	Simpex Electronic AG Binzackerstrasse 33 CH-8620 Wetzikon Telefon +41 44 931 10 30	www.simpex.ch contact@simpex.ch CHE-108.018.777 MWST	SIMPEX electronic
Features	 8:1 wide input volta SIP8 package Continuous short ci 	age range rcuit protection	RECOM DC/DC Converte
Regulated	No minimum load r 3kVDC/1min basic i	equired	
Converters	 88.5% typical effici 	ency	RSK-RUW

Description

The RSK-RUW series is a state-of-the-art isolated DC/DC converter that boasts an ultra-wide 8:1 input voltage range of 4.5-36 VDC. The RSK-RUW also includes ON/OFF control for added convenience and precision. The device delivers high accuracy and tight line and load regulation, ensuring stable performance even in challenging conditions. The RSK-RUW also includes continuous short circuit protection and undervoltage lockout (UVLO) for added safety and security. This product is certified according to IEC/EN/UL 62368-1, making it suitable for use in a variety of industrial applications. With a maximum output power of 2W and the ability to operate at 0% minimum load, the RSK-RUW is very versitile. The device also offers high efficiency, with a typical value of 88.5%. Finally, the RSK-RUW offers basic grade isolation of 3kVDC/1min and an industrial operating temperature range of -40°C to 85°C without derating, making it ideal for use in demanding industrial environments.

Selection Guide								
Part Number	Input Voltage Range [VDC]	Output Voltage [VDC]	Output Current [mA]	Efficiency typ. ⁽¹⁾ [%]	max. Capacitive Load ⁽²⁾ [µF]			
RSK-2405SRUW/H3	4.5-36	5	400	88.5	2000			

Notes:

Note1: Efficiency is tested at nominal input and full load at +25°C ambient

Note2: Max Cap Load is tested at nominal input and full resistive load

Model Numbering

RSK-2405SRUW/H3

Output Voltage -----

3kVDC Isolation

Specifications (measured @ t_{amb}= 25°C, nom. V_{IN}, full load and after warm-up unless otherwise stated)

BASIC CHARACTERISTICS								
Parameter	Conc	lition	Min.	Тур.	Max.			
Internal Input Filter					capacitors			
Input Voltage Range	nom. V _{IN} :	= 24VDC	4.5VDC		36VDC			
Linder Voltage Leekeut (UVLO)	DC-D	OC ON	4VDC		4.3VDC			
Under voltage Lockout (UVLO)	DC-D	C OFF	3.3VDC		3.6VDC			
Quiescent Current					20mA			
Minimum Load			0%					
	DC-D	OC ON	Open or V _{CTRL} >1.5VDC					
	DC-D	C OFF	Short to -V _{IN} or <1.5VDC					
Input Current of CTRL Pin	DC-D	OC ON			1mA			
Standby Current	DC-D	C OFF		3mA	6mA			
Internal Operating Frequency			100kHz		400kHz			
Output Ripple and Noise (3)	20MHz BW	$V_{IN} = 5VDC$			50mVp-p			
		$V_{IN} = 24VDC$			100mVp-p			

Notes:

Note3: Measurements are made with a $0.1 \mu F$ MLCC across output (low ESR)

continued on next page





RSK-RUW series

2 Watt

Single Output

SIP8



UL62368-1 certified C22.2 No. 62368-1-19 certified IEC/EN62368-1 certified CB Report



RSK-RUW Series

 $\label{eq:specifications} Specifications \ (measured @ t_{amb} = 25^{\circ}C, nom. V_{IN}, full load and after warm-up unless otherwise stated)$



PROTECTIONS			
Parameter	Туре	Value	
Short Circuit Protection (SCP)		continuous, auto recovery	
Short Circuit Input Current	V _{IN} = 5V[00	500mA max.
Short Gircuit Input Gurrent	V _{IN} = 24V	DC	120mA max.
Jaclatian Valtage (5)	1 minuto	I/P to O/P	3kVDC
Isolation voltage	1 minute		1.5kVAC/50Hz
Isolation Resistance	I/P to O/P, V _{ISO} =	= 500VDC	1 G Ω min.
Isolation Capacitance	I/P to 0/P, 100	kHz/0.1V	50pF max.
Insulation Grade	according to 6	basic	
Notes:		·	

Note5: For repeat Hi-Pot testing, reduce the time and/or the test voltage

Note6: Refer to local safety regulations if input over-current protection is also required. Recommended fuse: slow blow type

RECOM DC/DC Converter

RSK-RUW Series

Specifications (measured @ tamb= 25°C, nom. VIN, full load and after warm-up unless otherwise stated)

ENVIRONMENTAL																								
Parameter	Condition															١	/alue							
Operating Temperature Range	with derating					ref	er to) "D	erat	ing	Graj	oh"			-40°C to +105°				I05°C					
Maximum Case Temperature																							+1	15°C
Temperature Coefficient																							±0.0)2%/K
Thermal Impedance					na	tural	con	vecti	on C).1n	n/s												36.	.0K/W
Operating Altitude																							5	000m
Operating Humidity						nc	n-co	onde	nsin	g												95	% RH	I max.
Pollution Degree																								PD2
								ν.	- 51	חח		t _{AM}	1B= +	-25	°C						3	3463 >	(10 ³	hours
MTRE		ac	cord	ding	to			V IN-	- 0	VD0		t _{AN}	_{1B} = +	-85	°C							749 >	(10 ³	hours
	MIL-HDE)BK-	217	7F, G	.В.			`	$t_{AMB} = +25^{\circ}C$ $t_{AMB} = +85^{\circ}C$							3	3404 >	(10 ³	hours				
							V _{IN} = 24VDC									1	034 >	(10 ³	hours					
Derating Graph (@ Chamber and natural convection 0.1m/s)	Output Load [%]	100 90 80 70 60 50 40 30 20 10 -4	40 -3	80 -2	20 -10		10	20 3	30 2) 70		90	100	(110 ⁻)5	1120							

SAFETY AND CERTIFICATIONS							
Certificate Type (Safety)	Report / File Number	Standard					
Audio/Video, information and communication technology equipment -		UL62368-1, 3nd Edition, 2019					
Part1: Safety requirements 3rd Edition	L491400-A0024-0L	CAN/CSA-C22.2 No. 62368-1-19 3rd Edition					
Audio/Video, information and communication technology equipment -	095 220120001 000	IEC62368-1:2018 3rd Edition					
Part1: Safety requirements 3rd Edition (CB Scheme)	000-220100901-000	EN IEC 62368-1:2020+A11:2020					
RoHS2		RoHS 2011/65/EU + AM2015/863					
EMC Compliance	Condition	Standard / Criterion					
Electromagnetic Compatibility of Multimedia Equipment - Emission	with external filter	EN55032 Class B					
Requirements							

EMC Filtering Suggestions according to EN55032



Component	List Class B	

C1/C2	CMC1	C3/C4
10µF	11µH	3kV

RECOM DC/DC Converter

RSK-RUW Series

$Specifications \ (measured @ t_{amb} = 25^{\circ}C, nom. V_{IN}, full load and after warm-up unless otherwise stated)$

DIMENSION AND PHYSICAL CHARACTERIS	STICS	
Parameter	Туре	Value
	Case	black plastic, (UL94 V-0)
Material	potting	PU, (UL94 V-0)
	PCB	FR4, (UL94 V-0)
Dimension (LxWxH)		21.8 x 9.2 x 11.1mm
Weight		4.7g typ.
Dimension Drawing (mm)		
		Pinning Information Pin # Single
		1 -Vin
		+Vin
0.5		<u> </u>
	┬╥╥╖┙──┿ └───╥─┘	5 NC
' Џ Џ	J U U U U	6 +Vout
2.01 7X 2.	54 ♀ 1 □ 0.64 ^{±0.05}	7 -Vout
<i>→</i> →		8 NC
		NC= no connection
	01.0 1 2 3 5 6 7 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Tolerance: $xx.x = \pm 0.5mm$ $xx.xx = \pm 0.25mm$

PACKAGING INFORMATION							
Parameter	Туре	Value					
Packaging Dimension (LxWxH)	tube	520.0 x 11.5 x 19.0mm					
Packaging Quantity	tube	22pcs					
Storage Temperature Range		-50°C to +125°C					
Storage Humidity	non-condensing	95% RH max.					

The product information and specifications may be subject to changes even without prior written notice. The product has been designed for various applications; its suitability lies in the responsibility of each customer. The products are not authorized for use in safety-critical applications without RECOM's explicit written consent. A safety-critical application is an application where a failure may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The applicant shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.