

Features

Regulated Converters

- 2:1 Wide Range Voltage Input
- 1kVDC, 2kVDC & 3kVDC Isolation
- UL94V-0 Package Material
- Continuous Short Circuit Protection
- Low Ripple and Noise
- Remote On/Off Control
- Efficiency to 80%

ECONOLINE

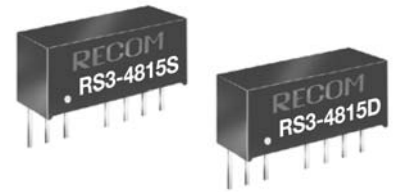
DC/DC-Converter

RS3 Series

Selection Guide

Part Number		Input Voltage Range (VDC)	Rated Output Voltage (VDC)	Output Current Full Load (mA)	Efficiency typ. (%)	Capacitive Load max. μ F
SIP8						
RS3-053.3S	(H2/H3)	4.5 - 9	3.3	600	72	1000
RS3-0505S	(H2/H3)	4.5 - 9	5	600	76	1000
RS3-0509S	(H2/H3)	4.5 - 9	9	333	77	470
RS3-0512S	(H2/H3)	4.5 - 9	12	250	78	220
RS3-0515S	(H2/H3)	4.5 - 9	15	200	79	100
RS3-123.3S	(H2/H3)	9 - 18	3.3	600	73	1000
RS3-1205S	(H2/H3)	9 - 18	5	600	77	1000
RS3-1209S	(H2/H3)	9 - 18	9	333	78	470
RS3-1212S	(H2/H3)	9 - 18	12	250	79	220
RS3-1215S	(H2/H3)	9 - 18	15	200	80	100
RS3-243.3S	(H2/H3)	18 - 36	3.3	600	73	1000
RS3-2405S	(H2/H3)	18 - 36	5	600	77	1000
RS3-2409S	(H2/H3)	18 - 36	9	333	79	470
RS3-2412S	(H2/H3)	18 - 36	12	250	80	220
RS3-2415S	(H2/H3)	18 - 36	15	200	80	100
RS3-483.3S	(H2/H3)	36 - 72	3.3	600	74	1000
RS3-4805S	(H2/H3)	36 - 72	5	600	78	1000
RS3-4809S	(H2/H3)	36 - 72	9	333	79	470
RS3-4812S	(H2/H3)	36 - 72	12	250	80	220
RS3-4815S	(H2/H3)	36 - 72	15	200	80	100
RS3-053.3D	(H2/H3)	4.5 - 9	\pm 3.3	\pm 300	72	\pm 470
RS3-0505D	(H2/H3)	4.5 - 9	\pm 5	\pm 300	76	\pm 470
RS3-0509D	(H2/H3)	4.5 - 9	\pm 9	\pm 167	77	\pm 220
RS3-0512D	(H2/H3)	4.5 - 9	\pm 12	\pm 125	78	\pm 100
RS3-0515D	(H2/H3)	4.5 - 9	\pm 15	\pm 100	79	\pm 47
RS3-123.3D	(H2/H3)	9 - 18	\pm 3.3	\pm 300	72	\pm 470
RS3-1205D	(H2/H3)	9 - 18	\pm 5	\pm 300	77	\pm 470
RS3-1209D	(H2/H3)	9 - 18	\pm 9	\pm 167	78	\pm 220
RS3-1212D	(H2/H3)	9 - 18	\pm 12	\pm 125	79	\pm 100
RS3-1215D	(H2/H3)	9 - 18	\pm 15	\pm 100	80	\pm 47
RS3-243.3D	(H2/H3)	18 - 36	\pm 3.3	\pm 300	73	\pm 470
RS3-2405D	(H2/H3)	18 - 36	\pm 5	\pm 300	78	\pm 470
RS3-2409D	(H2/H3)	18 - 36	\pm 9	\pm 167	79	\pm 220
RS3-2412D	(H2/H3)	18 - 36	\pm 12	\pm 125	80	\pm 100
RS3-2415D	(H2/H3)	18 - 36	\pm 15	\pm 100	80	\pm 47
RS3-483.3D	(H2/H3)	36 - 72	\pm 3.3	\pm 300	74	\pm 470
RS3-4805D	(H2/H3)	36 - 72	\pm 5	\pm 300	78	\pm 470
RS3-4809D	(H2/H3)	36 - 72	\pm 9	\pm 167	79	\pm 220
RS3-4812D	(H2/H3)	36 - 72	\pm 12	\pm 125	80	\pm 100
RS3-4815D	(H2/H3)	36 - 72	\pm 15	\pm 100	80	\pm 47

3 Watt SIP8 Isolated Single & Dual Output



RECOM

Description

Very high power density, wide operating temperature range of -40°C ~ $+71^{\circ}\text{C}$ and extra features such as On/Off control are just some of the characteristics of this converter which is ideal for highly sophisticated industrial designs.

The RS3 is available with isolation of 2kV or 3kV by choosing option "/H2" or "/H3"

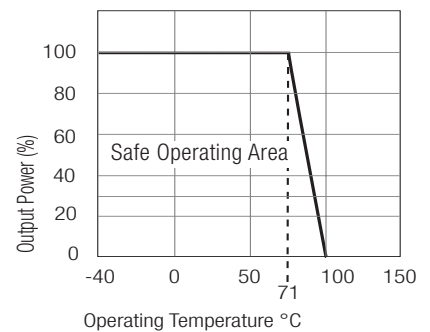
Description

High power-density, a wide temperature range of -40°C to +71°C and extra features like Remote On-Off function are just some of the characteristics of this versatile compact converter, ideal for highly sophisticated industrial designs where space is at a premium.

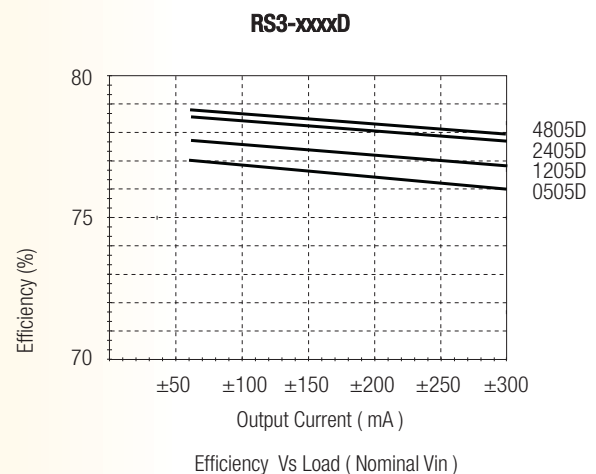
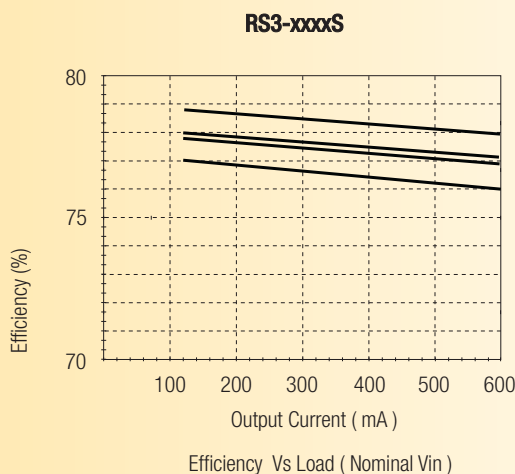
Electrical Specifications (measured at $T_A = 25^\circ\text{C}$, at nominal input voltage and rated output current unless otherwise specified)

Input Voltage Range	2:1		
Output Accuracy	Nominal V_{in} and full load	$\pm 2\%$ typ.	
Line Voltage Regulation	LL to HL, full load	$\pm 0.5\%$ max.	
Load Voltage Regulation	25% to 100% full load	$\pm 0.5\%$ typ.	
Output Ripple and Noise	20MHz limited	50mVp-p max.	
Switching Frequency	20% to 100% full load	200kHz typ.	
Efficiency at Full Load	see table		
No Load Input Current	8mA min., 60mA max.		
Isolation Voltage	(tested for 1 second)	1000VDC min.	
	H2	2000VDC min.	
	H3	3000VDC min.	
Rated Working Voltage	(long term isolation)	see Application Notes	
Isolation Capacitance (tested at 100kHz)	H1	200pF max.	
	H2/H3	30pF max.	
Isolation Resistance	1G Ω min.		
Short Circuit Protection	Continuous		
Operating Temperature Range	-40°C to +71°C		
Storage Temperature Range	-55°C to +125°C		
Relative Humidity	95% RH		
Package Weight	4.7g		
MTBF (+25°C) (+85°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	3303 x10 ³ hours
		using MIL-HDBK 217F	745 x10 ³ hours

Derating-Graph (Ambient Temperature)



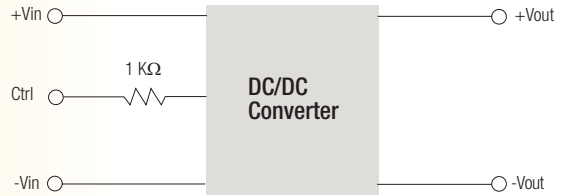
Typical Characteristics



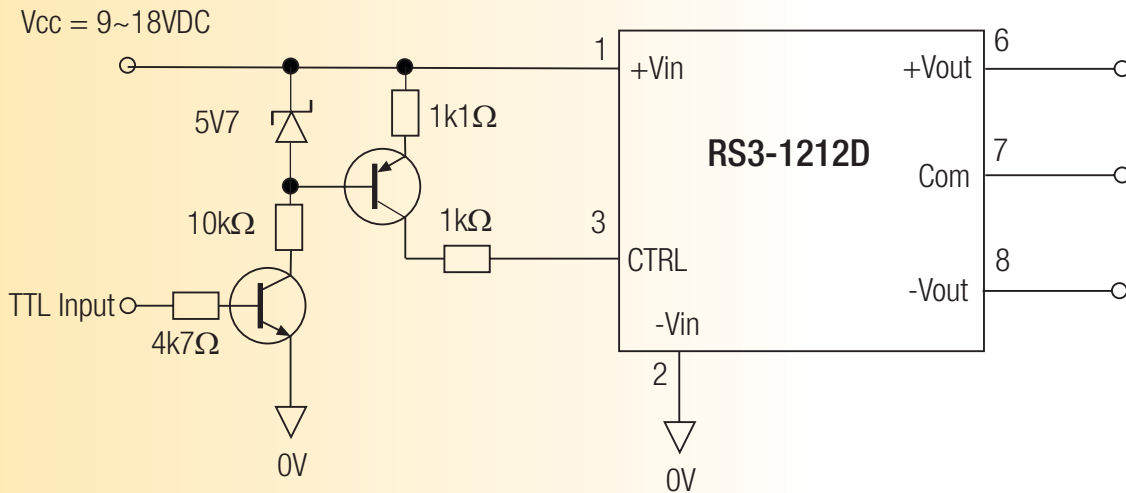
Standard Application Circuit

Remote ON/OFF

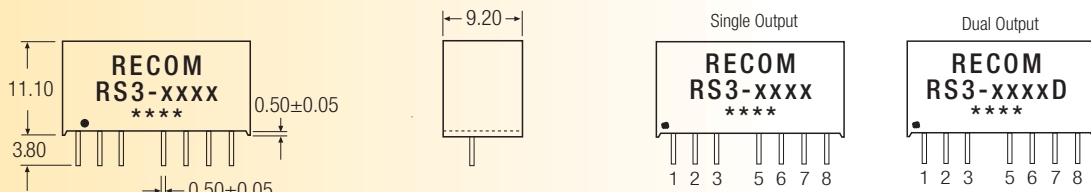
- ON: open or high impedance.
- OFF: 3-6mA input current applied via 1KΩ resistor to Vin- (OFF input current 10mA max.)



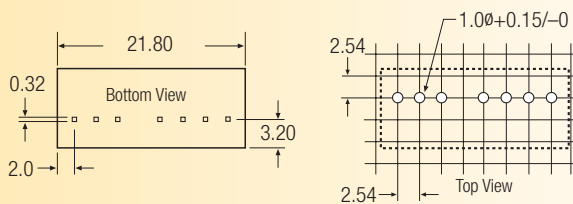
Suggested TTL ON/Off Control Circuit



Package Style and Pinning (mm)



Recommended Footprint Details



Pin Connections

Pin #	Single	Dual
1	-Vin	-Vin
2	+Vin	+Vin
3	CTRL	CTRL
5	NC	NC
6	+Vout	+Vout
7	-Vout	Com
8	NC	-Vout

NC = No Connection
XX.X ± 0.5 mm
XX.XX ± 0.25 mm