

## Power Supplies and DC-DC Converters

EN



**TDK-Lambda**





# Power Supply Solutions.

## Worldwide

TDK-Lambda offers a broad range of standard power supplies for many applications. This brochure is designed to give a quick overview of complete product range.

To ease navigation the product ranges are sorted into special categories on the next page. Individual product information is abbreviated to the relevant data required to make an initial selection of possible models for your application. For detailed technical data, please follow the web link alongside each product highlight.

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 only and for many applications several different TDK-Lambda products will be suitable. For assistance in finding the best product for your application, please contact our technical sales department.



Railway



Medical



Industrial



Test



Broadcast



Comms



Renewable



COTS



LED

[www.emea.tdk-lambda.com](http://www.emea.tdk-lambda.com)



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### Power + Solutions

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Protection, Accessories, Chassis, Filters

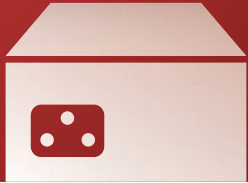
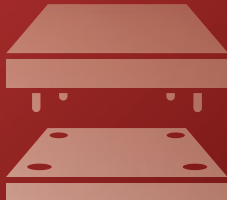
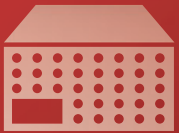
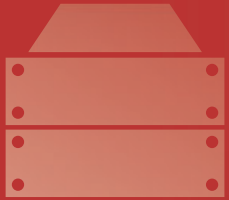
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# AC-DC Power Supplies



Configurable

Configurable

## Applications

### Many but especially:

- Equipment needing several different or uncommon output voltages
- Systems with different output voltage requirements in same package style

## 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

## NVM175 – Series

180W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 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:	<170 $\mu$ A
Input fuse:	Dual fuses (live and neutral)



Air Flow



Fan

Output power:	180W
Input voltage:	90 – 264Vac, 45 – 63Hz
Output voltage:	12 or 24Vdc
Efficiency:	Up to 90%, configuration dependent
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/nv](http://www.emea.tdk-lambda.com/nv)

## CFE400M – Series

300W, 400W, 450W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 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



Convection



Air Flow



Fan

Output power:	300W convection, 400W fan cooled, 450W peak
Input voltage:	85 – 264Vac, 47 – 63Hz (440Hz with reduced PFC)
Output voltage:	12, 24 or 48Vdc (see datasheet for adjustment range)
Efficiency:	Up to 94% for 48Vdc and 24Vdc (91% for 12Vdc). At 230Vac, 80% load
Warranty:	5 years

**More information:** [www.emea.tdk-lambda.com/cfe](http://www.emea.tdk-lambda.com/cfe)

## EFE300 – Series

300W, 400W



Industrial



Test



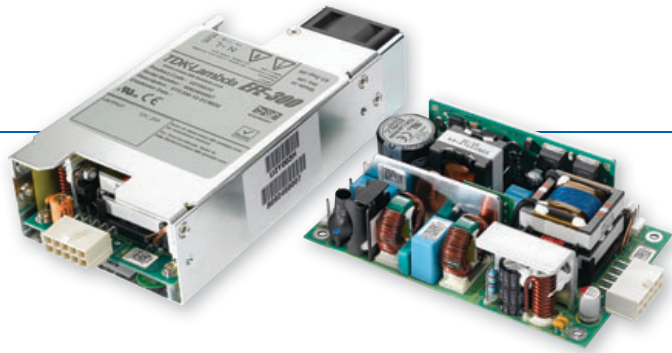
Broadcast



Comms



Renewable



### 1 Output

**High power density:** 300W on 5 x 3 inch footprint

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

**Peak power:** 400W for up to 10 sec.



Air Flow



Fan

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](http://www.emea.tdk-lambda.com/efe)

## EFE300M – Series

300W, 400W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 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



Air Flow



Fan

Output power:	300W continuous, 400W peak power
Input voltage:	90 – 264Vac, 45 – 63Hz (440Hz with reduced PFC), 120 – 350Vdc
Output voltage:	12, 24, 28, 48 or 50Vdc (non standard voltages available)
Efficiency:	Up to 90% (87% if Standby Supply is fully loaded)
Warranty:	5 years

**More information:** [www.emea.tdk-lambda.com/efe-m](http://www.emea.tdk-lambda.com/efe-m)

## EFE400 – Series

400W, 530W



Industrial



Test



Broadcast



Comms



Renewable



### 1 Output + standby

**High power density:** 400W on 6 x 3 inch footprint

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

**Peak power:** 530W for up to 10 sec.



Air Flow



Fan

Output power:	400W continuous, 530W peak 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](http://www.emea.tdk-lambda.com/efe)

## EFE400M – Series

400W, 530W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 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



Air Flow



Fan

Output power:	400W continuous, 530W peak power
Input voltage:	90 – 264Vac, 45 – 63Hz (440Hz with reduced PFC), 120 – 350Vdc
Output voltage:	12, 24 or 48Vdc (non standard voltages available)
Efficiency:	Up to 90% (87% if Standby Supply is fully loaded)
Warranty:	5 years

**More information:** [www.emea.tdk-lambda.com/efe-m](http://www.emea.tdk-lambda.com/efe-m)



## NV175M – Series

180W, 200W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 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.



Air Flow



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](http://www.emea.tdk-lambda.com/nv)

## NV100 – Series

100W



Industrial



Test



Broadcast



Comms



Renewable



### 4 Outputs

**Efficiency:** Up to 90%

**Working altitude:** –200 to 3000m

**Connection:** Single output connector



Convection



Air Flow

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](http://www.emea.tdk-lambda.com/nv)

## NV175 – Series

180W, 200W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 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.



Air Flow



Fan

Output power:	5V channel 1 are 175W (no peak power), all others are 180W (200W peak 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](http://www.emea.tdk-lambda.com/nv)

## NV300 – Series

300W



Medical



Industrial



Test



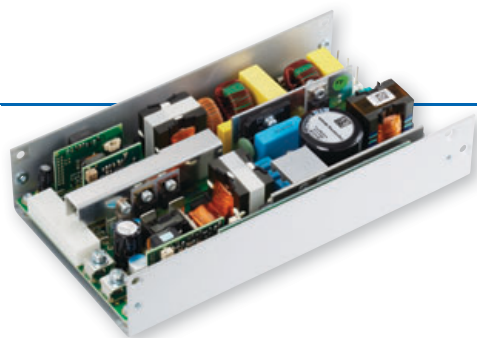
Broadcast



Comms



Renewable



### 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



Air Flow



Fan

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
Efficiency:	Up to 90%, configuration dependent
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/nv](http://www.emea.tdk-lambda.com/nv)

## NV350 – Series

350W, 660W, 740W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 1 to 6 Outputs + standby option

<b>High flexibility:</b>	10 single and 14 dual output modules available
<b>Isolation:</b>	3kVac input to output (2 x MOOPs for IEC60601-1) 4kVac input to output (2 x MOPPs) products available
<b>Controls &amp; signals:</b>	8 primary (global) and 4 secondary options



Air Flow



Fan

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](http://www.emea.tdk-lambda.com/nv350-700)

## NV700 – Series

700W, 1150W, 1450W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 1 to 8 Outputs + standby option

<b>High flexibility:</b>	10 single and 14 dual output modules available
<b>Isolation:</b>	3kVac input to output (2 x MOOPs for IEC60601-1) 4kVac input to output (2 x MOPPs) products available
<b>Controls &amp; signals:</b>	8 primary (global) and 4 secondary options



Air Flow



Fan

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](http://www.emea.tdk-lambda.com/nv350-700)

## Vega Lite – Series

550W, 750W, 900W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 1 to 11 Outputs + standby option

<b>High flexibility:</b>	<b>21 single and 7 dual output modules available</b>
<b>Isolation:</b>	<b>4kVac input to output (2 x MOPPs for IEC60601-1) 200Vdc output to ground, 1.5kVac input to ground</b>
<b>Operational Altitude:</b>	<b>Up to 5000m, application dependent</b>



Fan

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
Efficiency:	Up to 75%, 230Vac & 100% rated power, configuration dependent
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/vega-lite](http://www.emea.tdk-lambda.com/vega-lite)

## Vega – Series

450W, 650W, 900W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 1 to 11 Outputs + standby option

<b>Highest flexibility:</b>	<b>45 single and 25 dual output modules available</b>
<b>Isolation:</b>	<b>4kVac input to output (2 x MOPPs for IEC60601-1) 200Vdc output to ground, 1.5kVac input to ground</b>
<b>Operational Altitude:</b>	<b>Up to 5000m, application dependent</b>



Fan

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
Efficiency:	Up to 75%, at 230Vac & 100% rated power, configuration dependent
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/vega](http://www.emea.tdk-lambda.com/vega)



## Vega-DC – Series

450W



Industrial



Test



Broadcast



Comms



Renewable



### 1 to 11 Outputs + standby option

**Highest flexibility:** 45 single and 25 dual output modules available

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



Air Flow



Fan

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](http://www.emea.tdk-lambda.com/vega)

## Alpha – Series

1000W, 1500W



Medical



Industrial



Test



Broadcast



Comms



Renewable



### 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



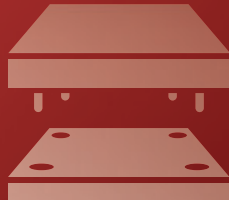
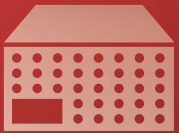
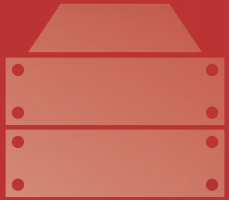
Fan

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](http://www.emea.tdk-lambda.com/alpha)



# AC-DC Power Supplies



External/Desktop

## Applications

- External power supplies as accessory for end equipment
- Typically used for portable equipment

## 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 – Series

60 – 65W



**Case:** Enclosed plastic case  
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



Convection

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](http://www.emea.tdk-lambda.com/dtm)

## DTM110 – Series

90 – 110W



**Case:** Enclosed plastic case  
IEC320-C14 input connector

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

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



Convection

Output power:	90 – 110W, convection cooled
Input voltage:	90 – 264Vac, 47 – 63Hz
Output voltage:	12, 13.5, 15, 19, 20 or 24Vdc
Efficiency:	87% average efficiency
Warranty:	2 years

**More information:** [www.emea.tdk-lambda.com/dtm](http://www.emea.tdk-lambda.com/dtm)

## DT150 – Series

140 – 150W



Industrial



Test



Broadcast



Comms



**Case:**

Enclosed plastic case  
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



Convection

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](http://www.emea.tdk-lambda.com/dt-c)

**Coming soon**

## DTM165 – Series

165W



Medical



Industrial



Test



Broadcast

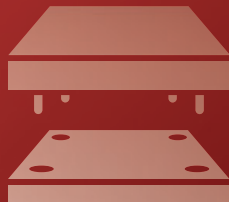
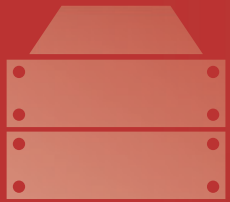


Comms





# AC-DC Power Supplies



Chassis mount

Chassis mount

## Applications

- Embedded (built-in) power supplies for a broad range of applications
- Suitable for industrial applications, automation, test equipment
- High reliability and low cost products available

## Features

- 5 to 2500W output power
- Single-phase wide range input 85 – 265Vac
- 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
- Safety meets EN/IEC/UL 60950-1 standard. CE marked for Low Voltage Directive

## HWS-15A to HWS-150A – Series

15 – 150W



Industrial



Test



Broadcast



Comms



LED



**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



Convection

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
Efficiency:	Up to 91%
Warranty:	Lifetime*

**More information:** [www.emea.tdk-lambda.com/hws\\_a](http://www.emea.tdk-lambda.com/hws_a)

## HWS300 to HWS600 – Series

300 – 600W



Industrial



Test



Broadcast



Comms



LED



**High efficiency:** Up to 86%

**Size:** Unique height of 82mm

**Input:** Wide range 85 – 265Vac without derating



Fan

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:	Lifetime*

**More information:** [www.emea.tdk-lambda.com/hws](http://www.emea.tdk-lambda.com/hws)

\* See TDK-Lambda's Terms & Conditions on our Website

## HWS1000 to HWS1500 – Series

1000 – 1500W



Industrial



Test



Broadcast



Comms



LED



**Size:**

**Unique height of 82mm**

**Output:**

**Remote voltage programming**



Fan

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:	Lifetime*

**More information:** [www.emea.tdk-lambda.com/hws](http://www.emea.tdk-lambda.com/hws)

## HWS300P / HWS600P – Series

300 / 600W



Industrial



Test



**Peak power capability:**

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



Fan

Output power:	300, 600W
Input voltage:	85 – 264Vac, 47 – 63Hz or 120 – 330Vdc
Output voltage:	24, 36 or 48Vdc
Efficiency:	Up to 87%
Warranty:	Lifetime*

**More information:** [www.emea.tdk-lambda.com/hws-p](http://www.emea.tdk-lambda.com/hws-p)

\* See TDK-Lambda's Terms & Conditions on our Website

## HWS-A/ME / HWS/ME – Series

30–150W / 300–1500W



Medical

<b>Warranty:</b>	<b>Lifetime warranty</b> <b>Highest reliability</b>
<b>Medical use:</b>	<b>Reduced leakage current for medical applications</b>
<b>Safety:</b>	<b>EN60601-1 for basic insulation</b>



Convection



Fan

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:	Lifetime*

**More information:** [www.emea.tdk-lambda.com/hws-me](http://www.emea.tdk-lambda.com/hws-me)

## HWS-A/HD / HWS/HD – Series

30–150W / 300–1500W



Industrial



Test



Broadcast



Comms



LED



COTS

<b>Operation:</b>	<b>Coating for harsh environmental conditions</b>
<b>Input:</b>	<b>Wide range 85 – 265Vac without derating</b>
<b>Safety:</b>	<b>EN/IEC/UL609501-1</b>



Convection



Fan

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:	Lifetime*

**More information:** [www.emea.tdk-lambda.com/hws-hd](http://www.emea.tdk-lambda.com/hws-hd)

\* See TDK-Lambda's Terms & Conditions on our Website



## HWS600L/BAT – Series

600W



Industrial



Test



Comms



Broadcast

**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



Fan

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



Medical



Test



Industrial



Comms



Broadcast

**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



Fan

Output power:	1000W
Input voltage:	85 – 265Vac, 47 – 63Hz or 120 – 350Vdc
Output voltage:	36 or 60Vdc
Efficiency:	Up to 86%
Warranty:	3 years

## LZSa – Series

500 – 1500W



Industrial



COTS



LED

**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



Fan

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](http://www.emea.tdk-lambda.com/lzsa)



## CPFE – Series

500 – 1000W



Industrial



COTS



Broadcast



Comms



LED

**Cooling:** Fanless operation  
 Conduction cooling via baseplate  
 Parallel operation with active current share  
**Control:** I<sup>2</sup>C Interface on CPFE1000F



Baseplate

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](http://www.emea.tdk-lambda.com/cpfe)



## RWS-B – Series

50W, 100W, 150W



Industrial



Test



Broadcast



Comms



LED



**Size:**

**High power density**

**Reliability:**

**Long E-Cap lifetime**

**Mounting:**

**Optional DIN-Rail bracket**



Convection

Output power:	50, 100, 150W
Input voltage:	85 – 265Vac, 47 – 63Hz or 120 – 370Vdc
Output voltage:	5, 12, 24 or 48Vdc
Efficiency:	Up to 89%
Warranty:	5 years

**More information:** [www.emea.tdk-lambda.com/rws-b](http://www.emea.tdk-lambda.com/rws-b)

## RWS-B – Series

300 – 600W



Industrial



Test



Broadcast



Comms



LED



**Size:**

**High power density**

**Low noise:**

**Fan stops at no load operation**

**Reliability:**

**Long E-Cap lifetime**

**Optional:**

**Signals (RWS-600B)**



Fan

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:	5 years

**More information:** [www.emea.tdk-lambda.com/rws-b](http://www.emea.tdk-lambda.com/rws-b)

## SWS600L – Series

600W



Industrial



Test



LED



Comms



**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%**



Fan

Output power:	600W
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](http://www.emea.tdk-lambda.com/sws)

## SWS1000L – Series

1000W



Industrial



Test



LED



Comms



Medical



**Temperature:**

**Wide operating temperature range up to 74°C**

**Safety:**

**Medical approval EN/IEC/UL 60601-1**

**Output voltage control:**

**Analog input for remote programming of output voltage from 20–120%**



Fan

Output power:	100W
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](http://www.emea.tdk-lambda.com/sws)

## LS25 to LS150 – Series

25 – 150W



Industrial



Test



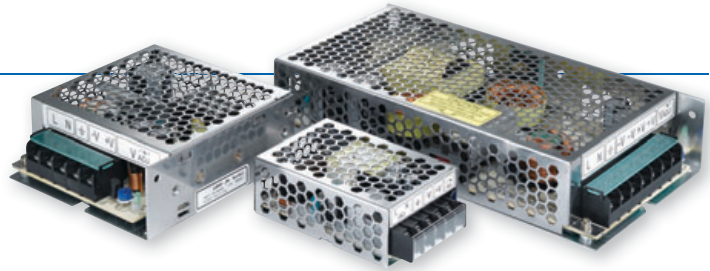
Broadcast



Comms



LED



**High efficiency:**

**Up to 87%**

**Temperature:**

**Wide operating temperature range up to 70°C**

**Low cost**



Convection

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:	3 years

**More information:** [www.emea.tdk-lambda.com/ls](http://www.emea.tdk-lambda.com/ls)

## LS200 – Series

200W



Industrial



Test



Broadcast



Comms



LED



**Peak-Power:**

**250W peak rating on 24V & 36V models**

**High efficiency:**

**Up to 85%**

**Size:**

**Only 41mm high for 1U integration**



Convection



Fan

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:	3 years

**More information:** [www.emea.tdk-lambda.com/ls](http://www.emea.tdk-lambda.com/ls)

## GWS250 – Series

250W



Industrial



Test



Broadcast



Comms



LED

**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](http://www.emea.tdk-lambda.com/gws)



## GWS500 – Series

500W



Industrial



Test



Broadcast



Comms



LED

**Dimensions:** 1U height

**Eco-design:** Standby Power Draw < 0.5 Watt  
Built to meet ErP directive

**Harmonics:** Conforms to class C for lighting equipment



Fan

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](http://www.emea.tdk-lambda.com/gws)





## GWS/BAT – Series

250 – 500W



Industrial



Test



Broadcast



Comms



LED

**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)



Convection



Fan

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



Chassis mount

## CUS250LD – Series

250W



Test



Broadcast



Comms



LED

**Low profile:** Only 30mm height  
**Operation temperature:** –25°C to +70°C  
**Cooling:** Natural convection  
**Output:** Typical voltages for LED supply



Convection

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](http://www.emea.tdk-lambda.com/cus)



## RFE2500 – Series

2500W



Industrial



Test



Comms

<b>High efficiency:</b>	<b>Meet 80+ Standard platinum/gold</b>
<b>Redundancy:</b>	<b>n+1 operation with integrated ORing FET</b>
<b>Paralleling:</b>	<b>With active current share</b>
<b>Signalling:</b>	<b>Full array of signals</b>



Fan

Output power:	2500W
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/rfe](http://www.emea.tdk-lambda.com/rfe)

## RFE1600 – Series

1600W



Industrial



Test



Comms

<b>High efficiency:</b>	<b>Meet 80+ Standard gold</b>
<b>Redundancy:</b>	<b>n+1 operation with integrated ORing FET</b>
<b>Size:</b>	<b>Flat shape for 1U integration</b>
<b>Input:</b>	<b>Wide range 85 – 265Vac</b>



Fan

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](http://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](http://www.emea.tdk-lambda.com/rfe)

## ZMS – Series

100W



**Isolation:** ErP compliant 2" x 4" power supply  
**Safety:** 2 MOPP for medical applications  
 EN60601-1 for Medical  
 EN60950-1 for Industrial /IT...



Output power:	100W (80W with convection cooling)
Input voltage:	90 – 265Vac, 47 – 63Hz
Output voltage:	12, 15, 24, 36 or 48Vdc
Efficiency:	Up to 90%
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/zms](http://www.emea.tdk-lambda.com/zms)



## ZWS-B – Series

10 – 30W



Industrial



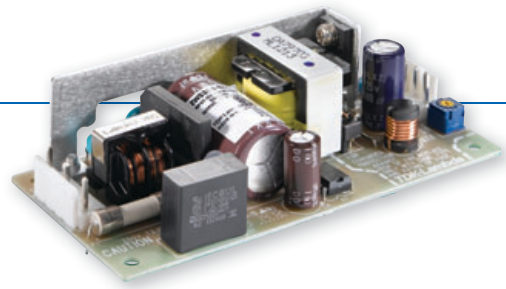
Test



Broadcast



Comms



**Warranty:**

**Highest reliability**  
**10 year E-Cap lifetime**

**Operating temperature:**

**-10°C to +70°C**

**Eco-design:**

**No load input power <0,5W**



Convection

Output power:	10, 15, 30W
Input voltage:	85 – 264Vac, 47 – 63Hz or 120 – 370Vdc
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](http://www.emea.tdk-lambda.com/zws-b)

## ZWS-BAF – Series

50 – 300W



Industrial



Test



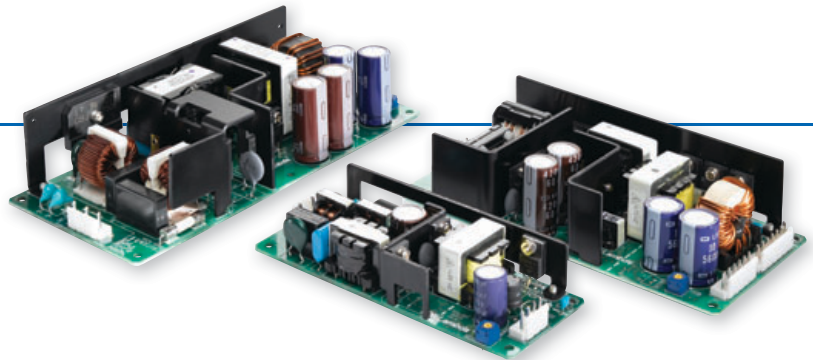
Broadcast



Comms



LED



**Warranty:**

**5 years**

**High efficiency:**

**Up to 88%**

**Input:**

**85 – 264Vac, 47 – 63Hz or 120 – 370Vdc**



Convection

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](http://www.emea.tdk-lambda.com/zws-baf)

## ZWS-BP – Series

150 – 240W



Industrial



Test



Broadcast



Comms



LED



**Warranty:**

**High reliability**  
**10 year 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](http://www.emea.tdk-lambda.com/zws-bp)

Chassis mount

## ZWD-PAF – Series

100 – 225W



Industrial



Test



**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**



Convection

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](http://www.emea.tdk-lambda.com/zwd-paf)

## CUT75 – Series

75W



Industrial



Test



Broadcast



Comms



**Output:**

**Triple output power supply without minimum load requirement**

**Case:**

**L-bracket and cover option**



Convection

Output power:	75W
Input voltage:	85 – 265Vac, 47 – 63Hz or 120 – 370Vdc
Output voltage:	5Vdc, $\pm 12$ Vdc or 5Vdc, $\pm 15$ Vdc
Efficiency:	Up to 85%
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/cut](http://www.emea.tdk-lambda.com/cut)

## ZWQ – Series

80 – 130W



Industrial



Test



Broadcast



Comms



**Quad output:**

**Output one and four adjustable  
Floating adjustable fourth output**

**Input:**

**Wide range 85–265Vac**

**Case:**

**L-bracket and cover option**



Convection

Output power:	80, 130W
Input voltage:	85 – 265Vac, 47– 63Hz or 120 – 370Vdc
Output voltage:	5Vdc main, $\pm 12/15$ Vdc and 3.3, 5, 12 or 24Vdc
Efficiency:	Up to 72%
Warranty:	1 year

**More information:** [www.emea.tdk-lambda.com/zwq](http://www.emea.tdk-lambda.com/zwq)



## ZPSA – Series

20 – 100W



Industrial



Test



Broadcast



Comms



**Size:** Low profile, industry standard footprint  
2" x 4" and 3" x 5"

**Immunity:** Meets EN61000-4



Convection

Output power:	20, 40, 60, 100W
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](http://www.emea.tdk-lambda.com/zpsa)

Chassis mount

## ZPD – Series

40W



Industrial



Test



Broadcast



Comms



**Size:** Low profile, industry standard footprint  
2" x 4"

**Safety:** Global approvals

**Immunity:** Meets EN61000-4



Convection

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](http://www.emea.tdk-lambda.com/zpd)

## ZPT – Series

40W



Industrial



Test



Broadcast



Comms

**Size:** Low profile, industry standard footprint  
2" x 4"

**Safety:** Global approvals

**Immunity:** Meets EN61000-4



Convection

Output power:	40W
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](http://www.emea.tdk-lambda.com/zpt)



## CSS – Series

65 – 150W



Medical



Industrial



Test



Broadcast



Comms

**Size:** Low profile, industry standard footprint  
2" x 4" and 3" x 5"

**Safety:** Global medical approvals

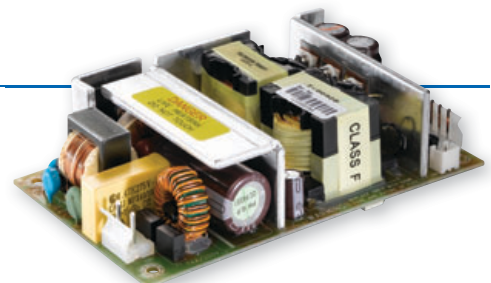
**Protection:** Dual input fuses



Convection

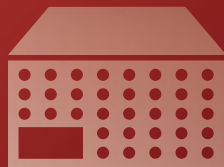
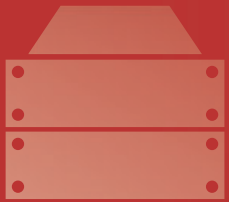
Output power:	65, 150W
Input voltage:	85 – 265Vac, 47 – 63Hz or 120 – 370Vdc
Output voltage:	65W: 12, 15, 24, 36 or 48Vdc 150W: 5, 12, 15, 19, 24, 36 or 48Vdc
Efficiency:	Up to 87%
Warranty:	2 years

**More information:** [www.emea.tdk-lambda.com/css](http://www.emea.tdk-lambda.com/css)





# AC-DC Power Supplies



PCB mount

PCB mount

## Applications

### Power modules

- Distributed power architectures
- Customised designs with specific dimensions

### PCB modules

- Low power applications

## Features

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

## KPSA – Series

5 – 15W



Industrial



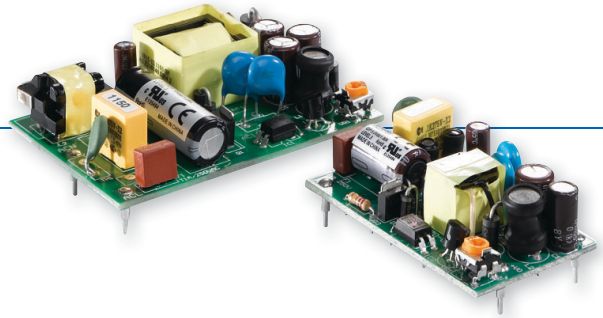
Test



Broadcast



Comms



**Size:** Small size & lightweight  
No external components needed

**Input:** Universal input voltage  
Low cost



Convection

Output power:	5, 10, 15W
Input voltage:	85 – 264Vac, 47 – 63Hz or 100 – 370Vdc
Output voltage:	3.3, 5, 12, 15 or 24Vdc
Efficiency:	Up to 82%
Warranty:	1 year

**More information:** [www.emea.tdk-lambda.com/kpsa](http://www.emea.tdk-lambda.com/kpsa)

## KMS / KMD / KMT – Series

15 – 40W



Medical



Industrial



Test



Broadcast



Comms



**Connection:** Class II power supply (no PE required)  
Single-, dual-, triple output

**Safety:** Medical safety approvals

**Case:** Enclosed case with encapsulation



Convection

Output power:	15, 40W
Input voltage:	90 – 264Vac, 47 – 440Hz or 100 – 375Vdc
Output voltage:	3.3, 5, 9, 12, 15, 24, $\pm 12$ or $\pm 15$ Vdc
Efficiency:	Up to 83%
Warranty:	2 years

**More information:** [www.emea.tdk-lambda.com/km](http://www.emea.tdk-lambda.com/km)

## PFE-SA – Series

300 – 700W



Industrial



Test



Broadcast



Comms



COTS



LED



**Format:**

**Full-Brick module with baseplate**  
**Basic element for customised**  
**power supply designs**  
**100°C baseplate temperature**



Baseplate

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](http://www.emea.tdk-lambda.com/pfe-sa)

PCB mount

## PFE-F – Series

500 – 1000W



Industrial



Test



Broadcast



Comms



COTS



LED



**Format:**

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



Baseplate

Output power:	500, 1000W
Input voltage:	90 – 264Vac, 47 – 63Hz
Output voltage:	12, 28 or 48Vdc
Efficiency:	Up to 86%
Warranty:	2 years

**More information:** [www.emea.tdk-lambda.com/pfe](http://www.emea.tdk-lambda.com/pfe)

# PF-A – Series

500 – 1500W



Industrial



Test



**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



Baseplate

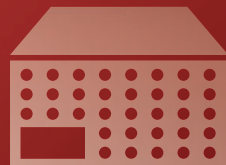
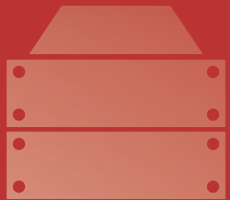
Output power:	500(750), 1000(1500)W
Input voltage:	85 – 265Vac 47 – 63Hz
Output voltage:	~360Vdc bulk power bus
Efficiency:	Up to 95%
Warranty:	2 years

More information:	<a href="http://www.emea.tdk-lambda.com/pf-a">www.emea.tdk-lambda.com/pf-a</a>
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# AC-DC Power Supplies



DIN-Rail

DIN-Rail

## Applications

- Factory Automation and controls
- Facility & Hotel or Home Automation
- Food & Beverage Industry
- Robot Controls
- Paper Handling, Sorting, Dispatch Systems
- Process Automation
- Conveyors, Elevators, Rolling Stairs
- Typical for DIN-Rail mounting in cabinets

## Features

- Efficiency up to 94% – NEW DRF-Series
- Mainly with 24V output, but also other output voltages from 5V to 48V are available
- Power range from 10W to 1000W with convection-cooling
- Single-phase and three-phase input (for models from 120W output power onwards)
- 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



Industrial



Test

**Output voltages:** 5 to 48Vdc  
**Operating temperature:** –20°C to +70°C  
**Dimensions:** Very compact, slim shape  
 ErP Compliant



Convection

Output power:	15, 30, 50, 100W
Input voltage:	85 – 264Vac, 47 – 63Hz
Output voltage:	5, 12, 24 or 48Vdc
Efficiency:	Up to 89%
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/drb](http://www.emea.tdk-lambda.com/drb)

## DRF single-phase – Series

120 – 480W



Industrial



Test

**Case:** Enclosed metal case  
**Operating temperature:** –25°C to +70°C  
**Parallel operation:** Possible  
**Peak Power:** 150% nominal for 4 sec.



Convection

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/drif](http://www.emea.tdk-lambda.com/drif)

## DSP – Series

10 – 100W



Industrial

**Shape:** Flat profile for wall mount cabinets  
**Operating temperature:** -25°C to +71°C  
**Safety:** UL 508 Listed  
 Class II double insulation



Convection

Output power:	10, 30, 60, 100W
Input voltage:	85 – 264Vac, 47 – 63Hz or 120 – 370Vdc
Output voltage:	5, 12, 15, or 24Vdc
Efficiency:	Up to 89%
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/dsp](http://www.emea.tdk-lambda.com/dsp)

## DPP – Series

15 – 100W



Industrial

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



Convection

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](http://www.emea.tdk-lambda.com/dpp)

## DPP single-phase – Series

120 – 480W



Industrial

<b>Case:</b>	<b>Enclosed metal case</b>
<b>Operating temperature:</b>	<b>–40°C to +71°C</b>
<b>Parallel operation:</b>	<b>With current share function</b>
<b>Safety:</b>	<b>UL 508 Listed</b>



Convection

Output power:	120, 240, 480W
Input voltage:	90 – 264Vac, 47 – 63Hz or 120 – 370Vdc
Output voltage:	12, 24 or 48Vdc
Efficiency:	Up to 88%
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/dpp](http://www.emea.tdk-lambda.com/dpp)



## DPP three-phase – Series

120 – 960W



Industrial

<b>Case:</b>	<b>Enclosed metal case</b>
<b>Operating temperature:</b>	<b>–40°C to +71°C</b>
<b>Parallel operation:</b>	<b>With current sharing</b>
<b>Safety:</b>	<b>UL 508 Listed</b>



Convection

Output power:	120, 240, 480, 960W
Input voltage:	340 – 575Vac, 3-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](http://www.emea.tdk-lambda.com/dpp)



## DPX – Series

10 – 60W



Industrial

**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



Convection

Output power:	10, 15, 20, 30, 40, 60W
Input voltage:	9.5 – 36Vdc or 18 – 75Vdc
Output voltage:	3.3, 5, 12, 15, $\pm 5$ , $\pm 12$ , $\pm 15$ Vdc
Efficiency:	Up to 86%
Warranty:	2 years

**More information:** [www.emea.tdk-lambda.com/dpx](http://www.emea.tdk-lambda.com/dpx)

## L-DIN – Series

DIN-Rail Adapters

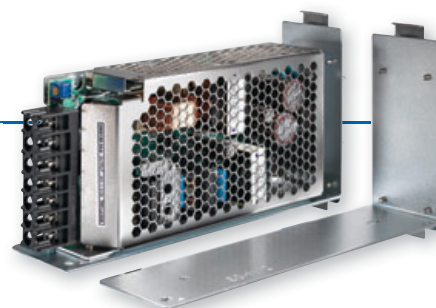


Industrial

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

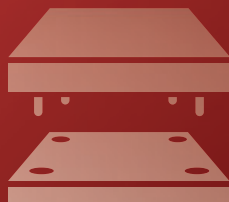
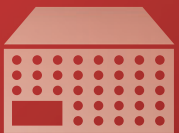
**Available for:** RWS-50B to RWS-150B  
HWS-15A to HWS-150A  
LS-25 to LS-150



DIN-Rail



# AC-DC Power Supplies



**Rack mount**

## Applications

- High reliability applications with n+1 redundancy
- High power applications for cabinet mounting
- Broadcast, RF-amplifiers, Telecoms

## 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 bus-voltages in distributed power architecture and other applications
- Optional PM-bus I<sup>2</sup>C interface for status monitoring and control



## HFE-1600 – Series

1600W



COTS



Industrial



Test



Broadcast



Comms



**Redundancy:**

**Internal ORing MOSFET & Current Share**

**High efficiency:**

**Meet 80+ Standard gold**

**Interface:**

**PMBus option**



Fan

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](http://www.emea.tdk-lambda.com/hfe)

## HFE-1600-S1U/-D1U – Series

6000 – 8000W



COTS



Industrial



Test



Broadcast



Comms



Rack mount

**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**



Fan

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](http://www.emea.tdk-lambda.com/hfe)

## HFE-2500 – Series

2500W



COTS



Industrial



Test



Broadcast



Comms



**Redundancy:**

**Internal ORing MOSFET & Current Share**

**High efficiency:**

**Meet 80+ Standard platinum/gold**

**Interface:**

**PMBus option**



Fan

Output power:	2500W single unit, 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](http://www.emea.tdk-lambda.com/hfe)

## HFE-2500-S1U – Series

10000W



COTS



Industrial



Test



Broadcast



Comms



**1U 19" shelf:**

**Suitable for up to 4 rectifiers HFE-2500**

**High efficiency:**

**Meet 80+ Standard platinum/gold**

**Interface:**

**PMBus option**



Fan

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](http://www.emea.tdk-lambda.com/hfe)

## FPS-1000 – Series

1000W



COTS



Industrial



Test



Broadcast



Comms



**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**



Fan

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](http://www.emea.tdk-lambda.com/fps)

## FPS-S1U / FPS-T1U – Series

3000W



COTS



Industrial



Test



Broadcast



Comms



Rack mount

**1U 19" shelf:**

**Suitable for up to 3 power modules FPS-1000**

**Shelf with three individual outputs or common bus bar**

**AC-Input:**

**Via IEC connector on rear or direct to FPS module front panel**



Fan

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%
Warranty:	2 years

**More information:**

[www.emea.tdk-lambda.com/fps](http://www.emea.tdk-lambda.com/fps)



# 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 150000W
- 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<sup>+</sup> – 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](http://www.emea.tdk-lambda.com/zplus)

## ZUP – Series

200 – 800W



**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](http://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

**Output current:** Up to 100A



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](http://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](http://www.emea.tdk-lambda.com/gen1u)



## GEN 2U – Series

3300 – 5000W



Industrial



Test



**Interface:** RS232/RS485, analogue (standard)  
LAN, IEEE (optional)

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

**Output current:** Up to 600A



Fan

Output power:	3300, 5000W
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](http://www.emea.tdk-lambda.com/gen2u)

## GEN 3U – Series

10000 – 15000W



Industrial



Test



**Interface:** RS232/RS485, analogue (standard)  
LAN, IEEE (optional)

**Output current:** Up to 1000A



Fan

Output power:	10000, 15000W
Input voltage:	Three-phase 208Vac, 400Vac or 480Vac
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](http://www.uk.tdk-lambda.com/gen3u)

# EVA2400 – Series

2400W



- Build in model:** No front-panel or display
- Interface:** RS232/RS485, analog
- Cooling:** Variable speed fan
- 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](http://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 with Neutral
- 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



Medical



Industrial



Test



Broadcast



Comms

**Type:** Single-phase filter  
**Attenuation:** 70 – 80dB at ~1-6MHz  
**Construction:** Single-stage  
optional low leakage type



Convection

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](http://www.emea.tdk-lambda.com/r-series)

## RSEN, RSAN, RSHN – Series

3 – 60A



Medical



Industrial



Test



Broadcast



Comms

**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



Convection

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](http://www.emea.tdk-lambda.com/r-series)

## RTEN, RTHN – Series

6 – 300A



Medical



Industrial



Test



Broadcast



Comms

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



Convection

Current:	6, 10, 20, 30, 40, 50, 60, 80, 100, 150, 200, 300A
Rated voltage:	500Vac
Connection:	Screw terminals
Warranty:	1 year

**More information:** [www.emea.tdk-lambda.com/r-series](http://www.emea.tdk-lambda.com/r-series)

## RDEN-048-050 – Series

50A



Industrial



Test



Broadcast



Comms

Type:	DC-line filter for Information and Telecommunication equipment
Attenuation:	High attenuation for noise from low frequency to high frequency



Convection

Current:	50A
Rated voltage:	48Vdc (76Vdc max.)
Connection:	Large stud type terminals
Warranty:	1 year

**More information:** [www.emea.tdk-lambda.com/r-series](http://www.emea.tdk-lambda.com/r-series)



## SIFI F, G, H – Series

3 – 36A



Industrial



Test



Broadcast



Comms



**Type:**

**Single-phase filter**

**Attenuation:**

**High attenuation over a wide frequency range**

**Construction:**

**Single-stage or two-stage  
optional low leakage type**



Convection

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](http://www.emea.tdk-lambda.com/sifi)

## B84771-B84776 – Series

1 – 10(20)A



Industrial



Test



Broadcast



Comms



**Types:**

**With IEC-Inlet  
With IEC-Inlet and fuse  
With IEC-Inlet, fuse and switch**

**Option:**

**Medical versions**



Convection

Current:	1, 3, 6, 8, 10A (12, 15, 16, 20A)
Rated voltage:	250Vac, 50/60Hz
Connection:	IEC-input, Faston-output
Warranty:	1 year

**More information:** [www.emea.tdk-lambda.com/iec](http://www.emea.tdk-lambda.com/iec)





# DC-DC Converters



## 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%

## PXA / PXB – Series

15W



Industrial



Test



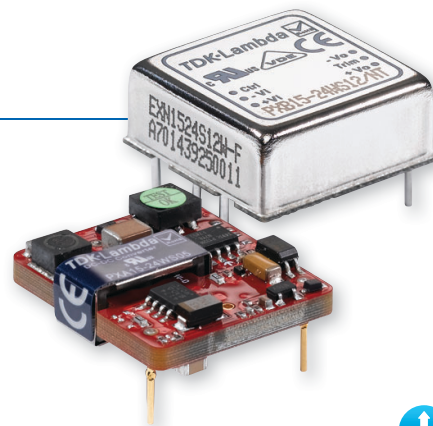
Broadcast



Comms

**Shape:** Standard industrial footprint 1" x 1"  
PXA open frame  
PXB six side shielding

**Mounting:** Pin and surface mount



Convection

Output power:	15W
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](http://www.emea.tdk-lambda.com/pxa)

## PXD / PXE / PXF – Series

10 – 60W



Industrial



Test



Broadcast

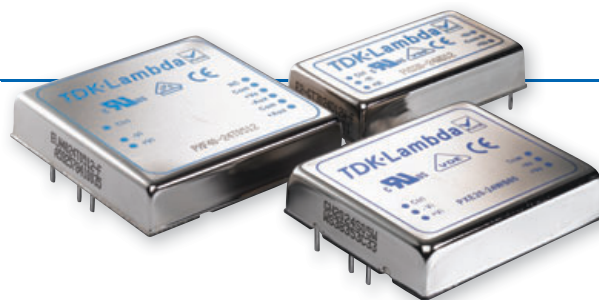


Comms

**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



Convection

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](http://www.emea.tdk-lambda.com/pxd)

## PXC – Series

3 – 6W



Industrial



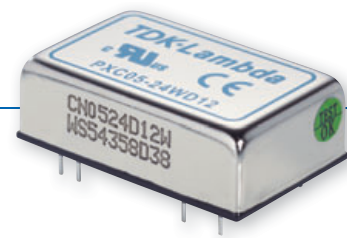
Test



Broadcast



Comms



**Shape:** Industry Standard 24 Pin DIP Package through hole and SMT versions

**Case:** Five sided shielding

**Input:** Wide range 4:1



Convection

Output power:	3 – 6W
Input voltage:	9 – 36 or 18 – 75Vdc
Output voltage:	3.3, 5, 12, 15Vdc, $\pm 5$ , $\pm 12$ , $\pm 15$ Vdc
Efficiency:	Up to 82%
Warranty:	2 years

**More information:** [www.emea.tdk-lambda.com/pxc](http://www.emea.tdk-lambda.com/pxc)

### Coming soon

1" x 1" 30W wide input range dc-dc converters

3W, 6W and 10W DIL Medical dc-dc converters with 5kVac isolation

## CC-E / CC-P-E – Series

1.5 – 30W



Industrial



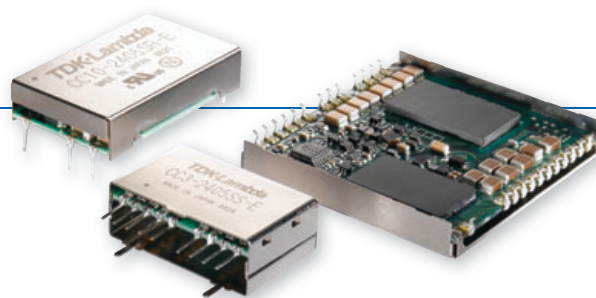
Test



Broadcast



Comms



**Shape:** SMT or through hole, flat profile  
Single and Dual outputs

**Trim:** Adjustable output voltage

**Isolation:** 500Vac Input to Output



Convection

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 $\pm 12/15$ Vdc
Efficiency:	Up to 90%
Warranty:	5 years

**More information:** [www.emea.tdk-lambda.com/cc-e](http://www.emea.tdk-lambda.com/cc-e)

## CE-10xx – Series

5 – 15W



Industrial



Test



Broadcast



Comms



**Shape:** SMT mounting, closed case  
**Height:** Only 4.5mm (5.5mm for CE-1050)  
**Temperature:**  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$   
Non isolated output



Convection

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](http://www.emea.tdk-lambda.com/ce)

## iCF / iCG – Series

5 – 15W



Industrial



Test

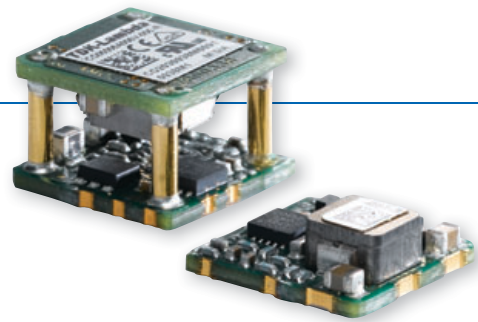


Broadcast



Comms

**Shape:** 2<sup>nd</sup> generation DOSA  
**Regulation:** Excellent transient response  
**Soldering:** LGA or EPC format  
 Non isolated output



Air Flow

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](http://www.emea.tdk-lambda.com/icf)

## iJB – Series

Up to 120 W



Industrial



Test



Broadcast



Comms

**Size:** Ultra high power density, dual phase 60A  
**Interface:** PM Bus read and write compliant  
**Accuracy:** Precision Vout setpoint; 0,5%  
 Digital adaptive control



Air Flow

Output current:	60A
Input voltage:	8 – 14Vdc
Output voltage:	0.6 – 2.0Vdc (adjustable)
Efficiency:	Up to 93%
Warranty:	3 years

**More information:** [www.emea.tdk-lambda.com/ijb](http://www.emea.tdk-lambda.com/ijb)

# iBF / iAF – Series

5 – 15W



Industrial



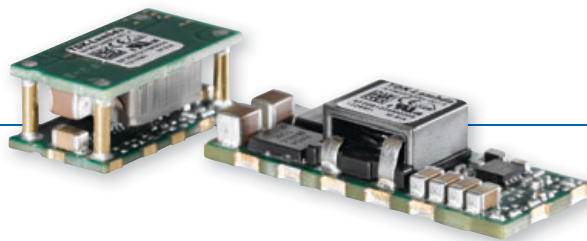
Test



Broadcast



Comms



**Shape:**

**2<sup>nd</sup> generation DOSA**

**Regulation:**

**Excellent transient response**

**Soldering:**

**LGA or EPC format**

**Non isolated output**



Air Flow

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](http://www.emea.tdk-lambda.com/ibf)

## iEA – Series

Up to 78W



Industrial



Test



Broadcast

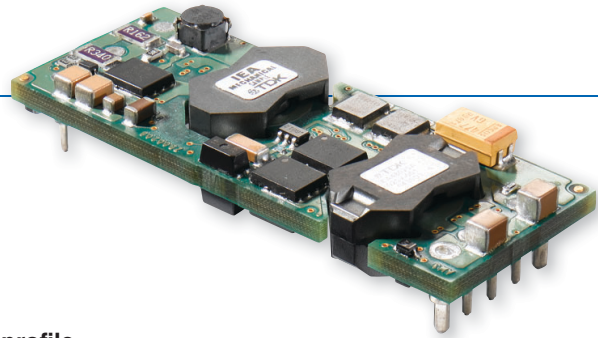


Comms

**Size:** Standard “eighth-brick” format  
Open frame design, low 8.8mm profile

**Mounting:** Through hole

**Isolation:** 1500Vdc basic isolation



Air Flow

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](http://www.emea.tdk-lambda.com/iea)

## iEH – Series

Up to 308W



Industrial



Test



Broadcast



Comms

**Size:** Standard “eighth-brick” format  
Baseplate option

**Isolation:** 2250Vdc Input to Output



Air Flow

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](http://www.emea.tdk-lambda.com/ieh)



## iQE / iQG – Series

Up to 400W



Industrial



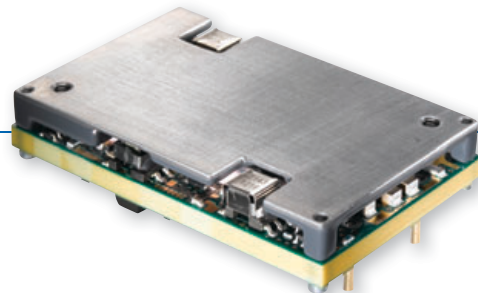
Test



Broadcast



Comms



**Size:** Standard “quarter-brick” format  
Open frame design, low profile

**Soldering:** Through hole mounting



Air Flow



Baseplate

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](http://www.emea.tdk-lambda.com/iqe)

## iHG – Series

Up to 300W



Industrial



Test



Broadcast



Comms



**Size:** Standard “half-brick” format  
Open frame design, low profile

**Soldering:** Through hole mounting



Air Flow

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](http://www.emea.tdk-lambda.com/ihg)

## CN-A – Series

30 – 100W



Industrial



Railway



COTS

<b>Size:</b>	Standard “quarter-brick” format
<b>Optional:</b>	Coating (suffix /CO)
<b>Shock/vibration:</b>	EN/IEC 61373
<b>Temperature:</b>	Full power at 100°C (baseplate temperature)
<b>Input:</b>	EN50155/IEC60571



Baseplate

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](http://www.emea.tdk-lambda.com/cn-a)

## CN-A – Series

200W



Industrial



Railway



COTS

<b>Size:</b>	Standard “half-brick” format
<b>Optional:</b>	Coating (suffix /CO)
<b>Shock/vibration:</b>	EN/IEC 61373
<b>Temperature:</b>	Full power at 100°C (baseplate temperature)
<b>Input:</b>	EN50155/IEC60571



Baseplate

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

**More information:** [www.emea.tdk-lambda.com/cn-a](http://www.emea.tdk-lambda.com/cn-a)

## PAH – Series

50 – 450W



Industrial



Test



Comms



COTS

<b>Size:</b>	Standard “half-brick” format
<b>Safety:</b>	EN/UL/CSA 60950-1 approval
<b>Temperature:</b>	Full power at 100°C (baseplate temperature)
<b>Output:</b>	Wide adjustable voltage range



Baseplate

Output power:	50, 75, 100, 150, 200, 300, 350, 450W
Input voltage:	24, 48Vdc nominal
Output voltage:	2.5, 3.3, 5, 12, 15, 24, 28 or 48Vdc
Efficiency:	Up to 92%
Warranty:	2 years

<b>More information:</b>	<a href="http://www.emea.tdk-lambda.com/pah">www.emea.tdk-lambda.com/pah</a>
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## PAF – Series

400 – 700W



Industrial



Test



Comms



COTS

<b>Size:</b>	Standard “full brick” format
<b>Safety:</b>	EN/UL/CSA 60950-1 approval
<b>Temperature:</b>	Full power at 100°C (baseplate temperature)
<b>Output:</b>	Wide adjustable voltage range



Baseplate

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

<b>More information:</b>	<a href="http://www.emea.tdk-lambda.com/paf">www.emea.tdk-lambda.com/paf</a>
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## PH-A – Series

50 – 150W



Industrial



Test



Comms



COTS



<b>Size:</b>	<b>Quarter-brick module with baseplate</b>
<b>Isolation:</b>	<b>High withstand voltage for PoE application</b>
<b>Safety:</b>	<b>EN/UL/CSA 60950-1 approval</b>
<b>Temperature:</b>	<b>Full power at 100°C (baseplate temperature)</b>



Baseplate

Output power:	50, 75, 100, 150W
Input voltage:	280Vdc nominal; range: 200 – 425Vdc
Output voltage:	5, 12, 24, 48Vdc
Efficiency:	Up to 90%
Warranty:	5 years

**More information:** [www.emea.tdk-lambda.com/ph-a](http://www.emea.tdk-lambda.com/ph-a)

## EZA – Series

2500W



Industrial



Test



Renewable



<b>Size:</b>	<b>Bidirectional DC-DC converter</b>
	<b>1U 19" shelf</b>
	<b>Full digital control with RS-485 interface</b>
<b>Isolation:</b>	<b>3kV AC between grid and battery</b>



Fan

Output power:	2500W
Grid voltage:	320Vdc nominal; range: 300 – 380Vdc
Batterie voltage:	48Vdc nominal; range: 36 – 60Vdc
Efficiency:	Up to 94% in booth directions
Warranty:	5 years

**More information:** [www.emea.tdk-lambda.com/eza](http://www.emea.tdk-lambda.com/eza)



## 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



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### 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.



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### 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.



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### 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)**



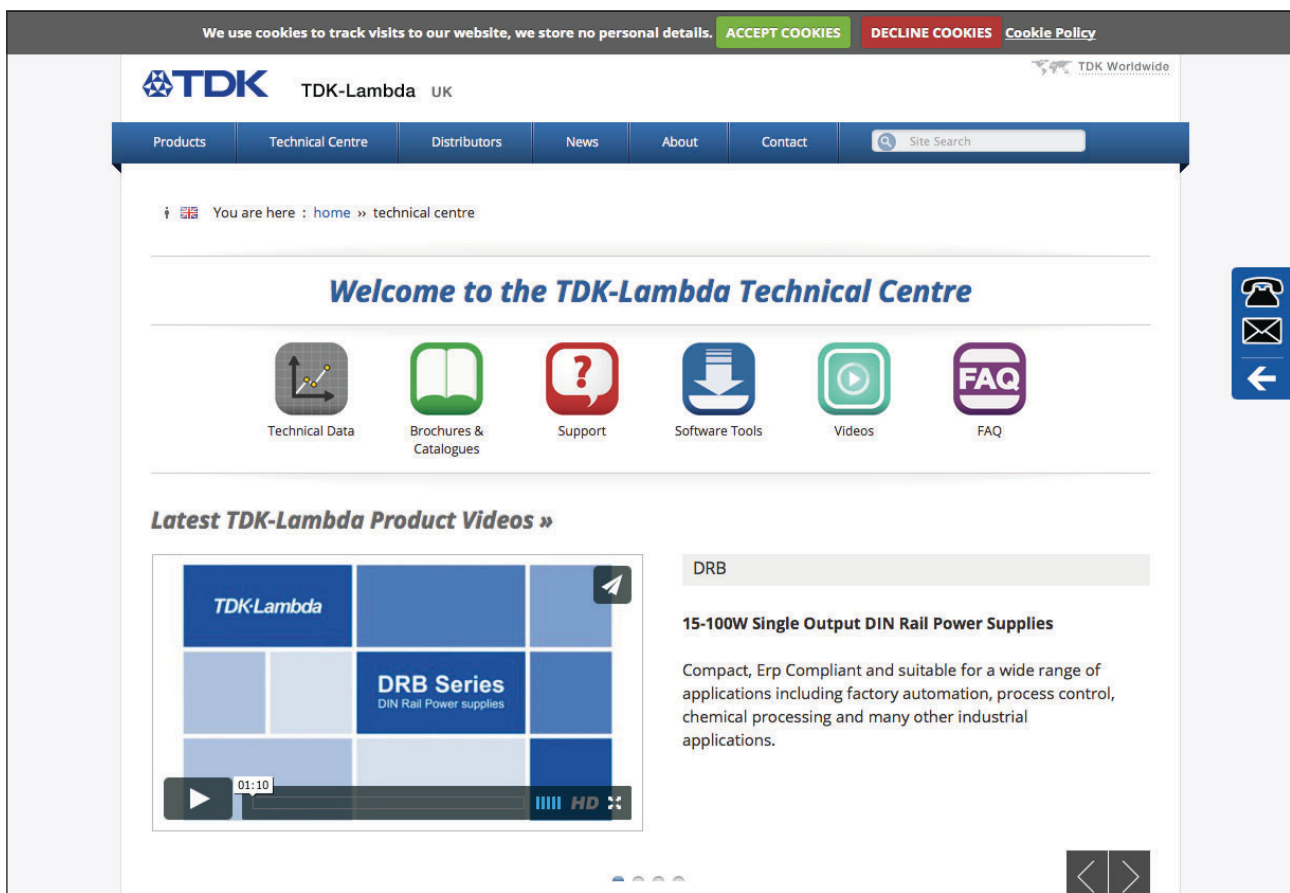
**Display applications (Fig. 11)**

**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](http://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.



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