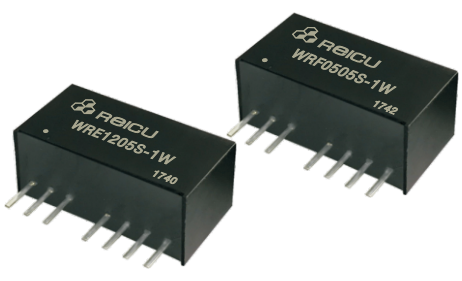
Features

- 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℃ to 85℃
- Low ripple and noise



Model Selection Guide

Order Code	Vin(V)		Output		Max capacitive Load	Efficiency(%) (Typ)
	Nominal	Range	Vo(V)	Io(mA)		
WRF0505S-1W	5	4.5-9.0	5	200	330	70
WRF0509S-1W			9	111	330	70
WRF0512S-1W			12	83	330	75
WRF0515S-1W			15	67	220	75
WRF1205S-1W	12	9-18	5	200	330	76
WRF1209S-1W			9	111	330	77
WRF1212S-1W			12	83	330	79
WRF1215S-1W			15	67	220	81
WRF2405S-1W	24	18-36	5	200	330	76
WRF2409S-1W			9	111	330	78
WRF2412S-1W			12	83	330	80
WRF2415S-1W			15	67	220	81
WRF4805S-1W	48	36-72	5	200	330	76
WRF4809S-1W			9	111	330	78
WRF4812S-1W			12	83	330	80
WRF4815S-1W			15	67	220	80
WRE0505S-1W	5	4.5-9.0	±5	±100	220	72
WRE0512S-1W			±12	±42	220	74
WRE0515S-1W			±15	±33	100	73
WRE1205S-1W	12	9-18	±5	±100	220	76
WRE1212S-1W			±12	±42	220	73
WRE1215S-1W			±15	±33	100	75
WRE2405S-1W	24	18-36	±5	±100	220	78
WRE2412S-1W			±12	±42	220	78
WRE2415S-1W			±15	±33	100	77
WRE4805S-1W	48	36-72	±5	±100	220	75
WRE4812S-1W			±12	±42	220	77
WRE4815S-1W			±15	±33	100	75

*All the specifications typical at Ta=+25℃ 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			

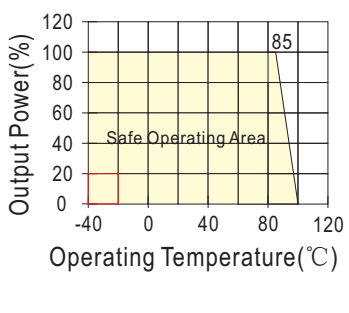
Output Characteristics

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	℃
Storage		-55	--	+125	℃
Storage humidity		--	--	+95	%
Cooling	Free air convection	--	--	--	
Isolation voltage	1mA≤1minute	--	3000	--	VDC
Isolation resistance	500VDC	1000	--	--	MΩ
MTBF	2×10^5				K hours
Case material		Plastic			

Temperature Derating Graph Curve

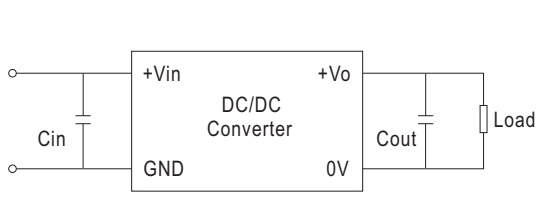


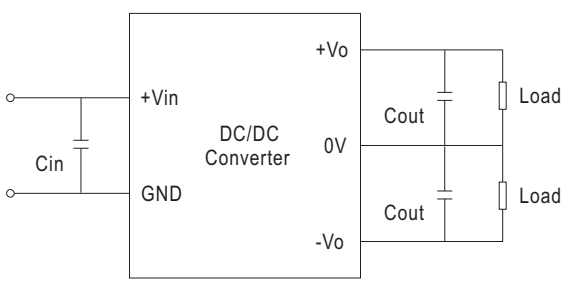
Design & Feature Considerations

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

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

3. Remote On/Off (CTRL Terminal)

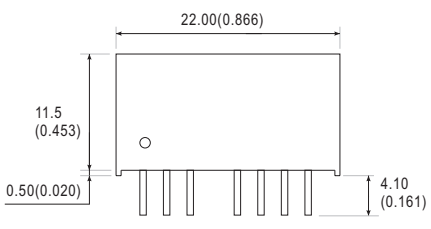
When open or high impedance, the converter work well; When this pin is high,t he converter shut down; It should be note that the input current should between 5-10mA,exceeding the maximum 20mA will cause permanence damage to the converter. The value of R can be derived as follows:

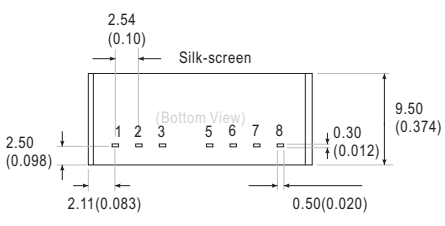
$$R = \frac{V_C - V_D - 1.0}{I_C}$$

Note

1.To ensure this module can operate efficinetly 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	COM	-Vo