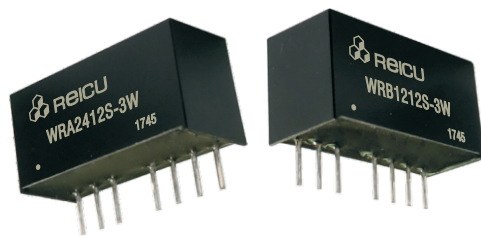


Features

- Efficiency up to 80%
- 1600VDC Isolation
- Singl/Double output
- Regulated output
- Remote On/Off Control
- Continous short circuit protection
- 2:1 Wide input voltage range
- Wide temperature -40°C to 85°C
- Low ripple and noise
- Small size



Model Selection Guide

| Order Code | Vin(V) | | Output | | Max capacitive Load | Efficiency(%) (Typ) |
|-------------|---------|-------|--------|--------|---------------------|---------------------|
| | Nominal | Range | Vo(V) | Io(mA) | | |
| WRB0505S-3W | 5 | 4.5-9 | 5 | 600 | 470 | 72 |
| WRB0509S-3W | | | 9 | 333 | 330 | 73 |
| WRB0512S-3W | | | 12 | 250 | 330 | 73 |
| WRB0515S-3W | | | 15 | 200 | 330 | 73 |
| WRB1205S-3W | 12 | 9-18 | 5 | 600 | 470 | 75 |
| WRB1209S-3W | | | 9 | 333 | 330 | 77 |
| WRB1212S-3W | | | 12 | 250 | 330 | 81 |
| WRB1215S-3W | | | 15 | 200 | 330 | 82 |
| WRB2405S-3W | 24 | 18-36 | 5 | 600 | 470 | 80 |
| WRB2409S-3W | | | 9 | 333 | 330 | 81 |
| WRB2412S-3W | | | 12 | 250 | 330 | 81 |
| WRB2415S-3W | | | 15 | 200 | 330 | 81 |
| WRB4805S-3W | 48 | 36-72 | 5 | 600 | 470 | 76 |
| WRB4809S-3W | | | 9 | 333 | 330 | 78 |
| WRB4812S-3W | | | 12 | 250 | 330 | 81 |
| WRB4815S-3W | | | 15 | 200 | 330 | 82 |
| WRA0505S-3W | 5 | 4.5-9 | ±5 | ±300 | 330 | 71 |
| WRA0512S-3W | | | ±12 | ±125 | 330 | 72 |
| WRA0515S-3W | | | ±15 | ±100 | 330 | 72 |
| WRA1205S-3W | | | ±5 | ±300 | 330 | 76 |
| WRA1212S-3W | 12 | 9-18 | ±12 | ±125 | 330 | 77 |
| WRA1215S-3W | | | ±15 | ±100 | 330 | 79 |
| WRA2405S-3W | | | ±5 | ±300 | 330 | 78 |
| WRA2412S-3W | | | ±12 | ±125 | 330 | 80 |
| WRA2415S-3W | 24 | 18-36 | ±15 | ±100 | 330 | 80 |
| WRA4805S-3W | | | ±5 | ±300 | 330 | 75 |
| WRA4812S-3W | | | ±12 | ±125 | 330 | 76 |
| WRA4815S-3W | | | ±15 | ±100 | 330 | 79 |

*All the specifications typical at Ta=+25°C resistive load, nominal input voltage and rated output current unless otherwise noted.

Input Characteristics

| Parameter | Condition | Min | Typ | Max | Units |
|-----------------------------------|------------------|--------------------|-----|-----|-------|
| Input Surge Voltage (1 sec. Max.) | 5V Input Models | -0.7 | -- | 15 | VDC |
| | 12V Input Models | -0.7 | -- | 25 | |
| | 24V Input Models | -0.7 | -- | 50 | |
| | 48V Input Models | -0.7 | -- | 90 | |
| Input Filter Type | All Models | Internal Capacitor | | | |

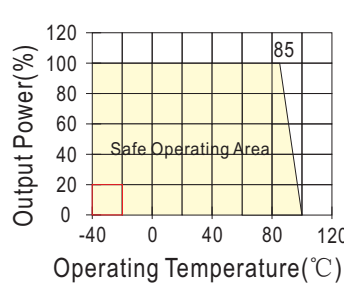
Output Characteristics

| Parameter | Condition | Min | Typ | Max | Units |
|--------------------------|--------------------------------|-------|------|------|-------|
| Line regulation | Full load, Vin(Min~Max) | ±0.15 | -- | ±0.5 | % |
| Switching frequency | Full load,nominal input | -- | 250 | -- | KHz |
| Load regulation | 10%~100% load | -- | ±0.5 | ±1 | % |
| Ripple and noise | BW=DC to 20MHz | -- | 30 | 75 | mVp-p |
| Short circuit Protection | Continuous, Automatic Recovery | | | | |

General Characteristics

| Parameter | Condition | Min | Typ | Max | Units |
|-----------------------|---------------------|------|------|------|---------|
| Operating Temperature | All output types | -40 | -- | +85 | °C |
| Storage | | -55 | -- | +125 | °C |
| Storage humidity | | -- | -- | +95 | % |
| Cooling | Free air convection | -- | -- | -- | |
| Isolation voltage | 1mA≤1minute | -- | 1600 | -- | VDC |
| Isolation resistance | 500VDC | 1000 | -- | -- | MΩ |
| MTBF | 2×10 ⁵ | | | | K hours |
| Case material | Plastic | | | | |

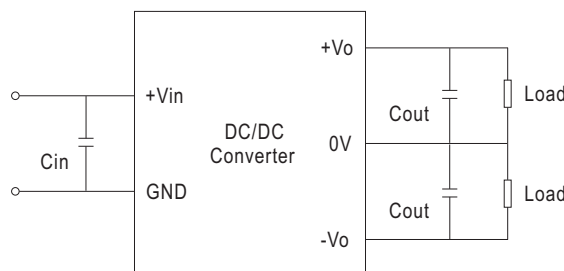
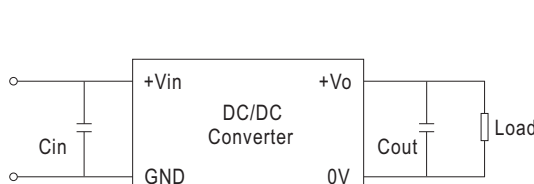
Temperature Derating Graph Curve



Design & Feature Considerations

1. Input/Output Ripple Reduction

Reduce output ripple, it is recommended to use capacitors at the input/output. It is recommended to use 10uF~100uF capacitors at the input; 3.3~22uF capacitors at the output.



2. Overload Protection

The products provide protection against overload, the unit is equipped with internal current limiting circuitry .

3. Remote On/Off (CTRL Terminal)

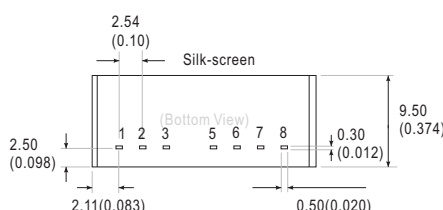
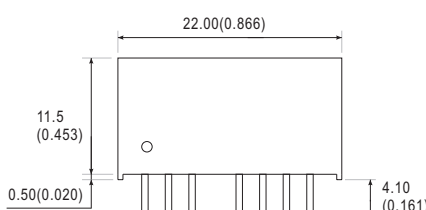
When open or high impedance, the converter,work well; When this pin is high, the converter shut down; It should be note that the input current should be less than 10mA,exceeding the maximum 20mA will cause permanence damage to the converter. The value of R can be derived as follows:

$$R = \frac{V_c - V_D - 1.0}{I_c}$$

Note

- 1.To ensure this module can operate effincetly and reliably,During operation,the minimum output load is not less than 10% of the full load.
- 2.Other input and output voltage may be available, please
- 3.Specifications subject to change without notice

Mechanical Dimension & Pin Connections



Note:
Unit:mm(inch)

| Pin | 1 | 2 | 3 | 5 | 6 | 7 | 8 |
|--------|-----|-----|------|----|-----|-----|-----|
| Single | GND | Vin | CTRL | NC | +Vo | -Vo | CS |
| Double | GND | Vin | CTRL | NC | +Vo | -Vo | -Vo |