24, 36 or 48Vdc

150W: 5, 12, 15, 19, 24, 36 or 48Vdc

Efficiency: Up to 87% Warranty: 2 years

More information: www.emea.tdk-lambda.com/css



# **PCB** mount Power Supplies

#### **Features**

- 2 to 1500W output power
- Single-phase wide range input 85 265Vac
- For PCB mounting
- · Flexibility for different cooling concepts



## **KWS-A** – Series

5 - 25W











Size: Small size and lightweight No external components needed

Connection:

Class II power supply (no PE required)

Input:

Universal input voltage



Output power: 5, 10, 15, 25W

85 - 265Vac, 47 - 440Hz Input voltage:

5, 12, 15 or 24Vdc Output voltage:

Efficiency: Up to 88% Warranty: 3 years

More information:

www.emea.tdk-lambda.com/kws-a



## KMS-A - Series

15 - 60W













Connection: Class II power supply (no PE required)

Single-output

Safety: Medical safety approvals IEC/EN60601-1

ITE safety approvals IEC/EN60950-1

Case: **Enclosed case with encapsulation** 



Output power: 15, 30, 60W

90 - 264Vac, 47 - 63Hz Input voltage: Output voltage: 5, 9, 12, 15, 24Vdc

Efficiency: Up to 89% 3 years Warranty:

More information:

www.emea.tdk-lambda.com/kms-a

## **KPSA** – Series

5 - 15W











Size: Small size & lightweight

No external components needed

Input:

Universal input voltage

Low cost



Output power: 5, 10, 15W

85 - 264Vac, 47 - 63Hz or 100 - 370Vdc Input voltage:

3.3, 5, 12, 15 or 24Vdc Output voltage:

Efficiency: Up to 82% Warranty: 1 year

More information: www.emea.tdk-lambda.com/kpsa

## KMS / KMD / KMT – Series

15 - 40W













Connection:

Class II power supply (no PE required)

Single-, dual-, triple output

Safety: Medical safety approvals

Case: **Enclosed case with encapsulation** 



Output power: 15, 40W

Input voltage: 90 - 264Vac, 47 - 440Hz or 100 - 375Vdc Output voltage: 3.3, 5, 9, 12, 15, 24, ±12 or ±15Vdc

Efficiency: Up to 83% Warranty: 2 years

More information: www.emea.tdk-lambda.com/km



# KAS - Series

2-4W











Size:

Small size & lightweight

No external components needed

Input:

Class II power supply (no PE required)

extended input voltage range



Output power:

2, 4W

Input voltage:

90 -305Vac, 47 - 63Hz

Output voltage:

3.3, 5, 8, 9, 12, 14, 15 or 24Vdc

Efficiency:

Up to 77%

Warranty:

3 years

More information:

www.emea.tdk-lambda.com/kas

### PF-A - Series

500 - 1500W









Format: Power module with baseplate

Basic element for customised power supply designs together with PAF/PAH DC/DC-converters

Paralleling: Parallel operation with active current share



Output power: 500(750), 1000(1500)W Input voltage: 85 - 265Vac 47 - 63Hz ~360Vdc bulk power bus Output voltage:

Efficiency: Up to 95% 2 years Warranty:

More information: www.emea.tdk-lambda.com/pf-a

## PFE-SA - Series

300 - 700W

















Format: Full-Brick module with baseplate

**Basic element for customised** 

power supply designs

100°C baseplate temperature



Output power: 300, 500, 700W

Input voltage: 90 - 264Vac, 47 - 63Hz

Output voltage: 12, 28 or 48Vdc Efficiency: Up to 91% Warranty: 5 years

More information: www.emea.tdk-lambda.com/pfe-sa



## PFE-FA / F - Series

500 - 1000W















Format:

Power module with baseplate **Basic element for customised** power supply designs 100°C baseplate temperature



Output power: 500, 1000W

Input voltage: 90 - 264Vac, 47 - 63Hz

Output voltage: 12, 28 or 48Vdc Efficiency: Up to 90% Warranty: 5 years

More information: www.emea.tdk-lambda.com/pfe





# **DIN-Rail Power Supplies**

#### **Features**

- Efficiency up to 94%
- Mainly with 24V output, other output voltages from 5V to 48V are available
- Power range from 10W to 960W
- Single-phase and three-phase input (for 120 960W models)
- Plastic cases for low-power units up to 100W, metal cases for higher output power

- Flat shape for wall mounted cabinets
- · Slim shape for industrial cabinets
- UL 508 Listed
- Additional DC/DC-Converters up to 60W for DIN-Rail are also available

## **DRB** – Series

#### 15 - 100W











**Output voltages:** 5 to 48Vdc -20°C to +70°C

**Operating temperature:** 

**Dimensions:** Very compact, slim shape

**ErP Compliant** 



Output power: 15, 30, 50, 100W Input voltage: 85 - 264Vac, 47 - 63Hz Output voltage: 5, 12, 24 or 48Vdc

Up to 89% Efficiency: Warranty: 3 years

More information: www.emea.tdk-lambda.com/drb



# DRB480 - Series

#### 480W











Case: **Enclosed metal case** 

-25°C to +70°C Operating temperature:

-30°C Startup

**Dimensions:** Very compact, only 84mm wide



Output power: 480W

Input voltage: 90 - 264Vac, 47-63Hz

Output voltage: 24Vdc Efficiency: Up to 93% Warranty: 5 years

More information: www.emea.tdk-lambda.com/drb480

# DRF single-phase - Series

120 - 480W











-25°C to +70°C

Case: **Enclosed metal case** 

Operating temperature: Parallel operation: **Possible** 

**Peak Power:** 150% nominal for 4 sec.

Output power: 120, 240, 480W

90 - 264Vac, 47 - 63Hz Input voltage:

Output voltage: 24Vdc Up to 94% Efficiency: Warranty: 5 years

More information: www.emea.tdk-lambda.com/drf







## DRF/HL single-phase - Series

120 - 480W













Safety: **IECEx & ATEX certification** 

DNV-GL approval for use in marine-equipment

Operating temperature: -25°C to +70°C

**Peak Power:** 150% nominal for 4 sec





Output power: 120, 240, 480W Input voltage: 90 - 264Vac, 47-63Hz

Output voltage: 24Vdc Efficiency: Up to 94% Warranty: 5 years

More information: www.emea.tdk-lambda.com/drf-hl

### Coming soon

# DRF960 single-phase - Series

#### 960W













Case: **Enclosed metal case** 

**Operating temperature:** -25°C to +70°C

**Peak Power:** 150% nominal for 4 sec



960W Output power:

Input voltage: 180 - 277Vac, (300Vac for 5sec.), 47 - 63Hz

Output voltage: 24Vdc Efficiency: Up to 95% Warranty: 5 years



## **DRL** - Series

10 - 100W













Shape:

Flat profile for wall mount cabinets

ErP compliant design

Safety:

UL 508 listed

Class II double Insulation



Output power: 10, 30, 60, 100W

Input voltage: 85 - 264Vac, (300Vac for 5sec.), 47 - 63Hz

Output voltage: 12 or 24Vdc Efficiency: Up to 90% Warranty: 3 years

More information:

www.emea.tdk-lambda.com/drl

## **DSP** – Series

### 10 – 100W













Shape: Flat profile for wall mount cabinets

**Operating temperature:** -25°C to +71°C Safety: UL 508 Listed

Class II double insulation



Output power: 10, 30, 60, 100W

Input voltage: 85 - 264Vac, 47 - 63Hz or 120 - 370Vdc

Output voltage: 5, 12, 15, or 24Vdc

Up to 89% Efficiency: Warranty: 3 years

More information: www.emea.tdk-lambda.com/dsp

### **DPP** – Series

15 - 100W











**Output voltages:** 5 to 48 Volt -10°C to +71°C Operating temperature: Safety: UL 508 Listed

**NEC Class II Compliant** 



TDK·Lambda

Output power: 15, 25, 30, 50, 100W Input voltage: 85 - 264Vac, 47 - 63Hz or 90 - 375Vdc Output voltage: 5, 12, 15, 24 or 48Vdc Efficiency: Up to 87% Warranty: 3 years

More information: www.emea.tdk-lambda.com/dpp

# DPP single-phase - Series

120 - 480W













Case: **Enclosed metal case** 

Operating temperature: -40°C to +71°C

Parallel operation: With current share function

Safety: UL 508 Listed

Output power: 120, 240, 480W

Input voltage: 90 - 264Vac, 47 - 63Hz or 120 - 370Vdc

Output voltage: 12, 24 or 48Vdc Up to 88% Efficiency: Warranty: 3 years

More information: www.emea.tdk-lambda.com/dpp

## DPP three-phase - Series

120 - 960W











Case: **Enclosed metal case** Operating temperature: -40°C to +71°C Parallel operation: With current sharing Safety: **UL 508 Listed** 





Output power: 120, 240, 480, 960W

Input voltage: 340 - 575Vac, three-phase or 480 - 820Vdc

Output voltage: 12, 24 or 48Vdc Efficiency: Up to 93% Warranty: 3 years

More information: www.emea.tdk-lambda.com/dpp

## **DPX** – Series

10 - 60W













**Output:** Single, dual and triple output modules

Adjustable with front panel trimmer

Input: 4:1 input with nominal 24V or 48V

Protected against reverse voltage



Output power: 10, 15, 20, 30, 40, 60W

9.5 - 36Vdc or 18 - 75Vdc Input voltage:

Output voltage:  $3.3, 5, 12, 15, \pm 5, \pm 12, \pm 15 Vdc$ 

Up to 86% Efficiency: Warranty: 2 years

More information: www.emea.tdk-lambda.com/dpx

### L-DIN - Series

**DIN-Rail Adapters** 

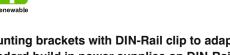












Mounting brackets with DIN-Rail clip to adapt standard build in power supplies on DIN-Rail.

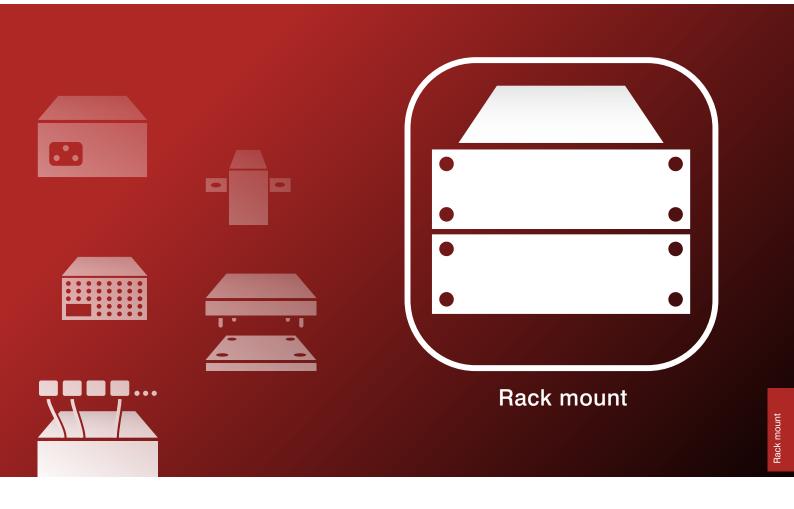
Usable for special requirements on output voltage or features which are not available with standard DIN-Rail power supplies

Available for: **RWS-50B to RWS-150B** 

HWS-15A to HWS-150A

LS-25 to LS-150





# Rack mount Power Supplies

#### **Features**

- 19" rack with hot-swap power modules up to 10kW in 1U
- Modules have integrated ORing MOSFETs for redundant operation
- Individual IEC connectors or terminal blocks for mains input
- Parallel operation between racks with active current sharing for higher output power levels
- 12V, 24V, 32V and 48V supplies for busvoltages in distributed power architecture and other applications
- Optional PM-bus I<sup>2</sup>C interface for status monitoring and control
- Optional LAN-interface for status monitoring and control





# HFE-1600 - Series

#### 1600W













Redundancy: **Internal ORing MOSFET & Current Share** 

High efficiency: Meet 80+ Standard gold

Interface: **PMBus option** 

Output power: 1600W single unit, up to 8 kW in 19" 1U shelf

Input voltage: 85 - 265Vac, 47 - 63Hz Output voltage: 12, 24, 32 or 48Vdc

Efficiency: Up to 92% Warranty: 3 years

More information: www.emea.tdk-lambda.com/hfe

## HFE-1600-S1U/-D1U - Series

6000 - 8000W

















HFE-1600-S1U: Parallel operation up to 5 units HFE-1600 (8000W total) HFE-1600-D1U: 2 separate outputs for 2x 2 units HFE-1600 (2x 3000W)

High efficiency: Meet 80+ Standard gold Interface: PMBus option and LAN option







Output power: Up to 8kW in 19" 1U shelf Input voltage: 85 - 265Vac, 47 - 63Hz Output voltage: 12, 24, 32 or 48Vdc

Efficiency: Up to 92% Warranty: 3 years

More information: www.emea.tdk-lambda.com/hfe

# HFE-2500 - Series

#### 2500W















Redundancy: **Internal ORing MOSFET & Current Share** High efficiency: Meet 80+ Standard platinum/gold

Interface: PMBus option







Output power: 2500W single unit, up to 10kW in 19" 1U shelf

85 - 265Vac, 47 - 63Hz Input voltage: Output voltage: 12, 24, 32 or 48Vdc Up to 92.5% Efficiency:

Warranty: 3 years

More information: www.emea.tdk-lambda.com/hfe

### HFE-2500-S1U - Series

#### 10000W

















1U 19" shelf: Suitable for up to 4 rectifiers HFE-2500 High efficiency: Meet 80+ Standard platinum/gold PMBus option and LAN option Interface:









Output power: Up to 10kW in 19" 1U shelf Input voltage: 85 - 265Vac, 47 - 63Hz Output voltage: 12, 24, 32 or 48Vdc

Efficiency: Up to 92.5% Warranty: 3 years

More information: www.emea.tdk-lambda.com/hfe

## FPS-1000 - Series

#### 1000W













Redundancy: Build in ORing diode & Current Share

Interface: I<sup>2</sup>C-bus option

AC-Input: Via IEC connector on front panel or via Positronic connector in rack

Output power: 1000W single unit, up to 3 kW in 19" 1U shelf

Input voltage: 85 – 264Vac, 47 – 63Hz
Output voltage: 12, 24, 32 or 48Vdc

Efficiency: Up to 88% Warranty: 2 years

More information: www.emea.tdk-lambda.com/fps

## FPS-S1U / FPS-T1U - Series

#### 3000W





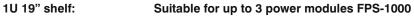












Shelf with three individual outputs or common bus bar

AC-Input: Via IEC connector on rear or direct to FPS module front panel



Output power: Up to 3kW in 19" 1U shelf
Input voltage: 85 – 265Vac, 47 – 63Hz
Output voltage: 12, 24, 32 or 48Vdc
Efficiency: Up to 88%

More information: www.emea.tdk-lambda.com/fps

2 years

Warranty:





# **Programmable Power Supplies**

### **Applications**

- ATE Systems
- · Battery simulation
- · Component burn-in
- · Plating and etching

#### **Features**

- Output voltage up to 1500V, output current up to 1000A, power range from 200W to 15000W
- Constant voltage or constant current operation with automatic crossover
- Last setting memory stores latest settings when power supply is switched off
- Analogue programming and monitoring for output voltage and current with 0-5V or 0-10V scale
- Integrated RS232/RS485 (and USB for Z+) communication interface as standard
- IEEE, LAN and isolated analogue optional interfaces
- Comprehensive parameter setting menus via front panel or digital interface
- Parallel operation with active current share and advanced parallel mode
- Arbitrary function generation and storage on Z+
- Suitable for benchtop use or 19" rack integration

## Z+ - Series

#### 200 - 800W









Interfaces: RS232/RS485, USB, analogue (standard)

LAN, IEEE (optional)

Features: Arbitrary function generation and storage

Optional front panel output jacks / CAT III type



Output power: 200, 400, 600, 800W

Input voltage: Single-phase 85 – 265Vac, 47 – 63Hz
Output voltage: 10, 20, 36, 60, 100, 160, 320, 375, 650Vdc

Efficiency: Up to 89,5% Warranty: 5 years

More information: www.emea.tdk-lambda.com/zplus

### **ZUP** – Series

200 - 800W







**WW** 

Interface: RS232/RS485, analogue (standard)

IEEE (with external controller)

Features: Optional front panel output jacks

Constant voltage / constant current



Output power: 200, 400, 800W

Input voltage: Single-phase 85 – 265Vac, 47 – 63Hz

Output voltage: 6, 10, 20, 36, 60, 80 or 120Vdc

Efficiency: Up to 87% Warranty: 3 years

More information: www.emea.tdk-lambda.com/zup

### **GENH - Series**

#### 750W









Interface: RS232/RS485, analogue (standard)

LAN, IEEE (optional)

Case: Suitable for benchtop use or 19" rack

Up to 100A **Output current:** 

Output power: 750W

Input voltage: Single-phase 85 - 265Vac, 47 - 63Hz

Output voltage: 6, 8, 12.5, 20, 40, 60, 80, 100, 150, 300 or 600Vdc

Efficiency: Up to 87% Warranty: 5 years

More information: www.emea.tdk-lambda.com/genh

### GEN 1U - Series

750 - 2400W











Interface: RS232/RS485, analogue (standard)

LAN, IEEE (optional)

Option: Integrated power sink

**Output current:** Up to 300A



Output power: 750, 1500, 2400W

Input voltage: Single-phase 85 - 264Vac, 47 - 63Hz (170 - 265Vac for 2400W)

Optional: Three-phase 170 - 265Vac for 2400W only

Output voltage: 6, 8, 12.5, 16, 20, 30, 40, 50, 60, 80, 100, 150, 300 or 600Vdc

Efficiency: Up to 88% Warranty: 5 years

More information: www.emea.tdk-lambda.com/gen1u

## GEN 2U - Series

3300 - 5000W







Interface: RS232/RS485, analogue (standard)

LAN, IEEE (optional)

Dynamic response: **Fast speed option for Automotive** 

Up to 600A **Output current:** 

3300, 5000W Output power:

Input voltage: Single-phase 170 - 265Vac, 47 - 63Hz (3300W only)

Three-phase 170 - 265Vac or 342 - 460Vac

Output voltage: 8, 10, 15, 16, 20, 30, 40, 60, 80, 100, 150, 200, 300, 400, 500 or 600Vdc

Efficiency: Up to 88% Warranty: 5 years

More information: www.emea.tdk-lambda.com/gen2u

### GEN 3U - Series

10000 - 15000W









Interface: RS232/RS485, analogue (standard)

LAN, IEEE (optional)

**Output current:** Up to 1000A



10000, 15000W Output power:

Three-phase 208Vac, 400Vac or 480Vac Input voltage:

Output voltage: 7.5, 10, 12.5, 20, 25, 30, 40, 50, 60, 80, 100, 125, 150, 200, 300, 400, 500, 600, 800, 1000,

1250 or 1500Vdc

Efficiency: Up to 88% Warranty: 5 years

More information: www.uk.tdk-lambda.com/gen3u

## EVA2400 - Series

#### 2400W









Output: Constant voltage, constant current

with automatic crossover



Output power: 2400W

Input voltage: Single-phase 170 – 265Vac, 47 – 63Hz

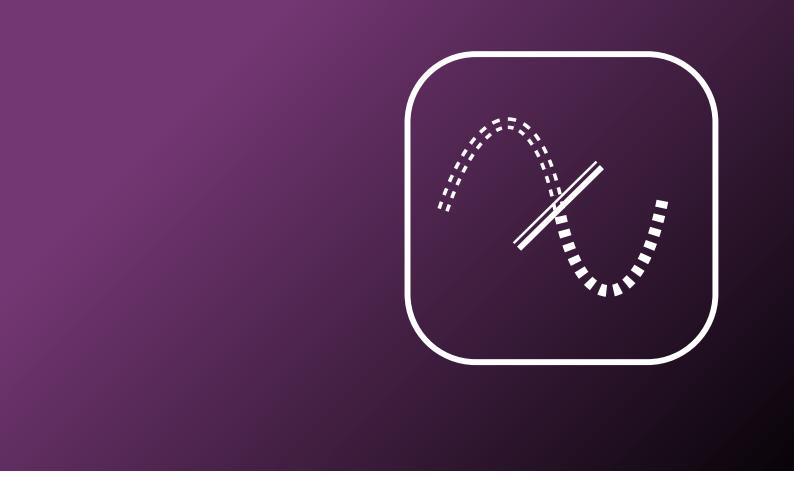
Output voltage: 150, 300, 600Vdc

Efficiency: Up to 88%

Warranty: 5 years

More information: www.emea.tdk-lambda.com/eva





# **EMC/EMI Filters**

#### **Applications**

- Improve EMC performance in complex equipment
- Improve EMC performance with long mains wires

### **Features**

- Single-phase, three-phase and three-phase AC with Neutral
- DC input models
- 0.5A to 300A line current
- Single-stage and two-stage filters with high attenuation over a wide frequency range
- With surge protection
- Medical versions with reduced leakage currents
- Models for DIN-Rail mounting

## **RSEL** – Series

0.5 – 6A















Type: Single-phase filter Attenuation: 70 - 80dB at ~1-6MHz

**Construction:** Single-stage

optional low leakage type



Current: 0.5, 1, 2, 3, 6A

Rated voltage: 250Vac Connection: Wire or Faston

Warranty: 1 year

More information: www.emea.tdk-lambda.com/r-series

## RSEN, RSAN, RSHN - Series

3 - 60A

















Type: Single-phase filter

Attenuation: High attenuation over a wide frequency range

**Construction:** Single-stage or two-stage

optional low leakage type and DIN-Rail mount



Current: 3, 6, 10, 16, 20, 30, 40, 50, 60A

Rated voltage: 250Vac

Connection: Screw terminals

Warranty: 1 year

More information: www.emea.tdk-lambda.com/r-series

# RTEN, RTHN - Series

6 - 300A









Type: Three-phase filter

Attenuation: High attenuation over a wide frequency range

**Construction:** Single-stage or two-stage

optional low leakage type and DIN-Rail mount

Current: 6, 10, 20, 30, 40, 50, 60, 80, 100, 150, 200, 300A

Rated voltage:

Connection: Screw terminals

Warranty: 1 year

More information: www.emea.tdk-lambda.com/r-series

# **RDEN-048-050 - Series**

50A











Type: **DC-line filter** 

for Information and Telecommunication equipment

Attenuation: High attenuation for noise from low frequency

to high frequency



Current: 50A

Rated voltage: 48Vdc (76Vdc max.) Connection: Large stud type terminals

Warranty: 1 year

More information: www.emea.tdk-lambda.com/r-series

# SIFI F, G, H - Series

3 - 36A















Type: Single-phase filter

Attenuation: High attenuation over a wide frequency range

**Construction:** Single-stage or two-stage

optional low leakage type



Current: 3, 6, 10, 16, 20, 25, 36A Rated Voltage: 250Vac, 50/60Hz and 250Vdc Connection: Faston or screw terminals

Warranty: 1 year

More information: www.emea.tdk-lambda.com/sifi

## B84771, B84773, B84776 - Series

1 - 20A













With IEC-Inlet Types:

With IEC-Inlet and fuse

With IEC-Inlet, fuse and switch

Option: **Medical versions** 



Current: 1 - 20A

Rated voltage: 250Vac, 50/60Hz

Connection: IEC-input, Faston-output

Warranty: 1 year

More information: www.emea.tdk-lambda.com/iec



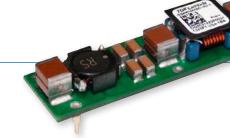
10A











Type: DC-line filter for Information and Telecommunication equipment

Attenuation: Exceptional Differential Mode Performance

**Very Compact Size** 



Current: 10A

Rated Voltage: 75Vdc (100Vdc for 100msec.)

Connection: Surface or Through Hole Mount

Warranty: 3 years

More information: www.emea.tdk-lambda.com/iDQ



#### **Applications DC/DC Converters**

- Distributed Power Architecture with DC Bus
- Small subsystems with battery backup

#### **Applications bidirectional DC/DC Converters**

- Electrical motor energy re-generation/storage (lifts, cranes, etc)
- Battery tests systems energy re-generation to avoid energy waste
- Smart-grid, particularly "micro-grid" applications

#### **Features DC-DC Converters**

- · Galvanic isolation between input and output
- Power range from 1.5W to 700W
- Convection cooling, conduction cooling with baseplate or forced air cooling
- Input voltage ranges 2:1 or 4:1
- Nominal input voltages 5V, 12V, 24V, 48V, 110V or 280V

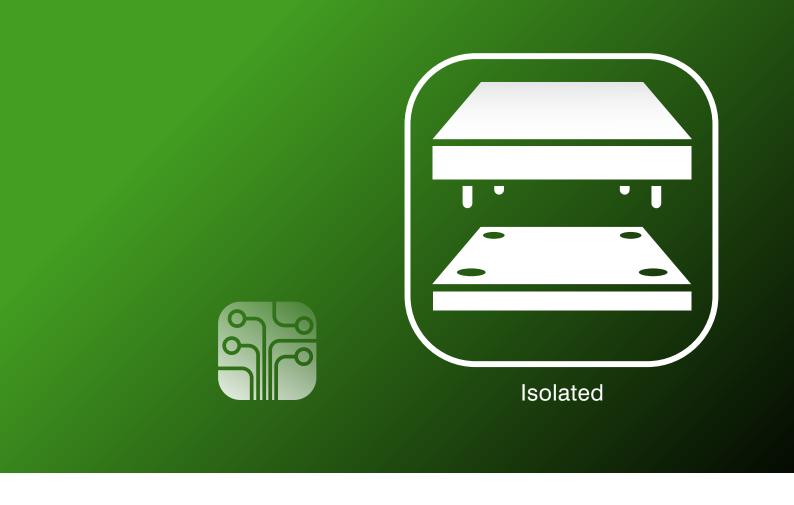
#### **Features Point of Load Converters**

- · No galvanic isolation
- · High efficiency
- · Very fast transient response time
- SMT or through hole mounting
- Supply of logic voltages below 5V direct at the load

#### Features bidirectional DC/DC converters

- Grid voltage 320Vdc nominal, (300-380Vdc)
- Battery voltage 48Vdc nominal, (36-60Vdc)
- High efficiency up to 94.6%





## Isolated DC-DC Converters

#### **Features**

- Galvanic isolation between input and output
- Power range from 1.5W to 700W
- Input voltage ranges 2:1 or 4:1
- Convection cooling, conduction cooling with baseplate of forced air cooling
- Nominal input voltages 5V, 12V, 24V, 48V, 110V or 280V
- · Very high efficiencies
- Industry leading power density

# PXA / PXB - Series

15W











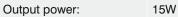


Shape: Standard industrial footprint 1" x 1"

> **PXA** open frame PXB six side shielding

Mounting:

Pin and surface mount



Input voltage: 12, 24 or 48Vdc nominal

9 - 36 or 18 - 75Vdc

Output voltage: 3.3, 5, 12, 15Vdc

Efficiency: Up to 88% Warranty: 2 years

More information: www.emea.tdk-lambda.com/pxa



10 - 60W











Shape: Industrial standard footprint 2" x 1", 2" x 1.6", 2" x 2"

Input:

2:1 and wide range 4:1

Safety:

**Industry standard footprint** 



Output power: 10, 15, 20, 30, 40, 60W Input voltage: 12, 24 or 48Vdc nominal

9 - 36 or 18 - 75Vdc

Output voltage:

3.3, 5, 12, 15Vdc

Efficiency:

Up to 89%

Warranty:

2 years

More information:

www.emea.tdk-lambda.com/pxd

## **PXC** – Series

3 - 6W













Shape: **Industry Standard 24 Pin DIP Package** 

through hole and SMT versions

Case: Five sided shielding Input: Wide range 4:1

3 – 6W Output power:

9 - 36 or 18 - 75Vdc Input voltage:

Output voltage:  $3.3, 5, 12, 15 Vdc, \pm 5, \pm 12, \pm 15 Vdc$ 

Efficiency: Up to 82% Warranty: 2 years

More information: www.emea.tdk-lambda.com/pxc



## PXC-M - Series

3 - 10W













Input: 4:1 Wide range 24V and 48V nominal

isolation: 5kVac input/output 2x MoPP

Safety: IEC/EN60601-1



Output power: 3, 6, 10W

Input voltage: 9 - 36 or 18 - 75Vdc

Output voltage: 3.3, 5, 12, 15, 24, ±5, ±12, ±15Vdc

Efficiency: Up to 89% Warranty: 2 years

More information: www.emea.tdk-lambda.com/pxc-m

# CC-E / CC-P-E - Series

1.5 – 30W













Shape:

SMT or through hole, flat profile

**Single and Dual outputs** 

Trim: Isolation: Adjustable output voltage 500Vac Input to Output



Output power: 1.5, 3, 6, 10, 15, 25, 30W Input voltage: 5, 12, 24 or 48Vdc nominal Output voltage:  $3.3, 5, 12/15, or \pm 12/15Vdc$ 

Efficiency: Up to 90% Warranty: 5 years

More information: www.emea.tdk-lambda.com/cc-e



### **CCG** – Series

15 - 30W











Size:

1" x 1" industry standard

Input:

4:1 Wide range 24V and 48V nominal

Six sided shielding

Safety:

EN/UL/CSA 60950-1



Output current: 15, 30W

Input voltage: 9 - 36 or 18 - 75Vdc Output voltage: 3.3, 5, 12, 15Vdc Efficiency: Up to 91%

5 years

More information:

Warranty:

www.emea.tdk-lambda.com/ccg15

### iEA - Series

#### Up to 78W











Size:

Standard "eighth-brick" format

Open frame design, low 8.8mm profile

Through hole Mounting:

Isolation: 1500Vdc basic isolation



Output power:

Up to 78W

Input voltage:

36 - 75Vdc or 18 - 60Vdc

Output voltage:

1.2, 1.5, 1.8, 2.5, 3.3, 5, 12, 15, 18 or 28Vdc

Efficiency:

Up to 90%

Warranty:

3 years

More information:

www.emea.tdk-lambda.com/iea

# iEH - Series

### Up to 308W











Size:

Standard "eighth-brick" format

**Baseplate option** 

Isolation:

2250Vdc Input to Output



Output power:

Up to 308W

Input voltage:

36 - 75Vdc

Output voltage:

9.6, 10.2, 10.8 or 2Vdc

Efficiency:

Up to 96%

Warranty:

3 years

More information:

www.emea.tdk-lambda.com/ieh

# iQE / iQG - Series

**Up to 400W** 













Standard "quarter-brick" format Open frame design, low profile

Soldering:

Through hole mounting





Output power: Up to 400W

Input voltage: 18 - 36, 18 - 60 or 36 - 75Vdc Output voltage: 3.3, 5, 8, 9.6, 10.8, 12 or 15Vdc

Efficiency: Up to 95% Warranty: 3 years

More information: www.emea.tdk-lambda.com/iqe

### iHG - Series

Up to 300W











Size:

Standard "half-brick" format Open frame design, low profile

Soldering:

Through hole mounting



Output power: Up to 300W Input voltage: 36 - 75Vdc Output voltage: 1.8, 3.3, 5Vdc Efficiency: Up to 95% Warranty: 3 years

More information: www.emea.tdk-lambda.com/ihg



### **CN-A** – Series

#### 30 - 100W





Size: Standard "quarter-brick" format

Optional: Coating (suffix /CO) Shock/vibration: **EN/IEC 61373** 

Temperature: Full power at 100°C (baseplate temperature)

Input: EN50155/IEC60571



Output power: 30, 50, 100W

Input voltage: 60 - 160Vdc or 18 - 36Vdc (50W, 100W)

Output voltage: 5, 12, 15 or 24Vdc

Efficiency: Up to 88% Warranty: 5 years

More information: www.emea.tdk-lambda.com/cn-a

### CN-A - Series

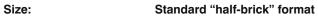
#### 200W











**Optional:** Coating (suffix /CO)

Shock/vibration: **EN/IEC 61373** 

Temperature: Full power at 100°C (baseplate temperature)

EN50155/IEC60571 Input:



Output power: 200W 60 - 160Vdc Input voltage: 5, 12, 15 or 24Vdc Output voltage: Up to 88% Efficiency:

More information: www.emea.tdk-lambda.com/cn-a

5 years



Warranty:



#### 120W







**Standard Quarter Brick Footprint** Size:

Up to 115°C Baseplate Temperature **Rugged Package with Encapsulation** 

**Enhanced Screening Option** 

Safety: EN/UL/CSA 60950-1



Output power: 120W Input voltage: 9 - 40 or 18 - 40Vdc Output voltage: 12, 24, 28, 48Vdc Efficiency: Up to 91.5% Warranty: 3 years

More information: www.emea.tdk-lambda.com/hqa

### PAH - Series

#### 50 - 450W













Size: Standard "half-brick" format Safety: EN/UL/CSA 60950-1 approval

Temperature: Full power at 100°C (baseplate temperature)

Wide adjustable voltage range **Output:** 



50, 75, 100, 150, 200, 300, 350, 450W Output power:

24, 48Vdc nominal Input voltage:

Output voltage: 2.5, 3.3, 5, 12, 15, 24, 28 or 48Vdc

Efficiency: Up to 92% Warranty: 2 years

More information: www.emea.tdk-lambda.com/pah

# PAF - Series

400 - 700W



Size:

Safety:













Full power at 100°C (baseplate temperature) Temperature:

**Output:** Wide adjustable voltage range



Output power: 450, 500, 600, 700W Input voltage: 24, 48, 280Vdc nominal Output voltage: 12, 24, 28 or 48Vdc Efficiency: Up to 91% Warranty: 2 years

More information: www.emea.tdk-lambda.com/paf



# PH-A - Series

50 - 300W













Size: Quarter-brick (50-150W) or Half-brick (300W) module with baseplate

Isolation: High withstand voltage for PoE application

Safety: EN/UL/CSA 60950-1 approval

Temperature: Full power at 100°C (baseplate temperature)



Output power: 50, 75, 100, 150, 300W

Input voltage: 280Vdc nominal; range: 200 – 425Vdc

Output voltage: 3.3, 5, 12, 15, 24, 28, 48Vdc

Efficiency: Up to 91% Warranty: 5 years

**More information:** www.emea.tdk-lambda.com/ph-a

www.emea.tdk-lambda.com/ph300a



# **EZA** – Series

2500 - 11000W











Size: 1U 19" shelf

Full digital control with RS-485 interface

Isolation: 3kV AC between grid and battery



Output power: 2500, 11000W

Grid voltage: 320Vdc nominal; range: 300 – 380Vdc for 2500W; 240 – 400Vdc for 11000W

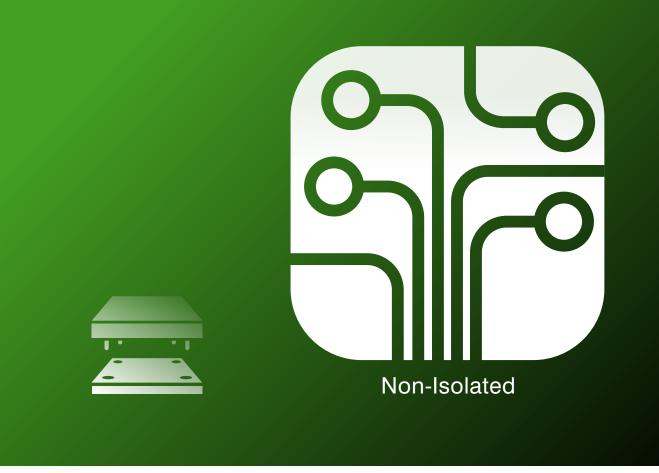
Batterie voltage: 48Vdc for 2500W; 240VDC for 11000W

Efficiency: Up to 95% in both directions

Warranty: 5 years

More information: www.emea.tdk-lambda.com/eza





# Non-Isolated DC-DC Converters

#### **Features**

- No galvanic isolation
- · Very high efficiency
- Very fast transient response time
- SMT or through hole mounting
- Supply of logic voltages directly at the load
- Industry leading power density
- iJx models offer digital adaptive control with PMBus  $^{\mathsf{\tiny M}}$





# i6A - Series

#### 250W













Size: Standard 1/16 Brick Footprint

Step-down (buck) PoL-converter

Wide output voltage adjustment ranges

Safety: EN/UL/CSA 60950-1



Output power: Up to 250W

Input voltage: 9 - 40 or 9 - 53Vdc

Output voltage: 3.3 to 15, 3.3 to 24, -3.3 to -30Vdc

Up to 98% Efficiency: Warranty: 3 years

More information: www.emea.tdk-lambda.com/i6A



### iAH/iBH/iCH - Series

80 - 150W











DOSA 2+ Standard Size:

**Surface Mountable** 

**Excellent Transient Response** 

No external loop tuning components needed

Safety: EN/UL/CSA 60950-1



Output current: 12A, 20A, 40A 3.5 - 17Vdc Input voltage: 0.7 - 8.5Vdc Output voltage: Efficiency: Up to 97% Warranty: 3 years

More information: www.emea.tdk-lambda.com/iah

> www.emea.tdk-lambda.com/ibh www.emea.tdk-lambda.com/ich



#### Up to 150 W

















Size: Ultra high power density, dual phase 60A

Interface: PM Bus read and write compliant **Accuracy:** Precision Vout setpoint; 0,5%

Digital adaptive control



Output current: 35, 60, 100A 8 - 14Vdc Input voltage:

Output voltage: 0.6 - 3.3Vdc (adjustable)

Efficiency: Up to 94% Warranty: 3 years

More information: www.emea.tdk-lambda.com/ija

> www.emea.tdk-lambda.com/ijb www.emea.tdk-lambda.com/ijc

### iBF / iAF - Series

5 - 15W















Regulation: **Excellent transient response** 

Soldering: **LGA or EPC format** Non isolated output



Output current: 12, 20A Input voltage: 4.5 - 14Vdc

Output voltage: 0.7 - 5.5Vdc (adjustable)

Efficiency: Up to 93.5% Warranty: 3 years

More information: www.emea.tdk-lambda.com/ibf

www.emea.tdk-lambda.com/iaf

# iCF / iCG - Series

5 – 15W













Shape: 2<sup>nd</sup> generation DOSA

Regulation:

**Excellent transient response** 

Soldering:

LGA or EPC format Non isolated output



Output current:

3 or 6A

Input voltage:

4.5 - 14Vdc

Output voltage:

0.7 - 5.5Vdc (adjustable)

Efficiency:

Up to 96.5%

Warranty:

3 years

More information:

www.emea.tdk-lambda.com/icf www.emea.tdk-lambda.com/icg

### CE-10xx - Series

5 – 15W













Shape: SMT mounting, closed case Height: Only 4.5mm (5.5mm for CE-1050)

Temperature:

-40°C to +85°C Non isolated output



Output current:

1.5, 2.5A

Input voltage:

3 - 5.25, 6 - 16, 9 - 26.4Vdc

Output voltage:

1.5 - 3.3, 3.3 - 5, 1.0 - 3.3, 3.3 - 12.6Vdc (adjustable)

Efficiency:

Up to 91.5%

Warranty:

1 year

More information:

www.emea.tdk-lambda.com/ce



#### **The Design Process**

- · Technical draft
- Field-proven technology from our standard products
- Careful component selection
- Design verification tests (DVT)
- Approvals (Safety, EMC...)

### **Protection**

#### examples 5 - 15000W























#### Medical applications (Fig. 1)

High Transportation Safety: The MRT Ramp Up Power Supply system is designed for a withstand repeated shipping, rough handling and vibration.

The Power Modules have comprehensive front panel controls with individual rotary encoders for output current and voltage and extensive self-test and quality control functions.

#### Medical applications (Fig. 2)

Fast acceleration forces: Individual solutions are a standard at TDK-Lambda. In this application, the power supply including its components is part of the rotating gantry and thus has to cope with high speeds of rotation. The multiple output voltages specified by the customer are realized using standard components, taking advantage of the easy-to-install modular technology.





#### Display (Fig. 3)

Specifically for maritime applications: A common challenge in maritime applications is the need to cope with extreme operating temperatures, saline air, erosion, considerable vibrations and shocks. In addition, large-area electromagnetic interferences (EMI) may occur, which can obstruct the orderly operation of the equipment. Specifically for requirements like this, TDK-Lambda has developed a high performance multiple output power supply with AC and DC input and 130W output power. A special coating protects the unit from a highly polluted atmosphere - a fundamental precaution for a long-lasting, reliable and particularly maintenance-free performance.

### **Accessories**

#### examples 5 - 15000W























#### Analysis applications (Fig. 4)

Power supplies for various applications: Flexible use in different systems with 5 output voltages. The standard power supply has an IEC input connector, DC cabling and a customised cooling concept.



#### Medical applications (Fig. 5)

Harsh environment conditions: Your application requires a controllable power supply that works reliably under harsh electromagnetic conditions. The programmable Genesys™ series delivering up to 16kW provides what you need.



#### Measuring (Fig. 6)

Fast Integration: Fitted for the customer's pin connectors, this pc board is included with screw terminals for easy integration. Result: Easy to mount and connect.

### Chassis

#### examples 5 - 15000W





























#### Vending and ticketing (Fig. 7)

Rapid integration: As a tailored solution to match the customer requirement for limited output power (NEC class 2), the HWS-150 standard power supply was built into a customer-specific metal enclosure and was equipped with specific connection cables and connectors. Result: Easy installation and connection.

#### Food industry (Fig. 8)

High safety level: For best user protection according to the IP classifications, a modified HWS-300 standard power supply (240W) was built into an IP54 enclosure. The protection enclosure protects the operating personnel and additionally matches specific functional requirements in a harsh environment with extraordinary thermal impacts.

#### Measuring (Fig. 9)

Universal applicability: Another innovative concept is employed in this equipment. Depending on your requirements, you are flexible to choose between an AC power supply from our standard range and a customised power supply with DC input with a minimum manufacturing level. Your advantage: Both variants have the same terminal block and the same volume.

# **Filters**

#### examples 5 - 15000W

























### Medical applications (Fig. 10)

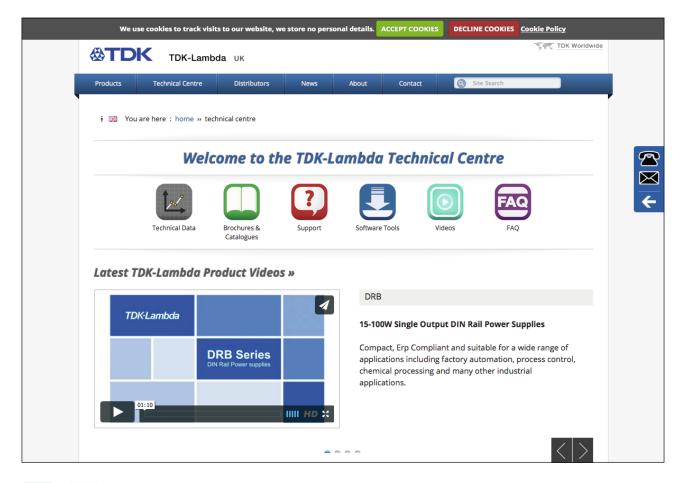
### Display applications (Fig. 11)

**Reduction of ripple and noise:** These Vega 450 and NV175 applications with integrated DC filter ensure enhanced ripple and noise performance. Integration into the customers equipment is eased by used of their specified connector types.

### You need Technical Information?

#### The TDK-Lambda website www.emea.tdk-lambda.com has a huge library of data:

- Quick Product Finder
- Datasheets
- · Installation Manuals
- Application Notes
- Software Tools
- Evaluation & Reliability Data
- · Safety Certification
- Technical Articles / Product Videos







# You want Engineering Support?

Please contact your local TDK-Lambda salesperson or distribution partner to speak to our inside technical support team.

# TDK-Lambda – Global Operations







### Please contact your local sales office to find the best solution to your application.





#### **TDK-Lambda France SAS**

3 avenue du Canada Parc Technopolis - Bâtiment Sigma 91940 Les Ulis France

Tel. +33 1 60 12 71 65 Fax +33 1 60 12 71 66 france@fr.tdk-lambda.com www.fr.tdk-lambda.com



#### TDK-Lambda UK Ltd.

Kingsley Avenue Ilfracombe Devon EX34 8ES United Kingdom Tel. +44 12 71 85 66 66 Fax +44 12 71 86 48 94 powersolutions@uk.tdk-lambda.com www.uk.tdk-lambda.com



#### **Italy Sales Office**

Via dei Lavoratori 128/130 20092 Cinisello Balsamo (MI) Italy

Tel. +39 02 61 29 38 63 Fax +39 02 61 29 09 00 info.italia@it.tdk-lambda.com www.it.tdk-lambda.com



#### TDK-Lambda Ltd.

Kibbutz Givat Hashlosha 48800 Israel

Tel. +9 723 902 4333 Fax. +9 723 902 4777 info@tdk-lambda.co.il www.tdk-lambda.co.il



#### Netherlands



info@nl.tdk-lambda.com www.nl.tdk-lambda.com



#### C.I.S.

**Commercial Support:** Tel. +7 495 665-26 27

#### **Technical Support:**

St. Petersburg Tel. +7 812 658-04 63 info@tdk-lambda.ru www.tdk-lambda.ru



#### TDK-Lambda Germany GmbH

Karl-Bold-Strasse 40 77855 Achern Tel. +49 7841 666 0 Fax +49 7841 5000 info@de.tdk-lambda.com www.de.tdk-lambda.com



#### **Austria Sales Office**

Aredstrasse 22 2544 Leobersdorf Austria Tel. +43 2256 655 84 Fax +43 2256 645 12 info@at.tdk-lambda.com www.at.tdk-lambda.com



#### **Nordic Sales Office**

Haderslevvej 36B 6000 Kolding Denmark Tel. +45 2911 9656 info@dk.tdk-lambda.com www.dk.tdk-lambda.com



#### **Switzerland Sales Office**

Bahnhofstrasse 50 8305 Dietlikon Switzerland Tel. +41 44 850 53 53 Fax +41 44 850 53 50 info@ch.tdk-lambda.com www.ch.tdk-lambda.com

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