# **PRODUCT SELECTION GUIDE**

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





## **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 <u>www.recom-power.com</u> or contact your local sales rep in case you do not find what you are looking for.

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#### **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 costeffective 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** 



#### 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) / Pinnin	ıg	Certifications	Other features
MING		RAC02E-K/277	2	85-305	3.3, 5, 12, 15, 24	4 kVAC / 1min	33.7 x 22.2 x 15.4 mm (1.3" x 0.9" x 0.6")	● ● ● P 2 ● ●	UL/IEC/EN62368-1 IEC/EN61558-1, 2-16 EN60335-1	Low profile / tiny footprint operating temperature range: -40°C to +90°C with derating, full load power up to 80°C 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 (1.1" x 0.9" x 0.7")	••• • 1 • •	UL/IEC/EN62368-1 IEC/EN60335-1	Operating temperature range: -40°C to +80°C household certified 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 (1.1" x 0.9" x 0.8" )	••• SMT 1 ••	EN/IEC/UL62368-1 EN/IEC60335-1 EN/IEC61558-1, -2 EN62233	Operating temperature range: -40°C to +80°C operating altitude 5000m 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 (1.5" x 0.9" x 0.6")	● ● ● P 3 ● ●	UL/IEC/EN62368-1 EN62233 IEC/EN61558-1, 2-16 EN60335-1	Operating temperature range: -40°C to +85°C over Voltage category: OVC III household certified, low profile 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 (1.4" x 1.0" x 0.7")	••• • 4 • •	EN/IEC/UL60950-1 EN/IEC/UL62368-1 IEC/EN61558-1, 2-16 EN61010-1 EN60335-1	Operating temperature range: -40°C to +90°C household certified 6W peak power 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 (1.5" x 0.9" x 0.6")	● ● ● P 3 ● ●	EN/IEC/UL62368-1 EN60335-1 EN/IEC61558-1, 2-16	No load power consumption <75mW, operating temperature range: -40°C to +85°C, low profile and typ. 3W footprint, RAC04-GA: household certi- 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 (1.5" x 0.9" x 0.7")	P 3	EN/IEC/UL62368-1 EN/IEC60335-1 EN/IEC61558-1, 2-16	Economical design no load power consumption <100mW 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 (1.3" x 1.1" x 0.9")	● ● ● Ei 30 ● ●	UL/IEC/EN62368-1 IEC/EN60335-1 EN/IEC61558-1, 2-16	Operating temperature range: -25°C to +75°C economical design no load power consumption <100mW EI30 standard Transformer pinout

#### PCB MOUNT

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- Ultra compact size
- Modified standards available

	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	(1 0" x 1 0" x 0 0")	Ei 30	EN/UL62368-1 IEC/EN60335-1 EN/IEC61558-1, 2-16	OVCIII: up to 2000m altitude OVCII: 5000m operating temperature range: -40°C to +90°C 6W peak power
	RAC05-K/480	5	85-528	5, 12, 15	5.4 kVAC / 1 min		P 12	IEC/EN62368-1 UL/IEC61010-1	Ultra-wide input range 85-528VAC OVC III up to 3000m altitudeoperating temperature range: -40°C to 80°C
EDICAL Socol	RACM06E-K/277	6	80-305	3.3, 5, 12, 15, 24	4 kVAC / 1min		P 12	EN/IEC62368-1 ANSI/AAMI ES60601-1 EN/IEC60601-1 EN/IEC60335-1 EN/IEC61558-1 EN62233	2MOPP rated to 5000m; prepared for BF use OVC III up to 5000m operating temperature range: -40°C to +90°C
	RAC10-K/277	10	85-305	3.3, 5, 12, 15, 18, 24 ±12, ±15	4 kVAC / 1 min		P 12	EN/IEC/UL60950-1 EN/IEC/UL62368-1 EN/IEC60335-1 EN62477-1	OVC III rated OVCIII up to 3000m altitude; operating temperature range: -40°C to +80°C 14 Watt peak power
	RAC10E-K/277	10	85-305	3.3, 5, 12, 15, 24	4 kVAC / 1 min		P 11	UL/IEC62368-1 EN/IEC61558-1, 2-16	Economical design compact shape over voltage category: OVC III EMI class B with grounded output (eg. PELV)
	RAC15-K/480	15	85-528	5, 12, 15, 24	3.6 kVAC / 1 min		P 12	UL/IEC/EN62368-1 EN/IEC61010 EN60335-1	Phase to phase connections OVC III up to 5000m, PD3 and LPS operating temperature range: -40 to +90°C
new	RACM16E-K/277	16	85-305	3.3, 5, 12, 15, 24, 30	4 kVAC / 1 min		P 12	ANSI/AAMI ES60601-1 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-2-16	Operating temperature range: -40°C to +85°C 2MOPP rated to 5000m; prepared for BF use CV/CC over load limiting characteristics OVCIII: up to 4000m altitude; OVCII: 5000m
	RAC20-K(/277)	20	85-264 (/277) 85-305	5, 12, 15, 24, 48 ±12, ±15	3 kVAC / 1 min		P 12	EN/IEC/UL62368-1 IEC/EN60335-1 IEC/EN61558-1, 2-16	Standby mode optimized PSU (ENER Lot 6) ultra-high efficiency over entire load range

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#### PCB MOUNT

ME

- 1 to 60 watts
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- Ultra compact size
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	Series	Power (W)	Vin (VAC)	Vout (VDC)	Isolation	Dimensions (LxWxH) / Pinnir	ng	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")	● ● ● P 13 ● ●	UL/IEC/EN62368-1 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")	••• P 14 ••	UL/IEC/EN62368-1 EN/IEC61010 EN603350-1	Phase to phase connections OVC III up to 5000m, PD3 and LPS operating temperature range: -40°C to +90°C
SERTIFICS MEDICAL Socol.	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")	● ● ● P 12 ● ●	ANSI/AAMI ES60601-1 UL/EN/IEC62368-1 EN60335-1 EN62233 IEC/EN60601-1 IEC/EN61558-2	2MOPP rated to 5000m; prepared for BF use OVC III up to 5000m, PD3 and LPS, operating temperature range: -40°C to +90°C, EN55032 class "B": with grounded output (eg. PELV)
SERTIFICS IEDICAL Sosov	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")	••• P 14 ••	ANSI/AAMI ES60601-1 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-1, 2-16	2MOPP rated to 5000m; prepared for BF useop- erating temperature range: -40°C to +85°C 5000m altitude OVC II; 2000m OVC III, EN55032 class "B": with grounded output (eg. PELV)
SERTIFIES MEDICAL Sobol	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") 78.3 x 40.6 x 29.1 mm (PCB) (3.0" x 1.6" x 1.1")		ANSI/AAMI ES60601-1 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-1, 2-16	Operating temperature range: -40°C to +85°C over voltage category: OVC III rated, optional 2"x3" pacakge (OF/2"x3"), 5000m altitude OVC II; 2000m OVC III, 2MOPP rating; prepared for BF use
GERTIFIES MEDICAL POGOL->	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 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-1, 2-16	2MOPP rated to 4000m; prepared for BF use operating temperature range: -40°C to +85°C 5000m altitude OVC II; 2000m OVC III

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

Ϋ́	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 (2.0"x 2.0" x 0.4")	EN/IEC/UL60950-1 EN60335-1	Extra low footprint <11mm low no load power consumption <40mW operating temperature range: -40°C to +85°C round design and flying wires for flushmounting
		RAC05-K/277/W	5	85-305	3.3, 5, 12, 15, 24	4.2 kVAC / 1 min	31.7 x 26.7 x 21.8 mm (1.2" x 1.0" x 0.9")	EN/UL62368-1 IEC/EN60335-1 IEC/EN61558-1 IEC/EN61558-2-16	Over voltage category: OVC III operating temperature range: -40°C to +90°C 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 (2.6" x 1.9" x 0.9")	UL/IEC/EN62368-1 IEC/EN60950-1	Isolated power supply with integrated mains filter, safe, touchable DC outputs easy installation worldwide standard IEC input
new MEDICAL Cost 1-5		RACM15E-K/0F	15	80-264	3.3, 5, 12, 15, 24, 30	4 kVAC / 1 min	80.0 x 23.8 x 22.0 mm (3.2" x 0.9" x 0.8')	ANSI/AAMI ES60601-1 EWIEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-2-16	Operating temperature range: -40°C to +85°C OVC III up to 3000m altitude 2MOPP rated to 5000m; prepared for BF use CV/CC over load limiting characteristics
new		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 (3.2" x 1.0" x 1.2")	ANSI/AAMI ES60601-1 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-2-16	Operating temperature range: -40°C to +85°C OVC III up to 3000m altitude, OVCII: 5000m 2MOPP rated to 5000m; prepared for BF use CV/CC over load limiting characteristics
New MEDICAL 0561-5		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 (2.1" x 1.1" x 0.9")	ANSI/AAMI ES60601-1 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-2-16	Operating temperature range: -40°C to +85°C 2MOPP rated to 5000m; prepared for BF use OVC III up to 3000m altitude CV/CC over load limiting characteristics
		RAC20-K/W	20	85-264 (/277) 85-305	5, 12, 15, 24, 48	3 kVAC / 1 min	52.5 x 27.4 x 23.0 mm (2.1" x 1.1" x 0.9")	EN/IEC/UL62368-1 IEC/EN60335-1 IEC/EN61558-1 IEC/EN61558-2-16	Standby mode optimized PSU (ENER Lot 6) ultra-high efficiency over entire load range /277/W version on request
MEDICAL 90681-3		RACM30-K/277(/W) (/0F) (/PMA)	30	85-305	5,12, 15, 24, ±12, ±15	4 kVAC / 1 min	52.5 x 40.0 x 25.5 mm (W) (2,1" x 1.6" x 0.9") 84.7 x 40.0 x 33.0 mm (PMA) (3.3" x 1.6" x 1.3")	UL/EN/IEC62368-1 EN60335-1 EN62233 IEC/EN60601-1 IEC/EN61558-2	OVC III up to 5000m, PD3 and LPS operating temperature range: -40°C up to +90°C /PMA: panel mount version with push-in terminals 2MOPP rated to 5000m; prepared for BF use

This Selection Guide represents only the latest most popular products of our portfolio. Please check <u>www.recom-power.com</u> for additional products.

**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
SUPTIME MEDICAL Cosos	AT COL	RACM40-K/0F	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") 78.3 x 53.0 x 25.5 mm (2x3") (3.0" x 2.0" x 1.0")	ANSI/AAMI ES60601-1 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-1, 2-16	OVCIII: up to 2000m altitude; OVCII: 5000m operating temperature range: -40°C to +85°C 2MOPP rated to 5000m; prepared for BF use
MEDICAL 90501		RACM60-K/0F (/ENC/2x4) (/277/0F)	60	80-264 80-305 (/277/0F)	5, 12, 15, 24, 36, 48	4.8 kVAC / 1 min	78.4 x 53.0 x 31.5 mm (OF) (3.0" x 2.0" x 1.2") 101.6 x 53.0 x 31.5 mm (2x4") (4.0" x 2.0" x 1.2")	ANSI/AAMI ES60601-1 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-1, 2-16	Operating temperature range: -40°C to +85°C OVCIII: up to 2000m altitude; OVCII: 5000m 2MOPP rated to 4000m; prepared for BF use
MEDICAL Pasos	<b>N</b>	RACM90-K/0F (/ENC)	90	85-264	12, 15, 24, 36, 48	4 kVAC / 1 min	101.6 x 50.8 x 32.0 mm (OF) (4.0" x 2.0" x 1.3") 118.3 x 62.7 x 38.7 mm (ENC) (4.6" x 2.4" x 1.5")	ANSI/AAMI ES60601-1 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-1, 2-16	B and BF ready, operating temperature ratings: -40 to 90°C, low leakage current <75μA, LPS limited power source rated, 2MOPP rated to 4000m; prepared for BF use 0VCIII: up to 2000m altitude; 0VCII: 4000m
MEDICAL Cosos	<b>N</b>	RACM130E-K/OF (/ENC)	130	85-264	12, 15, 24, 36, 48	4 kVAC / 1 min	101.6 x 50.8 x 32.0 mm (OF) (4.0" x 2.0" x 1.3") 118.3 x 62.7 x 38.7 mm (ENC) (4.6" x 2.4" x 1.5")	ANSI/AAMI ES60601-1 EN/IEC60335-1 EN/IEC62368-1 EN/IEC60601-1 EN/IEC61558-1, 2-16	2MOPP rated to 4000m; prepared for BF use low leakage current $<75\mu A$ operating temperature ratings: -40 to 90°C OVCIII: up to 2000m altitude; OVCII: 4000m
COMING SOON		RACM140E-K/OF (/ENC)	140	80-264	12, 16, 24, 36, 48	4 kVAC / 1 min	127.0 x 81.5 x 38.0 mm (5.0" x 3.2" x 1.5")	EN/IEC60601-1 ANSI/AAMI ES60601-1 EN/IEC62368-1	Operating temperature range: +40°C to + 90°C 2MOPP rated to 4000m; prepared for BF use 210W boost power, OVCIII: up to 2000m altitude; OVCII: 5000m
	100 M	RAC150-G/OF (/ENC)	150	90-264	12, 24, 48	3 kVAC / 1 min	101.6 x 50.8 x 30.0 mm (OF) (4.0" x 2.0" x 1.2") 105.0 x 62.0 x 35.0 mm (ENC) (4.1" x 2.4" x 1.4")	EN/IEC/UL62368-1	Efficiency up to 91% SCP and OVP protection output 125W at +50°C with natural convection
MEDICAL Provident		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 (0F) (4.0" x 2.0" x 1.3") 105.0 x 62.0 x 35.0 mm (ENC) (4.1" x 2.4" x 1.4")	ANSI/AAMI ES60601-1 EN/EC62368-1 EN60335-1 EN/IEC60601-1 EN/IEC61558-1, 2-16	160W conduction-cooled, fan-less operation wide operating temperature range: -40°C to +80°C 2MOPP rated to 5000m; prepared for BF use
MEDICAL Google		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) (5.0" x 3.0" x 1.5") 150.0 x 87.0 x 45.0 mm (ENC) (5.9" x 3.4" x 1.8")	ANSI/AAMI ES60601-1 IEC/EN62368-1 IEC/EN60335-1 IEC/EN60601-1 IEC/EN61558-1, 2-16	300W conduction-cooled, fan-less operation 550W peak power or forced air rating 2MOPP rated to 5000m; prepared for BF use 5VSB Auxiliary and 12V fan outputs

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3 to 1200 watts

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

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

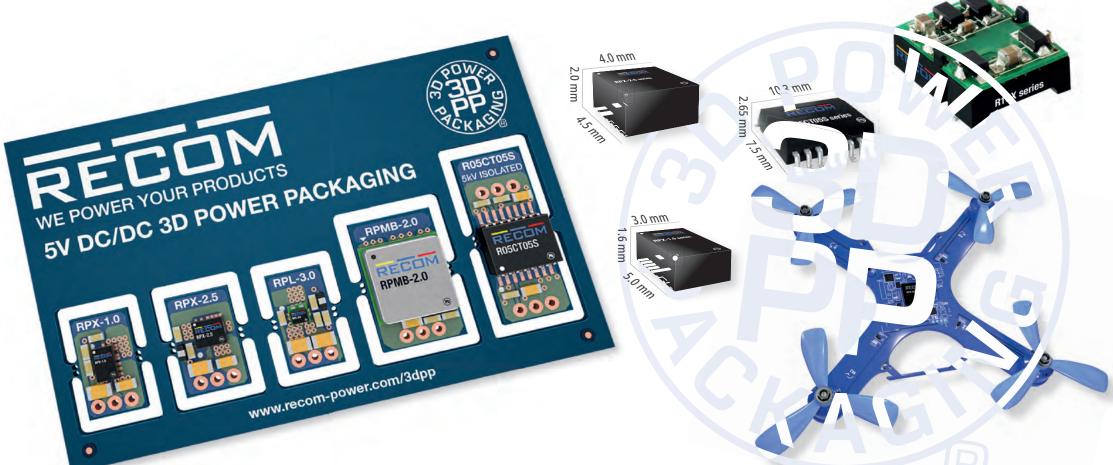
The standard range of isolated converters spans from 0.25W to 300W with higher power to several kW, available in RECOM's subsidiary company PCS as custom products based on proven platform designs. Almost every imaginable format of converter is offered, with a range of through-hole products, open or encapsulated 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** 



### 0.25 to 3 wattsIsolation 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)

#### UNREGULATED

Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case /	Dimensions (LxWxH)	Certifications	Other features
10.255 write 10.256 write 0 or or-	R0.25S (/E) R0.25D (DA)	0.25	3.3, 5, 12, 15, 24	$\begin{array}{c} 3.3, 5, 9, 12, 15, 24, \\ \pm 3.3, \pm 5, \pm 9, \pm 12, \\ \pm 15, \pm 24, \\ 5/5, 12/12 \end{array}$	1 or 3 kVDC / 1 s	SMD	12.75 x 10.7 x 6.7 mm (S) (0.5" x 0.4" x 0.3") 15.24 x 10.7 x 6.7 mm (D) (0.6" x 0.4" x 0.3")	EN/IEC/UL60950-1	Isolated independent dual outputs (A) operating temperature range: -40°C to +100°C
RM series	RM	0.25 3.3, 5, 1 15, 24		3.3, 5, 9, 12, 15	1 or 2 kVDC / 1 s	SIP4	11.5 x 6.0 x 10.0 mm (0.5" x 0.2" x 0.4")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +85°C higher isolation requirement 2kVDC
	R0.5S R0.5D	0.5	3.3, 5, 12, 24	5, 12, 15, ±5, ±12, ±15	1 or 3 kVDC / 1 s	SMD	12.75 x 10.7 x 6.7 mm (S) (0.5" x 0.4" x 0.3") 15.24 x 10.7 x 6.7 mm (D) (0.6" x 0.4" x 0.3")	UL60950-1	Operating temperature range: -40°C to +100°C
ROL series	ROL	0.5	5, 12	5, 12, 15	1 or 2 kVDC / 1 s	SIP4	11.5 x 6.0 x 10.0 mm (0.5" x 0.2" x 0.4")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +85°C
Hills only by an	R1DA	1	3.3, 5, 9, 12, 15, 24	3.3/3.3, 5/5, 9/9, 12/12, 15/15	1 kVDC / 1 s	SMD	15.24 x 10.7 x 7.0 mm (0.6" x 0.4" x 0.3")	EN/UL60950-1	Isolated independent dual outputs operating temperature range: -40°C to +100°C
	R1S (/E) R1D	1	3.3, 5, 12, 15, 24	$\begin{array}{c} 3.3, 5, 9, \\ 12, 15, 24 \\ \pm 3.3, \pm 5, \pm 9, \pm 12, \\ \pm 15, \pm 24 \end{array}$	1 or 3 kVDC / 1 s	SMD	12.75 x 10.7 x 7.0 mm (S) (0.5" x 0.4" x 0.3") 15.24 x 10.7 x 7.0 mm (D) (0.6" x 0.4" x 0.3")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +100°C high efficiency (/E) with 1 or 2 kVDC / 1s economical design available (R1SE, R1SE/H2)
PLEASE PLEASE OF ANTER OF ANTER	R1SE	1	5	5	1 kVDC / 1 s	SMD	12.75 x 10.7 x 6.7 mm (0.5" x 0.4" x 0.3")	UL60950-1	Operating temperature range: -40°C to +85°C economical design
Proster some	R1SE/H2	1	3.3, 5, 12, 15	5, 12, 15	2 kVDC / 1 s	SMD	12.75 x 10.7 x 7.0 mm (0.5" x 0.4" x 0.3")	UL60950-1	Operating temperature range: -40°C to +100°C economical design

• 0.25 to 3 watts Isolation v

Industry

- Economical designs available
- (-R) tape & reel packaging
- (/P) short circuit protection
- Single (S), dual (D)

#### UNREGULATED

voltages up to 20 kVDC	<ul> <li>(/E) – high efficiency</li> </ul>
standard pinout	<ul> <li>(/H) – high isolation</li> </ul>

• (/H) – high isolation

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

0.25 to 3 wattsIsolation 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)

Serie	es		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case /	/ Dimensions (LxWxH)	Certifications	Other features
RFB s	series 🕲 ,93.	RFB	1	5	5	1 kVDC / 1 s	SIP7	19.6 x 6.0 x 10.2 mm (0.7" x 0.2" x 0.4")	UL60950-1	1:1 input voltage range economical design
R	FM series ® ,su	RFM	1	5	5	1 kVDC / 1 s	SIP4	11.5 x 6.0 x 10.0 mm (0.4" x 0.2" x 0.4")	UL60950-1	Industry standard pinout economical design
RFM	M series ® ,su-	RFMM	1	5	5	4 kVDC / 1 s	SIP7	19.65 x 7.05 x 10.2 mm (0.7" x 0.3" x 0.4")	UL60950-1	Industry standard pinout economical design
RK ser	ries Po , FU -	RK (/H) RH	1	5, 12, 15, 24	5, 9, 12, 15, ±5, ±9, ±12, ±15, +15/-9	3 or 4 kVDC / 1 s	SIP7	19.65 x 6.0 x 10.2 mm (0.8" x 0.2" x 0.4") 19.65 x 7.05 x 10.2 mm (/H) (0.8" x 0.3" x 0.4")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +90°C economical design available (RKE)
RK/H	6 series ® .au.	RK/H6 RH/H6	1	5, 12, 15, 24	3.3, 5, 12, 15, ±3.3, ±5, ±12, ±15	6.4 kVDC / 1 s	SIP7	19.65 x 7.05 x 10.2 mm (0.8" x 0.3" x 0.4")	IEC/UL60950-1 IEC62368-1	Operating temperature range: -40°C to +90°C high capacitive load capability
RKK S	series ,su-®	RKK	1	5	5	4 kVDC / 1 s	SIP7	19.6 x 6.0 x 10.2 mm (0.7" x 0.2" x 0.4")	EN/IEC/UL62368-1	Operating temperature range: -40°C to $+105$ °C efficiency up to 82%
RKE/H	H series (9), RV::	RKE/H	1	5, 12, 24	5	4 kVDC / 1 s	SIP7	19.6 x 7.05 x 10.2 mm (0.8" x 0.3" x 0.4")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +85°C high isolation economical design
	A water	RNM	1	3.3, 5, 12, 15	3.3, 5, 9, 12, 15	1 or 2 kVDC / 1 s	DIP6	8.3 x 8.3 x 6.8 mm (0.3" x 0.3" x 0.3")	EN/IEC/UL60950-1	Ultra compact design operating temperature range: -40°C to +85°C

This Selection Guide represents only the latest most popular products of our portfolio. Please check <u>www.recom-power.com</u> for additional products.

• 0.25 to 3 watts

• Economical designs available

- (-R) tape & reel packaging
- (/P) short circuit protection

• Single (S), dual (D)

#### UNREGULATED

- Isolation voltages up to 20 kVDC • Industry standard pinout
- (/E) high efficiency • (/H) – high isolation

	Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case /	Dimensions (LxWxH)	Certifications	Other features
	RO series © nu-	R0 (/E)	1	3.3, 5, 12, 15, 24	3.3, 5, 9, 12, 15, 24	1 or 2 kVDC / 1 s	SIP4	11.5 x 6.0 x 10.0 mm (0.5" x 0.2" x 0.4")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +85°C economical design available (ROE)
	ROE series	ROE	1	3.3, 5, 12, 15, 24	5, 12, 15	1 kVDC / 1 s	SIP4	11.5 x 6.0 x 10.0 mm (0.5" x 0.2" x 0.4")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +85°C industry standard pinout economical design
	ROM series	ROM	1	3.3, 5, 12	5, 12, 15	3 kVDC / 1 s	SIP4 Micro	11.5 x 6.0 x 7.7 mm (0.5" x 0.2" x 0.3")	EN/UL60950-1	Operating temperature range: -40°C to +85°C
	RP series	RP	1	5, 9, 12, 15, 24	3.3, 5, 9, 12, 15, 24, ±3.3, ±5, ±9, ±12, ±15, ±24 +15/-9	5.2 kVDC / 1 s	SIP7	19.65 x 7.05 x 10.2 mm (0.8" x 0.3" x 0.4")	EN/IEC60950-1 UL60950-1*	Operating temperature range: -40°C to +85°C * +15/-9 version excluded
	RU series	RU	1	3.3, 5	5/5	1 or 2 kVDC / 1 s	SIP7	19.6 x 6.0 x 10.2 mm (0.8" x 0.2" x 0.4")	EN60950-1	Isolated independent dual outputs operating temperature range: -40°C to +85°C
	RUM series •	RUM	1	3.3, 5	5/5	1 or 2 kVDC / 1 s	SIP6	16.55 x 6.0 x 7.7 mm (0.7" x 0.2" x 0.3")	EN60950-1	Isolated independent dual outputs operating temperature range: -40°C to +85°C low profile
DICAL	RxaPxx series	RxxPxx (/R)	1	5, 12, 15, 24	3.3, 5, 6, 9, 12, 15, ±3.3, ±5, ±9, ±12, ±15, +15/-9	6.4 or 8 kVDC / 1 s	SIP7	19.5 x 9.8 x 12.5 mm (0.8" x 0.4" x 0.5")	EN/IEC/JL60950-1 EN/IEC/JL62368-1 EN/IEC/JL60601-1 ANSI/AAMI ES60601-1	Medical approved (/R6.4 & /R8 versions) operating temperature range: -40°C to +90°C 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	12.6 x 10.1 x 7.6 mm (0.5" x 0.4" x 0.3")	EN60950-1	Operating temperature range: -40°C to +85°C

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## 0.25 to 3 wattsIsolation voltages up to 20 kVDC

• Industry standard pinout

Economical designs available
 VDC
 (/E) – high efficiency

• (/H) – high isolation

- (-R) tape & reel packaging
- (/P) short circuit protection
- Single (S), dual (D)

#### UNREGULATED

	Series	Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case /	Dimensions (LxWxH)	Certifications	Other features
	R2S R2D	2	5, 12, 15, 24	3.3, 5, 9, 12, 15, 24, ±5, ±9, ±12, ±15, ±24	1 or 3 kVDC / 1 s	SMD	12.75 x 10.7 x 9.0 mm (S) (0.5" x 0.4" x 0.4") 15.24 x 10.7 x 9.0 mm (D) (0.6" x 0.4" x 0.4")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +100°C
PPP S	R2SX	2	5, 12, 24	3.3, 5, 15, 24	1 or 3 kVDC / 1 s	SMD	15.24 x 11.1 x 8.0 mm (0.6" x 0.4" x 0.4")	EN/IEC/UL62368-1 EN/IEC/UL60950-1	Operating temperature range: -40°C to +100°C no minimum load required economical design
SERTIFICA MEDICAL Segon	REM2 strites REM2	2	3.3, 5, 12, 15, 24	3.3, 5, 9, 12, ±3.3, ±5, ±12	5.2 kVDC / 1 min	SIP8	23.0 x 8.0 x 12.2 mm (0.9" x 0.4" x 0.5")	ANSI/AAMI ES60601-1 CAN/CSA60601-1 IEC/EN62368-1 EN/IEC60601-1 EN60601-1-2	Operating temperature range: -40°C to +95°C reinforced isolation for 250VAC working voltage CF rated outputs, 5000m altitude
	RD series RD	2	5, 12, 24	±5, ±12, ±15, ±24	1 or 2 kVDC / 1 s	SIP7	19.65 x 7.0 x 10.2 mm (0.8" x 0.3" x 0.4")	IEC/EN60950-1	Operating temperature range: -40°C to +85°C
	RI series RI	2	5, 12, 15, 24	5, 12, 15	1 kVDC / 1 s	SIP4	11.5 x 7.6 x 10.2 mm (0.5" x 0.3" x 0.4")	IEC/EN60950-1	Operating temperature range: -40°C to +85°C
	RJZ RGZ	2	3.3, 5, 9, 12, 15, 24	$\begin{array}{c} 3.3, 5, 9, 12, 15, 24, \\ \pm 3.3, \pm 5, \pm 9, \pm 12, \\ \pm 15, \pm 24, \\ + 15/-9 \end{array}$	3 or 4 kVDC / 1 s	DIP14	19.9 x 10.0 x 7.1 mm (0.8" x 0.4" x 0.3")	IEC/EN60950-1	Operating temperature range: -40°C to +90°C
	RKZ series PKZ	2	5, 12, 24	5, 12, 15, ±5, ±12, ±15, +15/-9	3 or 4 kVDC / 1 s	SIP7	19.65 x 7.05 x 10.2 mm (0.8" x 0.3" x 0.4")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +85°C
	RKZE series	2	5, 12, 15, 24	5, 9, 12, 15, ±5, ±12, ±15	3 or 4 kVDC / 1 s	SIP7	19.65 x 7.05 x 10.2 mm (0.7" x 0.3" x 0.4")	EN62368-1	Economical design /H suffix for 4kV Isolation

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0.25 to 3 wattsIsolation 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)

#### UNREGULATED

	Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case /	Dimensions (LxWxH)	Certifications	Other features
		RTM	2	5, 12, 24	5	2 or 3 kVDC / 1 s	SMD	18.0 x 8.7 x 7.15 mm (0.7" x 0.3" x 0.3")	EN60950-1	Operating temperature range: -40°C to +90°C
	Martine Pr	RHV2	2	5, 12, 24	5, 12, 24, ±5, ±12	20 kVDC / 1 s	SIP16	45.0 x 15.0 x 17.0 mm (1.7" x 0.6" x 0.7")	IEC/EN62368-1 IEC/EN61010-1	Compact SIP16 case with >30mm pin separation low 4pF max. isolation capacitance operating temperature range: -40°C to +85°C at full load
	RUZ series	RUZ	2	5	5/5	1 or 2 kVDC / 1 s	SIP7	19.65 x 7.0 x 10.2 mm (0.8" x 0.3" x 0.4")	IEC/EN60950-1	Isolated independent dual outputs operating temperature range: -40°C to +85°C
DICAL		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	32.35 x 14.7 x 11.1 mm (1.3" x 0.6" x 0.4")	EN/UL60950-1 EN61010-1 ANSI/AAMI ES60601-1 IEC/EN/UL62368-1	Medical approved (/R6.4 & /R8 versions) operating temperature range: -40°C to +90°C single, dual or asymmetric output options
BICAL	RxxP2xx series	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	19.5 x 9.8 x 12.5 mm (0.8" x 0.4" x 0.5")	EN/UL60950-1 EN/IEC/UL60601-1 ANSI/AAMI ES60601-1 IEC/EN/UL62368-1	Medical approved (/R6.4 & /R8 versions) operating temperature range: -40°C to +95°C single, dual or asymmetric output options
	RI3 series	RI3	3	5, 12, 15, 24	5, 9, 12, 15	1, 2, or 3 kVDC / 1 s	SIP4	11.5 x 7.6 x 10.2 mm (0.5" x 0.3" x 0.4")	EN/IEC/UL60950-1	Very high power density operating temperature range: -40°C to +100°C
	RK23 series	RKZ3	3	5, 12, 24	5, 12	3 or 4 kVDC / 1 s	SIP7	19.6 x 7.5 x 12.2 mm (0.8" x 0.3" x 0.5")	IEC/EN62368-1	High power density efficiency up to 90% pin-compatible with RK & RKZ
	Bifts since	RHV3	3	5, 12, 24	5, 12, 24, ±5, ±12	20 kVDC / 1 s	SIP16	45.0 x 15.0 x 17.0 mm (1.7" x 0.6" x 0.7")	IEC/EN62368-1 IEC/EN61010-1	Compact SIP16 case with >30mm pin separation low 4pF max. isolation capacitance operating temperature range: -40°C to +80°C at full load

Power (W)

Vin (VDC)

• 0.5 to 300 watts

- Economical design available

Case / Dimensions (LxWxH)

- (/P) short circuit protection
- (Z), (W) wide input range

Certifications

- (-HC) heatsink available
- (/SMD) surface mount device

#### REGULATED

Series

- Isolation voltages up to 10 kVDC
- Short circuit protection

Vout (VDC)

- Modified standards available
- (-R) tape & reel packaging

Isolation

- (/M) metal case

Other features

C Converters		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 UL60950-1 EN/IEC/UL62368-1	Operating temperature range: -40°C to +100°C regulated output with internal linear regulator industry standard pinout
REPERTING MEDICAL Gaston	аннин	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 UL/IEC/EN62368-1 IEC/EN60601-1	Operating temperature range: -40°C to +140°C 1kVAC working voltage CTRL, SYNC, and UVLO selectable outputs
C 3D PPP	- Contraction	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
POW PPPP	- CHARLEN	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
nev		RxxC1TFxxS	1	3-3.5	3.3, 5	3 kVAC / 1 s	DFN	5.0 x 4.0 x 1.2 mm (0.2" x 0.2" x 0.05")	N/A	Operating temperature range: -40°C to +125°C adjustable output (0.6V to 12V) 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%
	Rectand Rectander of the	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

• 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

• (/M) – metal case

	Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / D	imensions (LxWxH)	Certifications	Other features
PP 9 PP 9 FKAS		R1ZX	1	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/EN/UL60950-1 EN/IEC/UL62368-1	Operating temperature range: -40°C to +100°C regulated output with internal linear regulator industry standard pinout
		RAZ	1	5, 12, 24	5	1.25 or 2.5 kVDC / 1 s	SMD	18.0 x 8.7 x 7.8 mm (0.7" x 0.3" x 0.3")	IEC/EN60950-1 EN60601-1	Operating temperature range: -40°C to +85°C
-	RSO series • @ As-	RSO (Z)	1	4.5-9, 9-18, 18-36, 36-72 9-36, 18-72 (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")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +85°C economical design available (RSOK-Z)
	Honoren RSOK Leden F	RSOK-Z /H3 (/ADJ)	1	9-36	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 /ADJ for adjustable output (3.3 - 17V) economical design
	RY series	RY	1	5, 9, 12, 15, 24	5, 9, 12, 15, 24 ±5, ±9, ±12, ±15, ±24	1 kVDC / 1 s	SIP7	19.65 x 7.05 x 10.2 mm (0.8" x 0.3" x 0.4")	EN60950-1	Control pin (on/off) operating temperature range: -40°C to +70°C
-	RYK/H series	RYK	1	5	3.3, 5	4 kVDC / 1 s	SIP7	19.6 x 6.0 x 10.2 mm (0.7" x 0.2" x 0.4")	EN/IEC/UL62368-1	Operating temperature range: -40°C to +105°C efficiency up to 81% post regulated
-		R2M (/SMD)	2	9-18, 18-36, 36-72	3.3, 5, 9, 12, 15, 24, ±5, ±12, ±15	1.6 kVDC / 1 min	DIP8 SMD	13.2 x 9.1 x 10.2 mm (0.5" x 0.4" x 0.4") 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 efficiency up to 81%
-	RS series	RS (Z)	2	4.5-9, 9-18, 9-36, 18-36, 18-72, 36-72 (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")	EN/IEC/UL60950-1	Operating temperature range: -40°C to +85°C economical design available (RSK-RUW)

0.5 to 300 wattsIsolation voltages up to 10 kVDC

Short circuit protection

- Economical design available
- Modified standards available

• (-R) – tape & reel packaging

- (Z), (W) wide input range
  - (-HC) heatsink available

• (/P) – short circuit protection

- (/SMD) surface mount device
- (/M) metal case

REGULATED	

Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / Di	mensions (LxWxH)	Certifications	Other features
PSK-RIW strike	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 /ADJ for adjustable output (3.3 - 17V) 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 compact SMD package, control pin (on/off) 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 CAI//CSA-C22.2 NO. 62368-1	2W power in compact SMD package efficiency up to 84% operating temperature range: -40°C to +100 °C
	RW2	2	4.5-9, 9-18, 18-36, 36-72	3.3, 5, 12, 15, ±5, ±9, ±12, ±15	1, 2, or 3 kVDC / 1 s	Mini DIP16 DIP16 SMD	22.1 x 12.55 x 8.5 mm (0.9" x 0.5" x 0.3") 24.2 x 14.50 x 9.7 mm (1.0" x 0.6" x 0.4") 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 DIP16 Mini smaller case size (/B) SMD package available (/SMD)
	R3M/SMD	3	4.5-18, 9-36, 18-75	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 +105°C 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 IEC/EN62368-1	Operating temperature range: -40°C to +100°C no minimum load required optional UVLO (/X1) economical design
Time mi	REC3-R	3	4.5-5.75, 10.2-13.8, 20.4-27.6	5, 12, 15 ±5, ±12, ±15	1 kVDC / 1 s	dip24 SMD	32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 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 SMD package (/SMD) or metal case (/M)
	REC3-RW(Z)	3	4.5-9, 9-18, 18-36, 36-72 9-36, 18-72 (Z)	3.3, 5, 9, 12, 15, ±5, ±12, ±15	2, 4, or 6 kVDC / 1 s	dip24 SMD	32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 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 SMD package (/SMD) or metal case (/M)

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

REGULATED

MED

- (-R) tape & reel packaging

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	Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / Dimensions (LxWxH)		Certifications	Other features
DICAL		REM3(W)	3	4.5-9, 9-18, 18-36, 36-75 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 CAN/CSA60601-1 IEC/EN60601-1 EN60601-1-2	Reinforced isolation for 250VAC working voltage CF rated outputs, 5000m altitude 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 EN50155 EN45545-2	Designed for railway and industrial applications operating temperature range: -40°C to +105°C CE marked 3 kVAC/ 1 min reinforced insulation
	RS3 series · $rac{1}{N}$ .m.	RS3 (Z)	3	4.5-9, 9-18, 18-36, 36-72 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 control pin (on/off) economical design available (RS3K-Z)
	BSIX series · · · · ·	RS3K-(Z)/H3	3	4.5-9 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 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 CAN/CSA-C22.2 NO. 62368-1	3W power in compact SMD package efficiency up to 83% operating temperature range: -40°C to +100°C
	_						DIP24	32.3 x 14.7 x 7.0 mm (S) (1.3" x 0.6" x 0.3")		
	TIT.	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) 3 kVDC / 1 s (D)	smd Dip24	(1.3" x 0.6" x 0.2" mm (S) (1.3" x 0.6" x 0.4") 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 SMD package for RW-S available (/SMD)
		Rxx-B	3 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 cascadable for output voltages up to 400VDC remote voltage programming by external voltage or resistance
DICAL		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 EN/IEC/UL60601-1	Reinforced isolation (/R8 & /R10) operating temperature range: -40°C to +85°C no minimum load required

• 0.5 to 300 watts

Short circuit protection

• Isolation voltages up to 10 kVDC

- Economical design available
- Modified standards available
- (-R) tape & reel packaging
- (Z), (W) wide input range
- (/SMD) surface mount device
- (/M) metal case

pinning option (A) or (C), optional UVLO (/X1)

- (-HC) heatsink available

• (/P) – short circuit protection

#### REGULATED

Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / D	imensions (LxWxH)	Certifications	Other features
	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) 6 kVDC / 1 min (SMD)	dip24 SMD	31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 31.8 x 20.3 x 11.2 mm (1.3" x 0.8" x 0.4")	EN/IEC/UL60601-1 ANSI/AAMI ES60601-1	250VAC working voltage isolation clearance and creepage distance >8mm up to 10kVDC reinforced insulation 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 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 derates to 110°C ambient temperature ON/OFF control pin 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 SMD	31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 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 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 derates to 110°C ambient temperature ON/OFF control pin, UVLO and SCP /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) 6 kVDC / 1 min (SMD)	DIP 24 SMD	31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 31.8 x 20.3 x 11.2 mm (1.3" x 0.8" x 0.4")	EN/IEC/UL60601-1 EN/IEC60601-1-2	250VAC working voltage isolation clearance and creepage distance >8mm up to 10kVDC reinforced insulation operating temperature range: -40°C to +85°C 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 UL60950-1 EN/IEC62368-1	Operating temperature range: -40°C to +100°C no minimum load required optional UVLO (/X1) economical design
	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	32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4")	UL60950-1 EN/IEC/UL60601-1	Reinforced isolation (/R8 & /R10) operating temperature range: -40°C to +75°C no derating pinning option (A) or (C), optional UVLO (/X1)

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• 0.5 to 300 watts

43-160 (W)

- Economical design available
- (/P) short circuit protection
  - (Z), (W) wide input range
  - (-HC) heatsink available

#### • (/SMD) - surface mount device

• (/M) – metal case

•	isolation voltages up to	10	K
•	Short circuit protection		

- Isolation voltages up to 10 kVDC Modified standards available
  - (-R) tape & reel packaging

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	Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / D	imensions (LxWxH)	Certifications	Other features
AL	and the second s	REM6(W)	6	4.5-9, 9-18, 18-36, 36-75 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")	ANSI/AAMI ES60601-1 EN/ICE60601-1 EN60601-1-2	Reinforced isolation for 250VAC working voltage CF rated outputs, 5000m altitude operating temperature range: -40°C to +105°C
AL		REM6E	6	9-18, 18-36, 36-75	9, 12, 15, 24 ±9, ±12, ±15	8 or 10 kVDC / 1 s (DIP24) 6 kVDC / 1 min (SMD)	DIP24 SMD	31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 31.8 x 20.3 x 10.9 mm (1.3" x 0.8" x 0.43")	ANSI/AAMI ES60601-1 EN/IEC60601-1-2 EN/IEC60601-1	2MOPP, 250VAC working voltage isolation clearance and creepage distance >8mm up to 10kVDC reinforced insulation operating temperature range: -40°C to +75°C no derating
		RP06-RAW	6	36-160	3.3, 5, 12, 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 EN50155 EN45545-2	Designed for railway and industrial applications operating temperature range: -40°C to +105°C CE marked 3 kVAC/ 1 min reinforced insulation
	RS6 series	RS6	6	4.5-9, 9-18, 18-36, 36-75	3.3, 5, 12, 15, ±5, ±12, ±15	1.6 kVDC / 1 min 2 kVDC / 1 s	SIP8	21.8 x 9.2 x 11.1 mm (0.9" x 0.4" x 0.4")	EN60950-1 EN/IEC62368-1	Very high power density operating temperature range -40°C to +75°C 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 SMD	32.0 x 20.3 x 10.5 mm (1.3" x 0.8" x 0.4") 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 no derating 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 SMD	32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 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 no derating 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"	25.4 x 25.4 x 10.5 mm (1.0" x 1.0" x 0.4")	EN/IEC/UL62368-1 IEC60950-1	Compact 1"x1" package CTRL and UVLO standard Operating temperature range:-40°C to +75°C no derating
		RP08-A(W)	8	9-18, 18-36, 36-75 9-36, 18-75, 43-160 (W)	3.3, 5, 12, 15, ±5, ±12, ±15	1.6 kVDC / 1 min	DIP24 SMD	31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 32.0 x 20.3 x 11.2 mm (1.3" x 0.8" x 0.4")	EN/IEC/UL60950-1 EN50155 EN50121-3-2	Operating temperature range: -40°C to +85°C RP08-AW designed for railway applications

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(1.3" x 0.8" x 0.4")

• 0.5 to 300 watts

- Economical design available
- (/P) short circuit protection
  - (Z), (W) wide input range
  - (-HC) heatsink available
- (/SMD) surface mount device

#### REGULATED

- Short circuit protection
- Modified standards available • (-R) – tape & reel packaging

Contifi

• (/M) – metal case

	Series	Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / Di	imensions (LxWxH)	Certifications	Other features
MEDICAL MEDICAL	REC10/M(Z)	10	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	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 no derating high isolation
	REC10-RW(Z)	10	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 SMD	32.0 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 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 no derating SMD package available (/SMD) high isolation
	REM10(W)	10	4.5-9, 9-18, 18-36, 36-75 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 ANSI/AAMI ES60601-1 EN60601-1-2	Reinforced isolation for 250VAC working voltage CF rated outputs, 5000m altitude operating temperature range: -40°C to +100°C
	RP10-A(W)	10	9-18, 18-36, 36-75 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 no derating optional heatsink with clamps (-HC)
	RP10-E(W)	10	9-18, 18-36, 36-75 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 no derating 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 EN50155 EN45545-2	Designed for railway and industrial applications operating temperature range: -40°C to +105°C CE marked 3 kVAC/ 1 min reinforced insulation
R PPP PP	rstz-z series	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 operating temperature range: -40°C to +80°C
	RP12-A(W)	12	9-18, 18-36, 36-75 9-36, 18-75 (W)	3.3, 5.1, 12, 15, ±5, ±12, ±15	1.6 kVDC / 1 min	DIP24 SMD	31.8 x 20.3 x 10.2 mm (1.3" x 0.8" x 0.4") 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

This Selection Guide represents only the latest most popular products of our portfolio. Please check <u>www.recom-power.com</u> for additional products.

RPM(D)

REC20 (Z)

• 0.5 to 300 watts Isolation voltages up to 10 kVDC

9.5-36, 10-40, (D)

18-36, 18-75,

36-75

9-18, 18-36,

36-75, 9-36,

18-75

(Z)

 $\pm 5, \pm 12, \pm 15$ 

5/±12, 5/±15

3.4, 5.1, 12, 15

±5, ±12, ±15

15-60

20

• Short circuit protection

• Economical design available

• (-R) - tape & reel packaging

Modified standards available

(4.0" x 2.3" x 0.7")

(1.0" x 2.3" x 4.9")

(2.0" x 1.0" x 0.4")

(2.0" x 1.0" x 0.4")

50.8 x 25.4 x 10.2 mm

50.8 x 25.4 x 10.5 mm (Z)

24.5 x 57.6 x 125.0 mm (D)

- (/P) short circuit protection
- (Z), (W) wide input range
- (-HC) heatsink available

EN/IEC60950-1

EN/IEC/UL60950-1

REGULATED

	Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / Di	mensions (LxWxH)	Certifications	Other features
		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 EN50155	Operating temperature range: -40°C to +100°C 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 1" x 1" package, efficiency up to 90% operating temperature range: -40°C to + 75°C no derating continuous short circuit protection
		REC15(-Z)/M	15	9-18, 18-36, 36-75 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 no derating, without CTRL pin (/X2)
CAL		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 UL62368-1 IEC60601-1 EN60601-1-2 ANSI/AAMI ES60601-1	Reinforced insulation for 250VAC working vol- tage, clearance and creepage distance > 8mm 5kVAC I/P to 0/P isolation operating temperature range: -40°C to +105°C
		RP15-A(W)	15	9-18, 18-36, 36-75 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 optional heatsink with clamps (-HC)
		RP15-F(W)	15	9-18, 18-36, 36-75 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 optional heatsink with clamps (-HC)
	A.			9.5-18, 9.5-36, 10-40, (D)	3.3, 5, 12, 15,			101.6 x 57.2 x 19.0 mm (4.0" x 2.3" x 0.7")		Reverse polarity protected, soft start panel mount/bulkhead version RPM

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2" x 1"

1.6 kVDC / 1 min

1.6 kVDC / 1 min

panel mount/bulkhead version RPM

continuous short circuit protection

DIN-Rail version RPMD, screw terminals

triple output only for 40W version available

Operating temperature range: -40°C to +100°C

full load up to +80°C with natural convection

- 0.5 to 300 watts
- Economical design available

Isolation

Modified standards available

Case / Dimensions (LxWxH)

- (-R) tape & reel packaging
- (/P) short circuit protection • (Z), (W) – wide input range

Certifications

Other features

- (-HC) heatsink available
- (/SMD) surface mount device
- (/M) metal case

#### REGULATED

Series

	Power (W)	Vin (VDC)	Vout (VDC)
REM20-W	20	9-36, 18-75	5, 12, 15, 24 ±5, ±12, ±15
		0-18 18-36	

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 UL62368-1 IEC60601-1 EN60601-1-2 ANSI/AAMI ES60601-1	Reinforced insulation for 250VAC working vol- tage, clearance and creepage distance > 8mm 5kVAC I/P to 0/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 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 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%
REM30-W	30	9-36, 18-75	5, 12, 15, 24 ±5, ±12, ±15	5 kVAC / 1 min	2" x 1"	50.8 x 25.4 x 10.2 mm (2.0" x 1.0" x 0.4")	UL60950-1 UL62368-1 IEC6061-1 EN60601-1-2 ANSI/AAMI ES60601-1	Reinforced insulation for 250VAC working voltage clearance and creepage distance > 8mm 5kVAC I/P to 0/P isolation industry standard pinout

0.5 to 300 wattsIsolation 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

• (/M) – metal case

REGULATED

Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / Di	imensions (LxWxH)	Certifications	Other features
	RP30-E(W)	30	9-18, 18-36, 36-75 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 (2.0" x 1.6" x 0.4")	UL60950-1	Operating temperature range: -40°C to +100°C optional heatsink with clamps (-HC)
	RP30-F(W)	30	9-18, 18-36, 36-75 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 +101°C optional heatsink with clamps (-HC)
	RPA30-AW	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 (1.0" x 1.0" x 0.4")	EN/IEC/UL60950-1 EN50155	Designed for railway and industrial applications operating temperature range: -40°C to +100°C optional glued heatsink (-HC)
	RP40-FR	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 (2.0" x 1.0" x 0.4")	UL60950-1 EN50155 EN50121-3-2	Designed for railway applications operating temperature range: -40°C to +105°C optional heatsink with clamps (-HC) CE and EAC marked
	RP40-G(W)	40	9-18, 18-36, 36-75 9-36, 18-75 (W)	3.3, 5, 12, 15, ±12, ±15 5/±12, 5/±15	1.6 kVDC / 1 min	2" x 2"	50.8 x 50.8 x 10.2 mm (2.0" x 2.0" x 0.4")	UL60950-1	Operating temperature range: -40°C to +100°C optional heatsink with clamps (-HC) available as power module RPM40-G(W)
State on any	RP40Q-RUW	40	16-160	5, 12, 15, 24, 48	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/IEC/UL62368-1 EN50155	12:1 ultra-wide input voltage range operating temperature range: -40°C to +105°C optional fitted heatsink (-HC), CE marked "B" for Bus & UVP adjustability
	RPA40-FR	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 (2.0" x 1.0" x 0.4")	UL/IEC/EN62368-1 EN45545-2 EN50155	Designed for railway and industrial applications operating temperature range: -40°C to +105°C efficiency up to 90%
	RPA50S-W	50	18-75	3.3, 5, 12	2.25 kVDC / 1 min	1/16 brick	33.0 x 22.8 x 9.5 mm (1.3" x 0.9" x 0.4")	EN/IEC/UL60950-1	Economical design remote on/off and trim pins efficiency up to 91% Operating temperature range: -40°C to +85°C

REGULATED

• 0.5 to 300 watts

Short circuit protection

- Economical design available
- Modified standards available
  - (Z), (W) wide input range
- (/SMD) surface mount device
- (/M) metal case

#### • (-HC) – heatsink available

• (/P) – short circuit protection

#### Isolation voltages up to 10 kVDC

• (-R) – tape & reel packaging

	Series		Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / Di	imensions (LxWxH)	Certifications	Other features
CAL		REM60-W	60	9-36, 18-75	5, 5.1, 12, 15, 24, ±12, ±15	3 kVAC / 1min	1/4 brick	57.9 x 36.8 x 12.7 mm (2.3" x 1.4" x 0.5")	EN60601-1-2 ANSI/AAMI ES60601-1 UL/IEC/EN62368-1	Operating temperature range: -40°C to +105°C efficiency up to 90% 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"	50.8 x 50.8 x 10.2 mm (2.0" x 2.0" x 0.4")	UL60950-1	Operating temperature range: -40°C to +110°C optional heatsink with clamps (-HC) available as power module RPM60-G
-	SCENT PREMIUM	RP60Q-RUW	60	16-160	5, 12, 15, 24, 48	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/IEC/UL62368-1 EN50155	12:1 ultra-wide input voltage range operating temperature range: -40°C to +105°C optional fitted heatsink (-HC), CE marked "B" for Bus & UVP adjustability
	and a second second	RPA60-FW	60	9-36	5, 12, 15, 24	1.5 kVDC / 1 min	2" x 1"	50.8 x 25.4 x 10.2 mm (2.0" x 1.0" x 0.4")	EN/IEC/UL60950-1 EN50155 EN50121-3-2	Designed for railway and industrial applications operating temperature range: -40°C to +100°C optional glued heatsink (-HC)
-		RP75H-RW	75	9-36, 18-75, 43-160	5, 12, 15, 24, 48	2.25 kVDC / 1 min 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 EN50155	Designed for railway and industrial applications operating temperature range: -40°C to +100°C 3 kVAC / 1 min reinforced isolation for 110VDC optional fitted heatsink (-HC), CE, and EAC marked
-	a CC	RP90Q-RW	90	9-36, 16.5-75, 40-160	5, 12, 15, 24, 48	2.25 kVDC / 1 min 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 EN50155	Designed for railway and industrial applications operating temperature range: -40°C to +95°C 3 kVAC / 1 min reinforced isolation for 110VDC optional fitted heatsink (-HC), CE, and EAC marked
-	All and a second	RP100H-RW	100	9-36, 16.5-75, 43-160	5, 12, 15, 24, 48	2.25 kVDC / 1 min 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 EN50155	Designed for railway and industrial applications operating temperature range: -40°C to +105°C 3 kVAC / 1 min reinforced isolation for 110VDC optional fitted heatsink (-HC), CE, and EAC marked
-	AND AND	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 UVLO, OTP, OVP, OCP, and SCP economical design, selectable outputs CTRL and remote sense pins

This Selection Guide represents only the latest most popular products of our portfolio. Please check www.recom-power.com for additional products.

REGULATED

Series

• 0.5 to 300 watts

Short circuit protection

Isolation voltages up to 10 kVDC

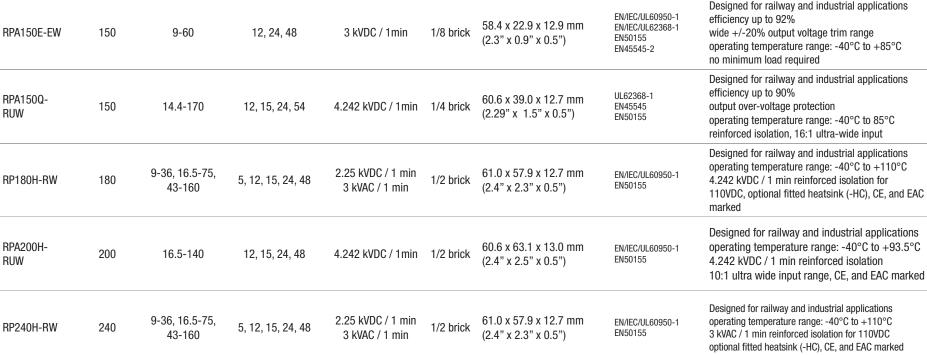
Economical design available

(-R) – tape & reel packaging

- Modified standards available
- (/P) short circuit protection
  - (Z), (W) wide input range
  - (-HC) heatsink available

• (/M) – metal case

	Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / Di	mensions (LxWxH)	Certifications	Other features
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 EN50155 EN50121-2-3	Designed for railway and industrial applications operating temperature range: -40°C to +97°C 4.242 kVDC reinforced isolation 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 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 EN50155	Designed for railway and industrial applications operating temperature range: -40°C to +95°C 3 kVAC / 1 min reinforced isolation for 110VDC 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 EN50155	Operating temperature range: -40°C to +105°C efficiency up to 90% 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 EN/IEC/UL62368-1 EN50155	Designed for railway and industrial applications efficiency up to 92% wide +/-20% output voltage trim range



- 0.5 to 300 watts
- Economical design available
- (/P) short circuit protection
  - (Z), (W) wide input range
  - (-HC) heatsink available
- (/SMD) surface mount device

REGULATED

- Short circuit protection
- Modified standards available
- (-R) tape & reel packaging

- (/M) metal case

Series	Power (W)	Vin (VDC)	Vout (VDC)	Isolation	Case / Dimensions (LxWxH)	Certifications	Other features
REC300H-W	300	9-36	12, 15, 24, 48	3 kVDC / 1 min	1/2 brick 61.0 x 57.9 x 12.7 mm (2.4" x 2.3" x 0.5")	EN62368-1	Operating temperature range: -40°C to +100°C efficiency up to 90% OTP, OVP, OCP, UVLO, remote ON/OFF control
RPA300E	300	36-72	32	2.25 kVDC / 1 min	1/8 brick 58.4 x 22.8 x 12.7 mm (2.3" x 0.9" x 0.5")	UL62368-1	Operating temperature range: -40°C to +85°C UVLO, OTP, OVP, OCP, and SCP, economical de- sign, selectable outputs, CTRL and remote sense pins, high efficiency up to 94.8%

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
MEDICAL Socol-	RP-stri 5090 series	RP-xx1509D RP-xx06S	1	5, 12, 24 5, 12, 15, 24	+15/-9 6	5.2 kVDC / 1 s	SIP7	19.65 x 7.05 x 10.2 mm (0.8" x 0.3" x 0.4")	EN/IEC/UL60950-1 IEC/EN60601-1	Designed for isolated IGBT or GaN drivers operating temperature range: -40°C to +85°C RP-xx06S series medical approved
	RuxP1542D series	RxxP1509D RxxP06S	1	5, 12, 24 5, 12, 15, 24	+15/-9 6	6.4 kVDC / 1 s	SIP7	19.5 x 9.8 x 12.5 mm (0.8" x 0.4" x 0.5")	EN/IEC60950-1 EN/IEC/UL62368-1	Designed for isolated IGBT or GaN drivers operating temperature range: -40°C to +90°C
		RGZ-xx1509D	2	5, 12, 24	+15/-9	3 or 4 kVDC / 1 s	DIP14	19.9 x 10.0 x 7.1 mm (0.8" x 0.4" x 0.3")	EN60950-1	Asymmetrical outputs designed for isolated IGBT drivers operating temperature range: -40°C to +90°C
	RKZ-xx1509D series	RKZ-xx1509D RKZ-xx2005D	2	5, 12, 24 5, 12, 15, 24	+15/-9 +20/-5	3 or 4 kVDC / 1 s	SIP7	19.65 x 7.05 x 10.2 mm (0.8" x 0.3" x 0.4")	EN/IEC/UL60950-1	Asymmetrical outputs designed for isolated IGBT/SiC drivers operating temperature range: -40°C to +100°C
		RV-xx1509D	2	5, 12, 24	+15/-9	6 kVDC / 1 s	DIP24	32.35 x 14.7 x 11.1 mm (1.3" x 0.6" x 0.4")	EN60950-1	Asymmetrical outputs designed for isolated IGBT drivers operating temperature range: -40°C to +90°C
	RxxP21500D series	RxxP21503D RxxP21509D RxxP22005D RxxP209S	2	12, 15, 24 5, 12, 24 5, 12, 15, 24 5, 12, 15, 24	+15/-3 +15/-9 +20/-5 9	6.4 kVDC / 1 s	SIP7	19.5 x 9.8 x 12.5 mm (0.8" x 0.4" x 0.5")	EN/IEC/UL60950-1 EN/IEC/UL62368-1	Asymmetrical outputs designed for isolated IGBT/SiC drivers operating temperature range: -40°C to +95°C
new		RxxC2Txx	2	21-27	+2.5/- 22.5 -2.5/-22.5	3 kVAC / 1 min	SMD	12.83 x 7.5 x 3.55 mm (0.5" x 0.3" x 0.1")	N/A	Progammable asymmetrical output voltages compact 12.83x7.5mm 36 Pin SSO Package OPP, OTP, UVLO, and OVLO
	HOUSE AND AND A AND A	RA3/SMD	3	5, 12, 24	8, 9, +7/-1, +15/-3, +15/-5 +20/-5	5.2 kVDC / 1 min	DIP16 SMD	23.4 x 15.0 x 8.5 mm (0.9" x 0.6" x 0.3")	UL/IEC/EN62368-1 EN61204-3	Operating temperature range: -40°C to +85°C ideal for IGBT, Si, SiC, and GaN gate drive power 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

with OR-ing diode

· Remote control and

Power good signal

- Compact designOutput decoupling
- Modified standards available

• No external components needed

• Adjustable output voltage

	Series	Power (W)	Vin	Vout (VDC)	Isolation	Case / Dimensions (LxWxH)	Certifications	Other features
COMING	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
COMING	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
new	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
new	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	Utra wide input range for 24V-110Vnom, efficiency up to 95%, designed for natural convection, 10% peak load capability to 330W for 10s, "-E" for ex- tended ambient temperature range (-50°C to +90°C)
new	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 IS07637-2	IP67 protection for selective model operating temperature range: -40°C to +75°C protections: input reverse polarity input UVLO, output OCL, SCP, OVP, OTP
new	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 IS07637-2	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/IS07637-2 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
								IP65 (24V)/IP69k (13V) protection for selective

	POWER SOLUTIONS PLUG & PLAY		● Int wi ● Ap	<ul> <li>40 to 4000 watts</li> <li>Interchangeable with Melcher RCM-series</li> <li>Approved as per latest standards</li> </ul>		wide and ultra wide voltage range rse polarity protection up time 10ms included h current limitation	<ul> <li>Compact design</li> <li>Output decoupling with OR-ing diode</li> <li>Remote control and Power good signal</li> </ul>	<ul> <li>No external components needed</li> <li>Modified standards available</li> <li>Adjustable output voltage</li> </ul>
	Series	Power (W)	Vin	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 (8.23" x 5.56" x 1.9")	EN50155 EN50124-1 IEC/EN62368-1 EN61373	Temperature class 0T4 ST1 & ST2 -40°C/+85°C efficiency up to 95% designed for natural convection and baseplate cooling
	RMOD500-W (/OR)	500	32-96	13.7, 12.4, 24.5 13, 11.7, 23.5 (/OR)	2.25 kVDC	198.0 x 113.0 x 45.0 mm (7.8" x 4.4" x 1.8")	IEC/EN/UL62368-1 EN12895-2015 EN55011 EN55014-2 CISPR11 Class A	IP67 protection, operating temperature range: -40°C to +90°C, protections: input reverse polarity, input UVLO, output OCL, SCP, OVP, OTP, control ON/OFF function
	RMOD600- EW	600	24-120	13	2.5 kVDC / 1 min	203.0 x 115.0 x 71.0 mm (8.0" x 4.5" x 2.8")	EN12895/CISPR11 Class A CE/IS07637-2 IEC/EN/UL62368-1	IP69k protection for selective model operating temperature range: -35°C to +80°C protections: input reverse polarity 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 (8.0" x 4.5" x 2.8")	CISPR11 Class A CE/IS07637-2 IEC/EN/UL62368-1	IP65 protection for selective model operating temperature range: -35°C to +85°C protections: input reverse polarity input UVLO, output OCL, SCP, OVP, OTP
COMING	RMD1000-W	600-1000	24, 36, 48, 72, 110	24, 36, 48, 72, 110	2.2 kvac	257.5 x 197 x 69.0 mm (10.2" x 9.7" x 3.1")	EN50155 EN62368-1 EN50121-3-2 EN50124-1 EN45545-2 EN61373	Designed for natural convection, and base plate cooling, flexible input - output voltage combination, temperature class OT4 ST1 & ST2 -40°C/+85°C
COMING	RMOD2000- EW	2000	180-950	14, 28	3 KVDC	316.0 x 254.0 x 83.0 mm (12.4" x 10.0" x 3.3")	EN62477-1 EN/ISO 114521 ECE R10	Supports nominal voltages from 250V to 800V high voltage DC/DC for e-mobility high IP level, liquid cooled or base plate cooled
COMING	RMOD4000- EW	4000	180-950	14, 28	3 KVDC	316.0 x 254.0 x 83.0 mm (12.4" x 10.0" x 3.3")	EN62477-1 EN/ISO 114521 ECE R10	Supports nominal voltages from 250V to 800V high voltage DC/DC for e-mobility high IP level, liquid cooled or base plate cooled

### **ACCESSORIES FOR DC/DC CONVERTERS**

Description

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

Suitable for

Other features

#### LINE INDUCTORS

Series

<b>Sea</b>	RLS-397	saturation current: 2.1A, inductance: 3.9µH	Ri3, RS, RSO, R1Z, RS3, R-78xx-1.0, R-78xx-0.5, R-78Exx-0.5, R-78A4xx-0.5, R-78Bxx-1.5, R-78Bxx-1.0L	Tested and approved in RECOM filter design RoHS compliant
	RLS-567	saturation current: 1.9A, inductance: 5.6µH	RK/H6, RI3, RS, RS3, RW2, R-78xx-1.0, R-78xx-0.5, R-78AAxx-0.5, R-78Cxx-1.0, R-78Bxx-1.5	Tested and approved in RECOM filter design RoHS compliant
Supra-	RLS-126	saturation current: 1.4A, inductance: 12µH	R1S, R2S, R1SE, RH/H6, RKZ, RS, RSO, REC5, R1Z, R-78bx-1.0, R-78bx-0.5, R-78Cxx-1.0, R-78bx-1.5	Tested and approved in RECOM filter design RoHS compliant
125-198	RLS-186	saturation current: 2.14A, inductance: 18µH	REC5	Tested and approved in RECOM filter design RoHS compliant
No ca	RLS-226	saturation current: 1.0A, inductance: 22µH	RO, RM, ROM, RK, RB, RP, RE, ROE, RK/H6, RH/H6, RxPxx, RKZ, REC5, RW2	Tested and approved in RECOM filter design RoHS compliant
100 M	RLS-686	saturation current: 1.05A, inductance: 68µH	R-78Exx-1.0	Tested and approved in RECOM filter design RoHS compliant
AS-100	RLS-105	saturation current: 1.1A, inductance: 100µH	REC5	Tested and approved in RECOM filter design RoHS compliant

### **ACCESSORIES FOR DC/DC CONVERTERS**

#### SURGE PROTECTORS

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

### **SWITCHING REGULATORS**

Standard pinoutMTBF 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

#### STEP DOWN

Series		Output current (A)	Vin (VDC)	Vout (VDC)	Case /	Dimensions (LxWxH)	Certifications	Other features
R-78HE-0.3	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) 100V surge with stand operating temperature range: -40°C to +105°C at 48V input, full load
R-78HB-05 series	R-78HB-0.5 R-78HB-24-0.3	0.5 (0.3)	9-72 (36-72)	3.3, 5, 6.5, 9, 12, 15 (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 high input voltage 90° pins (L)
B-76X-03 series	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 pin-out compatible with LM78xx linears up to 96% efficiency
B-78K-0.5 series	R-78K-0.5	0.5	4.5-36	1.5, 1.8, 2.5, 3.3, 5, 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 without derating, pin compatible with 78 series regulators, undervoltage protection up to 96% efficiency
B.7880/W Series	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 high input voltage flying wires
R-7900-005 series	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 flying wires up to 96% efficiency
HHH	R-78AA-0.5SMD	0.5	4.75-32	1.5, 1.8, 2.5, 3.3, 5, 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 adjustable output, on/off pin up to 97% efficiency
THE REAL	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 operating temperature range: -40°C to +85°C pinless design, on/off pin

This Selection Guide represents only the latest most popular products of our portfolio. Please check www.recom-power.com for additional products.

R-78K-1.0

Standard pinoutMTBF up to 21 million hours

Output current (A)

1.0

• (-R) – tape & reel packaging

Vin (VDC)

4.5-36

• (-Tray) – tray packaging

Vout (VDC)

1.8, 2.5, 3.3, 5,

9, 12, 15

- Internal SMD construction
  - Wide operating temperature

Certifications

EN/IEC62368-1

• No heatsink required

STEP DOWN

Series

R-78K-1.0 series

Short circuit protectionVery high efficiency up to 98%

SIP3

Case / Dimensions (LxWxH)

11.5 x 7.55 x 10.2 mm

(0.5" x 0.3" x 0.4")

range

Other features Operating temperature range: -40°C to + 90°C without derating, pin compatible with 78 series regulators, undervoltage protection

R-78AA-1.0SMD       1.0       4.75-18       1.5, 1.8, 2.5, 3.3, 5       SMD       (0.6" x 0.4" x 0.4")       ENVIECC00950-1       adju         Image: Register of the second sec	o 95% efficiency
R-78B-1.0       1.0       4.75-32       1.5, 1.8, 2.5, 3.3, 5, 6.5, 9, 12, 15       SIP3       11.5 x 8.5 x 17.5 mm (0.5" x 0.3" x 0.7")       EN/IEC60950-1       90° efficion         R-78B-1.0       1.0       4.75-32       1.8, 2.2, 5, 0, 12, 15       SIP3       11.6 x 8.5 x 10.4 mm       EN/IEC60950-1       90° efficion         R-78B-1.0       1.0       5.42       1.8, 2.2, 5, 0, 12, 15       SIP3       11.6 x 8.5 x 10.4 mm       EN/IEC60950-1       90° efficion	rating temperature range: -40°C to +85°C stable output, on/off pin
B-78C-1.0 Series P 78C 1.0 1.0 5.42 1.8.2.2.5.0.12.15 SID2 11.6 x 8.5 x10.4 mm	rating temperature range: -40°C to +85°C pins (L), input voltage up to 32V iency up to 97% ut voltage up to 15V
	rating temperature range: -40°C to +85°C ut voltage up to 15V t voltage up to 42V ontinuous in small package
$(-1)^{-1}$ $(-1)^{-1}$ $(-1)^{-1}$ $(-1)^{-1}$	rating temperature range: -40°C to +85°C t voltage up to 42V
R-78B-1.5 (L) 1.5 4.5-18 3.3, 5, 6.5 SIP3 (0.5" x 0.3" x 0.7") IEC/EN60950-1 "L"	rating temperature range: -45°C to +85°C version with 90° pins iency 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 11.5 x 8.5 x 17.5 mm (0.5" x 0.3" x 0.7") EN/IEC62368-1 with regu	rating temperature range: -40°C to + 90°C out derating, pin compatible with 78 series lators, "L" version with 90° pins iency up to 96%
Bit Market         Bit Point         <	rating temperature range: -40°C to +85°C sense stable output, 90° pins (DA) rol pin (on/off)

Standard pinoutMTBF 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

#### STEP DOWN

	Series		Output current (A)	Vin (VDC)	Vout (VDC)	Case /	Dimensions (LxWxH)	Certifications	Other features
	n davi sriti i	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 (1.3" x 0.4" x 0.6")	IEC/EN60950-1	Operating temperature range: -40°C to +85°C adjustable output, 90° pins (D) control pin (on/off) efficiency up to 97%
	1.703 XIGH 1.703 XIGH 	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 (1.3" x 0.4" x 0.6")	IEC/EN60950-1	Operating temperature range: -40°C to +85°C adjustable output, 90° pins (D) control pin (on/off) efficiency up to 97%
		RPMA-4.5 RPMA-8.0	4.5 8	9-53	5-30 3.3-16.5	1/32 brick	19.1 x 23.4 x 9.6 mm (0.75" x 0.9" x 0.4")	N/A	Ultra-wide operating temperature range: -40°C to +85°C OCP and OTP, CTRL, and remote sense selectable outputs
OMING		RPMGE-10	10	18-75	5, 12	1/8 brick	56.4 x 22.9 x 11.97 mm (2.2" x 0.9" x 0.5")	N/A	Operating temperature range: -40°C to +120°C efficiency up to 92% adjustable output from 3.3 to 15VDC
		RPMGS-20	20	18-75	3.3-8 8-24	1/16 brick	36.83 x 34.04 x 15.0 mm (1.4" x 1.3" x 0.6")	N/A	Ultra-wide operating temperature range: -40°C to +120°C, efficiency up to 97% UVLO, OTP, and OCP protected adjustable output voltage
		RPMGQ-20	20	18-75	3.3-8 8-24	1/4 brick	56.4 x 36.83 x 15.0 mm (2.2" x 1.4" x 0.6")	N/A	Ultra-wide operating temperature range: -40°C to +120°C, efficiency up to 97% UVLO, OTP, and OCP protected adjustable output voltage
OMING SOON	-	RPMGH-40	40	18-75	5, 12	1/2 brick	61.0 x 57.9 x 14.89 mm (2.4" x 2.3" x 0.6")	N/A	Operating temperature range: -40°C to +120°C high efficiency up to 97% adjustable output voltage from 3.3 to 24VDC

COM SO

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

Switching Regulators

- Advanced 3D Power Packaging
- No heatsink required
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- 0.5 to 20A
- Wide operating temperature range
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- Fully-automated production

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

#### POWER MODULES

**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 / I	Dimensions (LxWxH)	Certifications	Other features
	24VIN BUCK							
EC-Q100	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	SCP, OCP, OTP, and UVLO efficiency up to 84% operating temperature range: -40°C to +125°C (with derating) compact design with low profile (2mm)
	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	Operating temperature range: -40°C to +107°C at full load very high efficiency up to 99% 6-sided shielding for low EMI
	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	Operating temperature range: -40°C to +105°C at full load very high efficiency up to 98% 6-sided shielding for low EMI
SURUPTO EC-Q100 SRADE	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	Very high power density 3A maximum output current very low 1.45mm profile enable, sense, and power good functions
SUNUFICS EC-Q100 CRADE	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	Operating temperature range: -40°C to +105°C at full load very high efficiency up to 97% 6-sided shielding for low EMI
	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	SCP, OCP, and UVLO efficiency up to 90% operating temperature range: -40°C to +125°C (with derating)
	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	Operating temperature range: -40°C to +90°C at full load very high efficiency up to 99% 6-sided shielding for low EMI

**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 / I	Dimensions (LxWxH)	Certifications	Other features
<b>КРМВ-3.0</b>	3	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	SCP, OCP, OTP, and UVLO efficiency up to 94% operating temperature range: -40°C to +125°C (with derating)
RPX-4.0	4	3.8-36	1-7	QFN	5.0 x 5.5 x 4.0 mm (0.2" x 0.2" x 0.2")	N/A	SCP, OCP, OTP, and UVLO efficiency up to 94% operating temperature range: -40°C to +125°C (with derating)
HIGH VOLTAGE BUCK							
RPMH-0.5	0.5	4.3-65	3.3, 5, 12, 15, 24	LGA-25	12.19 x 12.19 x 3.75 mm (0.5" x 0.5" x 0.2")	N/A	Wide input range, operating temperature range: -40°C to +95°C at full load on/off, sense, trim, power good, and sequencing functions"
RPMH-1.5	1.5	5-60	3.3, 5, 12, 15, 24	LGA-25	12.19 x 12.19 x 3.75 mm (0.5" x 0.5" x 0.2")	N/A	Wide input voltage range operating temperature range: -40°C to +100°C at full load
RPH-3.0	3	4.5-55	1-15	QFN	10.0 x 12.0 x 4.0 mm (0.39" x 0.47" x 0.16")	N/A	SCP, OCP, OVP, and UVLO efficiency up to 91% operating temperature range: -40°C to +125°C (with derating)

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 / I	Dimensions (LxWxH)	Certifications	Other features
BOOST				l			
R-78S series 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 (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 (0.5" x 0.5" x 0.2")	N/A	7µA standby power consumption SCP, OTP, OCP 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 (2.4" x 2.5" x 0.5")	EN/IEC62368-1	Adjustable output voltage and current efficiency up to 96% operating temperature range: -40°C to +85°C without derating

### **LED DRIVERS**

• 3 to 25 watts

Constant current or

constant voltage available

High efficiency

• Ultra-low profile packages

• Modified standards available

AC/DC CONSTANT CURRENT

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

LED Drivers

# **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
Ħ	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 EN61373 EN50121-3-2	Buck topology IP67 rated wired version available (/W) Vref out (/Vref) digital PWM and analog voltage dimming
<b>Q</b>	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 EN61373 EN50121-3-2 EN55022	Buck topology low profile, class B filter built-in tape & reel packaging (-R)
P	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") 32.6 x 16.0 x 11.2 mm (/M) (1.3" x 0.7" x 0.4")	EN/UL60950-1 EN61373 EN50121-3-2	Buck topology wired version with Vref out available (/W) IP67 rated for wired version (/W) 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 constant current output (350, 700, or 1050mA) digital PWM and analog voltage dimming 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 compatible with all RECOM dimmable drivers spring terminals
RELV4-16	DALI Bus power supply	3.2	90-264	Designed to power the DALI bus DALI compliant 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, cascadable 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.

30kw BATTERY CHARGERS           INVERTERS   PFC FRONT ENDS			AC line	ower solutions for DC o with DC, 1AC, or 3AC perating temperature		W with 3AC input and vehicle C • Battery	applications & rugge solutions up to 4kW charging & battery ng 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 (7.2" x 6.5" x 1.6")	MIL-STD-704A MIL-STD-810F DEF-STAN 59-41 D0-160E/ED14E BS:2011, IPC-A-610D MIL-HDBK-217F 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 24-72-110VDC: 200-240VAC	3500VAC	289.0 x 128.0 x 100.0 mm (11.4" x 5.0" x 3.9")	EN50155 EN50121-4, -3-2 EN50124-1, EN50125-3 EN61373 (1B) EN62368-1 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 (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 (7.3" x 3.1" x 1.7")	EN61000-6-2 EN61000-6-4 EN61000-3-2/A14 EN62368-1 CE	Modular power factor correction mobile or stationary use excellent performance compact design, high efficiency

**Custom Solutions** 





## **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

Series		Power (W)	Vin	Vout (VDC)	Isolation	Case / Dimensions (LxWxH)	Comply with	Other features
	IPS1200	1200	48VDC±10% 24V or 48VDC	115V 3AC	1500VAC	250.0 x 149.9 x 96.7 mm (9.8" x 5.9" x 3.8")	MIL-STD-461F (Cat. Submarine) AECTP-400 (Edt.3) Method 403 AECTP-400 (Edt.3) Method 401 MIL-STD-810F 807.4, CE	Navi/marine inverter base plate cooling high efficiency, compact design robust, high reliability
	PFC1600	1600	230V 1AC	360	N/A	186.0 x 158.0 x 44.0 mm (7.3" x 6.2" x 1.7")	EN61000-6-2 EN61000-6-4 EN61000-3-2/A14 EN62368-1 CE	Modular power factor correction mobile or stationary use excellent performance compact design, high efficiency
	MA2000	1400-2000	90-264VAC 3-120VDC	12 2-80	1750VAC	318.0 x 212.0 x 165.0 mm ( 12.5" x 8.3" x 6.4")	EN61000-6-1, -6-3 EN62368-1 EN61010 EN60068-2-6 EN61326 class B CE	Battery conditioner for e-mobility production automotion digital regulation concept high functionality
	PFC3200	3200	230V 1AC	365	N/A	199.0 x 186.0 x XX.0 mm (7.8" x 7.3" x xx.0" )	EN61000-6-2 EN61000-6-4 EN61000-3-2/A14 EN62368-1 CE	Modular power factor correction mobile or stationary use, excellent performance compact design, high efficiency easy to integrate
	RMOC(D) 3200	3200	400V 3AC or 700VDC	24-110	1500VAC	410.0 x 235.0 x 85.0 mm (16.1" x 9.2" x 3.3")	EN62368-1 EN61000-6-2, -6-4 EN50155, EN50121-3-2 EN61373 1B EN50124-1, EN50153 EN45545-2	Battery charger for mobile applications railway-approved according to EN50155 robust and compact design interface for data communication
	PFC4000	4000	230-480V 3AC	360	N/A	Plattform design	EN61000-6-2 EN61000-6-4 EN62638-1 CE	Modular power factor correction mobile or stationary use excellent performance compact design, high efficiency
	RM0C4000	4000	115VAC 400V 3AC	24, 48 24, 48, 60	>200MW with 500VDC	617.0 x 483.0 x 132.0 mm (24.3" x 19.0" x 5.2")	STANAG 1008 EN62638-1 CE101 RE101 RE102 (Navy Fixed) CS101	Robust, compact design high efficiency industry AC power supply for 700VDC version see SD4000
alth	SD4000	4000	320/450 600VDC	24, 48	1500VAC	483.5 x 370.0 x 132.0 mm (19.0" x 14.5" x 5.2")	EN62368-1 EN61000-6-2 EN61000-6-4 CE	Converter for high level DC-input traction battery 320VDC / 450VDC / 600VDC high efficiency robust, compact design

### **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

Ve

- OCP, OTP, OVP, and SCP
- Battery charging & battery

Special applications & rugged
vehicle solutions up to 4kW
Battery charging & battery

balancing up to 30kW

Series		Power (W)	Vin	Vout (VDC)	Isolation	Case / Dimensions (LxWxH)	Comply with	Other features
00 00	RMOC5000	5000	360-440V 3AC	39.5-58	4 kvac	526.0 x 483.0 x 88.0 mm (20.7" x 19.0" x 3.5")	EN62368-1 EN50125-3 EN50129 EN50124-1/A1/A2 EN50121-3-2,-4 EN50155, EN45545-2	5kw battery charger for mobile use railway-approved concept 3Ph-AC input with active PFC output for 24V up to 110V battery
510	SAB10000	10000	340-470V 3AC 520-700VDC	20 24	1500VAC	670.0 x 443.0 x 128.0 mm (26.4" x 197.4" x 5.0")	EN62368-1 EN61000-6-4, -3-2 EN61000-4-2, -4-3 EN61000-4-4, -4-5 EN61000-4-6, -4-8 EN61000-4-11	Bidirectional battery balancer for e-mobility production automation digital regulation concept high functionality
	MA11000	11000	180-480V 3AC	24, 48	1500VAC	503.0 x 430.0 x 141.0 mm (19.8" x 16.9" x 5.5")	EN61000-6-3 EN61000-6-1 EN62368-1, EN61010 EN60068-2-6 EN60068-2-6 EN61326 class B CE	Battery conditioner for e-mobility production automotion digital regulation concept 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.

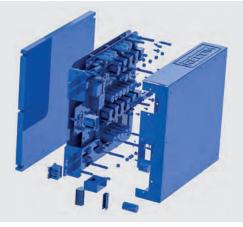
RECOM has design teams in Austria, Italy, China, and Taiwan, who design with the latest technologies, using state-of-theart CAD tools for circuit emulation and thermal simulation. In-house EMC test facilities can confirm compliance with international standards and our experienced R&D engineers ensure 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

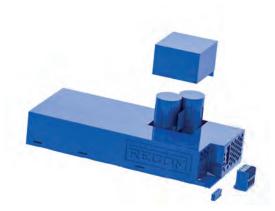
Full customs can be designed from sub-1W to kilowatts by our engineering teams in Austria, Italy, Taiwan, and China, depending on the individual specification. RECOM's subsidiary company PCS in Italy has particular expertise in custom high-power single- and three-phaseAC/DCs, DC/DCs, battery chargers/ 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		



recom-power.com/vrtour

# **RECOM POWER WORLDWIDE**

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