

# PRODUCT SELECTION GUIDE

AC/DC Converters ■ DC/DC Converters ■ Switching Regulators ■ LED Drivers



## WE POWER YOUR PRODUCTS

POWER SUPPLIES FOR DISTRIBUTED POWER ARCHITECTURE

# POWER SUPPLIES FOR DISTRIBUTED POWER ARCHITECTURE

## Innovative. Efficient. Reliable.

The Distributed Power Architecture concept enables engineers to develop the power structure of their design flexibly and efficiently, using power converter modules. Therefore, RECOM has evolved AC/DC and DC/DC converters needed for current and future applications in **IoT, industry 4.0, smart homes and buildings, energy monitoring, medical, and transportation.**

RECOM manufactures a full range of standard and customized DC/DC and AC/DC converters in every power class from sub-1W to tens of kW, apart from switching regulators and LED drivers in a wide selection of formats. The company headquarters are located in Gmunden, Austria, and include the state-of-the-art logistics research and development center and laboratory wing and is supported by a global distribution network. The RECOM name has become synonymous with exceptional quality, integrity, innovation and excellent customer service.

### RECOM: A global manufacturer

Our global network of RECOM – owned factories are located in Italy, Mainland China, and Taiwan with numerous subcontractors situated throughout Asia and Europe, enabling us to provide both low cost commercial products as well as custom power solutions quickly and efficiently. RECOM manufacturing and logistics sites are IATF 16949 / ISO 9001 certified, guaranteeing the highest level of quality control.

### Innovative

Since our first DC/DC converter came off the production line, RECOM continues to launch innovative new products, often setting new standards within the industry. Over the past four decades, RECOM has become one of the fastest growing power supply manufacturers of standard and customized products in the industry. This is largely due to an exceptional, global team of forward-thinking engineers and technical sales personnel, along with our commitment to high-quality products and responsive customer service.



### Efficient

When it comes to efficiency, our aim is to go beyond industry expectations, not only in the performance of our converters, but

also by assisting engineers with integrating RECOM products into their designs. We pride ourselves in providing over 35.000 standard products to choose from, thus providing solutions for almost any application. Custom designs are also possible, through our subsidiary company Power Control Systems, as well as directly with RECOM. RECOM is able to provide production samples quickly through our reliable distribution network and can provide guidance with application and EMC issues through our skilled and knowledgeable team of support engineers.



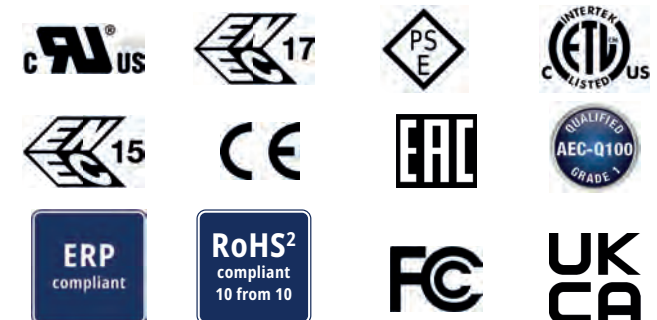
### Reliable

Here at RECOM, we understand that reliability is the most critical factor when customers choose third-party power supply products for their applications. All RECOM products are thoroughly tested during development for performance, including rigorous EMC and Highly Accelerated Lifetime Testing (HALT), to identify any design weaknesses before they are released to the market. Due to our thorough development and testing process, whether for eventual mass production or a short-run order custom, we are able to offer a design of up to ten years and provide warranties of up to five years. RECOM continues to meet the highest international standards, backed with certification from international safety agencies.



### Certified products:

RECOM offers product safety certifications including CE, EN, UL, CSA, ENEC, and PSE marks to meet our customers' requirements of international safety standards.



# Product Selection Guide

This Selection Guide only represents a variety of our most popular products. Please visit [www.recom-power.com](http://www.recom-power.com) or contact your local sales rep in case you do not find what you are looking for.

## AC/DC CONVERTERS

PCB Mount | Chassis Mount

pages 4 - 10

## DC/DC CONVERTERS

Unregulated | Regulated | IGBT/SiC MOSFET/GaN | Power Solutions - Plug & Play | Accessories

pages 11 - 35

## SWITCHING REGULATORS

Step Down | Buck-Boost | Power Modules

pages 36 - 43

## LED DRIVERS

AC/DC Constant Current | AC/DC Constant Voltage | DC/DC Constant Current | Accessories

pages 44 - 45

## CUSTOM SOLUTIONS

AC/DC | DC/DC | DC/AC

pages 46 - 50

# AC/DC POWER SUPPLIES

RECOM offers a wide range of AC/DC power supplies with performance and certifications suitable for applications ranging from **household to smart metering, industrial, medical, test and measurement, mobility/transportation, household/building automation, etc. Custom designs are additionally available for any application, including defense**, from RECOM subsidiary company PCS.

RECOM AC/DC power supplies utilize the latest design techniques to meet today's demands for safe, efficient, reliable, and cost-effective products with minimized light-load, no-load, and standby

losses – all this in the smallest case sizes and footprints with wide input ranges, most from 100VAC to 480VAC nominal. Accordingly, a special focus is on solutions for fan-less operation, supported by heat sinking base plates for easing thermal system integration of extra high-power density modules.

The standard ranges available span powers from 1W to 1200W with multi-kW parts available as platform solutions for custom designs. In addition, mechanical formats available include through-hole board-mount, encapsulated with wire connections, open frame with connectors or screw terminations, and even panel-

mounting in an IEC C14 'kettle' connector. Most products are rated for convection cooling up to high ambient temperatures while the higher power, open-frame parts, deliver maximum output with optional fan cooling. All products meet 'Class B' EMC emissions requirements without additional filtering and floating outputs. Many products feature isolation and leakage current performance suitable for the most sensitive medical applications.

















The RECOM AC/DC 'Book of Knowledge' provides an insight into the design methodologies used in your choice of AC/DC converter. [www.recom-power.com/bok](http://www.recom-power.com/bok)



# AC/DC CONVERTERS

## PCB MOUNT

















- 1 to 60 watts
- Regulated outputs
- OVP and OCP protected
- Low output ripple & noise
- High efficiency over the entire load range
- Optimized stand by mode operation
- Built-in EN55032 class B filter
- Ultra compact size
- Modified standards available

| Series   | Power (W) | Vin (VAC) | Vout (VDC)             | Isolation        | Dimensions (LxWxH) / Pinning                  | Certifications   | Other features   |
|--|-----------|-----------|------------------------|------------------|---|--|--|
|  RAC02E-K/277       | 2         | 85-305    | 3.3, 5, 12, 15, 24     | 4 kVAC / 1min    | 33.7 x 22.2 x 15.4 mm<br>(1.3" x 0.9" x 0.6") |  UL/IEC/EN62368-1<br>IEC/EN61558-1, 2-16<br>EN60335-1                                   | Low profile / tiny footprint<br>operating temperature range: -40°C to +90°C<br>with derating, full load power up to 80°C<br>no load power consumption <75mW                    |
|  RAC03-K            | 3         | 85-264    | 3.3, 5, 12, 15, 18, 24 | 3 kVAC / 1 min   | 28.5 x 23.5 x 17.9 mm<br>(1.1" x 0.9" x 0.7") |  UL/IEC/EN62368-1<br>IEC/EN60335-1  | Operating temperature range: -40°C to +80°C<br>household certified<br>tiniest footprint at 3W  |
|  RAC03-K/SMT        | 3         | 85-264    | 3.3, 5, 12, 15, 18, 24 | 3 kVAC / 1 min   | 27.7 x 23.7 x 19.0 mm<br>(1.1" x 0.9" x 0.8") |  EN/IEC/UL62368-1<br>EN/IEC60335-1<br>EN/IEC61558-1, -2<br>EN62233                      | Operating temperature range: -40°C to +80°C<br>operating altitude 5000m<br>JEDEC SMT reflow solder-able construction   |
|  RAC03E-K/277       | 3         | 85-305    | 3.3, 5, 12, 15, 24     | 4 kVAC / 1min    | 37.0 x 24.0 x 15.4 mm<br>(1.5" x 0.9" x 0.6") |  UL/IEC/EN62368-1<br>EN62233<br>IEC/EN61558-1, 2-16<br>EN60335-1                        | Operating temperature range: -40°C to +85°C<br>over Voltage category: OVC III<br>household certified, low profile<br>no load power consumption <75mW                           |
|  RAC04-K/277       | 4         | 80-305    | 3.3, 5, 12, 15, 24     | 4 kVAC / 1 min   | 36.7 x 27.2 x 17.4 mm<br>(1.4" x 1.0" x 0.7") |  EN/IEC/UL60950-1<br>EN/IEC/UL62368-1<br>IEC/EN61558-1, 2-16<br>EN61010-1<br>EN60335-1 | Operating temperature range: -40°C to +90°C<br>household certified<br>6W peak power<br>extra robust series   |
|  RAC04-G (B or A) | 4         | 85-305    | 3.3, 5, 9, 12, 15, 24  | 3 kVAC / 1 min   | 37.0 x 24.0 x 15.0 mm<br>(1.5" x 0.9" x 0.6") |  EN/IEC/UL62368-1<br>EN60335-1<br>EN/IEC61558-1, 2-16                                 | No load power consumption <75mW, operating<br>temperature range: -40°C to +85°C, low profile<br>and typ. 3W footprint, RAC04-GA: household certi-<br>fied, low leakage current |
|  RAC05E-K         | 5         | 90-264    | 5, 12, 15, 24          | 4.2 kVAC / 1 min | 37.0 x 24.0 x 18.0 mm<br>(1.5" x 0.9" x 0.7") |  EN/IEC/UL62368-1<br>EN/IEC60335-1<br>EN/IEC61558-1, 2-16                             | Economical design<br>no load power consumption <100mW<br>industry standard pinout for typ. 3W  |
|  RAC05E-KT        | 5         | 90-264    | 4, 5, 12, 15, 24       | 3 kVAC / 1 min   | 32.1 x 27.1 x 21.8 mm<br>(1.3" x 1.1" x 0.9") |  UL/IEC/EN62368-1<br>IEC/EN60335-1<br>EN/IEC61558-1, 2-16                             | Operating temperature range: -25°C to +75°C<br>economical design<br>no load power consumption <100mW<br>EI30 standard Transformer pinout                                       |

# AC/DC CONVERTERS

## PCB MOUNT











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| Series  | Power (W) | Vin (VAC)               | Vout (VDC)                         | Isolation        | Dimensions (LxWxH) / Pinning                  | Certifications   | Other features  |
|---|-----------|-------------------------|------------------------------------|------------------|---|--|---|
|  RAC05-K/277     | 5         | 85-305                  | 3.3, 5, 12, 15, 24                 | 4.2 kVAC / 1 min | 31.7 x 26.7 x 21.8 mm<br>(1.2" x 1.0" x 0.9") |  EN/UL62368-1<br>IEC/EN60335-1<br>EN/IEC61558-1, 2-16   | OVCIII: up to 2000m altitude<br>OVCI: 5000m<br>operating temperature range: -40°C to +90°C<br>6W peak power   |
|  RAC05-K/480     | 5         | 85-528                  | 5, 12, 15                          | 5.4 kVAC / 1 min | 52.5 x 27.4 x 23.0 mm<br>(2.1" x 1.1" x 0.9") |  IEC/EN62368-1<br>UL/IEC61010-1   | Ultra-wide input range 85-528VAC<br>OVC III up to 3000m altitude<br>operating temperature range: -40°C to 80°C  |
|  RACM06E-K/277   | 6         | 80-305                  | 3.3, 5, 12, 15, 24                 | 4 kVAC / 1min    | 25.6 x 25.6 x 16.6 mm<br>(1.0" x 1.0" x 0.6") |  EN/IEC62368-1<br>ANSI/AAMI ES60601-1<br>EN/IEC60601-1<br>EN/IEC60335-1<br>EN/IEC61558-1<br>EN62233 | 2MOPP rated to 5000m; prepared for BF use<br>OVC III up to 5000m<br>operating temperature range: -40°C to +90°C   |
|  RAC10-K/277     | 10        | 85-305                  | 3.3, 5, 12, 15, 18, 24<br>±12, ±15 | 4 kVAC / 1 min   | 52.5 x 27.4 x 23.0 mm<br>(2.1" x 1.1" x 0.9") |  EN/IEC/UL60950-1<br>EN/IEC/UL62368-1<br>EN/IEC60335-1<br>EN62477-1                                 | OVC III rated<br>OVCIII up to 3000m altitude;<br>operating temperature range: -40°C to +80°C<br>14 Watt peak power  |
|  RAC10E-K/277   | 10        | 85-305                  | 3.3, 5, 12, 15, 24                 | 4 kVAC / 1 min   | 45.7 x 25.4 x 21.5 mm<br>(1.8" x 1.0" x 0.8") |  UL/IEC62368-1<br>EN/IEC61558-1, 2-16  | Economical design<br>compact shape<br>over voltage category: OVC III<br>EMI class B with grounded output (eg. PELV)   |
|  RAC15-K/480   | 15        | 85-528                  | 5, 12, 15, 24                      | 3.6 kVAC / 1 min | 52.5 x 40.0 x 25.5 mm<br>(2.1" x 1.6" x 0.9") |  UL/IEC/EN62368-1<br>EN/IEC61010<br>EN60335-1   | Phase to phase connections<br>OVC III up to 5000m, PD3 and LPS<br>operating temperature range: -40 to +90°C   |
|  RACM16E-K/277 | 16        | 85-305                  | 3.3, 5, 12, 15, 24, 30             | 4 kVAC / 1 min   | 52.7 x 27.6 x 23.0 mm<br>(2.1" x 1.1" x 0.9") |  ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-2-16       | Operating temperature range: -40°C to +85°C<br>2MOPP rated to 5000m; prepared for BF use<br>CV/CC over load limiting characteristics<br>OVCIII: up to 4000m altitude; OVCI: 5000m |
|  RAC20-K(/277) | 20        | 85-264<br>(/277) 85-305 | 5, 12, 15, 24, 48<br>±12, ±15      | 3 kVAC / 1 min   | 52.5 x 27.4 x 23.0 mm<br>(2.1" x 1.1" x 0.9") |  EN/IEC/UL62368-1<br>IEC/EN60335-1<br>IEC/EN61558-1, 2-16   | Standby mode optimized PSU (ENER Lot 6)<br>ultra-high efficiency over entire load range   |

# AC/DC CONVERTERS

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| Series  | Power (W) | Vin (VAC) | Vout (VDC)                | Isolation        | Dimensions (LxWxH) / Pinning  | Certifications  | Other features  |
|---|-----------|-----------|---------------------------|------------------|---|---|---|
|  RAC20E-K/277      | 20        | 85-305    | 5, 12, 24                 | 4 kVAC / 1 min   | 52.7 x 27.6 x 23.0 mm (2.1" x 1.1" x 0.9")  |  UL/IEC/EN62368-1<br>EN/IEC61558-1, 2-16   | Economical design, EN55032 class "B": with grounded output (eg. PELV); OVCIII: up to 2000m altitude, OVCII: 5000m; operating temperature: -40 to 90°C   |
|  RAC25-K/480       | 25        | 85-528    | 5, 12, 15, 24             | 3.6 kVAC / 1 min | 83.2 x 46.4 x 30.4 mm (3.3" x 1.8" x 1.2")  |  UL/IEC/EN62368-1<br>EN/IEC61010<br>EN603350-1   | Phase to phase connections<br>OVC III up to 5000m, PD3 and LPS<br>operating temperature range: -40°C to +90°C   |
|  RACM30-K/277      | 30        | 85-305    | 5, 12, 15, 24, ±12, ±15   | 4 kVAC / 1 min   | 52.5 x 40.0 x 25.5 mm (2.1" x 1.6" x 0.9")  |  ANSI/AAMI ES60601-1<br>UL/EN/IEC62368-1<br>EN60335-1<br>EN62233<br>IEC/EN60601-1<br>IEC/EN61558-2 | 2MOPP rated to 5000m; prepared for BF use<br>OVC III up to 5000m, PD3 and LPS, operating temperature range: -40°C to +90°C, EN55032 class „B“: with grounded output (eg. PELV)                  |
|  RACM40-K          | 40        | 80-264    | 5, 12, 15, 18, 24, 36, 48 | 4 kVAC / 1 min   | 83.2 x 46.4 x 30.4 mm (3.2" x 1.8" x 1.2")  |  ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-1, 2-16     | 2MOPP rated to 5000m; prepared for BF use<br>operating temperature range: -40°C to +85°C<br>5000m altitude OVC II; 2000m OVC III, EN55032 class "B": with grounded output (eg. PELV)            |
|  RACM40-K/OF(PCB) | 40        | 80-264    | 5, 12, 15, 18, 24, 36, 48 | 4 kVAC / 1 min   | 78.3 x 40.6 x 25.5 mm (OF) (3.0" x 1.6" x 1.0")<br>78.3 x 40.6 x 29.1 mm (PCB) (3.0" x 1.6" x 1.1") | ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-1, 2-16   | Operating temperature range: -40°C to +85°C<br>over voltage category: OVC III rated, optional 2"x3" package (OF/2"x3"), 5000m altitude OVC II; 2000m OVC III, 2MOPP rating; prepared for BF use |
|  RACM60-K/OF/PCB | 60        | 80-264    | 5, 12, 15, 24, 36, 48     | 4.8 kVAC / 1 min | 78.4 x 53.0 x 35.4 mm (3.0" x 2.0" x 1.4")  | ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-1, 2-16   | 2MOPP rated to 4000m; prepared for BF use<br>operating temperature range: -40°C to +85°C<br>5000m altitude OVC II; 2000m OVC III  |

# AC/DC CONVERTERS

## CHASSIS MOUNT

















- 3 to 1200 watts
- Short circuit protection
- Built-in active PFC
- Built-in class B filter
- Different package types:  
enclosed and open-frame (/OF) versions

| Series  | Power (W) | Vin (VAC)               | Vout (VDC)                | Isolation           | Case / Dimensions (LxWxH)  | Certifications   | Other features  |
|---|-----------|-------------------------|---------------------------|---------------------|--|--|---|
|  RAC03-SER/277                     | 3         | 85-305                  | 3.3, 5, 12, 24            | 3 kVAC / 1 min      | 50.3 x 50.3 x 11.0 mm<br>(2.0" x 2.0" x 0.4")  | EN/IEC/UL60950-1<br>EN60335-1  | Extra low footprint <11mm<br>low no load power consumption <40mW<br>operating temperature range: -40°C to +85°C<br>round design and flying wires for flushmounting                  |
|  RAC05-K/277/W                     | 5         | 85-305                  | 3.3, 5, 12, 15, 24        | 4.2 kVAC /<br>1 min | 31.7 x 26.7 x 21.8 mm<br>(1.2" x 1.0" x 0.9")  | EN/UL62368-1<br>IEC/EN60335-1<br>IEC/EN61558-1<br>IEC/EN61558-2-16                         | Over voltage category: OVC III<br>operating temperature range: -40°C to +90°C<br>6W peak power  |
|  RAC05-K/C14                       | 5         | 85-264                  | 3.3, 5, 12, 15, 24        | 3 kVAC / 1 min      | 67.0 x 48.0 x 23.0 mm<br>(2.6" x 1.9" x 0.9")  | UL/IEC/EN62368-1<br>IEC/EN60950-1  | Isolated power supply with integrated mains<br>filter, safe, touchable DC outputs<br>easy installation<br>worldwide standard IEC input  |
|  RACM15E-K/OF                      | 15        | 80-264                  | 3.3, 5, 12, 15, 24, 30    | 4 kVAC / 1 min      | 80.0 x 23.8 x 22.0 mm<br>(3.2" x 0.9" x 0.8")  | ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-2-16 | Operating temperature range: -40°C to +85°C<br>OVC III up to 3000m altitude<br>2MOPP rated to 5000m; prepared for BF use<br>CV/CC over load limiting characteristics                |
|  RACM15E-K/PMAD                   | 15        | 80-264                  | 3.3, 5, 12, 15, 24, 30    | 4 kVAC / 1 min      | 83.0 x 26.4 x 29.5 mm<br>(3.2" x 1.0" x 1.2")  | ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-2-16 | Operating temperature range: -40°C to +85°C<br>OVC III up to 3000m altitude, OVCII: 5000m<br>2MOPP rated to 5000m; prepared for BF use<br>CV/CC over load limiting characteristics  |
|  RACM16E-K/277/W                 | 16        | 85-305                  | 3.3, 5, 12, 15, 24, 30    | 4 kVAC / 1 min      | 52.7 x 27.6 x 23.0 mm<br>(2.1" x 1.1" x 0.9")  | ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-2-16 | Operating temperature range: -40°C to +85°C<br>2MOPP rated to 5000m; prepared for BF use<br>OVC III up to 3000m altitude<br>CV/CC over load limiting characteristics                |
|  RAC20-K/W                       | 20        | 85-264<br>(/277) 85-305 | 5, 12, 15, 24, 48         | 3 kVAC / 1 min      | 52.5 x 27.4 x 23.0 mm<br>(2.1" x 1.1" x 0.9")  | EN/IEC/UL62368-1<br>IEC/EN60335-1<br>IEC/EN61558-1<br>IEC/EN61558-2-16                     | Standby mode optimized PSU (ENER Lot 6)<br>ultra-high efficiency over entire load range<br>/277/W version on request  |
|  RACM30-K/277(W)<br>(/OF) (/PMA) | 30        | 85-305                  | 5,12, 15, 24,<br>±12, ±15 | 4 kVAC / 1 min      | 52.5 x 40.0 x 25.5 mm (W)<br>(2.1" x 1.6" x 0.9")<br>84.7 x 40.0 x 33.0 mm (PMA)<br>(3.3" x 1.6" x 1.3") | UL/EN/IEC62368-1<br>EN60335-1<br>EN62233<br>IEC/EN60601-1<br>IEC/EN61558-2                 | OVC III up to 5000m, PD3 and LPS<br>operating temperature range: -40°C up to +90°C<br>/PMA: panel mount version with push-in terminals<br>2MOPP rated to 5000m; prepared for BF use |

# AC/DC CONVERTERS

## CHASSIS MOUNT





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- Different package types:  
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| Series  | Power (W) | Vin (VAC)                     | Vout (VDC)                | Isolation           | Case / Dimensions (LxWxH)   | Certifications  | Other features  |
|---|-----------|-------------------------------|---------------------------|---------------------|---|---|---|
|   RACM40-K/OF  | 40        | 80-264                        | 5, 12, 15, 18, 24, 36, 48 | 4 kVAC / 1 min      | 78.3 x 40.6 x 25.5 mm (OF)<br>(3.0" x 1.6" x 1.0")<br>78.3 x 53.0 x 25.5 mm (2x3")<br>(3.0" x 2.0" x 1.0")  | ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-1, 2-16 | OVCIII: up to 2000m altitude; OVCII: 5000m<br>operating temperature range: -40°C to +85°C<br>2MOPP rated to 5000m; prepared for BF use  |
|   RACM60-K/OF<br>(/ENC/2x4)<br>(/277/OF)   | 60        | 80-264<br>80-305<br>(/277/OF) | 5, 12, 15, 24, 36, 48     | 4.8 kVAC /<br>1 min | 78.4 x 53.0 x 31.5 mm (OF)<br>(3.0" x 2.0" x 1.2")<br>101.6 x 53.0 x 31.5 mm (2x4")<br>(4.0" x 2.0" x 1.2") | ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-1, 2-16 | Operating temperature range: -40°C to +85°C<br>OVCIII: up to 2000m altitude; OVCII: 5000m<br>2MOPP rated to 4000m; prepared for BF use  |
|   RACM90-K/OF (/ENC)   | 90        | 85-264                        | 12, 15, 24, 36, 48        | 4 kVAC / 1 min      | 101.6 x 50.8 x 32.0 mm (OF)<br>(4.0" x 2.0" x 1.3")<br>118.3 x 62.7 x 38.7 mm (ENC)<br>(4.6" x 2.4" x 1.5") | ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-1, 2-16 | B and BF ready, operating temperature ratings:<br>-40 to 90°C, low leakage current <75µA, LPS<br>limited power source rated, 2MOPP rated to<br>4000m; prepared for BF use OVCIII: up to 2000m<br>altitude; OVCII: 4000m |
|   RACM130E-K/OF<br>(/ENC)  | 130       | 85-264                        | 12, 15, 24, 36, 48        | 4 kVAC / 1 min      | 101.6 x 50.8 x 32.0 mm (OF)<br>(4.0" x 2.0" x 1.3")<br>118.3 x 62.7 x 38.7 mm (ENC)<br>(4.6" x 2.4" x 1.5") | ANSI/AAMI ES60601-1<br>EN/IEC60335-1<br>EN/IEC62368-1<br>EN/IEC60601-1<br>EN/IEC61558-1, 2-16 | 2MOPP rated to 4000m; prepared for BF use<br>low leakage current <75µA<br>operating temperature ratings: -40 to 90°C<br>OVCIII: up to 2000m altitude; OVCII: 4000m  |
|    RACM140E-K/OF<br>(/ENC) | 140       | 80-264                        | 12, 16, 24, 36, 48        | 4 kVAC / 1 min      | 127.0 x 81.5 x 38.0 mm<br>(5.0" x 3.2" x 1.5")  | EN/IEC60601-1<br>ANSI/AAMI ES60601-1<br>EN/IEC62368-1   | Operating temperature range: -40°C to + 90°C<br>2MOPP rated to 4000m; prepared for BF use<br>210W boost power, OVCIII: up to 2000m altitude;<br>OVCII: 5000m  |
|  RAC150-G/OF (/ENC)  | 150       | 90-264                        | 12, 24, 48                | 3 kVAC / 1 min      | 101.6 x 50.8 x 30.0 mm (OF)<br>(4.0" x 2.0" x 1.2")<br>105.0 x 62.0 x 35.0 mm (ENC)<br>(4.1" x 2.4" x 1.4") | EN/IEC/UL62368-1  | Efficiency up to 91%<br>SCP and OVP protection<br>output 125W at +50°C with natural convection  |
|   RACM230-G/OF (/ENC)  | 160 / 230 | 80-264                        | 12, 24, 36, 48, 54        | 4 kVAC / 1 min      | 101.6 x 50.8 x 32.0 mm (OF)<br>(4.0" x 2.0" x 1.3")<br>105.0 x 62.0 x 35.0 mm (ENC)<br>(4.1" x 2.4" x 1.4") | ANSI/AAMI ES60601-1<br>EN/IEC62368-1<br>EN60335-1<br>EN/IEC60601-1<br>EN/IEC61558-1, 2-16     | 160W conduction-cooled, fan-less operation<br>wide operating temperature range: -40°C to +80°C<br>2MOPP rated to 5000m; prepared for BF use   |
|   RACM550-G/OF (/ENC)  | 300 / 550 | 80-264                        | 24, 36, 48, 56            | 4 kVAC / 1 min      | 127.0 x 76.0 x 38.0 mm (OF)<br>(5.0" x 3.0" x 1.5")<br>150.0 x 87.0 x 45.0 mm (ENC)<br>(5.9" x 3.4" x 1.8") | ANSI/AAMI ES60601-1<br>IEC/EN62368-1<br>IEC/EN60335-1<br>IEC/EN60601-1<br>IEC/EN61558-1, 2-16 | 300W conduction-cooled, fan-less operation<br>550W peak power or forced air rating<br>2MOPP rated to 5000m; prepared for BF use<br>5VSB Auxiliary and 12V fan outputs   |

# AC/DC CONVERTERS

## CHASSIS MOUNT

- 3 to 1200 watts
- Short circuit protection
- Built-in active PFC
- Built-in class B filter
- Different package types:  
enclosed and open-frame (/OF) versions

| Series   | Power (W)    | Vin (VAC) | Vout (VDC) | Isolation    | Case / Dimensions (LxWxH) | Certifications                                  | Other features  |  |
|--|--------------|-----------|------------|--------------|---------------------------|---|---|--|
|   | RACM600-L/OF | 600       | 80-275     | 12*, 24, 48* | 4 kVAC / 1 min            | 196.8 x 101.6 x 40.6 mm<br>(7.7" x 4.0" x 1.6") | UL/IEC/EN62368-1<br>ANSI/AAMI ES60601-1<br>IEC/EN60601-1                        | 450W convection cooled, 600W peak power<br>5VSB auxiliary output<br>active current sharing<br>PMB monitoring, *800W peak power   |
|   | RACM1200-V   | 1200      | 80-264     | 24, 36, 48   | 4 kVAC / 1 min            | 228.0 x 96.2 x 40.0 mm<br>(9.0" x 3.8" x 1.6")  | ANSI/AAMI ES60601-1<br>IEC/EN/UL62368-1<br>IEC/EN60601-1<br>IEC/EN61558-1, 2-16 | Operating temperature range: -40°C to +80°C<br>optional PMBus version (/PMB)<br>conduction cooled, fanless operation industrial<br>certified, modified standards available |

# DC/DC CONVERTERS

RECOM has been offering isolated DC/DC converters and non-isolated switching regulators since 1975 and has the most extensive range on the market.

The standard range of isolated converters spans from 0.25W to 300W with higher power to several kW, available in RECOM's subsidiary company PCS as custom products based on proven platform designs. Almost every imaginable format of converter is offered, with a range of through-hole products, open or encapsulated surface-mount types in 'gullwing' or 'pinless' variants along with wired, screw terminal, and connectorized parts, mostly in industry-standard SIP, DIP, 'brick', and SMD formats. In addition to the standard portfolio, customized solutions are also available. Fixed and wide input isolated converters are available up to 16:1 with isolation ratings up to 20kVDC and certifications to

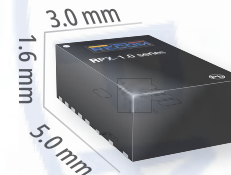
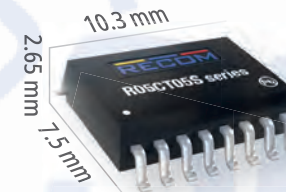
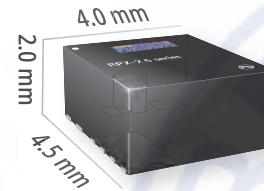
the highest 2MOPP medical grade. Unregulated and fully regulated parts are offered with variants featuring up to three outputs. For the **most cost sensitive applications** without sacrificing quality, the RECOM 'E' line provides the best value.

Non-isolated parts are available, ranging from 0.18W to 3kW and higher for custom designs from PCS. Input voltage ranges span 0.65V to 75V with some parts handling a 15:1 variation. Buck, boost, and buck-boost types have fixed or settable output voltages over a wide range from 0.8V to 30V. The package formats include SIP3/4/12, SMD, and 'brick'. Open frame and encapsulated types are available.

Many SMT parts feature RECOM's innovative '**3D Power Packaging®**' technology which utilizes advanced techniques to

leverage the 'third dimension' for maximum power density with minimum footprint. Typical construction methods are overmolded 'flip-chip on leadframe' for a QFN package, embedded die in substrates, and complex multi-layer PCBs with plugged and blind vias. 'Chip and wire bonding' with over-molding is another technique used with very high frequency planar magnetics for optimal thermal and functional performance. The result is a range of fully featured, high power density, low cost switching regulators, and isolated DC/DC converters in footprints down to 2x1.5mm with heights down to 1mm.





The RECOM DC/DC 'Book of Knowledge' gives an insight into the design methodologies used in your choice of DC/DC converter. [www.recom-power.com/bok](http://www.recom-power.com/bok)



# DC/DC CONVERTERS

## UNREGULATED



- 0.25 to 3 watts
- Isolation voltages up to 20 kVDC
- Industry standard pinout
- Economical designs available
- (/E) – high efficiency
- (/H) – high isolation
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- Single (S), dual (D)

| Series  |                            | Power (W) | Vin (VDC)                | Vout (VDC)  | Isolation            | Case / Dimensions (LxWxH)   | Certifications   | Other features  |
|---|----------------------------|-----------|--------------------------|---|----------------------|---|------------------|---|
|    | R0.25S (/E)<br>R0.25D (DA) | 0.25      | 3.3, 5, 12,<br>15, 24    | 3.3, 5, 9, 12, 15, 24,<br>±3.3, ±5, ±9, ±12,<br>±15, ±24,<br>5/5, 12/12 | 1 or 3 kVDC /<br>1 s | SMD<br>12.75 x 10.7 x 6.7 mm (S)<br>(0.5" x 0.4" x 0.3")<br>15.24 x 10.7 x 6.7 mm (D)<br>(0.6" x 0.4" x 0.3") | EN/IEC/UL60950-1 | Isolated independent dual outputs (A)<br>operating temperature range: -40°C to +100°C       |
|    | RM                         | 0.25      | 3.3, 5, 12,<br>15, 24    | 3.3, 5, 9, 12, 15   | 1 or 2 kVDC /<br>1 s | SIP4<br>11.5 x 6.0 x 10.0 mm<br>(0.5" x 0.2" x 0.4")  | EN/IEC/UL60950-1 | Operating temperature range: -40°C to +85°C<br>higher isolation requirement 2kVDC           |
|    | R0.5S<br>R0.5D             | 0.5       | 3.3, 5, 12, 24           | 5, 12, 15,<br>±5, ±12, ±15  | 1 or 3 kVDC /<br>1 s | SMD<br>12.75 x 10.7 x 6.7 mm (S)<br>(0.5" x 0.4" x 0.3")<br>15.24 x 10.7 x 6.7 mm (D)<br>(0.6" x 0.4" x 0.3") | UL60950-1        | Operating temperature range: -40°C to +100°C  |
|    | ROL                        | 0.5       | 5, 12                    | 5, 12, 15   | 1 or 2 kVDC /<br>1 s | SIP4<br>11.5 x 6.0 x 10.0 mm<br>(0.5" x 0.2" x 0.4")  | EN/IEC/UL60950-1 | Operating temperature range: -40°C to +85°C   |
|   | R1DA                       | 1         | 3.3, 5, 9, 12,<br>15, 24 | 3.3/3.3, 5/5, 9/9,<br>12/12, 15/15                                      | 1 kVDC / 1 s         | SMD<br>15.24 x 10.7 x 7.0 mm<br>(0.6" x 0.4" x 0.3")  | EN/UL60950-1     | Isolated independent dual outputs<br>operating temperature range: -40°C to +100°C           |
|  | R1S (/E)<br>R1D            | 1         | 3.3, 5, 12,<br>15, 24    | 3.3, 5, 9,<br>12, 15, 24<br>±3.3, ±5, ±9, ±12,<br>±15, ±24              | 1 or 3 kVDC /<br>1 s | SMD<br>12.75 x 10.7 x 7.0 mm (S)<br>(0.5" x 0.4" x 0.3")<br>15.24 x 10.7 x 7.0 mm (D)<br>(0.6" x 0.4" x 0.3") | EN/IEC/UL60950-1 | Operating temperature range: -40°C to +100°C<br>economical design available (R1SE, R1SE/H2) |
|  | R1SE                       | 1         | 5                        | 5   | 1 kVDC / 1 s         | SMD<br>12.75 x 10.7 x 6.7 mm<br>(0.5" x 0.4" x 0.3")  | UL60950-1        | Operating temperature range: -40°C to +85°C<br>economical design                            |
|  | R1SE/H2                    | 1         | 3.3, 5, 12, 15           | 5, 12, 15   | 2 kVDC / 1 s         | SMD<br>12.75 x 10.7 x 7.0 mm<br>(0.5" x 0.4" x 0.3")  | UL60950-1        | Operating temperature range: -40°C to +100°C<br>economical design                           |

# DC/DC CONVERTERS

## UNREGULATED

- 0.25 to 3 watts
- Isolation voltages up to 20 kVDC
- Industry standard pinout
- Economical designs available
- (/E) – high efficiency
- (/H) – high isolation
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- Single (S), dual (D)

| Series  |              | Power (W) | Vin (VDC)             | Vout (VDC)  | Isolation                          | Case / Dimensions (LxWxH)   | Certifications   | Other features   |
|---|--------------|-----------|-----------------------|---|------------------------------------|---|--|--|
|    | R1SX<br>R1DX | 1         | 3.3, 5, 12            | 3.3, 5<br>±5, ±9, ±12, ±15                              | 1 or 3 kVDC /<br>1 s               | SMD<br><br>12.75 x 10.8 x 5.8 mm (S)<br>(0.5" x 0.4" x 0.2")<br>15.24 x 10.7 x 8.5 mm (D)<br>(0.6" x 0.4" x 0.3") | EN/IEC/UL62368-1<br>UL60950-1  | Operating temperature range: -40°C to +100°C<br>pin compatible with R1S/R1D series<br>economical design                            |
|    | RAM          | 1         | 5, 12, 24             | 5   | 3.75 or 5 kVDC<br>/ 1 s            | SMD<br><br>18.0 x 9.0 x 6.7 mm<br>(0.7" x 0.3" x 0.2")  | EN60950-1  | Operating temperature range: -40°C to +100°C<br>very low isolation capacitance (4pF)   |
|    | RB (/E)      | 1         | 3.3, 5, 12,<br>15, 24 | 3.3, 5, 9, 12, 15, 24<br>±3.3, ±5, ±9, ±12,<br>±15, ±24 | 1 or 2 kVDC /<br>1 s               | SIP7<br><br>19.6 x 6.0 x 10.2 mm<br>(0.8" x 0.2" x 0.4")  | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +85°C<br>economical design available (RBE)   |
|    | RBE          | 1         | 5                     | 5   | 1 kVDC / 1 s                       | SIP7<br><br>19.6 x 6.0 x 10.2 mm<br>(0.8" x 0.2" x 0.4")  | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +85°C<br>industry standard<br>economical design  |
|   | RBM          | 1         | 5, 12                 | 5, 12, 15,<br>±5, ±12, ±15                              | 3 kVDC / 1 s                       | SIP6<br>Micro<br><br>16.55 x 6.0 x 7.7 mm<br>(0.7" x 0.2" x 0.3")   | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +85°C  |
|  | RE           | 1         | 3.3, 5, 12,<br>15, 24 | 3.3, 5, 9, 12, 15, 24                                   | 1 or 2 kVDC /<br>1 s               | SIP7<br><br>19.6 x 6.0 x 10.2 mm<br>(0.8" x 0.2" x 0.4")  | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +85°C<br>economical design available (REE)   |
|  | REE          | 1         | 5                     | 5   | 1 kVDC / 1 s                       | SIP7<br><br>19.6 x 6.0 x 10.2 mm<br>(0.8" x 0.2" x 0.4")  | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +85°C<br>industry standard<br>economical design  |
|  | REM1         | 1         | 3.3, 5, 12,<br>15, 24 | 3.3, 5, 12  | 5.2 kVDC / 1 min<br>4 kVAC / 1 min | SIP7<br><br>19.6 x 6.0 x 10.2 mm<br>(0.8" x 0.2" x 0.4")  | ANSI/AAMI ES60601-1<br>EN62368-1<br>EN/IEC60601-1<br>IEC/EN60601-1-2 | Reinforced isolation for 250VAC working voltage<br>CF rated outputs, 5000m altitude<br>operating temperature range: -40°C to +90°C |

# DC/DC CONVERTERS

## UNREGULATED

- 0.25 to 3 watts
- Isolation voltages up to 20 kVDC
- Industry standard pinout
- Economical designs available
- (/E) – high efficiency
- (/H) – high isolation
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- Single (S), dual (D)

| Series  | Power (W) | Vin (VDC)             | Vout (VDC)                                   | Isolation            | Case / Dimensions (LxWxH)  | Certifications              | Other features   |
|---|-----------|-----------------------|--|----------------------|--|-----------------------------|--|
|  RFB             | 1         | 5                     | 5  | 1 kVDC / 1 s         | SIP7<br>19.6 x 6.0 x 10.2 mm<br>(0.7" x 0.2" x 0.4")   | UL60950-1                   | 1:1 input voltage range<br>economical design                                       |
|  RFM             | 1         | 5                     | 5  | 1 kVDC / 1 s         | SIP4<br>11.5 x 6.0 x 10.0 mm<br>(0.4" x 0.2" x 0.4")   | UL60950-1                   | Industry standard pinout<br>economical design                                      |
|  RFMM            | 1         | 5                     | 5  | 4 kVDC / 1 s         | SIP7<br>19.65 x 7.05 x 10.2 mm<br>(0.7" x 0.3" x 0.4")   | UL60950-1                   | Industry standard pinout<br>economical design                                      |
|  RK (/H)<br>RH   | 1         | 5, 12, 15, 24         | 5, 9, 12, 15,<br>±5, ±9, ±12, ±15,<br>+15/-9 | 3 or 4 kVDC /<br>1 s | SIP7<br>19.65 x 6.0 x 10.2 mm<br>(0.8" x 0.2" x 0.4")<br>19.65 x 7.05 x 10.2 mm (/H)<br>(0.8" x 0.3" x 0.4") | EN/IEC/UL60950-1            | Operating temperature range: -40°C to +90°C<br>economical design available (RKE)   |
|  RK/H6<br>RH/H6 | 1         | 5, 12, 15, 24         | 3.3, 5, 12, 15,<br>±3.3, ±5, ±12, ±15        | 6.4 kVDC / 1 s       | SIP7<br>19.65 x 7.05 x 10.2 mm<br>(0.8" x 0.3" x 0.4")   | IEC/UL60950-1<br>IEC62368-1 | Operating temperature range: -40°C to +90°C<br>high capacitive load capability     |
|  RKE/H         | 1         | 5, 12, 24             | 5  | 4 kVDC / 1 s         | SIP7<br>19.6 x 7.05 x 10.2 mm<br>(0.8" x 0.3" x 0.4")  | EN/IEC/UL60950-1            | Operating temperature range: -40°C to +85°C<br>high isolation<br>economical design |
|  RNM           | 1         | 3.3, 5, 12, 15        | 3.3, 5, 9, 12, 15                            | 1 or 2 kVDC /<br>1 s | DIP6<br>8.3 x 8.3 x 6.8 mm<br>(0.3" x 0.3" x 0.3")   | EN/IEC/UL60950-1            | Ultra compact design<br>operating temperature range: -40°C to +85°C                |
|  RO (/E)       | 1         | 3.3, 5, 12,<br>15, 24 | 3.3, 5, 9,<br>12, 15, 24                     | 1 or 2 kVDC /<br>1 s | SIP4<br>11.5 x 6.0 x 10.0 mm<br>(0.5" x 0.2" x 0.4")   | EN/IEC/UL60950-1            | Operating temperature range: -40°C to +85°C<br>economical design available (ROE)   |

# DC/DC CONVERTERS

## UNREGULATED

- 0.25 to 3 watts
- Isolation voltages up to 20 kVDC
- Industry standard pinout
- Economical designs available
- (/E) – high efficiency
- (/H) – high isolation
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- Single (S), dual (D)

| Series   | Power (W) | Vin (VDC)             | Vout (VDC)   | Isolation           | Case / Dimensions (LxWxH)   | Certifications  | Other features   |
|--|-----------|-----------------------|--|---------------------|---|---|--|
|  ROE  | 1         | 3.3, 5, 12, 15, 24    | 5, 12, 15  | 1 kVDC / 1 s        | SIP4<br>11.5 x 6.0 x 10.0 mm<br>(0.5" x 0.2" x 0.4")  | EN/IEC/UL60950-1  | Operating temperature range: -40°C to +85°C<br>industry standard pinout<br>economical design                                 |
|  ROM  | 1         | 3.3, 5, 12            | 5, 12, 15  | 3 kVDC / 1 s        | SIP4<br>Micro<br>11.5 x 6.0 x 7.7 mm<br>(0.5" x 0.2" x 0.3")  | EN/UL60950-1  | Operating temperature range: -40°C to +85°C  |
|  RP   | 1         | 5, 9, 12, 15, 24      | 3.3, 5, 9, 12, 15, 24,<br>±3.3, ±5, ±9, ±12,<br>±15, ±24<br>+15/-9 | 5.2 kVDC / 1 s      | SIP7<br>19.65 x 7.05 x 10.2 mm<br>(0.8" x 0.3" x 0.4")  | EN/IEC60950-1<br>UL60950-1*   | Operating temperature range: -40°C to +85°C<br>* +15/-9 version excluded   |
|  RU   | 1         | 3.3, 5                | 5/5  | 1 or 2 kVDC / 1 s   | SIP7<br>19.6 x 6.0 x 10.2 mm<br>(0.8" x 0.2" x 0.4")  | EN60950-1   | Isolated independent dual outputs<br>operating temperature range: -40°C to +85°C   |
|  RUM   | 1         | 3.3, 5                | 5/5  | 1 or 2 kVDC / 1 s   | SIP6<br>16.55 x 6.0 x 7.7 mm<br>(0.7" x 0.2" x 0.3")  | EN60950-1   | Isolated independent dual outputs<br>operating temperature range: -40°C to +85°C<br>low profile                              |
|   RxxPxx (/R) | 1         | 5, 12, 15, 24         | 3.3, 5, 6, 9, 12, 15,<br>±3.3, ±5, ±9, ±12,<br>±15,<br>+15/-9      | 6.4 or 8 kVDC / 1 s | SIP7<br>19.5 x 9.8 x 12.5 mm<br>(0.8" x 0.4" x 0.5")  | EN/IEC/UL60950-1<br>EN/IEC/UL62368-1<br>EN/IEC/UL60601-1<br>ANSI/AAMI ES60601-1 | Medical approved (/R6.4 & /R8 versions)<br>operating temperature range: -40°C to +90°C<br>reinforced isolation (/R6.4 & /R8) |
|  RN   | 1.25      | 3.3, 5, 9, 12, 15, 24 | 3.3, 5, 7, 9, 12, 15, 24   | 1 or 2 kVDC / 1 s   | DIP8<br>12.6 x 10.1 x 7.6 mm<br>(0.5" x 0.4" x 0.3")  | EN60950-1   | Operating temperature range: -40°C to +85°C  |
|  R2S<br>R2D   | 2         | 5, 12, 15, 24         | 3.3, 5, 9, 12, 15, 24,<br>±5, ±9, ±12, ±15,<br>±24                 | 1 or 3 kVDC / 1 s   | SMD<br>12.75 x 10.7 x 9.0 mm (S)<br>(0.5" x 0.4" x 0.4")<br>15.24 x 10.7 x 9.0 mm (D)<br>(0.6" x 0.4" x 0.4") | EN/IEC/UL60950-1  | Operating temperature range: -40°C to +100°C   |

This Selection Guide represents only the latest most popular products of our portfolio. Please check [www.recom-power.com](http://www.recom-power.com) for additional products.

# DC/DC CONVERTERS

## UNREGULATED

- 0.25 to 3 watts
- Isolation voltages up to 20 kVDC
- Industry standard pinout
- Economical designs available
- (/E) – high efficiency
- (/H) – high isolation
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- Single (S), dual (D)










| Series  | Power (W) | Vin (VDC)             | Vout (VDC)   | Isolation         | Case / Dimensions (LxWxH)                              | Certifications   | Other features   |
|---|-----------|-----------------------|--|-------------------|--|--|--|
|  R2SX        | 2         | 5, 12, 24             | 3.3, 5, 15, 24   | 1 or 3 kVDC / 1 s | SMD<br>15.24 x 11.1 x 8.0 mm<br>(0.6" x 0.4" x 0.4")   | EN/IEC/UL62368-1<br>EN/IEC/UL60950-1   | Operating temperature range: -40°C to +100°C<br>no minimum load required<br>economical design                                      |
|  REM2        | 2         | 3.3, 5, 12, 15, 24    | 3.3, 5, 9, 12, ±3.3, ±5, ±12                               | 5.2 kVDC / 1 min  | SIP8<br>23.0 x 8.0 x 12.2 mm<br>(0.9" x 0.4" x 0.5")   | ANSI/AAMI ES60601-1<br>CAN/CSA60601-1<br>IEC/EN62368-1<br>EN/IEC60601-1<br>EN60601-1-2 | Operating temperature range: -40°C to +95°C<br>reinforced isolation for 250VAC working voltage<br>CF rated outputs, 5000m altitude |
|  RD          | 2         | 5, 12, 24             | ±5, ±12, ±15, ±24  | 1 or 2 kVDC / 1 s | SIP7<br>19.65 x 7.0 x 10.2 mm<br>(0.8" x 0.3" x 0.4")  | IEC/EN60950-1  | Operating temperature range: -40°C to +85°C  |
|  RI          | 2         | 5, 12, 15, 24         | 5, 12, 15  | 1 kVDC / 1 s      | SIP4<br>11.5 x 7.6 x 10.2 mm<br>(0.5" x 0.3" x 0.4")   | IEC/EN60950-1  | Operating temperature range: -40°C to +85°C  |
|  RJZ<br>RGZ | 2         | 3.3, 5, 9, 12, 15, 24 | 3.3, 5, 9, 12, 15, 24, ±3.3, ±5, ±9, ±12, ±15, ±24, +15/-9 | 3 or 4 kVDC / 1 s | DIP14<br>19.9 x 10.0 x 7.1 mm<br>(0.8" x 0.4" x 0.3")  | IEC/EN60950-1  | Operating temperature range: -40°C to +90°C  |
|  RKZ       | 2         | 5, 12, 24             | 5, 12, 15, ±5, ±12, ±15, +15/-9                            | 3 or 4 kVDC / 1 s | SIP7<br>19.65 x 7.05 x 10.2 mm<br>(0.8" x 0.3" x 0.4") | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +85°C  |
|  RKZE      | 2         | 5, 12, 15, 24         | 5, 9, 12, 15, ±5, ±12, ±15                                 | 3 or 4 kVDC / 1 s | SIP7<br>19.65 x 7.05 x 10.2 mm<br>(0.7" x 0.3" x 0.4") | EN62368-1  | Economical design<br>/H suffix for 4kV Isolation   |
|  RTM       | 2         | 5, 12, 24             | 5  | 2 or 3 kVDC / 1 s | SMD<br>18.0 x 8.7 x 7.15 mm<br>(0.7" x 0.3" x 0.3")    | EN60950-1  | Operating temperature range: -40°C to +90°C  |



# DC/DC CONVERTERS

## UNREGULATED

- 0.25 to 3 watts
- Isolation voltages up to 20 kVDC
- Industry standard pinout
- Economical designs available
- (/E) – high efficiency
- (/H) – high isolation
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- Single (S), dual (D)

| Series  | Power (W) | Vin (VDC)             | Vout (VDC)  | Isolation               | Case / Dimensions (LxWxH)                                     | Certifications  | Other features   |
|---|-----------|-----------------------|---|-------------------------|---|---|--|
|  RHV2  | 2         | 5, 12, 24             | 5, 12, 24, ±5, ±12  | 20 kVDC / 1 s           | SIP16<br>45.0 x 15.0 x 17.0 mm<br>(1.7" x 0.6" x 0.7")        | IEC/EN62368-1<br>IEC/EN61010-1  | Compact SIP16 case with >30mm pin separation<br>low 4pF max. isolation capacitance<br>operating temperature range: -40°C to +85°C at full load |
|  RUZ   | 2         | 5                     | 5/5   | 1 or 2 kVDC / 1 s       | SIP7<br>19.65 x 7.0 x 10.2 mm<br>(0.8" x 0.3" x 0.4")         | IEC/EN60950-1   | Isolated independent dual outputs<br>operating temperature range: -40°C to +85°C   |
|   RV (/R)      | 2         | 3.3, 5, 9, 12, 15, 24 | 3.3, 5, 9, 12, 15, 24, ±3.3, ±5, ±9, ±12, ±15, ±24, +15/-9        | 6, 6.4, or 8 kVDC / 1 s | DIP24 Micro<br>32.35 x 14.7 x 11.1 mm<br>(1.3" x 0.6" x 0.4") | EN/UL60950-1<br>EN61010-1<br>ANSI/AAMI ES60601-1<br>IEC/EN/UL62368-1        | Medical approved (/R6.4 & /R8 versions)<br>operating temperature range: -40°C to +90°C<br>single, dual or asymmetric output options            |
|   RxxP2xx (/R) | 2         | 5, 12, 15, 24         | 3.3, 5, 9, 12, 15, ±3.3, ±5, ±9, ±12, ±15, +15/-3, +15/-9, +20/-5 | 6.4 or 8 kVDC / 1 s     | SIP7<br>19.5 x 9.8 x 12.5 mm<br>(0.8" x 0.4" x 0.5")          | EN/UL60950-1<br>EN/IEC/UL60601-1<br>ANSI/AAMI ES60601-1<br>IEC/EN/UL62368-1 | Medical approved (/R6.4 & /R8 versions)<br>operating temperature range: -40°C to +95°C<br>single, dual or asymmetric output options            |
|  RI3  | 3         | 5, 12, 15, 24         | 5, 9, 12, 15  | 1, 2, or 3 kVDC / 1 s   | SIP4<br>11.5 x 7.6 x 10.2 mm<br>(0.5" x 0.3" x 0.4")          | EN/IEC/UL60950-1  | Very high power density<br>operating temperature range: -40°C to +100°C  |
|  RKZ3  | 3         | 5, 12, 24             | 5, 12   | 3 or 4 kVDC / 1 s       | SIP7<br>19.6 x 7.5 x 12.2 mm<br>(0.8" x 0.3" x 0.5")          | IEC/EN62368-1   | High power density<br>efficiency up to 90%<br>pin-compatible with RK & RKZ   |
|  RHV3  | 3         | 5, 12, 24             | 5, 12, 24, ±5, ±12  | 20 kVDC / 1 s           | SIP16<br>45.0 x 15.0 x 17.0 mm<br>(1.7" x 0.6" x 0.7")        | IEC/EN62368-1<br>IEC/EN61010-1  | Compact SIP16 case with >30mm pin separation<br>low 4pF max. isolation capacitance<br>operating temperature range: -40°C to +80°C at full load |

# DC/DC CONVERTERS

## REGULATED

- 0.5 to 300 watts
- Isolation voltages up to 10 kVDC
- Short circuit protection
- Economical design available
- Modified standards available
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- (Z), (W) – wide input range
- (-HC) – heatsink available
- (/SMD) – surface mount device
- (/M) – metal case

| Series   | Power (W) | Vin (VDC)          | Vout (VDC)                          | Isolation         | Case / Dimensions (LxWxH)                      | Certifications   | Other features  |
|--|-----------|--------------------|-------------------------------------|-------------------|--|--|---|
|  R0.5Z        | 0.5       | 5, 12, 15, 24      | 5, 12, 15                           | 1 or 2 kVDC / 1 s | SMD 15.24 x 10.7 x 7.1 mm (0.6" x 0.4" x 0.3") | EN/UL60950-1   | Operating temperature range: -40°C to +85°C regulated output with internal linear regulator                           |
|  R0.5ZX       | 0.5       | 5                  | 5                                   | 1 or 2 kVDC / 1 s | SMD 15.24 x 11.1 x 8.5 mm (0.6" x 0.4" x 0.4") | IEC/EN60950-1<br>UL60950-1<br>EN/IEC/UL62368-1           | Operating temperature range: -40°C to +100°C regulated output with internal linear regulator industry standard pinout |
|  R05CT05S     | 0.5       | 4.5-5.5            | 3.3, 3.7, 5.0, 5.4                  | 5 kVAC / 1 min    | SMD 10.3 x 7.5 x 2.65 mm (0.4" x 0.3" x 0.1")  | ANSI/AAMI ES60601-1<br>UL/IEC/EN62368-1<br>IEC/EN60601-1 | Operating temperature range: -40°C to +140°C 1kVAC working voltage CTRL, SYNC, and UVLO selectable outputs            |
|  R05C05TE05S  | 0.5       | 4.5-5.5            | 5                                   | 3 kVDC / 1 min    | SMD 10.35 x 7.5 x 2.5 mm (0.4" x 0.3" x 0.1")  | IEC/EN62368-1  | Ultra-wide operating temperature range: -40°C to +125°C low EMI emissions, low profile (2.5mm) economical design      |
|  R05CTE05S   | 1         | 4.5-5.5            | 5                                   | 3 kVDC / 1 min    | SMD 10.35 x 7.5 x 2.5 mm (0.4" x 0.3" x 0.1")  | IEC/EN62368-1  | Ultra-wide operating temperature range: -40°C to +125°C low EMI emissions, low profile (2.5mm) economical design      |
|  RxxC1TFxxS | 1         | 3-5.5              | 3.3, 5                              | 2.5 kVAC / 1 min  | LGA 5.0 x 4.0 x 1.18 mm (0.2" x 0.2" x 0.05")  | N/A  | Operating temperature range: -40°C to +125°C ultra-compact SMD package with low profile                               |
|  R1M/SMD    | 1         | 9-18, 18-36, 36-72 | 3.3, 5, 9, 12, 15, 24, ±5, ±12, ±15 | 1.6 kVDC / 1min   | SMD 14.2 x 9.1 x 10.2 mm (0.6" x 0.4" x 0.4")  | N/A  | Operating temperature range: -40°C to 90°C efficiency up to 81%   |
|  R1Z        | 1         | 3.3, 5, 12, 15, 24 | 3.3, 5, 9, 12, 15                   | 1 or 2 kVDC / 1 s | SMD 15.24 x 10.7 x 9.0 mm (0.6" x 0.4" x 0.4") | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +70°C regulated output with internal linear regulator                           |



new

# DC/DC CONVERTERS

## REGULATED





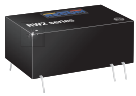



- 0.5 to 300 watts
- Isolation voltages up to 10 kVDC
- Short circuit protection
- Economical design available
- Modified standards available
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- (Z), (W) – wide input range
- (-HC) – heatsink available
- (/SMD) – surface mount device
- (/M) – metal case

| Series   | Power (W) | Vin (VDC)  | Vout (VDC)                                      | Isolation              | Case / Dimensions (LxWxH)   | Certifications                       | Other features  |
|--|-----------|--|---|------------------------|---|--------------------------------------|---|
|  R1ZX                  | 1         | 5  | 5   | 1 or 2 kVDC / 1 s      | SMD<br>15.24 x 11.1 x 8.5 mm<br>(0.6" x 0.4" x 0.4")  | IEC/EN/UL60950-1<br>EN/IEC/UL62368-1 | Operating temperature range: -40°C to +100°C<br>regulated output with internal linear regulator<br>industry standard pinout |
|  RAZ                  | 1         | 5, 12, 24  | 5   | 1.25 or 2.5 kVDC / 1 s | SMD<br>18.0 x 8.7 x 7.8 mm<br>(0.7" x 0.3" x 0.3")  | IEC/EN60950-1<br>EN60601-1           | Operating temperature range: -40°C to +85°C   |
|  RKK                  | 1         | 5  | 5   | 4 kVDC / 1 s           | SIP7<br>19.6 x 6.0 x 10.2 mm<br>(0.7" x 0.2" x 0.4")  | EN/IEC/UL62368-1                     | Operating temperature range: -40°C to +105°C<br>efficiency up to 82%  |
|  RSO (Z)              | 1         | 4.5-9, 9-18,<br>18-36, 36-72<br>9-36, 18-72<br>(Z) | 3.3, 5, 9, 12, 15,<br>±3.3, ±5, ±9, ±12,<br>±15 | 1, 2, or 3 kVDC / 1 s  | SIP8<br>21.8 x 9.2 x 11.1 mm<br>(0.9" x 0.4" x 0.4")  | EN/IEC/UL60950-1                     | Operating temperature range: -40°C to +85°C<br>economical design available (RSOK-Z)   |
|  RSOK-Z/H3<br>(/ADJ) | 1         | 9-36   | 5, 12 (/ADJ)                                    | 3 kVDC / 1 min         | SIP8<br>21.8 x 9.2 x 11.1 mm<br>(0.9" x 0.4" x 0.4")  | IEC/EN/UL62368-1                     | Operating temperature range: -40°C to +105°C<br>/ADJ for adjustable output (3.3 - 17V)<br>economical design                 |
|  RY                 | 1         | 5, 9, 12, 15,<br>24                                | 5, 9, 12, 15, 24<br>±5, ±9, ±12, ±15,<br>±24    | 1 kVDC / 1 s           | SIP7<br>19.65 x 7.05 x 10.2 mm<br>(0.8" x 0.3" x 0.4")  | EN60950-1                            | Control pin (on/off)<br>operating temperature range: -40°C to +70°C   |
|  RYK                | 1         | 5  | 3.3, 5  | 4 kVDC / 1 s           | SIP7<br>19.6 x 6.0 x 10.2 mm<br>(0.7" x 0.2" x 0.4")  | EN/IEC/UL62368-1                     | Operating temperature range: -40°C to +105°C<br>efficiency up to 81%<br>post regulated                                      |
|  R2M (/SMD)         | 2         | 9-18, 18-36,<br>36-72                              | 3.3, 5, 9, 12, 15, 24,<br>±5, ±12, ±15          | 1.6 kVDC / 1 min       | DIP8<br>13.2 x 9.1 x 10.2 mm<br>(0.5" x 0.4" x 0.4")<br>SMD<br>14.2 x 9.1 x 10.2 mm<br>(0.6" x 0.4" x 0.4") | N/A                                  | Operating temperature range: -40°C to 105°C<br>efficiency up to 81%   |

# DC/DC CONVERTERS

## REGULATED






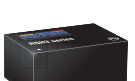


- 0.5 to 300 watts
- Isolation voltages up to 10 kVDC
- Short circuit protection
- Economical design available
- Modified standards available
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- (Z), (W) – wide input range
- (-HC) – heatsink available
- (/SMD) – surface mount device
- (/M) – metal case

| Series  | Power (W) | Vin (VDC)                                  | Vout (VDC)   | Isolation             | Case / Dimensions (LxWxH)  | Certifications                                | Other features   |
|---|-----------|--|--|-----------------------|--|---|--|
|  RS (Z)            | 2         | 4.5-9, 9-18, 9-36, 18-36, 18-72, 36-72 (Z) | 3.3, 5, 9, 12, 15, $\pm 3.3$ , $\pm 5$ , $\pm 9$ , $\pm 12$ , $\pm 15$ | 1, 2, or 3 kVDC / 1 s | SIP8 21.8 x 9.2 x 11.1 mm (0.9" x 0.4" x 0.4")   | EN/IEC/UL60950-1                              | Operating temperature range: -40°C to +85°C<br>economical design available (RSK-RUW)                                 |
|  RSK-RUW/H3 (/ADJ) | 2         | 4.5-36                                     | 5, 12 (/ADJ)   | 3 kVDC / 1 min        | SIP8 21.8 x 9.2 x 11.1 mm (0.9" x 0.4" x 0.4")   | IEC/EN/UL62368-1                              | Operating temperature range: -40°C to +105°C<br>/ADJ for adjustable output (3.3 - 17V)<br>economical design          |
|  RTC2              | 2         | 4.5-9, 18-36                               | 5  | 3 kVDC / 1 s          | SMD 14.9 x 14.2 x 9.6 mm (0.6" x 0.6" x 0.4")  | EN/IEC62368-1                                 | Operating temperature range: -40°C to +100°C<br>compact SMD package, control pin (on/off)<br>economical design       |
|  RSH2              | 2         | 2.8-5.5, 4.5-13.2, 9-18, 18-36             | 3.3, 5, 12, 15, 24   | 2 or 3 kVDC / 1 min   | SMD 18.9 x 17.2 x 8.7 mm (0.7" x 0.7" x 0.3")  | IEC/EN/UL62368-1<br>CAN/CSA-C22.2 NO. 62368-1 | 2W power in compact SMD package<br>efficiency up to 84%<br>operating temperature range: -40°C to +100 °C             |
|  RW2              | 2         | 4.5-9, 9-18, 18-36, 36-72                  | 3.3, 5, 12, 15, $\pm 5$ , $\pm 9$ , $\pm 12$ , $\pm 15$                | 1, 2, or 3 kVDC / 1 s | Mini DIP16 22.1 x 12.55 x 8.5 mm (0.9" x 0.5" x 0.3")<br>DIP16 24.2 x 14.50 x 9.7 mm (1.0" x 0.6" x 0.4")<br>SMD 24.2 x 14.50 x 10.2 mm (1.0" x 0.6" x 0.4") | IEC/EN60950-1                                 | Operating temperature range: -40°C to +85°C<br>DIP16 Mini smaller case size (/B)<br>SMD package available (/SMD)     |
|  R3M/SMD         | 3         | 4.5-18, 9-36, 18-75                        | 3.3, 5, 9, 12, 15, 24, $\pm 5$ , $\pm 12$ , $\pm 15$                   | 1.6 kVDC / 1min       | SMD 14.2 x 9.1 x 10.2 mm (0.6" x 0.4 x 0.4")   | N/A   | Operating temperature range: -40°C to +105°C<br>efficiency up to 84%   |
|  REC3A           | 3         | 4.5-9, 18-36                               | 5  | 2 kVDC / 1 s          | DIP24 31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")   | UL60950-1<br>IEC/EN62368-1                    | Operating temperature range: -40°C to +100°C<br>no minimum load required<br>optional UVLO (/X1)<br>economical design |
|  REC3-R          | 3         | 4.5-5.75, 10.2-13.8, 20.4-27.6             | 5, 12, 15, $\pm 5$ , $\pm 12$ , $\pm 15$                               | 1 kVDC / 1 s          | DIP24 32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD 32.0 x 20.32 x 11.2 mm (1.3" x 0.8" x 0.4")  | EN60950-1                                     | Operating temperature range: -40°C to +80°C<br>SMD package (/SMD) or metal case (/M)                                 |

# DC/DC CONVERTERS

## REGULATED

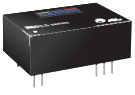







- 0.5 to 300 watts
- Economical design available
- (/P) – short circuit protection
- (/SMD) – surface mount device
- Isolation voltages up to 10 kVDC
- Modified standards available
- (Z), (W) – wide input range
- (/M) – metal case
- Short circuit protection
- (-R) – tape & reel packaging
- (-HC) – heatsink available

| Series   | Power (W) | Vin (VDC)                                    | Vout (VDC)                                | Isolation                            | Case / Dimensions (LxWxH)  | Certifications  | Other features  |
|--|-----------|--|---|--------------------------------------|--|---|---|
|  REC3-RW(Z)   | 3         | 4.5-9, 9-18, 18-36, 36-72<br>9-36, 18-72 (Z) | 3.3, 5, 9, 12, 15, ±5, ±12, ±15           | 2, 4, or 6 kVDC / 1 s                | DIP24 32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD 32.0 x 19.9 x 11.2 mm (1.3" x 0.8" x 0.4")   | EN/UL60950-1  | Operating temperature range: -40°C to +80°C<br>SMD package (/SMD) or metal case (/M)  |
|  REM3(W)       | 3         | 4.5-9, 9-18, 18-36, 36-75<br>9-36, 18-75 (W) | 3.3, 5, 12, 15, 24, ±5, ±12, ±15          | 5 kVAC / 1min                        | DIP24 31.8 x 20.3 x 10.4 mm (1.3" x 0.8" x 0.4")   | ANSI/AAMI ES60601-1<br>CAN/CSA60601-1<br>IEC/EN60601-1<br>EN60601-1-2 | Reinforced isolation for 250VAC working voltage<br>CF rated outputs, 5000m altitude<br>operating temperature range: -40°C to +100°C                   |
|  RP03-RAW     | 3         | 36-160                                       | 3.3, 5, 12, 15, 24, ±5, ±12, ±15          | 3 kVAC / 1 min                       | DIP24 31.8 x 20.3 x 10.6 mm (1.3" x 0.8" x 0.4")   | UL/IEC/EN62368-1<br>EN50155<br>EN45545-2                              | Designed for railway and industrial applications<br>operating temperature range: -40°C to +105°C<br>CE marked<br>3 kVAC/ 1 min reinforced insulation  |
|  RS3 (Z)      | 3         | 4.5-9, 9-18, 18-36, 36-72<br>9-27, 20-60 (Z) | 3.3, 5, 9, 12, 15, ±3.3, ±5, ±9, ±12, ±15 | 1, 2, or 3 kVDC / 1 s                | SIP8 21.8 x 9.2 x 11.1 mm (0.9" x 0.4" x 0.4")   | IEC/EN60950-1   | Operating temperature range: -40°C to +71°C<br>control pin (on/off)<br>economical design available (RS3K-Z)   |
|  RS3K-(Z)/H3 | 3         | 4.5-9<br>9-36(Z)                             | 3.3, 5, 9, 12, 15, 24 ±5, ±12, ±15, ±24   | 3 kVDC / 1 min                       | SIP8 21.8 x 9.2 x 11.1 mm (0.9" x 0.4" x 0.4")   | EN/IEC/UL62368-1  | Operating temperature range: -40°C to +105°C<br>efficiency up to 86%  |
|  RSH3       | 3         | 9-18, 18-36                                  | 5, 12, 15, 24 ±12, ±15                    | 3 kVDC / 1min                        | SMD 18.9 x 17.2 x 8.7 mm (0.7" x 0.7" x 0.3")  | IEC/EN/UL62368-1<br>CAN/CSA-C22.2 NO. 62368-1                         | 3W power in compact SMD package<br>efficiency up to 83%<br>operating temperature range: -40°C to +100°C   |
|  RW         | 3         | 4.5-9, 9-18, 18-36, 36-72                    | 3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15       | 1 kVDC / 1 s (S)<br>3 kVDC / 1 s (D) | DIP24 32.3 x 14.7 x 7.0 mm (S) (1.3" x 0.6" x 0.3")<br>SMD 32.2 x 14.5 x 10.2 mm (S) (1.3" x 0.6" x 0.4")<br>DIP24 32.0 x 17.5 x 7.0 mm (D) (1.3" x 0.7" x 0.3") | EN60950-1   | Operating temperature range: -40°C to +85°C<br>SMD package for RW-S available (/SMD)  |
|  Rxx-B      | 3<br>5    | 4.5-6, 10-14, 14-17, 21-27                   | 41-120, 50-135, 92-200                    | 3 kVDC / 1 s                         | DIP24 31.8 x 20.3 x 9.4 mm (1.3" x 0.8" x 0.4")  | EN/IEC60950-1   | Adjustable output voltage up to 200VDC<br>cascadable for output voltages up to 400VDC<br>remote voltage programming by external voltage or resistance |

# DC/DC CONVERTERS

## REGULATED









- 0.5 to 300 watts
- Economical design available
- (/P) – short circuit protection
- (/SMD) – surface mount device
- Isolation voltages up to 10 kVDC
- Modified standards available
- (Z), (W) – wide input range
- (/M) – metal case
- Short circuit protection
- (-R) – tape & reel packaging
- (-HC) – heatsink available

| Series  | Power (W) | Vin (VDC)                                  | Vout (VDC)                          | Isolation  | Case / Dimensions (LxWxH)   | Certifications                          | Other features   |
|---|-----------|--|-------------------------------------|--|---|---|--|
|  REC3.5/R                | 3.5       | 4.5-9, 9-18, 18-36, 36-75                  | 5, 9, 12, 15, 24, ±5, ±9, ±12, ±15  | 8 or 10 kVDC / 1 s                                 | DIP24 32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")  | UL60950-1<br>EN/IEC/UL60601-1           | Reinforced isolation (/R8 & /R10)<br>operating temperature range: -40°C to +85°C<br>no minimum load required   |
|  REM3.5E                 | 3.5       | 4.5-9, 9-18, 18-36, 36-75                  | 5, 9, 12, 15, 24, ±5, ±9, ±12, ±15  | 8 or 10 kVDC / 1 s (DIP24)<br>6 kVDC / 1 min (SMD) | DIP24 31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD 31.8 x 20.3 x 11.2 mm (1.3" x 0.8" x 0.4")  | EN/IEC/UL60601-1<br>ANSI/AAMI ES60601-1 | 250VAC working voltage isolation<br>clearance and creepage distance >8mm<br>up to 10kVDC reinforced insulation<br>operating temperature range: -40°C to +85°C                |
|  R5M/SMD                 | 5         | 9-36, 18-75                                | 3.3, 5, 9, 12, 15, 24, ±5, ±12, ±15 | 1.6 kVDC / 1 min                                   | SMD 14.2 x 9.1 x 10.2 mm (0.6" x 0.4" x 0.4")   | N/A                                     | Operating temperature range: -40°C to +105°C<br>efficiency up to 84%   |
|  REC5K-AW /H4            | 5         | 9-36                                       | 5                                   | 4 kVDC / 1 s                                       | 1"x1" 25.4 x 25.4 x 10.0 mm (1.0" x 1.0" x 0.4")  | EN/IEC/UL62368-1                        | Feedback regulated output<br>derates to 110°C ambient temperature<br>ON/OFF control pin<br>UVLO and SCP  |
|  REC5-RW (Z)            | 5         | 4.5-9, 9-18, 18-36, 36-72, 9-36, 18-72 (Z) | 3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15 | 1.6, 2, 4, or 6 kVDC / 1 s                         | DIP24 31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD 31.8 x 19.9 x 11.2 mm (1.3" x 0.8" x 0.4")  | EN/IEC/UL60950-1                        | Operating temperature range: -40°C to +75°C<br>SMD package (/SMD) or metal case (/M)   |
|  REC5K-RW /H4/A (/ADJ) | 5         | 9-36                                       | 5, 12 (/ADJ)                        | 4 kVDC / 1 s                                       | DIP24 32.1 x 20.6 x 10.2 mm (1.3" x 0.8" x 0.4")  | EN/IEC/UL62368-1                        | Low ripple and noise<br>derates to 110°C ambient temperature<br>ON/OFF control pin, UVLO and SCP<br>/ADJ for adjustable output   |
|  REM5E                 | 5         | 4.5-9, 9-18, 18-36, 36-75                  | 5, 9, 12, 15, 24, ±5, ±9, ±12, ±15  | 8 or 10 kVDC / 1 s (DIP24)<br>6 kVDC / 1 min (SMD) | DIP 24 31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD 31.8 x 20.3 x 11.2 mm (1.3" x 0.8" x 0.4") | EN/IEC/UL60601-1<br>EN/IEC60601-1-2     | 250VAC working voltage isolation<br>clearance and creepage distance >8mm<br>up to 10kVDC reinforced insulation<br>operating temperature range: -40°C to +85°C<br>no derating |
|  REC6A                 | 6         | 4.5-9, 18-36                               | 5                                   | 2 kVDC / 1 s                                       | DIP24 31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")  | UL62368-1<br>UL60950-1<br>EN/IEC62368-1 | Operating temperature range: -40°C to +100°C<br>no minimum load required<br>optional UVLO (/X1)<br>economical design   |

# DC/DC CONVERTERS

## REGULATED









- 0.5 to 300 watts
- Economical design available
- (/P) – short circuit protection
- (/SMD) – surface mount device
- Isolation voltages up to 10 kVDC
- Modified standards available
- (Z), (W) – wide input range
- (/M) – metal case
- Short circuit protection
- (-R) – tape & reel packaging
- (-HC) – heatsink available

| Series   | Power (W) | Vin (VDC)                                    | Vout (VDC)                          | Isolation  | Case / Dimensions (LxWxH)   | Certifications  | Other features  |
|--|-----------|--|-------------------------------------|--|---|---|---|
|  REC6/R        | 6         | 4.5-9, 9-18, 18-36, 36-75                    | 5, 9, 12, 15, 24, ±5, ±9, ±12, ±15  | 8 or 10 kVDC / 1 s                                 | DIP24<br>32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")   | UL60950-1<br>EN/IEC/UL60601-1                           | Reinforced isolation (/R8 & /R10)<br>operating temperature range: -40°C to +75°C<br>no derating<br>pinning option (A) or (C), optional UVLO (/X1)                                   |
|  REM6(W)       | 6         | 4.5-9, 9-18, 18-36, 36-75<br>9-36, 18-75 (W) | 3.3, 5, 12, 15, 24, ±5, ±12, ±15    | 5 kVAC / 1 min                                     | DIP24<br>31.8 x 20.3 x 10.4 mm (1.3" x 0.8" x 0.4")   | ANSI/AAMI ES60601-1<br>EN/ICE60601-1<br>EN60601-1-2     | Reinforced isolation for 250VAC working voltage<br>CF rated outputs, 5000m altitude<br>operating temperature range: -40°C to +105°C   |
|  REM6E         | 6         | 9-18, 18-36, 36-75                           | 9, 12, 15, 24 ±9, ±12, ±15          | 8 or 10 kVDC / 1 s (DIP24)<br>6 kVDC / 1 min (SMD) | DIP24<br>31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD<br>31.8 x 20.3 x 10.9 mm (1.3" x 0.8" x 0.43") | ANSI/AAMI ES60601-1<br>EN/IEC60601-1-2<br>EN/IEC60601-1 | 2MOPP, 250VAC working voltage isolation<br>clearance and creepage distance >8mm<br>up to 10kVDC reinforced insulation<br>operating temperature range: -40°C to +75°C<br>no derating |
|  RP06-RAW     | 6         | 36-160                                       | 3.3, 5, 12, 15, 24 ±5, ±12, ±15     | 3 kVDC / 1 min                                     | DIP24<br>31.8 x 20.3 x 10.6 mm (1.3" x 0.8" x 0.4")   | UL/IEC/EN62368-1<br>EN50155<br>EN45545-2                | Designed for railway and industrial applications<br>operating temperature range: -40°C to +105°C<br>CE marked<br>3 kVAC/ 1 min reinforced insulation                                |
|  RS6         | 6         | 4.5-9, 9-18, 18-36, 36-75                    | 3.3, 5, 12, 15, ±5, ±12, ±15        | 1.6 kVDC / 1 min<br>2 kVDC / 1 s                   | SIP8<br>21.8 x 9.2 x 11.1 mm (0.9" x 0.4" x 0.4")   | EN60950-1<br>EN/IEC62368-1                              | Very high power density<br>operating temperature range -40°C to +75°C<br>no derating  |
|  REC7.5-RW  | 7.5       | 9-18, 18-36, 36-72                           | 3.3, 5, 9, 12, 15, ±5, ±9, ±12, ±15 | 1, 2, or 3 kVDC / 1 s                              | DIP24<br>32.0 x 20.3 x 10.5 mm (1.3" x 0.8" x 0.4")<br>SMD<br>32.0 x 19.9 x 11.2 mm (1.3" x 0.8" x 0.4")  | EN/IEC/UL60950-1  | Operating temperature range: -40°C to +71°C<br>no derating<br>SMD package available (/SMD)  |
|  REC8-RW(Z) | 8         | 4.5-9, 9-18, 18-36, 36-75, 9-36, 18-75 (Z)   | 3.3, 5, 12, 15, ±5, ±12, ±15        | 2 or 3 kVDC / 1 s                                  | DIP24<br>32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD<br>32.0 x 19.9 x 11.2 mm (1.3" x 0.8" x 0.4")  | EN/IEC/UL60950-1  | Operating temperature range: -40°C to +85°C<br>no derating<br>SMD package available (/SMD)  |
|  REC8E      | 8         | 9-18, 18-36, 20-60                           | 5, 9, 12, 15, 24 ±12, ±15           | 1.6 kVDC / 1 min                                   | 1" x 1"<br>25.4 x 25.4 x 10.5 mm (1.0" x 1.0" x 0.4")   | EN/IEC/UL62368-1<br>IEC60950-1                          | Compact 1"x1" package<br>CTRL and UVLO standard<br>Operating temperature range: -40°C to +75°C<br>no derating   |

# DC/DC CONVERTERS

## REGULATED


- 0.5 to 300 watts
- Isolation voltages up to 10 kVDC
- Short circuit protection
- Economical design available
- Modified standards available
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- (Z), (W) – wide input range
- (-HC) – heatsink available
- (/SMD) – surface mount device
- (/M) – metal case

| Series  | Power (W) | Vin (VDC)                                     | Vout (VDC)                          | Isolation         | Case / Dimensions (LxWxH)  | Certifications                                      | Other features   |
|---|-----------|---|-------------------------------------|-------------------|--|---|--|
|  RP08-A(W)   | 8         | 9-18, 18-36, 36-75<br>9-36, 18-75, 43-160 (W) | 3.3, 5, 12, 15, ±5, ±12, ±15        | 1.6 kVDC / 1 min  | DIP24 31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD 32.0 x 20.3 x 11.2 mm (1.3" x 0.8" x 0.4") | EN/IEC/UL60950-1<br>EN50155<br>EN50121-3-2          | Operating temperature range: -40°C to +85°C<br>RP08-AW designed for railway applications   |
|  REC10/M(Z)  | 10        | 9-18, 18-36, 36-75<br>9-36, 18-75 (Z)         | 3.3, 5, 12, 15, ±5, ±12, ±15        | 2 or 3 kVDC / 1 s | 2" x 1" 50.8 x 25.4 x 10.2 mm (2.0" x 1.0" x 0.4")   | EN/IEC/UL60950-1                                    | Operating temperature range: -40°C to +81°C<br>no derating<br>high isolation   |
|  REC10-RW(Z) | 10        | 9-18, 18-36, 36-75<br>9-36, 18-75 (Z)         | 3.3, 5, 12, 15, ±5, ±12, ±15        | 2 or 3 kVDC / 1 s | DIP24 32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD 32.0 x 19.9 x 11.2 mm (1.3" x 0.8" x 0.4") | EN/IEC/UL60950-1                                    | Operating temperature range: -40°C to +81°C<br>no derating<br>SMD package available (/SMD)<br>high isolation   |
|  REM10(W)    | 10        | 4.5-9, 9-18, 18-36, 36-75<br>9-36, 18-75 (W)  | 3.3, 5, 12, 15, 24, ±5, ±12, ±15    | 5 kVAC / 1 min    | DIP24 31.8 x 20.3 x 10.4 mm (1.3" x 0.8" x 0.4")   | EN/IEC60601-1<br>ANSI/AAMI ES60601-1<br>EN60601-1-2 | Reinforced isolation for 250VAC working voltage<br>CF rated outputs, 5000m altitude<br>operating temperature range: -40°C to +100°C                  |
|  RP10-A(W)  | 10        | 9-18, 18-36, 36-75<br>9-36, 18-75 (W)         | 3.3, 5, 12, 15, 24, ±5, ±12, ±15    | 1.6 kVDC / 1 min  | 1" x 1" 25.4 x 25.4 x 9.9 mm (1.0" x 1.0" x 0.4")  | UL60950-1   | Operating temperature range: -40°C to +78°C<br>no derating<br>optional heatsink with clamps (-HC)  |
|  RP10-E(W) | 10        | 9-18, 18-36, 36-75<br>9-36, 18-75 (W)         | 3.3, 5, 12, 15, ±5, ±12, ±15        | 1.6 kVDC / 1 min  | 2" x 1" 50.8 x 25.4 x 10.2 mm (2.0" x 1.0" x 0.4")   | UL60950-1   | Operating temperature range: -40°C to +78°C<br>no derating<br>optional heatsink with clamps (-HC)  |
|  RP10-RAW  | 10        | 36-160  | 3.3, 5, 5.1, 2, 15, 24 ±5, ±12, ±15 | 3 kVDC / 1 min    | DIP24 31.8 x 20.3 x 10.6 mm (1.3" x 0.8" x 0.4")   | UL/IEC/EN62368-1<br>EN50155<br>EN45545-2            | Designed for railway and industrial applications<br>operating temperature range: -40°C to +105°C<br>CE marked<br>3 kVAC/ 1 min reinforced insulation |
|  RS12-Z    | 12        | 9-36, 18-75                                   | 3.3, 5, 12, 15, 24                  | 3 kVDC / 1 min    | SIP8 21.8 x 9.6 x 12.1 mm (0.9" x 0.4" x 0.5")   | UL/IEC/EN62368-1                                    | Very high power density<br>operating temperature range: -40°C to +80°C   |

# DC/DC CONVERTERS

## REGULATED

- 0.5 to 300 watts
- Economical design available
- (P) – short circuit protection
- (/SMD) – surface mount device
- Isolation voltages up to 10 kVDC
- Modified standards available
- (Z), (W) – wide input range
- (/M) – metal case
- Short circuit protection
- (-R) – tape & reel packaging
- (-HC) – heatsink available

| Series  | Power (W) | Vin (VDC)   | Vout (VDC)                                   | Isolation         | Case / Dimensions (LxWxH)  | Certifications   | Other features  |
|---|-----------|---|--|-------------------|--|--|---|
|  RP12-A(W)   | 12        | 9-18, 18-36, 36-75<br>9-36, 18-75 (W)             | 3.3, 5.1, 12, 15, ±5, ±12, ±15               | 1.6 kVDC / 1 min  | DIP24 31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")<br>SMD 32.0 x 20.3 x 11.2 mm (1.3" x 0.8" x 0.4") | UL60950-1  | Operating temperature range: -40°C to +105°C  |
|  RP12-AR     | 12        | 36-160  | 3.3, 5, 12, 15, 24, ±12, ±15, ±24            | 3 kVDC / 1 min    | 1" x 1" 25.4 x 25.4 x 9.9 mm (1.0" x 1.0" x 0.4")  | IEC/EN60950-1<br>EN50155   | Operating temperature range: -40°C to +100°C<br>efficiency up to 90%  |
|  REC15E-Z    | 15        | 9-36, 18-75                                       | 3.3, 5, 12, 15, 24, ±12, ±15                 | 2 kVDC / 1 s      | 1" x 1" 25.4 x 25.4 x 10 mm (1.0" x 1.0" x 0.4")   | EN/IEC/UL62368-1   | Compact size<br>1" x 1" package, efficiency up to 90%<br>operating temperature range: -40°C to +75°C<br>no derating<br>continuous short circuit protection            |
|  REC15(-Z)/M | 15        | 9-18, 18-36, 36-75<br>9-36, 36-75 (Z)             | 3.4, 5.1, 12, 15, ±5, ±12, ±15               | 2 or 3 kVDC / 1 s | 2" x 1" 50.8 x 25.4 x 10.2 mm (2.0" x 1.0" x 0.4")   | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +71°C<br>no derating, without CTRL pin (/X2)  |
|  REM15-W    | 15        | 9-36, 18-75                                       | 5, 12, 15, 24 ±5, ±12, ±15                   | 5 kVAC / 1 min    | 1.6" x 1" 40.6 x 25.4 x 10.2 mm (1.6" x 1.0" x 0.4")   | UL60950-1<br>UL62368-1<br>IEC60601-1<br>EN60601-1-2<br>ANSI/AAMI ES60601-1 | Reinforced insulation for 250VAC working voltage, clearance and creepage distance > 8mm<br>5kVAC I/P to O/P isolation<br>operating temperature range: -40°C to +105°C |
|  RP15-A(W) | 15        | 9-18, 18-36, 36-75<br>9-36, 18-75 (W)             | 3.3, 5, 12, 15, ±5, ±12, ±15                 | 1.6 kVDC / 1 min  | 1" x 1" 25.4 x 25.4 x 9.9 mm (1.0" x 1.0" x 0.4")  | UL60950-1  | Operating temperature range: -40°C to +105°C<br>optional heatsink with clamps (-HC)   |
|  RP15-F(W) | 15        | 9-18, 18-36, 36-75<br>9-36, 18-75 (W)             | 3.3, 5, 12, 15, ±5, ±12, ±15                 | 1.6 kVDC / 1 min  | 2" x 1" 50.8 x 25.4 x 10.2 mm (2.0" x 1.0" x 0.4")   | UL60950-1  | Operating temperature range: -40°C to +105°C<br>optional heatsink with clamps (-HC)   |
|  RPM(D)    | 15-60     | 9.5-18, 9.5-36, 10-40, (D)<br>18-36, 18-75, 36-75 | 3.3, 5, 12, 15, ±5, ±12, ±15<br>5/±12, 5/±15 | 1.6 kVDC / 1 min  | 101.6 x 57.2 x 19.0 mm (4.0" x 2.3" x 0.7")<br>24.5 x 57.6 x 125.0 mm (D)<br>(1.0" x 2.3" x 4.9")  | EN/IEC60950-1  | Reverse polarity protected, soft start<br>panel mount/bulkhead version RPM<br>DIN-Rail version RPMD, screw terminals<br>triple output only for 40W version available  |

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# DC/DC CONVERTERS

## REGULATED

- 0.5 to 300 watts
- Economical design available
- (P) – short circuit protection
- (/SMD) – surface mount device
- Isolation voltages up to 10 kVDC
- Modified standards available
- (Z), (W) – wide input range
- (/M) – metal case
- Short circuit protection
- (-R) – tape & reel packaging
- (-HC) – heatsink available

| Series  | Power (W) | Vin (VDC)                           | Vout (VDC)                    | Isolation         | Case / Dimensions (LxWxH)   | Certifications   | Other features   |
|---|-----------|-------------------------------------|-------------------------------|-------------------|---|--|--|
|  REC20 (Z)   | 20        | 9-18, 18-36, 36-75, 9-36, 18-75 (Z) | 3.4, 5.1, 12, 15 ±5, ±12, ±15 | 1.6 kVDC / 1 min  | 2" x 1" 50.8 x 25.4 x 10.2 mm (2.0" x 1.0" x 0.4") 50.8 x 25.4 x 10.5 mm (Z) (2.0" x 1.0" x 0.4") | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +100°C full load up to +80°C with natural convection continuous short circuit protection   |
|  REM20-W     | 20        | 9-36, 18-75                         | 5, 12, 15, 24 ±5, ±12, ±15    | 5 kVAC / 1 min    | 1.6" x 1" 40.6 x 25.4 x 10.2 mm (1.6" x 1.0" x 0.4")  | UL60950-1<br>UL62368-1<br>IEC60601-1<br>EN60601-1-2<br>ANSI/AAMI ES60601-1 | Reinforced insulation for 250VAC working voltage, clearance and creepage distance > 8mm 5kVAC I/P to O/P isolation   |
|  RP20-A(W)   | 20        | 9-18, 18-36, 36-75, 9-36, 18-75 (W) | 3.3, 5, 12, 15, ±12, ±15      | 1.6 kVDC / 1 min  | 1" x 1" 25.4 x 25.4 x 9.9 mm (1.0" x 1.0" x 0.4")   | UL60950-1  | Operating temperature range: -40°C to +102°C optional heatsink with clamps (-HC)   |
|  RP20-F(W)   | 20        | 9-18, 18-36, 36-75, 9-36, 18-75 (W) | 3.3, 5, 12, 15, ±12, ±15      | 1.6 kVDC / 1 min  | 2" x 1" 50.8 x 25.4 x 10.2 mm (2.0" x 1.0" x 0.4")  | UL60950-1  | Operating temperature range: -40°C to +105°C optional heatsink with clamps (-HC)   |
|  RP20-FR    | 20        | 9-36, 18-75 43-160                  | 3.3, 5, 12, 15, ±12, ±15      | 2.25 kVDC / 1 min | 2" x 1" 50.8 x 25.4 x 10.2 mm (2.0" x 1.0" x 0.4")  | UL60950-1<br>EN50155   | Designed for railway applications, operating temperature range: -40°C to +79°C, up to +85°C with natural convection, optional heat-sink with clamps (-HC), CE and EAC marked |
|  RPA20-AW  | 20        | 9-36                                | 3.3, 5, 12, 15, ±12, ±15      | 1.6 kVDC / 1 min  | 1" x 1" 25.4 x 25.4 x 10.2 mm (1.0" x 1.0" x 0.4")  | EN/IEC/UL60950-1<br>EN50155  | Designed for low cost industrial applications operating temperature range: -40°C to +85°C optional glued heatsink (-HC)  |
|  REC30 (Z) | 30        | 9-18, 18-36, 36-75, 9-36, 18-75 (Z) | 3.4, 5.1, 12, 15 ±12, ±15     | 1.6 kVDC / 1 min  | 2" x 1.6" 50.8 x 40.6 x 10.2 mm (2.0" x 1.6" x 0.4")  | EN/IEC/UL60950-1   | Operating temperature range: -40°C to +70°C continuous short circuit protection  |
|  REC30E-Z  | 30        | 9-36, 18-75                         | 3.3, 5, 12, 15, 24, ±12, ±15  | 2 kVDC / 1 min    | 1" x 1" 25.4 x 25.4 x 10.0 mm (1.0" x 1.0" x 0.4")  | UL/IEC/EN62368-1   | Operating temperature range: -40°C to +105°C efficiency up to 91%  |



# DC/DC CONVERTERS

## REGULATED

- 0.5 to 300 watts
- Economical design available
- (/P) – short circuit protection
- (/SMD) – surface mount device
- Isolation voltages up to 10 kVDC
- Modified standards available
- (Z), (W) – wide input range
- (/M) – metal case
- Short circuit protection
- (-R) – tape & reel packaging
- (-HC) – heatsink available

| Series   | Power (W) | Vin (VDC)                              | Vout (VDC)                               | Isolation             | Case / Dimensions (LxWxH)                               | Certifications  | Other features  |
|--|-----------|--|--|-----------------------|---|---|---|
|   | 30        | 9-36, 18-75                            | 5, 12, 15, 24<br>±5, ±12, ±15            | 5 kVAC / 1 min        | 2" x 1" 50.8 x 25.4 x 10.2 mm<br>(2.0" x 1.0" x 0.4")   | UL60950-1<br>UL62368-1<br>IEC6061-1<br>EN60601-1-2<br>ANSI/AAMI ES60601-1 | Reinforced insulation for 250VAC working voltage clearance and creepage distance > 8mm<br>5kVAC I/P to O/P isolation<br>industry standard pinout                    |
|   | 30        | 9-18, 18-36, 36-75<br>10-40, 18-75 (W) | 3.3, 5, 12, 15, ±12, ±15                 | 1.6 kVDC / 1 min      | 2" x 1.6" 50.8 x 40.6 x 10.2 mm<br>(2.0" x 1.6" x 0.4") | UL60950-1   | Operating temperature range: -40°C to +100°C<br>optional heatsink with clamps (-HC)   |
|   | 30        | 9-18, 18-36, 36-75<br>9-36, 18-75 (W)  | 3.3, 5, 12, 15, ±5, ±12, ±15             | 1.6 kVDC / 1 min      | 2" x 1" 50.8 x 25.4 x 10.2 mm<br>(2.0" x 1.0" x 0.4")   | UL60950-1   | Operating temperature range: -40°C to +101°C<br>optional heatsink with clamps (-HC)   |
|   | 30        | 9-36                                   | 3.3, 5, 12, 15, ±12, ±15                 | 1.6 kVDC / 1 min      | 1" x 1" 25.4 x 25.4 x 10.2 mm<br>(1.0" x 1.0" x 0.4")   | EN/IEC/UL60950-1<br>EN50155   | Designed for railway and industrial applications<br>operating temperature range: -40°C to +100°C<br>optional glued heatsink (-HC)                                   |
|    | 40        | 9-36, 18-75, 43-160                    | 3.3, 5, 12, 15, 24, ±12, ±15, ±24        | 1.6 or 3 kVDC / 1 min | 2" x 1" 50.8 x 25.4 x 10.2 mm<br>(2.0" x 1.0" x 0.4")   | UL60950-1<br>EN50155<br>EN50121-3-2                                       | Designed for railway applications<br>operating temperature range: -40°C to +105°C<br>optional heatsink with clamps (-HC)<br>CE and EAC marked                       |
|   | 40        | 9-18, 18-36, 36-75<br>9-36, 18-75 (W)  | 3.3, 5, 12, 15, ±12, ±15<br>5/±12, 5/±15 | 1.6 kVDC / 1 min      | 2" x 2" 50.8 x 50.8 x 10.2 mm<br>(2.0" x 2.0" x 0.4")   | UL60950-1   | Operating temperature range: -40°C to +100°C<br>optional heatsink with clamps (-HC)<br>available as power module RPM40-G(W)   |
|   | 40        | 16-160                                 | 5, 12, 15, 24, 48                        | 3 kVAC / 1 min        | 1/4 brick 57.9 x 36.8 x 12.7 mm<br>(2.3" x 1.4" x 0.5") | EN/IEC/UL62368-1<br>EN50155   | 12:1 ultra-wide input voltage range<br>operating temperature range: -40°C to +105°C<br>optional fitted heatsink (-HC), CE marked<br>"B" for Bus & UVP adjustability |
|   | 40        | 36-160                                 | 5, 5.1, 12, 15, 24, ±12, ±15             | 3 kVAC / 1 min        | 2" x 1" 50.8 x 25.4 x 10.2 mm<br>(2.0" x 1.0" x 0.4")   | UL/IEC/EN62368-1<br>EN45545-2<br>EN50155                                  | Designed for railway and industrial applications<br>operating temperature range: -40°C to +105°C<br>efficiency up to 90%  |

# DC/DC CONVERTERS

## REGULATED

- 0.5 to 300 watts
- Isolation voltages up to 10 kVDC
- Short circuit protection
- Economical design available
- Modified standards available
- (-R) – tape & reel packaging
- (/P) – short circuit protection
- (Z), (W) – wide input range
- (-HC) – heatsink available
- (/SMD) – surface mount device
- (/M) – metal case

| Series  | Power (W) | Vin (VDC)             | Vout (VDC)                   | Isolation                           | Case / Dimensions (LxWxH)                                  | Certifications   | Other features   |
|---|-----------|-----------------------|------------------------------|-------------------------------------|--|--|--|
|  RPA50S-W    | 50        | 18-75                 | 3.3, 5, 12                   | 2.25 kVDC / 1 min                   | 1/16 brick<br>33.0 x 22.8 x 9.5 mm<br>(1.3" x 0.9" x 0.4") | EN/IEC/UL60950-1                                       | Economical design<br>remote on/off and trim pins<br>efficiency up to 91%<br>Operating temperature range: -40°C to +85°C  |
|  REM60-W     | 60        | 9-36, 18-75           | 5, 5.1, 12, 15, 24, ±12, ±15 | 3 kVAC / 1min                       | 1/4 brick<br>57.9 x 36.8 x 12.7 mm<br>(2.3" x 1.4" x 0.5") | EN60601-1-2<br>ANSI/AAMI ES60601-1<br>UL/IEC/EN62368-1 | Operating temperature range: -40°C to +105°C<br>efficiency up to 90%<br>3 kVAC / 1 min reinforced isolation  |
|  RP60-G      | 60        | 18-36, 36-75          | 3.3, 5, 12, 15               | 1.6 kVDC / 1 min                    | 2" x 2"<br>50.8 x 50.8 x 10.2 mm<br>(2.0" x 2.0" x 0.4")   | UL60950-1  | Operating temperature range: -40°C to +110°C<br>optional heatsink with clamps (-HC)<br>available as power module RPM60-G   |
|  RP60Q-RUW   | 60        | 16-160                | 5, 12, 15, 24, 48            | 3 kVAC / 1 min                      | 1/4 brick<br>57.9 x 36.8 x 12.7 mm<br>(2.3" x 1.4" x 0.5") | EN/IEC/UL62368-1<br>EN50155                            | 12:1 ultra-wide input voltage range<br>operating temperature range: -40°C to +105°C<br>optional fitted heatsink (-HC), CE marked<br>"B" for Bus & UVP adjustability                                      |
|  RPA60-FW   | 60        | 9-36                  | 5, 12, 15, 24                | 1.5 kVDC / 1 min                    | 2" x 1"<br>50.8 x 25.4 x 10.2 mm<br>(2.0" x 1.0" x 0.4")   | EN/IEC/UL60950-1<br>EN50155<br>EN50121-3-2             | Designed for railway and industrial applications<br>operating temperature range: -40°C to +100°C<br>optional glued heatsink (-HC)  |
|  RP75H-RW  | 75        | 9-36, 18-75, 43-160   | 5, 12, 15, 24, 48            | 2.25 kVDC / 1 min<br>3 kVAC / 1 min | 1/2 brick<br>61.0 x 57.9 x 12.7 mm<br>(2.4" x 2.3" x 0.5") | EN/IEC/UL60950-1<br>EN50155                            | Designed for railway and industrial applications<br>operating temperature range: -40°C to +100°C<br>3 kVAC / 1 min reinforced isolation for 110VDC<br>optional fitted heatsink (-HC), CE, and EAC marked |
|  RP90Q-RW  | 90        | 9-36, 16.5-75, 40-160 | 5, 12, 15, 24, 48            | 2.25 kVDC / 1 min<br>3 kVAC / 1 min | 1/4 brick<br>57.9 x 36.8 x 12.7 mm<br>(2.3" x 1.4" x 0.5") | EN/IEC60950-1<br>EN50155                               | Designed for railway and industrial applications<br>operating temperature range: -40°C to +95°C<br>3 kVAC / 1 min reinforced isolation for 110VDC<br>optional fitted heatsink (-HC), CE, and EAC marked  |
|  RP100H-RW | 100       | 9-36, 16.5-75, 43-160 | 5, 12, 15, 24, 48            | 2.25 kVDC / 1 min<br>3 kVAC / 1 min | 1/2 brick<br>61.0 x 57.9 x 12.7 mm<br>(2.4" x 2.3" x 0.5") | EN/IEC/UL60950-1<br>EN50155                            | Designed for railway and industrial applications<br>operating temperature range: -40°C to +105°C<br>3 kVAC / 1 min reinforced isolation for 110VDC<br>optional fitted heatsink (-HC), CE, and EAC marked |

# DC/DC CONVERTERS

## REGULATED

- 0.5 to 300 watts
- Economical design available
- (/P) – short circuit protection
- (/SMD) – surface mount device
- Isolation voltages up to 10 kVDC
- Modified standards available
- (Z), (W) – wide input range
- (/M) – metal case
- Short circuit protection
- (-R) – tape & reel packaging
- (-HC) – heatsink available




| Series  | Power (W) | Vin (VDC)             | Vout (VDC)         | Isolation                           | Case / Dimensions (LxWxH)                             | Certifications   | Other features   |
|---|-----------|-----------------------|--------------------|-------------------------------------|---|--|--|
|  RPA100E-W     | 100       | 18-75                 | 5, 12              | 1.5kVDC                             | 1/8 brick 58.4 x 22.8 x 11.0 mm (2.3" x 0.9" x 0.4")  | UL62368-1  | Operating temperature range: -40°C to +85°C<br>UVLO, OTP, OVP, OCP, and SCP<br>economical design, selectable outputs<br>CTRL and remote sense pins   |
|  RPA100H-RUW   | 100       | 16.5-140              | 12, 15, 24, 48     | 4.242 kVDC / 1 min                  | 1/2 brick 60.6 x 63.1 x 13.0 mm (2.4" x 2.5" x 0.5")  | EN/IEC/UL60950-1<br>EN50155<br>EN50121-2-3                   | Designed for railway and industrial applications<br>operating temperature range: -40°C to +97°C<br>4.242 kVDC reinforced isolation<br>10:1 ultra wide input range, CE, and EAC marked                      |
|  RP120Q-RW     | 120       | 9-36, 16.5-75, 40-160 | 5, 12, 15, 24, 48  | 2.25 kVDC / 1 min<br>3 kVAC / 1 min | 1/4 brick 57.9 x 36.8 x 12.7 mm (2.3" x 1.4" x 0.5")  | EN/IEC60950-1<br>EN50155                                     | Designed for railway and industrial applications<br>operating temperature range: -40°C to +95°C<br>3 kVAC / 1 min reinforced isolation for 110VDC<br>optional fitted heatsink (-HC), CE, and EAC marked    |
|  REC150H-UW    | 150       | 9-75                  | 12, 24, 28, 48, 54 | 3 kVDC / 1 min                      | 1/2 brick 61.0 x 57.9 x 12.7 mm (2.4" x 2.3" x 0.5")  | IEC/EN62368-1<br>EN50155                                     | Operating temperature range: -40°C to +105°C<br>efficiency up to 90%<br>OTP, OVP, OCP, UVLO, remote ON/OFF control   |
|  RPA150E-EW   | 150       | 9-60                  | 12, 24, 48         | 3 kVDC / 1min                       | 1/8 brick 58.4 x 22.9 x 12.9 mm (2.3" x 0.9" x 0.5")  | EN/IEC/UL60950-1<br>EN/IEC/UL62368-1<br>EN50155<br>EN45545-2 | Designed for railway and industrial applications<br>efficiency up to 92%<br>wide +/-20% output voltage trim range<br>operating temperature range: -40°C to +85°C<br>no minimum load required               |
|  RPA150Q-RUW | 150       | 14.4-170              | 12, 15, 24, 54     | 4.242 kVDC / 1min                   | 1/4 brick 60.6 x 39.0 x 12.7 mm (2.29" x 1.5" x 0.5") | UL62368-1<br>EN45545<br>EN50155                              | Designed for railway and industrial applications<br>efficiency up to 90%<br>output over-voltage protection<br>operating temperature range: -40°C to 85°C<br>reinforced isolation, 16:1 ultra-wide input    |
|  RP180H-RW   | 180       | 9-36, 16.5-75, 43-160 | 5, 12, 15, 24, 48  | 2.25 kVDC / 1 min<br>3 kVAC / 1 min | 1/2 brick 61.0 x 57.9 x 12.7 mm (2.4" x 2.3" x 0.5")  | EN/IEC/UL60950-1<br>EN50155                                  | Designed for railway and industrial applications<br>operating temperature range: -40°C to +110°C<br>4.242 kVDC / 1 min reinforced isolation for 110VDC, optional fitted heatsink (-HC), CE, and EAC marked |
|  RPA200H-RUW | 200       | 16.5-140              | 12, 15, 24, 48     | 4.242 kVDC / 1min                   | 1/2 brick 60.6 x 63.1 x 13.0 mm (2.4" x 2.5" x 0.5")  | EN/IEC/UL60950-1<br>EN50155                                  | Designed for railway and industrial applications<br>operating temperature range: -40°C to +93.5°C<br>4.242 kVDC / 1 min reinforced isolation<br>10:1 ultra wide input range, CE, and EAC marked            |

This Selection Guide represents only the latest most popular products of our portfolio. Please check [www.recom-power.com](http://www.recom-power.com) for additional products.

# DC/DC CONVERTERS

## REGULATED









- 0.5 to 300 watts
- Economical design available
- (/P) – short circuit protection
- (/SMD) – surface mount device
- Isolation voltages up to 10 kVDC
- Modified standards available
- (Z), (W) – wide input range
- (/M) – metal case
- Short circuit protection
- (-R) – tape & reel packaging
- (-HC) – heatsink available

| Series  | Power (W) | Vin (VDC)             | Vout (VDC)        | Isolation                           | Case / Dimensions (LxWxH)                                  | Certifications              | Other features   |
|---|-----------|-----------------------|-------------------|-------------------------------------|--|-----------------------------|--|
|  RP240H-RW | 240       | 9-36, 16.5-75, 43-160 | 5, 12, 15, 24, 48 | 2.25 kVDC / 1 min<br>3 kVAC / 1 min | 1/2 brick<br>61.0 x 57.9 x 12.7 mm<br>(2.4" x 2.3" x 0.5") | EN/IEC/UL60950-1<br>EN50155 | Designed for railway and industrial applications<br>operating temperature range: -40°C to +110°C<br>3 kVAC / 1 min reinforced isolation for 110VDC<br>optional fitted heatsink (-HC), CE, and EAC marked |
|  REC300H-W | 300       | 9-36                  | 12, 15, 24, 48    | 3 kVDC / 1 min                      | 1/2 brick<br>61.0 x 57.9 x 12.7 mm<br>(2.4" x 2.3" x 0.5") | EN62368-1                   | Operating temperature range: -40°C to +100°C<br>efficiency up to 90%<br>OTP, OVP, OCP, UVLO, remote ON/OFF control   |
|  RPA300E   | 300       | 36-72                 | 32                | 2.25 kVDC / 1 min                   | 1/8 brick<br>58.4 x 22.8 x 12.7 mm<br>(2.3" x 0.9" x 0.5") | UL62368-1                   | Operating temperature range: -40°C to +85°C<br>UVLO, OTP, OVP, OCP, and SCP, economical design, selectable outputs, CTRL and remote sense pins, high efficiency up to 94.8%                              |

# DC/DC CONVERTERS

IGBT / SiC MOSFET / GaN


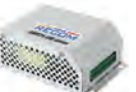






- Designed for SiC/IGBT/GaN gate drivers
- Up to 3 watts
- Isolation voltages up to 6.4 kVDC
- Alternate pinout and package styles
- Asymmetric output
- High efficiency
- High isolation
- (/P) – short circuit protection

| Series   | Power (W) | Vin (VDC)   | Vout (VDC)                               | Isolation            | Case / Dimensions (LxWxH)                                    | Certifications                       | Other features  |
|--|-----------|---|--|----------------------|--|--------------------------------------|---|
|  RP-xx1509D<br>RP-xx06S                               | 1         | 5, 12, 24<br>5, 12, 15, 24                                | +15/-9<br>6                              | 5.2 kVDC / 1 s       | SIP7<br>19.65 x 7.05 x 10.2 mm<br>(0.8" x 0.3" x 0.4")       | EN/IEC/UL60950-1<br>IEC/EN60601-1    | Designed for isolated IGBT or GaN drivers<br>operating temperature range: -40°C to +85°C<br>RP-xx06S series medical approved    |
|  RxxP1509D<br>RxxP06S                                 | 1         | 5, 12, 24<br>5, 12, 15, 24                                | +15/-9<br>6                              | 6.4 kVDC / 1 s       | SIP7<br>19.5 x 9.8 x 12.5 mm<br>(0.8" x 0.4" x 0.5")         | EN/IEC60950-1<br>EN/IEC/UL62368-1    | Designed for isolated IGBT or GaN drivers<br>operating temperature range: -40°C to +90°C  |
|  RGZ-xx1509D  | 2         | 5, 12, 24   | +15/-9                                   | 3 or 4 kVDC /<br>1 s | DIP14<br>19.9 x 10.0 x 7.1 mm<br>(0.8" x 0.4" x 0.3")        | EN60950-1                            | Asymmetrical outputs<br>designed for isolated IGBT drivers<br>operating temperature range: -40°C to +90°C                       |
|  RKZ-xx1509D<br>RKZ-xx2005D                           | 2         | 5, 12, 24<br>5, 12, 15, 24                                | +15/-9<br>+20/-5                         | 3 or 4 kVDC /<br>1 s | SIP7<br>19.65 x 7.05 x 10.2 mm<br>(0.8" x 0.3" x 0.4")       | EN/IEC/UL60950-1                     | Asymmetrical outputs<br>designed for isolated IGBT/SiC drivers<br>operating temperature range: -40°C to +100°C                  |
|  RV-xx1509D  | 2         | 5, 12, 24   | +15/-9                                   | 6 kVDC / 1 s         | DIP24<br>32.35 x 14.7 x 11.1 mm<br>(1.3" x 0.6" x 0.4")      | EN60950-1                            | Asymmetrical outputs<br>designed for isolated IGBT drivers<br>operating temperature range: -40°C to +90°C                       |
|  RxxP21503D<br>RxxP21509D<br>RxxP22005D<br>RxxP209S | 2         | 12, 15, 24<br>5, 12, 24<br>5, 12, 15, 24<br>5, 12, 15, 24 | +15/-3<br>+15/-9<br>+20/-5<br>9          | 6.4 kVDC / 1 s       | SIP7<br>19.5 x 9.8 x 12.5 mm<br>(0.8" x 0.4" x 0.5")         | EN/IEC/UL60950-1<br>EN/IEC/UL62368-1 | Asymmetrical outputs<br>designed for isolated IGBT/SiC drivers<br>operating temperature range: -40°C to +95°C                   |
|  RxxC2Txx   | 2         | 21-27   | +2.5/- 22.5<br>-2.5/-22.5                | 3 kVAC / 1 min       | SMD<br>12.83 x 7.5 x 3.55 mm<br>(0.5" x 0.3" x 0.1")         | N/A                                  | Programmable asymmetrical output voltages<br>compact 12.83x7.5mm 36 Pin SSO Package<br>OPP, OTP, UVLO, and OVLO                 |
|  RA3/SMD  | 3         | 5, 12, 24   | 8, 9, +7/-1,<br>+15/-3, +15/-5<br>+20/-5 | 5.2 kVDC / 1 min     | DIP16<br>SMD<br>23.4 x 15.0 x 8.5 mm<br>(0.9" x 0.6" x 0.3") | UL/IEC/EN62368-1<br>EN61204-3        | Operating temperature range: -40°C to +85°C<br>ideal for IGBT, Si, SiC, and GaN gate drive power<br>isolation capacitance <10pf |

# POWER SOLUTIONS

## PLUG & PLAY

- 40 to 4000 watts
- Interchangeable with Melcher RCM-series
- Approved as per latest standards
- Very wide and ultra wide input voltage range
- Reverse polarity protection
- Hold-up time 10ms included
- Inrush current limitation
- Compact design
- Output decoupling with OR-ing diode
- Remote control and Power good signal
- No external components needed
- Modified standards available
- Adjustable output voltage

| Series  | Power (W) | Vin (VDC)    | Vout (VDC)       | Isolation        | Case / Dimensions (LxWxH)                    | Certifications   | Other features   |
|---|-----------|--------------|------------------|------------------|--|--|--|
|  <b>COMING SOON</b> RMD40-UW | 40        | 14.4-154     | 24               | 4.2 kVDC         | 100.0 x 60.0 x 30.0 mm (3.9" x 2.3" x 1.2")  | EN50155, EN62368-1, EN45545-2, EN50124-1, EN50121-3-2, EN61373     | Full railway approved, ultra wide input 24V-110V base plate cooled for natural convection reinforced isolation, 50% peak load capability to 60W for 10s  |
|  <b>COMING SOON</b> RMD75-UW | 75        | 14.4-170     | 24               | 4.2 kVDC         | 110.0 x 73.0 x 40.0 mm (4.3" x 2.8" x 1.6")  | EN50155, IEC/EN62368-1, EN45545-2, EN50124-1, EN50121-3-2, EN61373 | Full railway approved base plate cooled for natural convection reinforced isolation, ultra wide input 24V-110V 20% peak load capability to 90W for 10s   |
|  <b>new</b> RMD150-UW (-E)   | 150       | 14.4-154     | 24               | 5 kVDC           | 188.6 x 116.0 x 42.5 mm (7.4" x 4.6" x 1.7") | EN50155, IEC/EN62368-1, EN50121-3-2, EN50124-1, EN45545-2, EN61373 | Ultra wide input range for 24V-110Vnom, efficiency up to 94%, designed for natural convection, "-E" for extended ambient temperature range (-50°C to +90°C), 10% peak load capability to 165W for 10 s |
|  <b>new</b> RMD300-UW (-E)   | 300       | 14.4-170     | 24, 110          | 5 kVDC           | 209.0 x 141.0 x 48.0 mm (8.2" x 5.5" x 1.9") | EN50155, IEC/EN62368-1, EN50121-3-2, EN50124-1, EN45545-2, EN61373 | Ultra wide input range for 24V-110Vnom, efficiency up to 95%, designed for natural convection, 10% peak load capability to 330W for 10s, "-E" for extended ambient temperature range (-50°C to +90°C)  |
|  <b>new</b> RMOD300-UW      | 300       | 18-126       | 12.2, 13.7, 24.5 | 2.25 kVDC        | 190.0 x 76.0 x 44.0 mm (7.5" x 3.0" x 1.7")  | UL60950, EN12895, CISPR11 Class A, ISO7637-2                       | IP67 protection for selective model operating temperature range: -40°C to +75°C protections: input reverse polarity input UVLO, output OCL, SCP, OVP, OTP  |
|  <b>new</b> RMOD360-UW     | 360       | 18-126       | 24.5             | 2.25 kVDC        | 190.0 x 76.0 x 44.0 mm (7.5" x 3.0" x 1.7")  | UL60950, EN12895, CISPR11 Class A, ISO7637-2                       | Operating temperature range: -40°C to +75°C protections: input reverse polarity input UVLO, output OCL, SCP, OVP, OTP  |
|  RMOD400-EW                | 400       | 24-120       | 13               | 2.5 kVDC / 1 min | 203.0 x 115.0 x 61.0 mm (8.0" x 4.5" x 2.4") | EN12895/CISPR11 Class A, CE/ISO7637-2, IEC/EN/UL62368-1            | IP69k protection for selective model operating temperature range: -35°C to +85°C protections: input reverse polarity input UVLO, output OCL, SCP, OVP, OTP   |
|  RMOD400-W                 | 400       | 12-56, 24-96 | 13, 24           | 2.5 kVDC / 1 min | 203.0 x 115.0 x 61.0 mm (8.0" x 4.5" x 2.4") | EN12895/CISPR11 Class A, CE/ISO7637-2, IEC/EN/UL62368-1            | IP65 (24V)/IP69k (13V) protection for selective model, operating temperature range: -35°C to +70/85°C, protections: input reverse polarity, input UVLO, output OCL, SCP, OVP, OTP                      |

# POWER SOLUTIONS

## PLUG & PLAY








- 40 to 4000 watts
- Interchangeable with Melcher RCM-series
- Approved as per latest standards
- Very wide and ultra wide input voltage range
- Reverse polarity protection
- Hold-up time 10ms included
- Inrush current limitation
- Compact design
- Output decoupling with OR-ing diode
- Remote control and Power good signal
- No external components needed
- Modified standards available
- Adjustable output voltage

| Series   | Power (W) | Vin (VDC)              | Vout (VDC)                               | Isolation        | Case / Dimensions (LxWxH)                         | Certifications  | Other features   |
|--|-----------|------------------------|--|------------------|---|---|--|
|  RMD500-EW  | 500       | 43.2-170               | 24                                       | 5 kVDC           | 209.0 x 141.0 x 48.0 mm<br>(8.23" x 5.56" x 1.9") | EN50155<br>EN50124-1<br>IEC/EN62368-1<br>EN61373                            | Temperature class OT4 ST1 & ST2 -40°C/+85°C<br>efficiency up to 95%<br>designed for natural convection<br>and baseplate cooling  |
|  RMOD500-W<br>(/OR)   | 500       | 32-96                  | 13.7, 12.4, 24.5<br>13, 11.7, 23.5 (/OR) | 2.25 kVDC        | 198.0 x 113.0 x 45.0 mm<br>(7.8" x 4.4" x 1.8")   | IEC/EN/UL62368-1<br>EN12895-2015<br>EN55011<br>EN55014-2<br>CISPR11 Class A | IP67 protection, operating temperature range:<br>-40°C to +90°C, protections: input reverse<br>polarity, input UVLO, output OCL, SCP, OVP, OTP,<br>control ON/OFF function |
|  RMOD600-<br>EW   | 600       | 24-120                 | 13                                       | 2.5 kVDC / 1 min | 203.0 x 115.0 x 71.0 mm<br>(8.0" x 4.5" x 2.8")   | EN12895/CISPR11<br>Class A<br>CE/ISO7637-2<br>IEC/EN/UL62368-1              | IP69k protection for selective model<br>operating temperature range: -35°C to +80°C<br>protections: input reverse polarity<br>input UVLO, output OCL, SCP, OVP, OTP        |
|  RMOD600-W  | 600       | 24-120                 | 24                                       | 2.5 kVDC / 1 min | 203.0 x 115.0 x 71.0 mm<br>(8.0" x 4.5" x 2.8")   | CISPR11 Class A<br>CE/ISO7637-2<br>IEC/EN/UL62368-1                         | IP65 protection for selective model<br>operating temperature range: -35°C to +85°C<br>protections: input reverse polarity<br>input UVLO, output OCL, SCP, OVP, OTP         |
|   RMD1000-W         | 600-1000  | 24, 36, 48,<br>72, 110 | 24, 36,<br>48, 72, 110                   | 2.2 kVAC         | 257.5 x 197 x 69.0 mm<br>(10.2" x 9.7" x 3.1")    | EN50155<br>EN62368-1<br>EN50121-3-2<br>EN50124-1<br>EN45545-2<br>EN61373    | Designed for natural convection, and base<br>plate cooling, flexible input - output voltage<br>combination, temperature class OT4 ST1 & ST2<br>-40°C/+85°C                 |
|   RMOD2000-<br>EW | 2000      | 180-950                | 14, 28                                   | 3 kVDC           | 316.0 x 254.0 x 83.0 mm<br>(12.4" x 10.0" x 3.3") | EN62477-1<br>EN/ISO 114521<br>ECE R10                                       | Supports nominal voltages from 250V to 800V<br>high voltage DC/DC for e-mobility<br>high IP level, liquid cooled or base plate cooled                                      |
|   RMOD4000-<br>EW | 4000      | 180-950                | 14, 28                                   | 3 kVDC           | 316.0 x 254.0 x 83.0 mm<br>(12.4" x 10.0" x 3.3") | EN62477-1<br>EN/ISO 114521<br>ECE R10                                       | Supports nominal voltages from 250V to 800V<br>high voltage DC/DC for e-mobility<br>high IP level, liquid cooled or base plate cooled                                      |

# ACCESSORIES FOR DC/DC CONVERTERS




- SMD wire-wound power inductor suitable for EMC filtering
- Reflow solderable with J-STD-020C standard profile (250°C ±5°C peak)

## LINE INDUCTORS

| Series  | Description                                 | Suitable for  | Other features   |
|---|---|---|--|
|  RLS-397   | saturation current: 2.1A, inductance: 3.9μH | RI3, RS, RS0,<br>R1Z, RS3, R-78xx-1.0,<br>R-78xx-0.5, R-78Exx-0.5,<br>R-78AAxx-0.5,<br>R-78Bxx-1.5,<br>R-78Bxx-1.0L | Tested and approved in RECOM filter design<br>RoHS compliant |
|  RLS-567   | saturation current: 1.9A, inductance: 5.6μH | RK/H6, RI3, RS, RS3,<br>RW2, R-78xx-1.0,<br>R-78xx-0.5,<br>R-78AAxx-0.5,<br>R-78Cxx-1.0,<br>R-78Bxx-1.5             | Tested and approved in RECOM filter design<br>RoHS compliant |
|  RLS-126   | saturation current: 1.4A, inductance: 12μH  | R1S, R2S, R1SE, RH/H6,<br>RKZ, RS, RS0, REC5, R1Z,<br>R-78Exx-1.0, R-78Exx-0.5,<br>R-78Cxx-1.0, R-78Bxx-1.5         | Tested and approved in RECOM filter design<br>RoHS compliant |
|  RLS-186   | saturation current: 2.14A, inductance: 18μH | REC5  | Tested and approved in RECOM filter design<br>RoHS compliant |
|  RLS-226  | saturation current: 1.0A, inductance: 22μH  | RO, RM, ROM, RK, RB, RP,<br>RE, ROE, RK/H6,<br>RH/H6, RxxPxx, RKZ, REC5,<br>RW2                                     | Tested and approved in RECOM filter design<br>RoHS compliant |
|  RLS-686 | saturation current: 1.05A, inductance: 68μH | R-78Exx-1.0   | Tested and approved in RECOM filter design<br>RoHS compliant |
|  RLS-105 | saturation current: 1.1A, inductance: 100μH | REC5  | Tested and approved in RECOM filter design<br>RoHS compliant |

# ACCESSORIES FOR DC/DC CONVERTERS






## SURGE PROTECTORS

| Series  |            | Power (W) | Vin    | Vout (VDC)              | Isolation | Case / Dimensions (LxWxH)                                  | Comply with                 | Other features  |
|---|------------|-----------|--------|-------------------------|-----------|--|-----------------------------|---|
|  | RSP20-168  | 20        | 40-160 | 168VDC Clamping Voltage | N/A       | DIP24<br>31.8 x 20.3 x 10.2 mm<br>(1.25" x 0.8" x 0.4")    | UK BRB/RIA12<br>NF F 01-510 | Output follows input up to the clamp voltage<br>compliant with RIA12 and NF F 01-510<br>surge susceptibility<br>operating temperature range: -40°C to +95°C |
|  | RSP150-168 | 150       | 40-160 | 168VDC Clamping Voltage | N/A       | 1.6" x 1"<br>40.6 x 25.4 x 10.2 mm<br>(1.6" x 1.0" x 0.4") | UK BRB/RIA12<br>NF F 01-510 | Output follows input up to the clamp voltage<br>operating temperature range: -40°C to +100°C<br>compliant to RIA12 and NF F 01-510<br>surge susceptibility  |
|  | RSP300-168 | 300       | 40-160 | 168VDC Clamping Voltage | N/A       | 1.6" x 1"<br>40.6 x 25.4 x 10.2 mm<br>(1.6" x 1.0" x 0.4") | UK BRB/RIA12<br>NF F 01-510 | Output follows input up to the clamp voltage<br>operating temperature range: -40°C to +100°C<br>compliant to RIA12 and NF F 01-510<br>surge susceptibility  |

# SWITCHING REGULATORS

## STEP DOWN





- Standard pinout
- MTBF up to 21 million hours
- (-R) – tape & reel packaging
- (-Tray) - tray packaging
- Short circuit protection
- Very high efficiency up to 98%
- Internal SMD construction
- Wide operating temperature range
- No heatsink required

| Series  | Output current (A) | Vin (VDC)       | Vout (VDC)                               | Case / Dimensions (LxWxH)                       | Certifications | Other features   |
|---|--------------------|-----------------|--|---|----------------|--|
|  R-78HE-0.3                  | 0.3                | 6.5-72          | 5  | SIP3 11.5 x 8.5 x 12.5 mm (0.5" x 0.3" x 0.7")  | N/A            | Wide input range (6.5V - 72V)<br>100V surge with stand<br>operating temperature range: -40°C to +105°C at 48V input, full load                                 |
|  R-78HB-0.5<br>R-78HB-24-0.3 | 0.5<br>(0.3)       | 9-72<br>(36-72) | 3.3, 5, 6.5, 9, 12, 15<br>(24)           | SIP3 11.5 x 8.5 x 17.5 mm (0.5" x 0.3" x 0.7")  | EN/IEC60950-1  | Operating temperature range: -40°C to +85°C<br>high input voltage<br>90° pins (L)  |
|  R-78CK-0.5                  | 0.5                | 5-40            | 3.3, 5, 12, 15                           | SIP3 11.5 x 7.55 x 10.2 mm (0.5" x 0.3" x 0.4") | EN/IEC62368-1  | Operating temperature range: -40°C to +100°C<br>pin-out compatible with LM78xx linears<br>up to 96% efficiency   |
|  R-78K-0.5                   | 0.5                | 4.5-36          | 1.5, 1.8, 2.5, 3.3, 5,<br>6.5, 9, 12, 15 | SIP3 11.5 x 7.55 x 10.2 mm (0.5" x 0.3" x 0.4") | EN/IEC62368-1  | Operating temperature range: -40°C to + 90°C<br>without derating, pin compatible with 78 series<br>regulators, undervoltage protection<br>up to 96% efficiency |
|  R-78HB-0.5/W               | 0.5                | 9-72            | 5, 12                                    | SIP3 12.1 x 9.7 x 24.0 mm (0.5" x 0.4" x 0.9")  | EN/IEC60950-1  | Operating temperature range: -40°C to +85°C<br>high input voltage<br>flying wires  |
|  R-78W-0.5                 | 0.5                | 6.5-32          | 3.3, 5, 9, 12                            | SIP3 11.5 x 8.5 x 17.5 mm (0.5" x 0.3" x 0.7")  | EN/IEC60950-1  | Operating temperature range: -40°C to +85°C<br>flying wires<br>up to 96% efficiency  |
|  R-78AA-0.5SMD             | 0.5                | 4.75-32         | 1.5, 1.8, 2.5, 3.3, 5,<br>6.5, 9, 12, 15 | SMD 15.3 x 9.6 x 8.8 mm (0.6" x 0.4" x 0.4")    | EN/IEC60950-1  | Operating temperature range: -40°C to +85°C<br>adjustable output, on/off pin<br>up to 97% efficiency   |
|  ROF-78E                   | 0.5                | 5-36            | 3.3, 5, 12                               | SMD 12.5 x 13.5 x 4.0 mm (0.5" x 0.5" x 0.2")   | N/A            | Economical design, low profile<br>operating temperature range: -40°C to +85°C<br>pinless design, on/off pin  |

# SWITCHING REGULATORS

## STEP DOWN





- Standard pinout
- MTBF up to 21 million hours
- (-R) – tape & reel packaging
- (-Tray) – tray packaging
- Short circuit protection
- Very high efficiency up to 98%
- Internal SMD construction
- Wide operating temperature range
- No heatsink required

| Series  | Output current (A) | Vin (VDC) | Vout (VDC)                            | Case / Dimensions (LxWxH)   | Certifications | Other features  |
|---|--------------------|-----------|---------------------------------------|---|----------------|---|
|  R-78K-1.0       | 1.0                | 4.5-36    | 1.8, 2.5, 3.3, 5, 9, 12, 15           | SIP3<br>11.5 x 7.55 x 10.2 mm<br>(0.5" x 0.3" x 0.4")   | EN/IEC62368-1  | Operating temperature range: -40°C to + 90°C without derating, pin compatible with 78 series regulators, undervoltage protection up to 95% efficiency   |
|  R-78AA-1.0SMD   | 1.0                | 4.75-18   | 1.5, 1.8, 2.5, 3.3, 5                 | SMD<br>15.3 x 9.6 x 8.8 mm<br>(0.6" x 0.4" x 0.4")  | EN/IEC60950-1  | Operating temperature range: -40°C to +85°C adjustable output, on/off pin   |
|  R-78B-1.0       | 1.0                | 4.75-32   | 1.5, 1.8, 2.5, 3.3, 5, 6.5, 9, 12, 15 | SIP3<br>11.5 x 8.5 x 17.5 mm<br>(0.5" x 0.3" x 0.7")  | EN/IEC60950-1  | Operating temperature range: -40°C to +85°C 90° pins (L), input voltage up to 32V efficiency up to 97% output voltage up to 15V                         |
|  R-78C-1.0       | 1.0                | 5-42      | 1.8, 3.3, 5, 9, 12, 15                | SIP3<br>11.6 x 8.5 x 10.4 mm<br>(0.5" x 0.3" x 0.4")  | EN/IEC60950-1  | Operating temperature range: -40°C to +85°C output voltage up to 15V input voltage up to 42V 1A continuous in small package                             |
|  R-78T-1.0      | 1.0                | 7-42      | 3.3, 5, 12                            | SMD<br>23.0 x 27.2 x 10.0 mm (/AC or /AL) (0.9" x 1.1" x 0.4")<br>23.0 x 29.4 x 8.0 mm (/FC) (0.9" x 1.2" x 0.3") | N/A            | Operating temperature range: -40°C to +85°C input voltage up to 42V   |
|  R-78B-1.5 (L) | 1.5                | 4.5-18    | 3.3, 5, 6.5                           | SIP3<br>11.5 x 8.5 x 17.5 mm<br>(0.5" x 0.3" x 0.7")  | IEC/EN60950-1  | Operating temperature range: -45°C to +85°C "L" version with 90° pins efficiency up to 95%  |
|  R-78K-2.0(L)  | 2.0                | 4.5-36    | 1.2, 1.5, 1.8, 2.5, 3.3, 5, 9, 12, 15 | SIP3<br>11.5 x 8.5 x 17.5 mm<br>(0.5" x 0.3" x 0.7")  | EN/IEC62368-1  | Operating temperature range: -40°C to + 90°C without derating, pin compatible with 78 series regulators, "L" version with 90° pins efficiency up to 96% |
|  R-5xxxA       | 2, 3, 4, 5         | 4.5-18    | 1.2, 1.8, 2.5, 3.3, 5                 | SIP12<br>32.2 x 9.1 x 15.0 mm<br>(1.3" x 0.4" x 0.6")   | IEC/EN60950-1  | Operating temperature range: -40°C to +85°C auto sense adjustable output, 90° pins (DA) control pin (on/off)  |

# SWITCHING REGULATORS

## STEP DOWN

- Standard pinout
- MTBF up to 21 million hours
- (-R) – tape & reel packaging
- (-Tray) - tray packaging
- Short circuit protection
- Very high efficiency up to 98%
- Internal SMD construction
- Wide operating temperature range
- No heatsink required

| Series  |                        | Output current (A) | Vin (VDC) | Vout (VDC)              | Case / Dimensions (LxWxH) |   | Certifications | Other features  |
|---|------------------------|--------------------|-----------|-------------------------|---------------------------|---|----------------|---|
|    | R-6xxx                 | 1-2                | 9-32      | 1.8, 2.5, 3.3, 5, 9, 12 | SIP12                     | 32.2 x 9.1 x 15.0 mm<br>(1.3" x 0.4" x 0.6")    | IEC/EN60950-1  | Operating temperature range: -40°C to +85°C<br>adjustable output, 90° pins (D)<br>control pin (on/off)<br>efficiency up to 97%                |
|    | R-7xxx                 | 2, 3, 4            | 4.5-28    | 3.3, 5, 6.5, 9, 12, 15  | SIP12                     | 32.2 x 9.1 x 15.0 mm<br>(1.3" x 0.4" x 0.6")    | IEC/EN60950-1  | Operating temperature range: -40°C to +85°C<br>adjustable output, 90° pins (D)<br>control pin (on/off)<br>efficiency up to 97%                |
|    | RPMMA-4.5<br>RPMMA-8.0 | 4.5<br>8           | 9-53      | 5-30<br>3.3-16.5        | 1/32<br>brick             | 19.1 x 23.4 x 9.6 mm<br>(0.75" x 0.9" x 0.4")   | N/A            | Ultra-wide operating temperature range:<br>-40°C to +85°C<br>OCP and OTP, CTRL, and remote sense<br>selectable outputs                        |
|    | RPMGE-10               | 10                 | 18-75     | 5, 12                   | 1/8<br>brick              | 56.4 x 22.9 x 11.97 mm<br>(2.2" x 0.9" x 0.5")  | N/A            | Operating temperature range: -40°C to +120°C<br>efficiency up to 92%<br>adjustable output from 3.3 to 15VDC                                   |
|   | RPMGS-20               | 20                 | 18-75     | 3.3-8<br>8-24           | 1/16<br>brick             | 36.83 x 34.04 x 15.0 mm<br>(1.4" x 1.3" x 0.6") | N/A            | Ultra-wide operating temperature range:<br>-40°C to +120°C, efficiency up to 97%<br>UVLO, OTP, and OCP protected<br>adjustable output voltage |
|  | RPMGQ-20               | 20                 | 18-75     | 3.3-8<br>8-24           | 1/4<br>brick              | 56.4 x 36.83 x 15.0 mm<br>(2.2" x 1.4" x 0.6")  | N/A            | Ultra-wide operating temperature range:<br>-40°C to +120°C, efficiency up to 97%<br>UVLO, OTP, and OCP protected<br>adjustable output voltage |
|  | RPMGH-40               | 40                 | 18-75     | 5, 12                   | 1/2<br>brick              | 61.0 x 57.9 x 14.89 mm<br>(2.4" x 2.3" x 0.6")  | N/A            | Operating temperature range: -40°C to +120°C<br>high efficiency up to 97%<br>adjustable output voltage from 3.3 to 24VDC                      |



# SWITCHING REGULATORS

## POWER MODULES

- Advanced 3D Power Packaging
- No heatsink required
- Compact SMD footprint

- 0.5 to 20A
- Wide operating temperature range
- Trimmable outputs

- High efficiency up to 99%
- Short circuit protection
- Fully-automated production

| Series  |          | Output current (A) | Vin (VDC) | Vout (VDC)                   | Case / Dimensions (LxWxH) |   | Certifications | Other features   |
|---|----------|--------------------|-----------|------------------------------|---------------------------|---|----------------|--|
| 5VIN BUCK   |          |                    |           |                              |                           |   |                |  |
| <div><div>V</div><div></div></div>   | RPZ-0.5  | 0.5                | 2.3-5.5   | 0.6-5.375                    | QFN                       | 2.0 x 2.0 x 1.6 mm<br>(0.08" x 0.08" x 0.06")   | N/A            | SCP, OCP, OVP, and UVLO<br>efficiency up to 91%<br>operating temperature range: -40°C to +125°C<br>(with derating)   |
| <div><div>V</div><div></div></div>   | RPZ-1.0  | 1                  | 2.3-5.5   | 0.6-5.25                     | QFN                       | 2.0 x 2.0 x 1.6 mm<br>(0.08" x 0.08" x 0.06")   | N/A            | SCP, OCP, and UVLO<br>efficiency up to 88%<br>operating temperature range: -40°C to +125°C<br>(with derating)<br>ultra compact design with low profile (1.6mm) |
| <div><div>V</div><div></div></div>   | RPZ-2.0  | 2                  | 2.75-6    | 0.6-5.74                     | QFN                       | 2.5 x 3.5 x 1.6 mm<br>(0.1" x 0.14" x 0.06")    | N/A            | SCP, OCP, and UVLO<br>efficiency up to 90%<br>operating temperature range: -40°C to +90°C<br>(full load)<br>ultra compact design with low profile (1.6mm)      |
| <div><div>V</div><div></div></div>   | RPZ-3.0A | 3                  | 2.75-6    | 0.6-5.5                      | QFN                       | 2.5 x 3.5 x 1.6 mm<br>(0.1" x 0.14" x 0.06")    | N/A            | SCP, OCP, OTP, and UVLO<br>efficiency up to 92%<br>operating temperature range: -40°C to +125°C<br>(with derating)   |
| <div><div>V</div><div></div></div> | RPZ-6.0  | 6                  | 2.75-7    | 0.6-6.65                     | QFN                       | 4.0 x 6.0 x 1.6 mm<br>(1.16" x 0.24" x 0.63")   | N/A            | SCP, OCP, OTP, and UVLO<br>efficiency up to 90%<br>operating temperature range: -40°C to +125°C<br>(with derating)   |
| 12VIN BUCK  |          |                    |           |                              |                           |   |                |  |
| <div><div>V</div><div></div></div> | RPL-1.0  | 1                  | 3-22      | 0.6-12                       | LGA-11                    | 3.0 x 3.0 x 2.0 mm<br>(0.12" x 0.12" x 0.08")   | N/A            | SCP, OCP, OTP, and UVLO<br>efficiency up to 84%<br>operating temperature range: -40°C to +125°C<br>(with derating)<br>compact design with low profile (2mm)    |
| <div></div>                        | RPM-1.0  | 1                  | 3-17      | 3.3, 5<br>trimmable 0.9-6.0V | LGA-25                    | 12.19 x 12.19 x 3.75 mm<br>(0.5" x 0.5" x 0.2") | N/A            | Operating temperature range: -40°C to +107°C<br>at full load<br>very high efficiency up to 99%<br>6-sided shielding for low EMI                                |

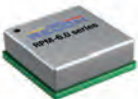

# SWITCHING REGULATORS

## POWER MODULES

- Advanced 3D Power Packaging
- No heatsink required
- Compact SMD footprint

- 0.5 to 20A
- Wide operating temperature range
- Trimmable outputs

- High efficiency up to 99%
- Short circuit protection
- Fully-automated production

| Series  | Output current (A) | Vin (VDC) | Vout (VDC)                   | Case / Dimensions (LxWxH)                                 | Certifications | Other features   |
|---|--------------------|-----------|------------------------------|---|----------------|--|
|  RPM-2.0             | 2                  | 3-17      | 3.3, 5<br>trimmable 0.9-6.0V | LGA-25<br>12.19 x 12.19 x 3.75 mm<br>(0.5" x 0.5" x 0.2") | N/A            | Operating temperature range: -40°C to +105°C at full load<br>very high efficiency up to 98%<br>6-sided shielding for low EMI |
|  RPL-3.0             | 3                  | 4-18      | 0.8-5.2                      | LGA-10<br>3.0 x 3.0 x 1.45 mm<br>(0.1" x 0.1" x 0.06")    | N/A            | Very high power density<br>3A maximum output current<br>very low 1.45mm profile<br>enable, sense, and power good functions   |
|  RPM-3.0             | 3                  | 3-17      | 3.3, 5<br>trimmable 0.9-6.0V | LGA-25<br>12.19 x 12.19 x 3.75 mm<br>(0.5" x 0.5" x 0.2") | N/A            | Operating temperature range: -40°C to +105°C at full load<br>very high efficiency up to 97%<br>6-sided shielding for low EMI |
| <b>new</b>  RPL-5.0  | 5                  | 2.75-17   | 0.6-12                       | QFN<br>4.0 x 6.0 x 1.6 mm<br>(1.16" x 0.24" x 0.63")      | N/A            | SCP, OCP, and UVLO<br>efficiency up to 90%<br>operating temperature range: -40°C to +125°C (with derating)                   |
|  RPM-6.0            | 6                  | 3-17      | 3.3, 5<br>trimmable 0.9-6.0V | LGA-25<br>12.19 x 12.19 x 3.75 mm<br>(0.5" x 0.5" x 0.2") | N/A            | Operating temperature range: -40°C to +90°C at full load<br>very high efficiency up to 99%<br>6-sided shielding for low EMI  |
| <b>new</b>  RPL-10 | 10                 | 4-16      | 0.6-5.5                      | LGA-29<br>7.0 x 7.0 x 4.4 mm<br>(0.28" x 0.28" x 0.17")   | N/A            | SCP, OCP, OTP, and UVLO<br>efficiency up to 94%<br>operating temperature range: -40°C to +125°C (with derating)              |
| <b>new</b>  RPL-20 | 20                 | 4-16      | 0.6-5.5                      | LGA-29<br>7.0 x 7.0 x 4.4 mm<br>(0.28" x 0.28" x 0.17")   | N/A            | SCP, OCP, OTP, and UVLO<br>efficiency up to 94%<br>operating temperature range: -40°C to +125°C (with derating)              |











# SWITCHING REGULATORS

## POWER MODULES

- Advanced 3D Power Packaging
- No heatsink required
- Compact SMD footprint

- 0.5 to 20A
- Wide operating temperature range
- Trimmable outputs

- High efficiency up to 99%
- Short circuit protection
- Fully-automated production

| Series  | Output current (A) | Vin (VDC) | Vout (VDC)                     | Case / Dimensions (LxWxH)                           | Certifications | Other features   |
|---|--------------------|-----------|--------------------------------|---|----------------|--|
| <b>24VIN BUCK</b>   |                    |           |                                |   |                |  |
|   RPX-0.5Q     | 0.5                | 4-36      | 0.8-30                         | QFN 3.0 x 5.0 x 1.6 mm (0.1" x 0.2" x 0.06")        | N/A            | AEC-Q100 Grade 1, wettable flank, SCP, OCP, OTP, and UVLO protection operating temperature range: -40°C to +125°C, trimmable output  |
|  RPX-1.0   | 1                  | 4-36      | 0.8-30                         | QFN 3.0 x 5.0 x 1.6 mm (0.1" x 0.2" x 0.06")        | N/A            | SCP, OCP, OTP, and UVLO protection operating temperature range: -40°C to +125°C trimmable output   |
|  RPX-1.5   | 1.5                | 4-36      | 0.8-30                         | QFN 3.0 x 5.0 x 1.6 mm (0.1" x 0.2" x 0.06")        | N/A            | SCP, OCP, OTP, and UVLO protection operating temperature range: -40°C to +125°C trimmable output   |
|   RPX-1.5Q     | 1.5                | 4-36      | 0.8-30                         | QFN 3.0 x 5.0 x 1.6 mm (0.1" x 0.2" x 0.06")        | N/A            | AEC-Q100 Grade 1, wettable flank, SCP, OCP, OTP, and UVLO protection, operating temperature range: -40°C to +125°, trimmable output  |
|   RPY-1.5Q | 0-1.5              | 4-36      | 0.8-34.8                       | QFN 3.0 x 5.0 x 1.6 mm (0.1" x 0.2" x 0.06")        | N/A            | AEC-Q100 Grade 1, wettable flank, constant current module with integrated shielded inductor, 1.5A output with 0-100% PWM dimming, enable, fault thermal shutdown, and soft-start functions |
|  RPMB-2.0  | 2                  | 4-36      | 3.3, 5, 12, 15 trimmable 1-24V | LGA-25 12.19 x 12.19 x 3.75 mm (0.5" x 0.5" x 0.2") | N/A            | Operating temperature range: -40°C to +100°C with derating, convection cooled adjustable output up to 24V  |
|  RPX-2.5   | 2.5                | 4.5-28    | 1.2-6                          | QFN 4.5 x 4.0 x 2.0 mm (0.2" x 0.1" x 0.07")        | N/A            | Very high power density with SCP, OCP, OTP, OVP, and UVLO protection efficiency up to 91% trimmable output   |

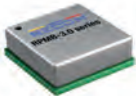


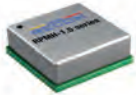

# SWITCHING REGULATORS

## POWER MODULES

- Advanced 3D Power Packaging
- No heatsink required
- Compact SMD footprint

- 0.5 to 20A
- Wide operating temperature range
- Trimmable outputs

- High efficiency up to 99%
- Short circuit protection
- Fully-automated production




| Series  | Output current (A) | Vin (VDC) | Vout (VDC)                        | Case / Dimensions (LxWxH)                                 | Certifications | Other features  |
|---|--------------------|-----------|-----------------------------------|---|----------------|---|
|  RPMB-3.0  | 3                  | 4-36      | 3.3, 5, 12, 15<br>trimmable 1-24V | LGA-25<br>12.19 x 12.19 x 3.75 mm<br>(0.5" x 0.5" x 0.2") | N/A            | Operating temperature range: -40°C to +100°C<br>with derating, convection cooled<br>adjustable output up to 24V                               |
|  RPX-4.0   | 4                  | 3.8-36    | 1-7                               | QFN<br>5.0 x 5.5 x 4.0 mm<br>(0.2" x 0.2" x 0.2")         | N/A            | Very high power density<br>excellent thermal performance<br>power good, enable, and trimmable output  |
| <b>HIGH VOLTAGE BUCK</b>  |                    |           |                                   |   |                |   |
|  RPMH-0.5  | 0.5                | 4.3-65    | 3.3, 5, 12, 15, 24                | LGA-25<br>12.19 x 12.19 x 3.75 mm<br>(0.5" x 0.5" x 0.2") | N/A            | Wide input range, operating temperature range:<br>-40°C to +95°C at full load<br>on/off, sense, trim, power good, and sequencing<br>functions |
|  RPMH-1.5  | 1.5                | 5-60      | 3.3, 5, 12, 15, 24                | LGA-25<br>12.19 x 12.19 x 3.75 mm<br>(0.5" x 0.5" x 0.2") | N/A            | Wide input voltage range<br>operating temperature range: -40°C to +100°C<br>at full load  |
|  RPH-3.0 | 3                  | 4.5-55    | 1-15                              | QFN<br>10.0 x 12.0 x 4.0 mm<br>(0.39" x 0.47" x 0.16")    | N/A            | SCP, OCP, OVP, and UVLO<br>efficiency up to 91%<br>operating temperature range: -40°C to +125°C<br>(with derating)                            |

new

# SWITCHING REGULATORS

## BOOST / BUCK-BOOST

- Standard Pinout
- MTBF up to 21 million hours
- Short circuit protection
- High efficiency up to 99%
- Internal SMD construction
- Wide operating temperature range
- No heatsink required
- RoHS compliant
- REACH compliant
- Ultra high specification

| Series  | Output current (A) | Vin (VDC) | Vout (VDC) | Case / Dimensions (LxWxH) |           | Certifications                                  | Other features |  |
|---|--------------------|-----------|------------|---------------------------|-----------|---|----------------|--|
| BOOST   |                    |           |            |                           |           |   |                |  |
|  | R-78S-0.1          | 0.1       | 0.65-3.3   | 1.8, 3.3, 3.6             | SIP4      | 11.6 x 8.5 x 10.4 mm<br>(0.5" x 0.3" x 0.4")    | IEC/EN62368-1  | Designed to power microprocessors and IoT operating temperature range: -40°C to +100°C boost converter to run from single cell batteries |
| BUCK-BOOST  |                    |           |            |                           |           |   |                |  |
|  | RBB10-2.0          | 4         | 2.3-5.5    | 1-5.5                     | LGA-25    | 12.19 x 12.19 x 3.75 mm<br>(0.5" x 0.5" x 0.2") | N/A            | 7µA standby power consumption<br>SCP, OTP, OCP<br>dual regulation modes for optimized performance or efficiency                          |
|  | RBBA3000           | 50        | 9-60       | 0-60                      | 1/2 brick | 60.6 x 63.2 x 13.0 mm<br>(2.4" x 2.5" x 0.5")   | EN/IEC62368-1  | Adjustable output voltage and current<br>efficiency up to 96%<br>operating temperature range: -40°C to +85°C without derating            |








# LED DRIVERS

## AC/DC CONSTANT CURRENT

- 3 to 25 watts
- Constant current or constant voltage available

- High efficiency
- Ultra-low profile packages
- Modified standards available





- Dimmable series available

| Series  | Power (W) | Output current (mA)      | Vin (VAC)        | Vout (VDC)                                       | Isolation         | Dimensions (LxWxH)                             | Certifications   | Other features   |
|---|-----------|--------------------------|------------------|--|-------------------|--|--|--|
|  RACD03      | 3         | 350<br>500<br>700        | 90-264<br>90-132 | 2.5-15 (3-12)<br>2.5-11 (3-9.5)<br>2.5-6 (3-4.5) | 3.75 kVAC / 1 min | 52.1 x 29.6 x 23.1 mm<br>(2.1" x 1.2" x 0.9")  | UL8750<br>EN/IEC61347-1, 2-13                                      | IP66, CC/CV<br>wired connections<br>compact size   |
|  RACD06      | 6         | 350<br>500<br>700        | 90-264           | 2.5-24<br>2.5-15<br>2.5-12                       | 3.75 kVAC / 1 min | 68.0 x 35.0 x 21.0 mm<br>(2.7" x 1.4" x 0.8")  | UL8750<br>EN/IEC/J61347-1, 2-13                                    | CC/CV<br>compact size<br>screw terminals   |
|  RACD06-LP   | 6         | 350<br>500<br>700        | 198-264          | 2-18<br>2-12<br>2-9                              | 3.75 kVAC / 1 min | 98.0 x 46.0 x 11.0 mm<br>(3.9" x 1.8" x 0.4")  | EN/IEC61347-1<br>EN/IEC61347-2-13<br>EN/IEC62384                   | Ultra-low profile<br>economical design<br>screw terminals  |
|  RACD07      | 7         | 250<br>350<br>500<br>700 | 90-295           | 14-28<br>10-20<br>5-14.5<br>3-10.5               | 3.75 kVAC / 1 min | 57.0 x 40.8 x 24.0 mm<br>(2.2" x 1.6" x 0.9")  | UL8750<br>EN61347-1<br>EN61347-2-13<br>EN61547                     | IP67<br>wired connections<br>compact size  |
|  RACD12-LP  | 12        | 350<br>500<br>700        | 198-264          | 2-37<br>2-24<br>2-19                             | 3.75 kVAC / 1 min | 128.0 x 50.0 x 13.0 mm<br>(5.0" x 2.0" x 0.5") | EN/IEC61347-1<br>EN/IEC61347-2-13<br>EN/IEC62384                   | Ultra-low profile<br>economical design<br>screw terminals<br>fully protected (OLP, SCP, OCP, OTP)      |
|  RACD20-LP | 20        | 350<br>500<br>700        | 198-264          | 2-59<br>2-40<br>2-31                             | 3.75 kVAC / 1 min | 128.0 x 50.0 x 13.0 mm<br>(5.0" x 2.0" x 0.5") | EN/IEC61347-1<br>EN/IEC61347-2-13<br>EN/IEC62384                   | Ultra-low profile<br>economical design<br>screw terminals<br>fully protected (OLP, SCP, OCP, OTP)      |
|  RACT25    | 25        | 500<br>700<br>1050       | 198-264          | 25-50<br>18-36<br>12-24                          | 3.75 kVAC / 1 min | 120.0 x 45.0 x 28.0 mm<br>(4.7" x 1.8" x 1.1") | EN/IEC61347-1<br>EN/IEC61347-2-13<br>EN61547<br>EN62493<br>EN55015 | dimmmable with leading<br>or trailing edge dimmers<br>class II with SELV output (no earth<br>required) |

# LED DRIVERS



## DC/DC CONSTANT CURRENT

- All-in-one
- Ready to use (no external components necessary for basic use)
- High efficiency up to 97%
- PWM / digital and analog dimming
- Wide input voltage range
- Buck & buck-boost topology
- Optional flying wires (/W)
- Low emissions (built-in EMC filter)
- Short circuit protected
- Modified standards available

| Series  | Output current (A) | Vin (VDC) | Vout (VDC) | Case / Dimensions (LxWxH)   | Certifications                                    | Other features  |
|---|--------------------|-----------|------------|---|---|---|
|  RCD-24 (/W) | 0.3-1.2            | 4.5-36    | 2-35       | DIP 22.1 x 12.55 x 8.5 mm (0.9" x 0.5" x 0.3")  | EN/UL60950-1<br>EN61373<br>EN50121-3-2            | Buck topology<br>IP67 rated wired version available (/W)<br>Vref out (/Vref)<br>digital PWM and analog voltage dimming                |
|  RCD-24/PL   | 0.3-1.0            | 4.5-36    | 2-35       | SMD 31.0 x 11.4 x 6.6 mm (1.2" x 0.5" x 0.3")   | EN/UL60950-1<br>EN61373<br>EN50121-3-2<br>EN55022 | Buck topology<br>low profile, class B filter built-in<br>tape & reel packaging (-R)   |
|  RCD-48 (/W) | 0.35-1.2           | 9-60      | 2-56       | DIP 32.6 x 16.7 x 11.1 mm (1.3" x 0.7" x 0.4")<br>32.6 x 16.0 x 11.2 mm (/M) (1.3" x 0.7" x 0.4") | EN/UL60950-1<br>EN61373<br>EN50121-3-2            | Buck topology<br>wired version with Vref out available (/W)<br>IP67 rated for wired version (/W)<br>metal case (/M)                   |
|  RCDE-48     | 0.35-1.05          | 6-60      | 3-52       | DIP24 32.1 x 20.6 x 12.3 mm (1.2" x 0.8" x 0.5")  | EN55015   | Buck topology<br>constant current output (350, 700, or 1050mA)<br>digital PWM and analog voltage dimming<br>high efficiency up to 97% |

# LED DRIVERS

## ACCESSORIES

| Series  | Operating principle                         | Power (W) | Input Voltage (VAC) | Other features  |
|---|---|-----------|---------------------|---|
|  RELI-DA01/R | DALI-to-PWM/analog control signal interface | 1.6       | 90-290              | DALI IEC62386, PWM / 0-10V output<br>compatible with all RECOM dimmable drivers<br>spring terminals |
|  RELV4-16    | DALI Bus power supply                       | 3.2       | 90-264              | Designed to power the DALI bus<br>DALI compliant<br>screw terminals                                 |

# POWER CONTROL SYSTEMS – CUSTOM SOLUTIONS

RECOM's subsidiary company Power Control Systems (PCS) specializes in custom power converter solutions and has over 40 years of experience with **high reliability/harsh environment applications**. Its design and manufacturing is in Europe with close local technical and sales support. Products developed include: high power DC input and single/three-phase AC input converters, cascable up to 30kW, battery chargers and balancers up to 11kW, suitable for a range of battery voltages up to 110VDC and above, bi-directional power supplies and modular inverters with single/three-phase outputs. All AC input products incorporate active power factor correction, and modular PFC 'front ends' are available up to 4kW with universal single and three-phase AC inputs.

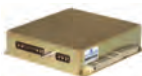
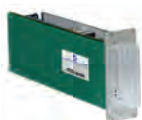


Special products **for rugged vehicle solutions in the marine, avionics, and defence sectors** have also been developed up to 4kW rating, with single or multiple outputs, high levels of functionality, robustness, and environmental protection. PCS has extensive expertise in standards compliance in high reliability markets and can provide certification of products to functional, safety, and **EMC standards for the industrial, rail, transportation, medical, and defense markets**. Although most products are bespoke (customized), PCS uses a variety of proven platform designs as a basis for new projects, to minimize costs, risk, and turn-round time. Customers are invited to browse the featured products as examples of PCS capability and to contact the company with your particular requirements.



## CUSTOM SOLUTIONS

30kW BATTERY CHARGERS |  
INVERTERS | PFC FRONT ENDS |

- High power solutions for DC or AC line with DC, 1AC, or 3AC
- Wide operating temperature range
- Bidirectional power supplies up to 11kW with 3AC input and active PFC
- Inverters up to 5kW
- Special applications & rugged vehicle solutions up to 4kW
- Battery charging & battery balancing up to 30kW
- OCP, OTP, OVP, and SCP

| Series   | Power (W) | Vin                   | Vout (VDC)                                   | Isolation | Case / Dimensions (LxWxH)                         | Comply with  | Other features   |
|--|-----------|-----------------------|--|-----------|---|--|--|
|  MD200    | 220       | 28VDC                 | 5V / 2 x 12VDC                               | 1500VDC   | 184.4 x 167.0 x 40.6 mm<br>(7.2" x 6.5" x 1.6")   | MIL-STD-704A<br>MIL-STD-810F<br>DEF-STAN 59-41<br>DO-160E/ED14E<br>BS.2011, IPC-A-610D<br>MIL-HDBK-217F<br>EN62368-1 | Plug & play DC/DC converter for special applications, robust, high reliability, multiple output, contact cooling IP 40 for ambient protection          |
|  ID250  | 240       | 24 - 48 - 72 - 110VDC | 48VDC: 50-156VAC<br>24-72-110VDC: 200-240VAC | 3500VAC   | 289.0 x 128.0 x 100.0 mm<br>(11.4" x 5.0" x 3.9") | EN50155<br>EN50121-4, -3-2<br>EN50124-1, EN50125-3<br>EN61373 (1B)<br>EN62368-1<br>IS402, CE                         | Railway inverter power for passenger socket or for driver desks fully railway-approved reliable AC-power   |
|  SD280  | 280       | 28VDC                 | Multiple output DC                           | N/A       | 250.0 x 130.0 x 100.0 mm<br>(9.8" x 5.1" x 3.9")  | N/A  | High functionality converter, power supply with integrated functional interfaces compact design for critical ambient conditions excellent EMC behavior |
|  PFC800 | 800       | 230V1AC               | 365VDC                                       | N/A       | 186.0 x 80.0 x 43.6 mm<br>(7.3" x 3.1" x 1.7")    | EN61000-6-2<br>EN61000-6-4<br>EN61000-3-2/A14<br>EN62368-1<br>CE   | Modular power factor correction mobile or stationary use excellent performance compact design, high efficiency   |

# CUSTOM SOLUTIONS

## 30kW BATTERY CHARGERS | INVERTERS | PFC FRONT ENDS

- High power solutions for DC or AC line with DC, 1AC, or 3AC
- Wide operating temperature range
- Bidirectional power supplies up to 11kW with 3AC input and active PFC
- Inverters up to 5kW
- Special applications & rugged vehicle solutions up to 4kW
- Battery charging & battery balancing up to 30kW
- OCP, OTP, OVP, and SCP




| Series  | Power (W) | Vin                       | Vout (VDC)           | Isolation             | Case / Dimensions (LxWxH)                          | Comply with   | Other features  |
|---|-----------|---------------------------|----------------------|-----------------------|--|---|---|
|  IPS1200       | 1200      | 48VDC±10%<br>24V or 48VDC | 115V 3AC             | 1500VAC               | 250.0 x 149.9 x 96.7 mm<br>(9.8" x 5.9" x 3.8")    | MIL-STD-461F (Cat. Submarine)<br>AECTP-400 (Edt.3) Method 403<br>AECTP-400 (Edt.3) Method 401<br>MIL-STD-810F 807.4, CE | Navi/marine inverter<br>base plate cooling<br>high efficiency, compact design<br>robust, high reliability   |
|  PFC1600       | 1600      | 230V 1AC                  | 360                  | N/A                   | 186.0 x 158.0 x 44.0 mm<br>(7.3" x 6.2" x 1.7")    | EN61000-6-2<br>EN61000-6-4<br>EN61000-3-2/A14<br>EN62368-1<br>CE  | Modular power factor correction<br>mobile or stationary use<br>excellent performance<br>compact design, high efficiency                           |
|  MA2000        | 1400-2000 | 90-264VAC<br>3-120VDC     | 12<br>2-80           | 1750VAC               | 318.0 x 212.0 x 165.0 mm<br>( 12.5" x 8.3" x 6.4") | EN61000-6-1, -6-3<br>EN62368-1<br>EN61010<br>EN60068-2-6<br>EN61326 class B<br>CE                                       | Battery conditioner for e-mobility production<br>automation<br>digital regulation concept<br>high functionality                                   |
|  PFC3200       | 3200      | 230V 1AC                  | 365                  | N/A                   | 199.0 x 186.0 x XX.0 mm<br>(7.8" x 7.3" x xx.0" )  | EN61000-6-2<br>EN61000-6-4<br>EN61000-3-2/A14<br>EN62368-1<br>CE  | Modular power factor correction<br>mobile or stationary use, excellent performance<br>compact design, high efficiency<br>easy to integrate        |
|  RMOC(D) 3200 | 3200      | 400V 3AC or<br>700VDC     | 24-110               | 1500VAC               | 410.0 x 235.0 x 85.0 mm<br>(16.1" x 9.2" x 3.3")   | EN62368-1<br>EN61000-6-2, -6-4<br>EN50155, EN50121-3-2<br>EN61373 1B<br>EN50124-1, EN50153<br>EN45545-2                 | Battery charger for mobile applications<br>railway-approved according to EN50155<br>robust and compact design<br>interface for data communication |
|  PFC4000     | 4000      | 230-480V 3AC              | 360                  | N/A                   | Plattform design                                   | EN61000-6-2<br>EN61000-6-4<br>EN62368-1<br>CE   | Modular power factor correction<br>mobile or stationary use<br>excellent performance<br>compact design, high efficiency                           |
|  RMOC4000    | 4000      | 115VAC<br>400V 3AC        | 24, 48<br>24, 48, 60 | >200MW with<br>500VDC | 617.0 x 483.0 x 132.0 mm<br>(24.3" x 19.0" x 5.2") | STANAG 1008<br>EN62638-1<br>CE101<br>RE101<br>RE102 (Navy Fixed)<br>CS101   | Robust, compact design<br>high efficiency<br>industry AC power supply<br>for 700VDC version see SD4000  |
|  SD4000      | 4000      | 320/450<br>600VDC         | 24, 48               | 1500VAC               | 483.5 x 370.0 x 132.0 mm<br>(19.0" x 14.5" x 5.2") | EN62368-1<br>EN61000-6-2<br>EN61000-6-4<br>CE   | Converter for high level DC-input<br>traction battery 320VDC / 450VDC / 600VDC<br>high efficiency<br>robust, compact design                       |

This Selection Guide represents only the latest most popular products of our portfolio. Please check [www.recom-power.com](http://www.recom-power.com) for additional products.

# CUSTOM SOLUTIONS

## 30kW BATTERY CHARGERS | INVERTERS | PFC FRONT ENDS

- High power solutions for DC or AC line with DC, 1AC, or 3AC
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- Inverters up to 5kW
- Special applications & rugged vehicle solutions up to 4kW
- Battery charging & battery balancing up to 30kW
- OCP, OTP, OVP, and SCP

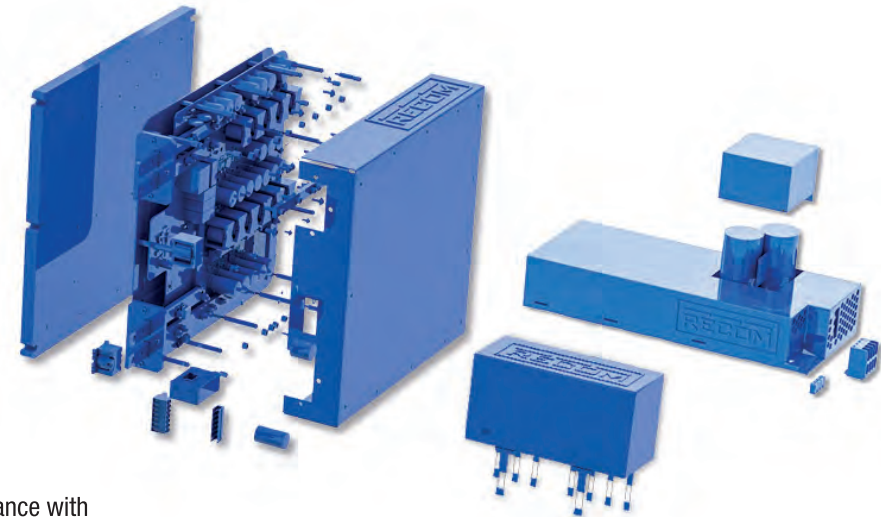
| Series  |          | Power (W) | Vin                        | Vout (VDC) | Isolation | Case / Dimensions (LxWxH)                          | Comply with   | Other features  |
|---|----------|-----------|----------------------------|------------|-----------|--|---|---|
|  | RMOC5000 | 5000      | 360-440V<br>3AC            | 39.5-58    | 4 kVAC    | 526.0 x 483.0 x 88.0 mm<br>(20.7" x 19.0" x 3.5")  | EN62368-1<br>EN50125-3<br>EN50129<br>EN50124-1/A1/A2<br>EN50121-3-2, -4<br>EN50155, EN45545-2                 | 5kw battery charger for mobile use<br>railway-approved concept<br>3Ph-AC input with active PFC<br>output for 24V up to 110V battery |
|  | SAB10000 | 10000     | 340-470V 3AC<br>520-700VDC | 20<br>24   | 1500VAC   | 670.0 x 443.0 x 128.0 mm<br>(26.4" x 19.7" x 5.0") | EN62368-1<br>EN61000-6-4, -3-2<br>EN61000-4-2, -4-3<br>EN61000-4-4, -4-5<br>EN61000-4-6, -4-8<br>EN61000-4-11 | Bidirectional battery balancer for e-mobility<br>production automation<br>digital regulation concept<br>high functionality          |
|  | MA11000  | 11000     | 180-480V<br>3AC            | 24, 48     | 1500VAC   | 503.0 x 430.0 x 141.0 mm<br>(19.8" x 16.9" x 5.5") | EN61000-6-3<br>EN61000-6-1<br>EN62368-1, EN61010<br>EN60068-2-6<br>EN61326 class B<br>CE                      | Battery conditioner<br>for e-mobility production automation<br>digital regulation concept<br>high functionality                     |

# POWER PRODUCTS DESIGNED TO FIT YOUR SPECIFICATIONS

RECOM is renowned for an exceptionally wide range of cost-effective standard products available globally. Additionally, we invite inquiries for full or semi-custom designs made to fit your specifications. All power levels can be considered, right from sub-1W to kilowatts for any application – industrial, medical, energy, aerospace, rail, or military COTS. Customizable product types include AC/DCs, DC/DCs, battery chargers/conditioners, inverters, PFC front ends, and much more. Your special requirement may also be met by modifying a standard product while retaining its existing safety certification, providing you with a very economical, simple, and quick solution. In the past, RECOM has modified many standard production parts as per particular customer specifications; we might hence already have the part you need in our design library.

RECOM has design teams in Austria, Italy, China Mainland, and Taiwan area, who design with the latest technologies, using state-of-the-art CAD tools for circuit emulation and thermal simulation. In-house EMC test facilities can confirm compliance with international standards and our experienced R&D engineers ensure that the designs fully meet the application requirements. Third-party safety agency and EMC certificates can be arranged for any custom design.

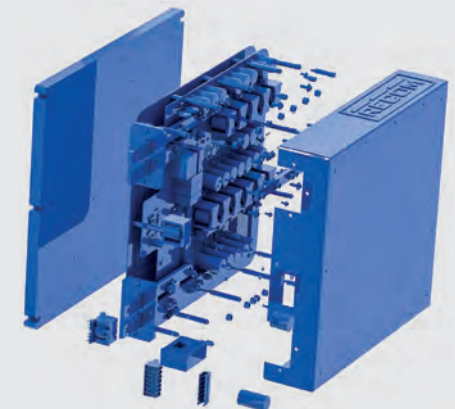
RECOM recommends that you discuss your power converter requirements with us before drawing up a final specification. This will ensure that the proposed product can be made most cost-effectively and designed, built, and certified in the fastest timescale. For example, matching a new design BoM to the RECOM manufacturing technology database will enable the use of common components that are always kept in stock, resulting in the most economical custom product.



## FULL CUSTOMIZE

- Built to your specification
- From concept to production
- Any shape, size or color
- Meets safety & EMC standards

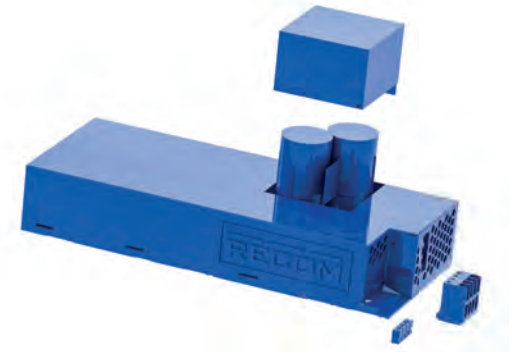
Full customs can be designed from sub-1W to kilowatts by our engineering teams in Austria, Italy, Taiwan, and China, depending on the individual specification. RECOM's subsidiary company PCS in Italy has particular expertise in custom high-power single- and three-phase AC/DCs, DC/DCs, battery chargers/conditioners, PFC front ends, and inverters. These can be designed for any particular market — industrial, medical, energy, aerospace, rail, and military COTS. State-of-the-art design techniques are used for high power density and high efficiency, with the lowest cost. Safety certification can be arranged to meet all the common standards. EMC compliance can also be realized with the pre-compliance testing performed using our in-house test chambers, and we can arrange for a third-party EMC certification.



## SEMI CUSTOM

- Based on proven designs
- Accelerate time-to-market
- Lower cost than a full custom
- Uses existing infrastructure

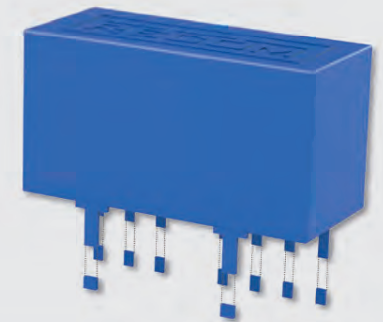
Often, a customer specification can be met using an existing 'platform' design that has the advantage of proven performance and reliability in the field. This is a more economical approach than a full custom, and product safety assurance and EMC certification are simplified, reducing the risk and accelerating the time to the market. Existing in-house stock components, tooling, and manufacturing processes may be used, resulting in a cost-effective product.



## MODIFIED STANDARD

- Standard designs, fine tuned
- Certifications remain valid
- Lowest cost and fastest TTM
- Uses existing supply chain

Do you sometimes look at a datasheet and think, 'If only this one specification were changed, it would be ideal'? RECOM and PCS have a large range of standard products that can often be easily modified to accommodate simple customer requests, such as a change to the output voltage, pinout, or encapsulation material. In many cases, existing certifications for safety and EMC remain valid, saving significant costs and time. RECOM has manufactured many 'modified standards' in the past; so, we might already have met your particular requirements.



## Notes

[illegible]



[recom-power.com/vrtour](http://recom-power.com/vrtour)

# RECOM POWER WORLDWIDE

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