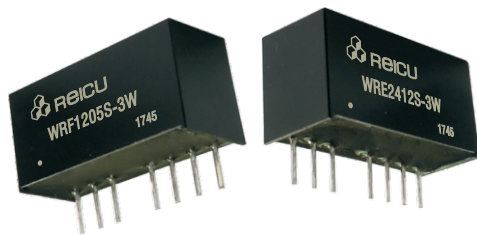


**Features**

- Efficiency up to 80%
- 3000VDC 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)		
WRF0505S-3W	5	4.5-9	5	600	470	72
WRF0509S-3W			9	333	330	73
WRF0512S-3W			12	250	330	73
WRF0515S-3W			15	200	330	73
WRF1205S-3W	12	9-18	5	600	470	75
WRFB1209S-3W			9	333	330	77
WRF1212S-3W			12	250	330	81
WRF1215S-3W			15	200	330	82
WRF2405S-3W	24	18-36	5	600	470	80
WRF2409S-3W			9	333	330	81
WRF2412S-3W			12	250	330	81
WRF2415S-3W			15	200	330	81
WRF4805S-3W	48	36-72	5	600	470	76
WRF4809S-3W			9	333	330	78
WRF4812S-3W			12	250	330	81
WRF4815S-3W			15	200	330	82
WRE0505S-3W	5	4.5-9	±5	±300	330	71
WRE0512S-3W			±12	±125	330	72
WRE0515S-3W			±15	±100	330	72
WRE1205S-3W			±5	±300	330	76
WRE1212S-3W	12	9-18	±12	±125	330	77
WRE1215S-3W			±15	±100	330	79
WRE2405S-3W			±5	±300	330	78
WRE2412S-3W			±12	±125	330	80
WRE2415S-3W	24	18-36	±15	±100	330	80
WRE4805S-3W			±5	±300	330	75
WRE4812S-3W			±12	±125	330	76
WRE4815S-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			

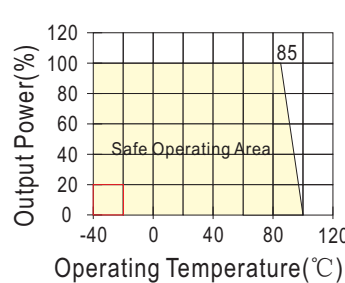
**Output Characteristics**

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	--	3000	--	VDC
Isolation resistance	500VDC	1000	--	--	MΩ
MTBF	2 × 10 <sup>5</sup>				K hours
Case material	Plastic				

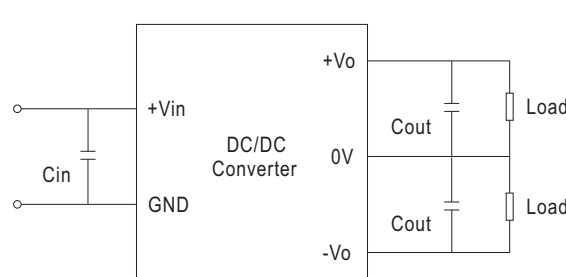
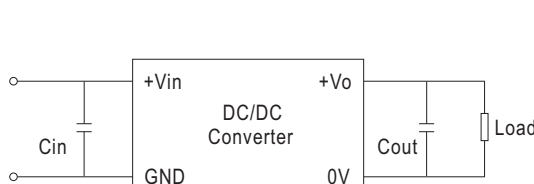
**Temperature Derating Graph Curve**



**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)**

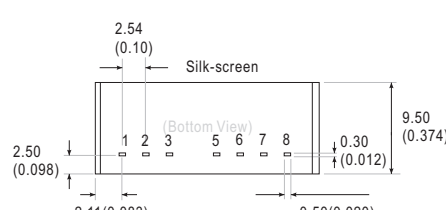
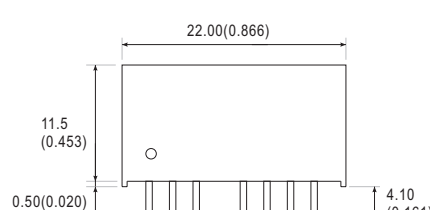
When open or high impedance, the converter, working well; When this pin is high, the converter shut down; It should be note that the input current should be less than 10mA, exceeding the maximum 20mA will cause permanence damage to the converter. The value of R can be derived as follows:

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

**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