The REC8-xxxxSRW/DRW-series offer single and dual regulated outputs in a DIP24 package with 2kV or 3kV isolation options and are suitable for higher power industrial or medical applications. Remote on/off control is standard and SMD pinning is offered with the /SMD option. The converters can deliver 150% rated power for short periods of time to cope with applications with large capacitive loads or high start up currents.

### Features
- 8W DIP24 Package
- 2KVDC and 3kVDC Isolation Options
- 2:1 and 4:1 Versions
- Continuous Short Circuit Protection (power limiting)
- Synchronous Rectification on 3.3, 5V outputs
- Full SMD internal design
- Through Hole or SMD Pinning Options
- Remote Control Pin
- Efficiency to 87%

### Description

The REC8-xxxxSRW/DRW-series offer single and dual regulated outputs in a DIP24 package with 2kV or 3kV isolation options and are suitable for higher power industrial or medical applications. Remote on/off control is standard and SMD pinning is offered with the /SMD option. The converters can deliver 150% rated power for short periods of time to cope with applications with large capacitive loads or high start up currents.

### Selection Guide

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Input Voltage (VDC)</th>
<th>Output Voltage (VDC)</th>
<th>Output Current (mA)</th>
<th>Efficiency (%)</th>
<th>Max. Capacitive Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>REC8-xx3.3SRW/H/A/M</td>
<td>4.5-9, 9-18, 18-36, 36-75</td>
<td>3.3</td>
<td>1600</td>
<td>83-85</td>
<td>2200μF</td>
</tr>
<tr>
<td>REC8-xx05SRW/H/A/M</td>
<td>4.5-9, 9-18, 18-36, 36-75</td>
<td>5</td>
<td>1600</td>
<td>85-87</td>
<td>2200μF</td>
</tr>
<tr>
<td>REC8-xx12SRW/H/A/M</td>
<td>4.5-9, 9-18, 18-36, 36-75</td>
<td>12</td>
<td>666</td>
<td>84-86</td>
<td>470μF</td>
</tr>
<tr>
<td>REC8-xx15SRW/H/A/M</td>
<td>4.5-9, 9-18, 18-36, 36-75</td>
<td>15</td>
<td>533</td>
<td>84-86</td>
<td>220μF</td>
</tr>
<tr>
<td>REC8-xx05DRW/H/A/M</td>
<td>9-18, 18-36, 36-75</td>
<td>±5</td>
<td>±800</td>
<td>84</td>
<td>±1000μF</td>
</tr>
<tr>
<td>REC8-xx12DRW/H/A/M</td>
<td>4.5-9, 9-18, 18-36, 36-75</td>
<td>±12</td>
<td>±333</td>
<td>84-86</td>
<td>±220μF</td>
</tr>
<tr>
<td>REC8-xx15DRW/H/A/M</td>
<td>4.5-9, 9-18, 18-36, 36-75</td>
<td>±15</td>
<td>±267</td>
<td>84-86</td>
<td>±100μF</td>
</tr>
<tr>
<td>REC8-xx3.3SRWZ/H/A/M</td>
<td>9-36, 18-75</td>
<td>3.3</td>
<td>1600</td>
<td>84</td>
<td>2200μF</td>
</tr>
<tr>
<td>REC8-xx05SRWZ/H/A/M</td>
<td>9-36, 18-75</td>
<td>5</td>
<td>1600</td>
<td>86</td>
<td>2200μF</td>
</tr>
<tr>
<td>REC8-xx12SRWZ/H/A/M</td>
<td>9-36, 18-75</td>
<td>12</td>
<td>666</td>
<td>85</td>
<td>470μF</td>
</tr>
<tr>
<td>REC8-xx15SRWZ/H/A/M</td>
<td>9-36, 18-75</td>
<td>15</td>
<td>533</td>
<td>85</td>
<td>220μF</td>
</tr>
<tr>
<td>REC8-xx05DRWZ/H/A/M</td>
<td>9-36, 18-75</td>
<td>±5</td>
<td>±800</td>
<td>83</td>
<td>±1000μF</td>
</tr>
<tr>
<td>REC8-xx12DRWZ/H/A/M</td>
<td>9-36, 18-75</td>
<td>±12</td>
<td>±333</td>
<td>85</td>
<td>±220μF</td>
</tr>
<tr>
<td>REC8-xx15DRWZ/H/A/M</td>
<td>9-36, 18-75</td>
<td>±15</td>
<td>±267</td>
<td>85</td>
<td>±100μF</td>
</tr>
</tbody>
</table>

* Standard is /H2 for 2kVDC isolation, use /H3 for 3kVDC isolation (not SMD)
* add suffix /SMD for SMD package, e.g. REC8-2405SRWZ/H2/A/M/SMD
* add suffix -R for Tape and Reel packaging (only available for SMD package)
e.g. REC8-2405SRWZ/H2/A/M/SMD-R

### Specifications

#### Input Voltage Range
2:1 & 4:1

#### Output Voltage Accuracy
±1.5% max.

#### Line Voltage Regulation (VL to VH at full load)
±0.5% max.

#### Load Voltage Regulation
- Single
  - ±0.5% max.
- Dual
  - ±1.2% max.

#### Cross Regulation (100%: 25% to 100% full load)
±5% max.

#### Output Ripple and Noise (with 100n output capacitor and 20MHz BW)
50mVp-p max.

#### Start-up time
300ms typ.

#### Operating Frequency (Full Load)
330kHz typ.

#### Efficiency at Full Load
see Selection Guide

#### Minimum Load
0%

continued on next page
**ECONOLINE**

**REC8-S_DRW(Z)/H*/A/M Series**

**Specifications cont.** *(measured at $T_A = 25^\circ C$, nominal input voltage, full load and after warm-up)*

- **Input Surge Voltage (100ms max.)**
  - 5V Input: 15VDC
  - 12V Input: 36VDC
  - 24V Input: 50VDC
  - 48V Input: 100VDC

- **Isolation Voltage**
  - H2-Suffix and SMD: (tested for 1 second) 2000VDC (rated for 1 minute**) 1000VAC / 60Hz
  - H3-Suffix: (tested for 1 second) 3000VDC (rated for 1 minute**) 1500VAC / 60Hz

- **Isolation Capacitance**: 1200pF typ.

- **Isolation Resistance**: 1 GΩ min.

- **Overload Protection**: 150% typ.

- **Short Circuit Protection**: Continuous, Auto Restart

- **Operating Temperature Range**
  - 2:1 - Vin=5V: -40°C to +71°C (see Graph)
  - 2:1 - All Others: -40°C to +85°C (see Graph)

- **Remote On/Off**
  - DC/DC ON: Open or 3.5V<Vr<12V
  - DC/DC OFF: Short or 0V<Vr<1.2V

- **Storage Temperature Range**: -55°C to +105°C

- **Temperature Coefficient**: ±0.05% max.

- **Relative Humidity**: 95% RH max.

- **Case Material**: Nickel Plated Metal with Non-Conductive Base

- **Thermal Impedance**: Natural convection 12°C/W

- **Maximum Case Temperature**: 100°C

- **Vibration**: 10-55Hz, 2G, 30mins along X,Y & Z

- **Package Weight**: 18g

- **Packing Quantity**
  - Tube: 15 pcs
  - Tape and Reel: 100 pcs

- **MTBF**
  - (+25°C) using MIL-HDBK 217F: 1200 x $10^6$ hours
  - (+71°C) using MIL-HDBK 217F: >300 x $10^6$ hours

**Certifications**

- **UL General Safety**: Report: E224736 UL 60950-1 1st Ed.

**Typical Characteristics**

- **REC8-1205SRW/H2/A/M (/SMD)**
- **REC8-1212SRW/H2/A/M (/SMD)**

**Note:** Refer to Application Notes for EMC Class B Filter suggestion
ECONOLINE
DC/DC-Converter

REC8-S_DRW(Z)/H*/A/M Series

Package Style and Pinning (mm)

24 PIN DIP Package - Available with /H2 and /H3 Options

24 PIN SMD Package - available with /H2 option only.

Recommended Footprint Details

Pin Connections DIP24

Pin # | Single | Dual
--- | --- | ---
1 | CTRL | CTRL
2 | –Vin | –Vin
3 | –Vin | –Vin
9 | NC | Com
11 | NC | –Vout
14 | +Vout | +Vout
16 | –Vout | Com
22 | +Vin | +Vin
23 | +Vin | +Vin
4,5,10,12 | NC | NC
13,15,20,21,24 | NC | NC

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. RECOM products are not authorized for use in safety-critical applications (such as life support) without RECOM’s explicit written consent. A safety-critical application is defined as an application where a failure of a RECOM product may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The buyer 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.