

# Features

## Regulated Converters

- DIP24 Low Profile Package
- Dual Outputs from a Single Supply
- 2:1 Wide Range Voltage Input
- 3kVDC Isolation
- UL94V-0 Package Material
- Continuous Short Circuit Protection
- Low profile 7mm Height
- Approved for Medical Applications
- Efficiency to 85 %

### Description

The RW\_D series with 2:1 input voltage ranges and maximum height of 7,0 mm has been designed for industrial automation and medical markets where a dual output rail needs to be generated from a single rail source. The converters supply the full 3 Watts without additional heat-sinks over the temperature range -40°C to +85°C.

### Selection Guide

Part Number DIP24 Miniature	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency %	Max Capacitive Load <sup>(1)</sup>
RW-0505D	4.5 – 9	±5	±300	71	±2200µF
RW-0509D	4.5 – 9	±9	±167	73	±1000µF
RW-0512D	4.5 – 9	±12	±125	74	±1000µF
RW-0515D	4.5 – 9	±15	±100	75	±1000µF
RW-1205D	9 – 18	±5	±300	76	±2200µF
RW-1209D	9 – 18	±9	±167	80	±1000µF
RW-1212D	9 – 18	±12	±125	83	±1000µF
RW-1215D	9 – 18	±15	±100	83	±1000µF
RW-2405D	18 – 36	±5	±300	78	±2200µF
RW-2409D	18 – 36	±9	±167	81	±1000µF
RW-2412D	18 – 36	±12	±125	85	±1000µF
RW-2415D	18 – 36	±15	±100	85	±1000µF
RW-4805D	36 – 72	±5	±300	78	±2200µF
RW-4809D	36 – 72	±9	±167	82	±1000µF
RW-4812D	36 – 72	±12	±125	84	±1000µF
RW-4815D	36 – 72	±15	±100	84	±1000µF

### Specifications (Core Operating Area)

Input Voltage Range	2:1
Output Voltage Accuracy	±1% typ. / ±2% max.
Line Voltage Regulation	0.1% typ. / 0.2% max.
Load Voltage Regulation (10% to 100% full load)	0.2% typ. / 0.5% max.
Minimum Load	10% <sup>(2)</sup>
Output Ripple and Noise (20MHz limited)	50mVp-p max.
Operating Frequency	100kHz min. / 150kHz typ.
Efficiency at Full Load	See above
No Load Power Consumption	250mW max.
Isolation Voltage	(tested for 1 second) 3000VDC (rated for 1 minute*) 1500VAC / 60Hz
Isolation Capacitance	20pF min. / 40pF typ. / 60pF max.
Isolation Resistance	1 GΩ min.
Short Circuit Protection	Continuous
Operating Temperature Range (free air convection)	-40°C to +85°C (see Graph)

continued on next page

# ECONOLINE

## DC/DC-Converter

with 3 year Warranty

# RECOM

## 3 Watt

## DIP24

## Low Profile Regulated Dual Output

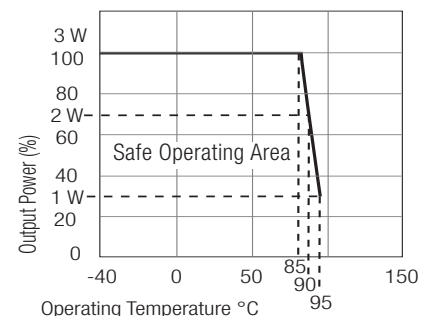


**EN-60950-1 Certified**  
**EN-60601-1 Certified**

# RW-D

## Derating-Graph

(Ambient Temperature)



\*Any data referred to in this datasheet are of indicative nature and based on our practical experience only. For further details, please refer to our Application Notes.

**Refer to Application Notes**

**Specifications (Core Operating Area)**

Storage Temperature Range	-55°C to +125°C		
Case Material	Non-Conductive Black Plastic		
Potting Material	Epoxy ( UL94V-0 )		
Relative Humidity	95% RH		
Package Weight	7.7g		
Packing Quantity	15pcs per Tube		
MTBF (+25°C)	} Detailed Information see Application Notes chapter "MTBF"	using MIL-HDBK 217F	1636 x 10 <sup>3</sup> hours
(+85°C)		using MIL-HDBK 217F	303 x 10 <sup>3</sup> hours

**Certifications**

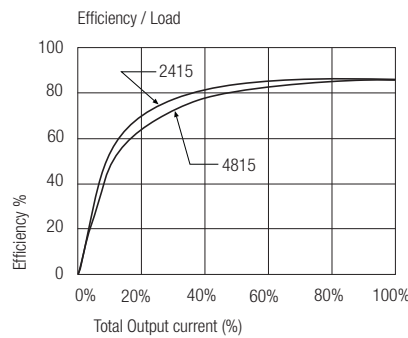
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EN Medical Safety	Report: MDD1205098-3 + RM1205098-3	IEC/EN 60601-1 3rd Edition	Medical Report + ISO14971 Risk Assessment

**Notes**

- Note 1: Maximum capacitive load is defined as the capacitive load that will allow start up in under 1 second without damage to the converter
- Note 2: The RW-D series requires a minimum of 10% load on the output to maintain specified regulation. Operating under no-load conditions will not damage these devices; however, they may not meet all listed specifications.

**Typical Performance**

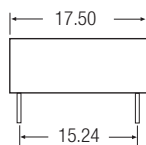
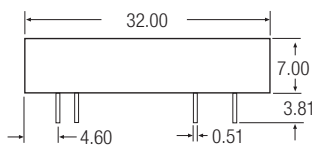
**RW-xx15D**



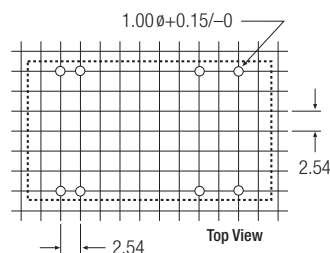
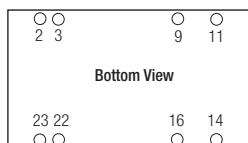
RW-D

**Package Style and Pinning (mm)**

**24 PIN DIP Miniature Package Style**



**Recommended Footprint Details**



**Pin Connections**

Pin	Dual
2 & 3	-Vin
9 & 16	Com
11	-Vout
14	+Vout
22 & 23	+Vin
NC	No Connection

XX.X ± 0.5 mm  
XX.XX ± 0.25 mm

The product information and specifications are subject to change without prior notice. All products are designed for non-safety critical commercial and industrial applications. The Buyer agrees to implement safeguards that anticipate the consequences of any failures that might cause harm, loss of life and/or damage property.