

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

Healthcare



# Healthcare 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 SE Asia.

TDK-Lambda is one of the oldest and most trusted manufacturers of high quality healthcare power supply solutions used in critical medical and laboratory applications.

### Organization

- Founded in 1948; offering long term financial stability
- · An independently recognized market leader
- · Worldwide recognition for high reliability
- · Outstanding customer support
- International organization with strong local presence
- Local design capability
- · Experts in medical power supply solutions
- Preferred supplier for Tier 1 healthcare companies
- Local inventory / local buffer





www.emea.tdk-lambda.com





### Wide choice of Medical Power **Supply Solutions**

TDK-Lambda offers a broad product line of healthcare power supplies with over 5.000 models of standard medical AC-DC power supplies, DC-DC Converters and EMC/EMI Filters to choose from. For the most complex applications we provide a full custom medical power supply design service.

# A power supply is more than just an electronic device.



### It is the heart



of our customers' systems and the core element of safety





### **Product Offering & Attributes**

- · Standard, modified power solutions and full custom designs
- AC-DC power supplies + EMC/EMI Filters + DC-DC converters
- · Products suitable for B & BF equipment
- · Class I & II products
- IEC60601-1 approvals as standard
- · Many products manufactured in ISO13485 factories

### **Access our Expertise**

Our expertise is based on 30+ years of experience powering healthcare products for major medical OEMs. Customers get our assistance and advice for medical power supply selection, application support, medical safety compliance and custom solutions.

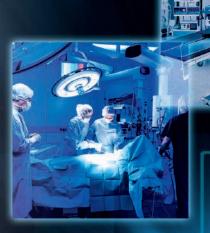
- · Approved supplier to many top global medical device companies
- · Global multi-site design, manufacture and local technical support

### Medical Safety Approvals

TDK-Lambda is certified and approved to design and manufacture power supplies for medical applications using its own testing facilities to generate UL and CB safety reports and test data. The medical power supplies from TDK-Lambda are approved to the latest medical safety standards and meet with Edition 4 EMC compliance requirements.

- ISO13485 designed and manufactured products
- IEC, UL, CSA, ANSI/AAMI 60601-1 safety compliance
- EN60601-1-2:2015 (Edition4) EMC compliance
- Own testing facilities to generate UL and CB safety reports and test data





### Clinical

- Dialysis Equipment
- Opthalmology Devices
- Patient Monitoring & Therapy
- Surgical & Ablation Systems
- Medical Beds Surgical Lasers
- Neonatal Care
   Electrocardiographs
- Anesthesia Devices Endoscopes
- Radiotherapy Infusion pumps
- ECG Robotics Ventilators
- Cosmetic Lasers
   Powered tools
- Operating Theatre lighting



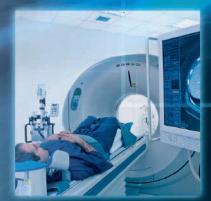
### **Dental**

- CAD/CAM Systems
- Oral Care Equipment
- X-Ray Machines
- Gamma Imaging Systems
- Digital Radiography
- Lighting
   Chairs



### Laboratory / Bioscience

- Microbiology Electron Microscopes
- Chemical Analysis Equipment
- Lab Process Automation
- Immunoassay Systems
- Mass Analyzers In-Vitro Diagnostics
- Sterilization Clinical Chemistry
- Centrifuges
   PCRs
   Osmometers
- Blood analysers
   DNA Testers
- VHP Systems Bioreactors
- Mixing systems



Medical applications require high reliability and high quality solutions. TDK-Lambda as one of the oldest and most trusted manufacturers of high quality healthcare power supplies serves this demand with long experience, many certifications and medical power supplies tested and approved to the highest safety standards. Backed by industry leading warranties, our motivation is complete customer satisfaction.

### **Imaging**

- · X-Ray Machines Ultrasound Scanners
- Single Photon Emission Computed Thomography (SPECT)
- Positron Emission Tomography (PET)
- Computed Tomography (CT) Scan
- Magnetic Resonance Imaging (MRI)



### Homecare

- Oxygen therapy
- Nebulizers
- Portable dialysis
- Telehealth
- Respirators

# AC-DC Power Supplies



## **KM** Series

### 15W, 40W Medical PCB-Mount Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- 90 264VAC Universal Input
- Protection Class II (No ground needed)
- 1, 2 or 3 Output Voltages available
- Working Altitude up to 5000m (Medical and Industrial)
- High Efficiency
- Small Size and Lightweight









# **KMS-A Series**

### 15W, 30W, 60W Medical PCB-Mount Single Output **Power Supplies**

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- 90 264VAC Universal Input
- Protection Class II (No ground needed)
- Working Altitude up to 5000m (Medical and Industrial)
- Wide Temperature Range (-40 to +80°C)
- Low Off-load Power Draw
- High Efficiency
- Smaller Size than KMS





### Coming soon

# CUS30M & CUS60M

### 30W, 60W Medical 2" x 3" Single **Output Power Supplies**

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- Protection Class I and II Installations
- 30W / 60W Convection cooled
- Working Altitude up to 5000m (Medical and Industrial)
- Compact 2" x 3" x 0.95" / 1.05" Size



# **CUT35** Series

### 35W Medical 2" x 4" 2 & 3 Output Power Supplies

- 2 x MOOP Primary Secondary
- 3kVAC Input Output Isolation
- 85 265VAC Universal Input
- Output 1 Isolated from Outputs 2 & 3
- 35W Convection cooled
- Working Altitude up to 3000m (Medical and Industrial)
- Low Earth Leakage < 300µA</p>
- Compact 2" x 4" x 1.06" Size





# HWS30A/ME & HWS50A/ME

### 30W, 50W Medical Single Output Power Supplies

- 2 x MOOP Primary Secondary
- 3kVAC Input Output Isolation
- 85 265VAC Universal Input
- Limited Lifetime Warranty\*
- cover option /MEA
- Working Altitude up to 4000m
- Low Earth Leakage <500µA</p>



# **ZMS100**

### 100W Medical 2" x 4" AC-DC Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- 85 264VAC Universal Input
- Protection Class I and II Installations
- 80W Convection, 100W Forced Air
- Working Altitude up to 5000m (Medical and Industrial)
- Dual Fusing (Live and Neutral)
- Long Capacitor Lifetimes, Ceramic Start-Up Cap









# HWS100A/ME

### 100W Medical Single Output Power Supplies

- 2 x MOOP Primary Secondary
- 3kVAC Input Output Isolation
- 85 265VAC Universal Input
- Limited Lifetime Warranty\*
- cover option /MEA
- Working Altitude up to 4000m
- Low Earth Leakage <500µA





# **CUS150M Series**

### 150W Medical 2" x 4" Single Output Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- 90 264VAC Universal Input
- Protection Class I and II Installations
- Convection, Conduction and Fan cooled options
- Working Altitude up to 5000m (Medical and Industrial)
- Dual Fusing (Live and Neutral)
- Long Capacitor Lifetimes
- Compact 2" x 4" x 1.24" Footprint









# **HWS150A/ME Series**

### 150W Medical Single Output Power Supplies

- 2 x MOOP Primary Secondary
- 3kVAC Input Output Isolation
- 85 265VAC Universal Input
- Limited Lifetime Warranty\*
- cover option /MEA
- Working Altitude up to 4000m
- Low Earth Leakage <500µA





# NV175 Series

### 175-200W Medical 3" x 5" Multiple Output Power Supplies.

- 2 x MOOP Primary Secondary
- 3kVAC Input Output Isolation
- Universal Input (90 264VAC)
- 1-4 Main Outputs
- 5V, 12V and 13.5V Standby Supply, 12V Fan Supply, Remote On/Off
- Working Altitude up to 3000m (Medical and Industrial)



- Up to 90% Efficient ■ No Minimum Loads
- Suitable for 1U Applications







# NV175-M Series

### 180-200W Medical 3" x 5" Multiple **Output Power Supplies**

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Universal Input (90 264VAC)
- 1-3 Outputs
- Active Power Factor Correction
- Working Altitude up to 3000m (Medical and Industrial)
- Up to 90% Efficient
- No Minimum Loads
- Suitable for 1U Applications



# NVM175 Series

### 180W Medical 3" x 5" Single Output Power Supplies

- 2 x MOPP Primary Secondary
- 4.5kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- Very Low Earth Leakage and Class B EMC
- 5V and 12V Standby Supply and Remote On/Off
- Working Altitude Medical 3000m, Industrial 5000m
- Dual Fusing (Live and Neutral)
- High Efficiency (90%) & High Power Density (9.3 W/in³)
- Suitable for 1U Applications







# **NV300** Series

### 300W Medical 3.75" x 7.25" Multiple Output Power Supplies

- 2 x MOOP Primary Secondary
- 3kVAC Input Output Isolation
- Universal Input (90 264VAC)
- Up to 5 Outputs (Including Standby)
- Working Altitude up to 3000m (Medical and Industrial)
- No Minimum Loads
- High Efficiency
- Suitable for 1U Applications









# 200-250W Medical 3" x 5" Single Output Power

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- 5V Standby Output, Remote On/Off, Power Good
- 200W Convection, up to 250W with Airflow
- Working Altitude up to 5000m (Medical and Industrial)
- Dual Fusing (Live and Neutral)
- High Efficiency, up to 94%
- Suitable for 1U Applications







# **HWS300/ME Series**

### 300W Medical Single Output Power Supplies

- 2 x MOOP Primary Secondary
- 3kVAC Input Output Isolation
- 85 265VAC Universal Input
- Limited Lifetime Warranty\* ■ Working Altitude up to 3000m
- Low Earth Leakage <500µA</p>





# **EFE300M &** EFE400M

### 300W, 400W Medical Single Output Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- Universal Input (90 264VAC)
- Working Altitude Medical 3000m, Industrial 5000m
- ORing FET for Parallel Operation
- Dual Fusing (Live and Neutral)
- Peak Loading 400W / 530W (10s)
- Suitable for 1U Applications
- 5V or 12V Standby and 12V Fan Supply available







# **CUS350M Series**

### 350-420W Medical Single Output Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- Universal Input (85 265VAC)
- 350W Convection Cooled, 420W Forced Air Rating
- Working Altitude up to 5000m (Medical and Industrial)
- Dual Fusing (Live and Neutral)
- High Efficiency, up to 94%
- Suitable for 1U Applications
- 5V Standby and 12V Fan Supply available





# 350-1150W Medical Multiple Output Modular

# **Power Supplies**

- 2 x MOPP Primary Secondary (C, CC, CM modules)
- 4kVAC Input Output Isolation (C, CC, CM modules)
- 90 264VAC Universal Input
- Up to 8 Outputs (6 for NV350)
- Working Altitude Medical 3000m, Industrial 5000m
- Active Power Factor Correction
- No Minimum Loads
- Peak Power Rating of up to 1450W
- Up to 90% Efficiency
- Suitable for 1U Applications





# **CFE400M Series**

### 300-400W Medical Single Output Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- 300W Convection, 400W Fan Cooled, 450W Peak Power (10s)
- Working Altitude up to 5000m (Medical and Industrial)
- 0.5W Standby Power
- Meets ERP/Eco-Design (2009/125/EC) and Climate Savers Gold Level
- Up to 94% Efficiency
- Suitable for 1U Applications
- 5V Standby and 12V Fan Supply available



# XMS500 Series

### 500W Medical AC-DC Single Output Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- Protection Class I and II Curve B EMC
- Working Altitude Medical 3000m, Industrial 5000m
- Dual Fusing (Live and Neutral) or Single Fusing
- Low Airflow Requirement
- High Efficiency
- Suitable for 1U Applications
- Case and Top Fan available
- 5V or 12V Standby, 12V Fan Supply available







# Vega Series

### 450-900W Medical Multiple Output Modular Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- 90 264VAC Universal Input and 48VDC Input available
- Up to 10 Wide Range Outputs with Adjustment plus 1 Standby supply
- Output Voltages from 0.5V to 62V
- 45 Single and 25 Dual Output Modules for Highest Flexibility
- Forward/Reverse/Low Noise/System Air Cooling
- Working Altitude up to 5000m (Medical and Industrial)
- MIL-STD-810 Shock and Vibration
- PFC Compliant to EN61000-3-2



# HWS600/ME Series

### **600W Medical Single Output Power Supplies**

- 2 x MOOP Primary Secondary
- 3kVAC Input Output Isolation
- 85 265VAC Universal Input
- Limited Lifetime Warranty\*
- Working Altitude up to 3000m
- Low Earth Leakage <500µA





# QM5 & QM7 Series

# 700-1500W Medical Multiple Output Modular Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Suitable for BF Rated Equipment
- 90 264VAC Universal Input
- Up to 14 Main Outputs plus 2 Standby supplies
- Industry Leading Flexibility
- Forward or Reverse Low Audible Noise Fans or System Air Cooling
- Working Altitude up to 5000m (Medical and Industrial)
- Dual Fusing (Live and Neutral) or Single Fusing
- 7 Year Warranty





# SWS1000-L Series

### 1000W Medical Single Output Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Universal Input (85 265VAC)
- Active Power Factor Correction
- Input Transient Protected IEC61000-4
- Low Audible Noise
- Variable Speed Fan
- SEMI F47 Compliant (208VAC)



# AC-DC Power Supplies





# RWS1000B/ME & RWS1500B/ME

### 1000W, 1500W Medical Single Output Power Supplies

- 2 x MOPP Primary Secondary
- Compact Size
- Long E-cap Lifetime
- Operating Temperature up to 60°C
- 7 Year Warranty
- Working Altitude up to 4000m
- Low Earth Leakage <300µA





# HWS1000/ME & HWS1500/ME Series

### 1000W, 1500W Medical Single Output Power Supplies

- 2 x MOOP Primary Secondary
- 3kVAC Input Output Isolation
- Universal Input (85 265VAC)
- High Efficiency
- Limited Lifetime Warranty\*
- Working Altitude up to 3000m
- Low Earth Leakage <500µA







# QS5-1200 & QS7-1200

### 1200W Medical Single Output Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- BF ready medical isolation (MOPP)
- Low speed, low audible noise fan or system air cooling
- high power single output + up to 2 standby supplies
- Single or dual fusing
- PMBus<sup>™</sup> communication option
- 7 year warranty





# External / Desktop Power Supplies





# DTM65-C Series

### 40-65W Medical AC-DC External Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- CEC, EISA(1) & ErP Stage 2 Compliant
- Wide Range AC Input
- 85% Efficient, >87% Average (12V Models & Above)









# DTM110-C Series

### 90-110W Medical AC-DC External Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- CEC, EISA & ErP Stage 2 Compliant
- Wide Range AC Input
- >87% Average Efficiency





## DTM65-C8 Series

### 40-65W Medical Class II AC-DC External **Power Supplies**

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Meets DOE Level VI Efficiency
- Class II Input
- < 0.21W Off-load Power Draw</p>





# DTM165-C Series

### 160-165W Medical AC-DC External Power **Supplies**

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- CEC, ErP and EISA(1) Level V Compliant Models
- Wide Range AC Input
- >87% Average Efficiency







# DTM300-D Series

### 300W Medical Class I and II External Power Supplies

- 2 x MOPP Primary Secondary
- 4kVAC Input Output Isolation
- Meets DOE Level VI Efficiency
- Class I & II Inputs
- < 0.5W Off-load Power Draw</p>
- Suitable for BF Rated Equipment



# DC-DC Converters







### **3W Medical DC-DC Converters**

- 2 x MOPP Primary Secondary
- 5kVAC Input Output Isolation
- Industry Standard DIP-24 Package
- 9-36V or 18-75VDC Input
- 2.5uA Leakage Current
- Low Off-Load Power Draw





# PXC-M06

### **6W Medical DC-DC Converters**

- 2 x MOPP Primary Secondary
- 5kVAC Input Output Isolation
- Industry Standard DIP-24 Package
- 9-36V or 18-75VDC Input
- 2.5uA Leakage Current
- Low Off-Load Power Draw







# PXC-M<sub>10</sub>

### 10W Medical DC-DC Converters

- 2 x MOPP Primary Secondary
- 5kVAC Input Output Isolation
- Industry Standard DIP-24 Package
- 9-36V or 18-75VDC Input
- 2.5uA Leakage Current
- Low Off-Load Power Draw







# **RSAL** Series

### 0.5A - 6A, 250VAC EMI Filters

- High Voltage Pulse Attenuation
- Lug or Wire Terminations
- Low Earth Leakage Current Option
- Conforms to UL, CSA and EN Safety Agency Certifications



# **RSEL** Series

### 0.5A - 6A, 250VAC EMI Filters

- Lower cost compared to the RSAL Series
- Lug or Wire Terminations
- Low Earth Leakage Current Option
- Conforms to UL, CSA and EN Safety Agency Certifications





# **RSAN** Series

### 3A - 30A, 250VAC EMI Filters

- High Voltage Pulse Attenuation
- DIN Rail Mount Option
- Low Earth Leakage Current Option
- Conforms to UL, CSA and EN Safety Agency Certifications



# **RSEN** Series

### 3A - 30A, 250VAC EMI Filters

- Lower cost compared to the RSHN Series
- DIN Rail Mount Option
- Low Earth Leakage Current Option
- Conforms to UL, CSA and EN Safety Agency Certifications





# **RSHN** Series

### 3A - 30A, 250VAC EMI Filters

- Two Stage Filter for Better Performance
- DIN Rail Mount Option
- Low Earth Leakage Current Option
- Conforms to UL, CSA and EN Safety Agency Certifications

# **RSMN** Series

### 3A - 30A, 250VAC EMI Filters

- High Voltage Pulse Attenuation
- Two Stage Filter for Better Performance
- DIN Rail Mount Option
- Low Earth Leakage Current Option
- Conforms to UL, CSA and EN Safety Agency Certifications





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# SIFI F

### 3A - 36A, 250VAC EMI Filters

- Standard Attenuation
- Faston or Stud-Connection
- No Earth Leakage Current (no Y-Caps)
- Conforms to ENEC, UL and cUL Certifications





# SIFI G

### 2A - 36A, 250VAC EMI Filters

- Enhanced Attenuation
- Faston or Stud-Connection
- No Earth Leakage Current (no Y-Caps)
- Conforms to ENEC, UL and cUL Certifications





# SIFI H

### 3A - 36A, 250VAC EMI Filters

- Very High Attenuation
- Faston or Stud-Connection
- No Earth Leakage Current (no Y-Caps)
- Conforms to ENEC, UL and cUL Certifications



# B84771

### 1A - 20A, 250VAC IEC-EMI Filters

- IEC-Inlet C14 based on IEC60320-1
- Metal-case
- No Earth Leakage Current (no Y-Caps)
- Conforms to ENEC, UL and cUL Certifications





## B84773

### 1A - 10A, 250VAC IEC-EMI Filters including fuse

- IEC-Inlet C14 based on IEC60320-1
- Metal-case
- No Earth Leakage Current (no Y-Caps)
- Conforms to ENEC, UL and cUL Certifications





# B84776

# 1A – 10A, 250VAC IEC-EMI Filters including fuse and switch

- IEC-Inlet C14 based on IEC60320-1
- Metal-case
- No Earth Leakage Current (no Y-Caps)
- Conforms to ENEC, UL and cUL Certifications





In addition to our broad range of standard products, we offer a full bespoke service ranging from modified standards to full custom designs.

Our "Power+ Solutions" design teams are located close to all of our major markets for fast response.

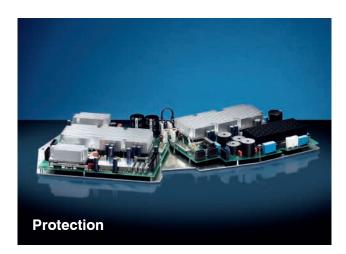
- Modified Standard Power Supply
- Customized Power Supply

### **Modified Standard**

Modifications (electrical or physical) to a Standard / Existing TDK-Lambda product.

The product retains the inherent reliability of the product from which it was modified.

Examples include Input/Output connector, signal, output voltage, color changes, conformal coating, firmware change, reduced leakage current, addition of test points or indicator lights, etc.









### **Customized Power Supply**

A customized power solution adding enhanced circuitry or packaging around a Standard/Existing TDK-Lambda Power Supply to meet customer's specifications.

Any TDK-Lambda supply may be used as a starting point and these customized solutions also retain the proven reliability of the product from which it was modified.

Examples include custom racks or enclosures, communications/control, ruggedization, special wire harnesses, switches, fuses, fans, heat sinks, and other additional functionality to a standard product.

# Healthcare Product Overview

# AC/DC

Product	Description	Output Power (W)	Outputs	Output Voltages (VDC)	Isolation i/p-o/p	Protection Class	Cooling
KMS15	Enclosed PCB Mount	9.9 - 15	1	3.3, 5, 9, 12, 15, 24	2x MOPP	Class II	Convection
KMD15	Enclosed PCB Mount	15	2	±5, ±12, ±15	2x MOPP	Class II	Convection
KMT15	Enclosed PCB Mount	15	3	5, ±12,5, ±15	2x MOPP	Class II	Convection
KMS40	Enclosed PCB Mount	26.4 - 40	1	3.3, 5, 9, 12, 15, 24	2x MOPP	Class II	Convection
KMD40	Enclosed PCB Mount	40	2	±5,5/12,5/24, ±12, ±15	2x MOPP	Class II	Convection
KMT40	Enclosed PCB Mount	40	3	5, ±12,5, ±15	2x MOPP	Class II	Convection
KMS15A	Enclosed PCB Mount	15	1	5, 9, 12, 15, 24	2x MOPP	Class II	Convection
KMS30A	Enclosed PCB Mount	25 - 30	1	5, 12, 15, 24	2x MOPP	Class II	Convection
KMS60A	Enclosed PCB Mount	51 - 60	1	5.1, 9, 12, 15, 24	2x MOPP	Class II	Convection
CUS30M	Open -frame	30	1	12, 15, 18, 24, 36, 48	2x MOPP	Class I /Class II	Convection
CUS60M	Open -frame	30 - 60	1	5, 12, 15, 18, 24, 36, 48	2x MOPP	Class I /Class II	Convection
HWS30A/ME	Enclosed	30	1	5, 12, 15, 24, 48	2x MOOP	Class I	Convection
HWS50A/ME	Enclosed	50	1	5, 12, 15, 24, 48	2x MOOP	Class I	Convection
CUT35	Open -frame	35	2 - 3	5, ±12, ±15	2x MOOP	Class I	Convection
ZMS100	Open -frame	80 - 100	1	12, 15, 24, 36, 48	2x MOPP	Class I /Class II	Convection/Forced air
HWS100A/ME	Enclosed	100	1	5, 12, 15, 24, 48	2x MOOP	Class I	Convection
CUS150M	Open -frame	120 - 150	1	12, 15, 18, 24, 28, 36, 48	2x MOPP	Class I /Class II	Convection/Forced air
HWS150A/ME	Enclosed	150	1	5, 12, 15, 24, 48	2x MOOP	Class I	Convection
NV175	Open -frame (configurable)	175 - 180	1 - 5	0.9 - 5.5, 12 - 15, 18 - 28	2x MOOP	Class I	Forced air
NVM175	Open -frame (configurable)	180	1	12, 24	2x MOPP	Class I	Forced air
NV175-M	Open -frame (configurable)	180	1 - 3	3.3, 5, 12 - 15, 18 - 28	2x MOPP	Class I	Forced air
CUS200M	Open -frame	200 - 250	1	12, 18, 24, 36, 48	2x MOPP	Class I	Convection/Forced air
NV300	Open -frame (configurable)	300	1 - 5	0.9 - 5.5, 12 - 15, 18 - 28	2x MOOP	Class I	Forced air
EFE300M	Open-frame	300	1	12, 24, 28, 48, 50	2x MOPP	Class I	Forced air
HWS300/ME	Enclosed - End fan	300	1	12, 15, 24, 48	2x MOOP	Class I	Forced air
CUS350M	U-Channel	350 - 420	1	12, 18, 24, 36, 48	2x MOPP	Class I	Convection/Forced air
NV350	Enclosed-End fan(configurable)	350 - 660	1 - 6	3.3 - 64	2x MOOP/MOPP <sup>1</sup>	Class I	Forced air
CFE400M	U-Channel	300 - 400	1	12, 24, 48	2x MOPP	Class I	Convection/Forced air
CFE400M(TF)	Enclosed -Top fan	400	1	12, 24, 48	2x MOPP	Class I	Convection/Forced air
EFE400M	Open-frame	400	1	12, 24, 48	2x MOPP	Class I	Forced air
XMS500(N)	Open-frame	500	1	12, 24, 36, 48	2x MOPP	Class I /Class II <sup>3</sup>	Forced air
XMS500(S)	U-Channel	500	1	12, 24, 36, 48	2x MOPP	Class I /Class II <sup>3</sup>	Forced air
XMS500(TF)	Enclosed -Top fan	500	1	12, 24, 36, 48	2x MOPP	Class I /Class II <sup>3</sup>	Forced air
HWS600/ME	Enclosed - End fan	600	1	5, 12, 15, 24, 48	2x MOOP	Class I	Forced air
Vega	Enclosed-End fan(configurable)	450 - 900	1 - 10	0.5 - 62	2x MOPP	Class I	Forced air
NV700	Enclosed-End fan(configurable)	700 - 1150	1 - 8	3.2 - 64	2x MOOP/MOPP <sup>1</sup>	Class I	Forced air
QM5	Enclosed-End fan(configurable)	700 - 1200	1 - 12	2.8 - 61.6	2x MOPP	Class I	Forced air
SWS1000L	Enclosed - End fan	1000	1	3.3, 5, 12, 15, 24, 36, 48, 60	2x MOPP	Class I	Forced air
RWS1000B/ME	Enclosed - End fan	1000	1	12, 15, 24, 36, 48	2x MOPP	Class I	Forced air
HWS1000/ME	Enclosed - End fan	1000	1	24, 36, 48	2XMOOP	Class I	Forced air
QS5-1200	Enclosed-End fan	1200²	1	12, 24, 48	2x MOPP	Class I	Forced air
QS7-1200	Enclosed-End fan	1200	1	12, 24, 48	2x MOPP	Class I	Forced air
QM7	Enclosed-End fan(configurable)	1200 - 1500	1 - 16	2.8 - 61.6	2x MOPP	Class I	Forced air
RWS1500B/ME	Enclosed - End fan	1500	1	12, 15, 24, 36, 48	2x MOPP	Class I	Forced air
HWS1500/ME	Enclosed - End fan	1500	1	24, 36, 48	2x MOOP	Class I	Forced air

 $^{\rm 1}$  configuration dependent  $~\cdot~^{\rm 2}$  1200W highline ~ 700W lowline  $~\cdot~^{\rm 3}$  optional

# External / Desktop Power Supplies

Product	Description	Output Power (W)	Outputs	Output Voltages (VDC)	Dimensions (mm) W x L x H	Protection Class	Cooling
DTM65-C8	External adapter	40 - 65	1	5, 12, 15, 19, 24, 28, 48	60 x 106 x 31	Class II	Convection
DTM65-C	External adapter	40 - 65	1	5, 12, 15, 18, 24, 36, 48	69 x 132 x 39.9	Class I	Convection
DTM110-C	External adapter	90 - 110	1	12, 13.5, 15, 19, 20, 24	170 x 64.8 x 38.5	Class I	Convection
DTM165-C	External adapter	160 - 165	1	12, 15, 19, 24, 28, 36, 48	85 x 170 x 44	Class I	Convection
DTM300-D	External adapter	300	1	12, 19, 24, 28, 48, 54	112 x 222 x 45	Class I / Class II	Convection



## DC/DC

Product	Description	Output Power (W)	Outputs	Output Voltages (VDC)	Dimensions 10.2 x 20.3 x 31.8 mm 1.25 x 0.8 x 0.4"	Cooling
PXC-M03 (S)	Enclosed - PCB Mount	3	1	3.3, 5, 12, 15, 24	DIP-24 Package	Convection
PXC-M03 (D)	Enclosed - PCB Mount	3	2	±5, ±12, ±15	DIP-24 Package	Convection
PXC-M06 (S)	Enclosed - PCB Mount	6	1	3.3, 5, 12, 15, 24	DIP-24 Package	Convection
PXC-M06 (D)	Enclosed - PCB Mount	6	2	±5, ±12, ±15	DIP-24 Package	Convection
PXC-M10 (S)	Enclosed - PCB Mount	10	1	3.3, 5, 12, 15, 24	DIP-24 Package	Convection
PXC-M10 (D)	Enclosed - PCB Mount	10	2	±5, ±12, ±15	DIP-24 Package	Convection

### **Filters**

Product	Medical product code (_xx)	Description	Input (VAC)	Rated Current (A)	Cooling
RSAL-20xx	/L	Chassis Mount	250	0.5 - 6	Convection
RSEL-20xx	/L	Chassis Mount	250	0.5 - 6	Convection
RSAN-20xx	/L	Chassis Mount, Din rail optional	250	3 - 30	Convection
RSEN-20xx	/L	Chassis Mount, Din rail optional	250	3 - 30	Convection
RSHN-20xx	/L	Chassis Mount, Din rail optional	250	3 - 30	Convection
RSMN-20xx	/L	Chassis Mount, Din rail optional	250	3 - 30	Convection
SIFI F	M	Chassis Mount	250	3 - 36	Convection
SIFI G	M	Chassis Mount	250	2 - 36	Convection
SIFI H	M	Chassis Mount	250	3 - 36	Convection
B84771	M	IEC-Filter	250	1 - 20	Convection
B84773	M	IEC-Filter with fuse	250	1 - 10	Convection
B84776	M	IEC-Filter with fuse and switch	250	1 - 10	Convection

# More about Healthcare

Visit www.uk.tdk-lambda.com/medical to learn more about healthcare. Get free assistance and advice for medical power supply selection, application support, medical safety compliance and custom solutions. Tap into our 30 years of experience powering critical healthcare products for major medical OEMs. Watch our video to see more.

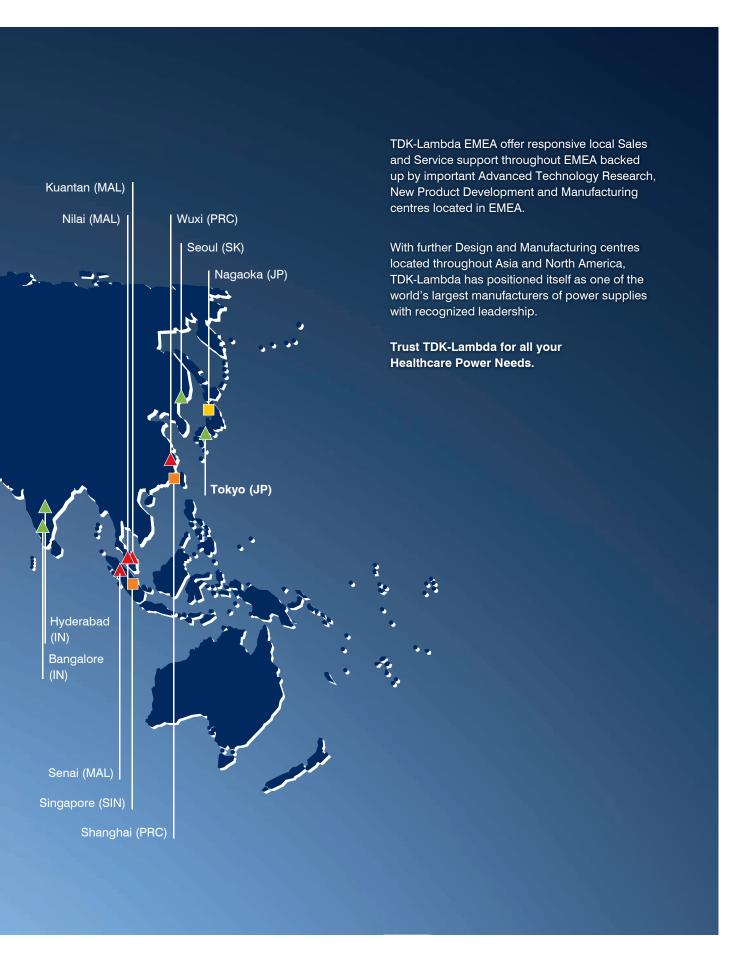


You are welcome to get in contact with us to find the right solution for your application.

# TDK-Lambda – Global Operations







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