

FEATURES

- ◆ Wide (2:1) Input Range
- ◆ Continuous Short Circuit Protection
- ◆ 3000VDC Isolation
- ◆ Operating Temperature: -40°C ~ +71°C
- ◆ Small Footprint
- ◆ Ultra-compact SIP-8 packaged
- ◆ Internal SMD construction
- ◆ Remote On/Off control
- ◆ Excellent load and line regulation
- ◆ Efficiency to 82%

MODEL SELECTION

WRE^①24^②12^③YS^④S^⑤-3W(125)^⑥

- ① Product Series
- ② Input Voltage
- ③ Output Voltage
- ④ Wide (2:1) Input Range
- ⑤ SIP8 Package Style
- ⑥ Rated Power(Output current)

APPLICATIONS

The WRE_YS-3W&WRF_YS-3W Series are specially designed for applications where a wide range input voltage power supplies are isolated from the input power supply in a distributed power supply system on a circuit board.

These products apply to:

- 1) Where the voltage of the input power supply is wide range (Voltage range≤2:1);
- 2) Where isolation is necessary between input and Output (Isolation voltage≤3000VDC);
- 3) Where the regulation of the Output voltage and the output ripple noise are demanded.



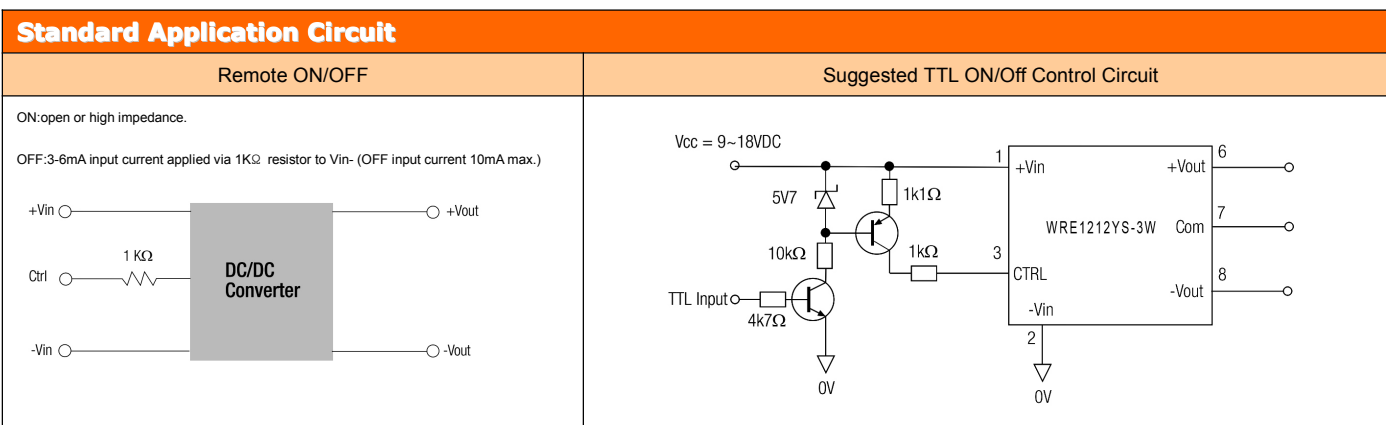
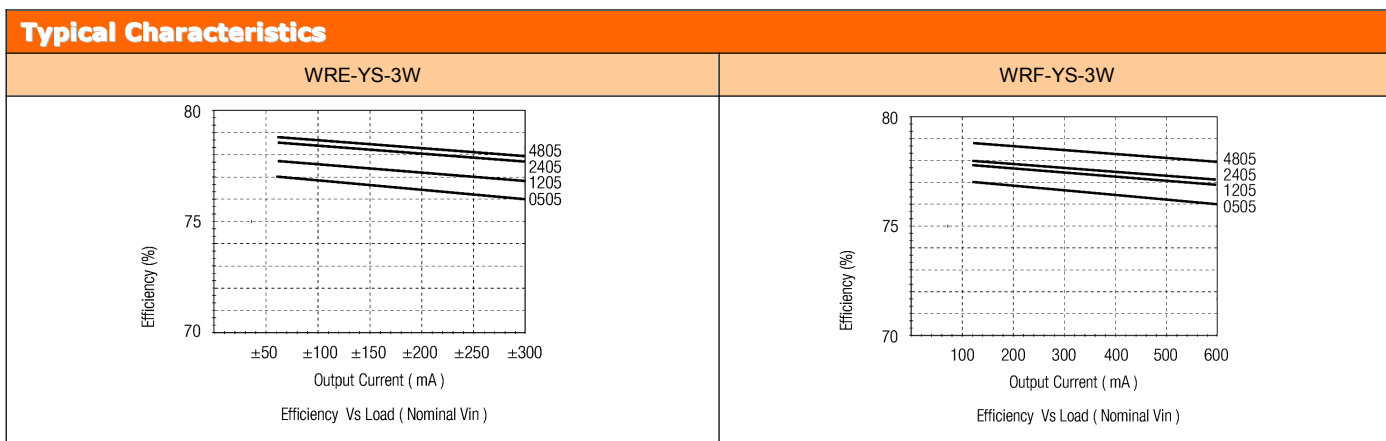
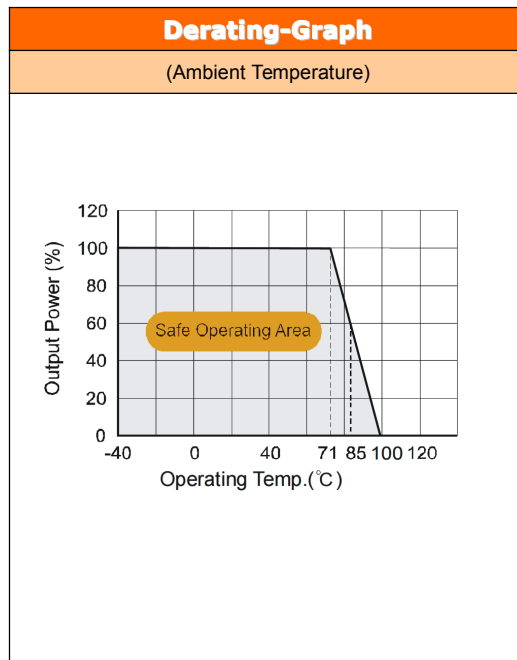
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SELECTION GUIDE

Order code	Input		Output		Efficiency (%.Typ.)
	Voltage(VDC)		Voltage (VDC)	Current(mA) Max.	
	Nominal	Range			
WRF0503YS-700	05	4.5-9	3.3	700	72
WRF0503YS-3W	05	4.5-9	3.3	700	72
WRF0505YS-3W	05	4.5-9	5	600	76
WRF0509YS-3W	05	4.5-9	9	333	77
WRF0512YS-3W	05	4.5-9	12	250	78
WRF0515YS-3W	05	4.5-9	15	200	79
WRF1203YS-700	12	9-18	3.3	700	73
WRF1203YS-3W	12	9-18	3.3	700	73
WRF1205YS-3W	12	9-18	5	600	77
WRF1209YS-3W	12	9-18	9	333	78
WRF1212YS-3W	12	9-18	12	250	79
WRF1215YS-3W	12	9-18	15	200	80
WRF2403YS-700	24	18-36	3.3	700	73
WRF2403YS-3W	24	18-36	3.3	700	73
WRF2405YS-3W	24	18-36	5	600	77
WRF2409YS-3W	24	18-36	9	333	79
WRF2412YS-3W	24	18-36	12	250	80
WRF2415YS-3W	24	18-36	15	200	80
WRF4803YS-700	48	36-72	3.3	700	74
WRF4803YS-3W	48	36-72	3.3	700	74
WRF4805YS-3W	48	36-72	5	600	78
WRF4809YS-3W	48	36-72	9	333	79
WRF4812YS-3W	48	36-72	12	250	80
WRF4815YS-3W	48	36-72	15	200	80
WRE0503YS-3W	05	4.5-9	±3.3	±300	72
WRE0505YS-3W	05	4.5-9	±5	±300	76
WRE0509YS-3W	05	4.5-9	±9	±167	77
WRE0512YS-3W	05	4.5-9	±12	±125	78
WRE0515YS-3W	05	4.5-9	±15	±100	79
WRE1203YS-3W	12	9-18	±3.3	±300	73
WRE1205YS-3W	12	9-18	±5	±300	77
WRE1209YS-3W	12	9-18	±9	±167	78
WRE1212YS-3W	12	9-18	±12	±125	79
WRE1215YS-3W	12	9-18	±15	±100	80
WRE2403YS-3W	24	18-36	±3.3	±300	73
WRE2405YS-3W	24	18-36	±5	±300	77
WRE2409YS-3W	24	18-36	±9	±167	79
WRE2412YS-3W	24	18-36	±12	±125	80
WRE2415YS-3W	24	18-36	±15	±100	80
WRE4803YS-3W	48	36-72	±3.3	±300	74
WRE4805YS-3W	48	36-72	±5	±300	78
WRE4809YS-3W	48	36-72	±9	±167	79
WRE4812YS-3W	48	36-72	±12	±125	80
WRE4815YS-3W	48	36-72	±15	±100	80

NOTE: High power-density, a wide temperature range of -40°C~+71°C and extra features like Remote On-Off function are just some of the characteristics of this versatile compact converter, ideal for highly sophisticated industrial designs where space is at a premium. (measured at TA = 25°C, at nominal input voltage and rated output current unless otherwise specified)

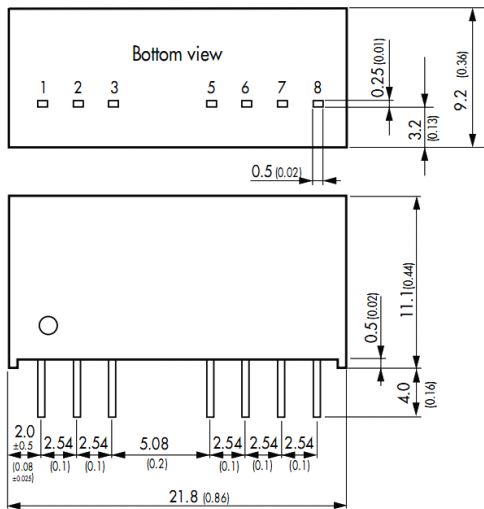
Electrical Specifications		
Parameter	Conditions	Units
Output Accuracy	Nominal Vin and full load	±2% typ.
Line Voltage Regulation	LL to HL, full load	±0.5% max.
Load Voltage Regulation	25% to 100% full load	±0.5% typ.
Output Ripple and Noise	20MHz limited	50mVp-p max.
Switching Frequency	20% to 100% full load	200kHz typ.
Efficiency at Full Load		see table
No Load Input Current		8mA min., 60mA max.
Isolation Voltage		3000VDC min.
Rated Working Voltage	(long term isolation)	see Application Notes
Isolation Capacitance	(tested at 100kHz)	30pF max.
Isolation Resistance		1GΩ min.
Short Circuit Protection		Continuous
Operating Temperature Range		-40°C to +71°C
Storage Temperature Range		-55°C to +125°C
Relative Humidity		95% RH
Package Weight		4.7g
Case material		non-conductive plastic
MTBF (+25°C)	using MIL-HDBK 217F	3303 x10 ³ hours
MTBF (+85°C)	using MIL-HDBK 217F	745 x10 ³ hours



All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

OUTLINE DIMENSIONS & FOOTPRINT DETAILS

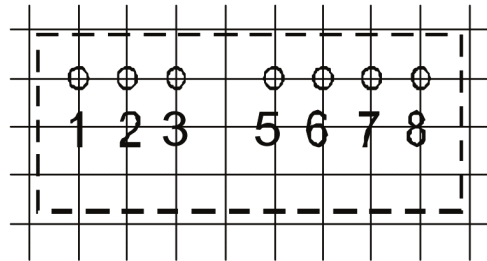
MECHANICAL DIMENSIONS



Note:
Unit:mm[inch]
Pin section tolerances:±0.10mm[±0.004inch]
General tolerances:±0.25mm[±0.010inch]

RECOMMENDED FOOTPRINT

Dual/Single Output



Top view grid:2.54mm(0.1inch)
diameter:1.00mm(0.039inch)

FOOTPRINT DETAILS

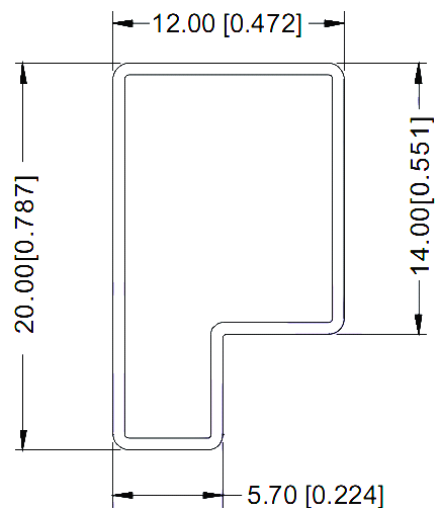
Pin	Single	Dual
1	-Vin(GND)	-Vin(GND)
2	+Vin(Vcc)	+Vin(Vcc)
3	CTRL	CTRL
5	NC	NC
6	+Vout	+Vout
7	-Vout	Common
8	NC	-Vout

NC=No Connection
Note:specifications can be changed any time without notice.

When the environment temperature is higher than 71°C, the product output power should be less than 60% of the rated power.

No parallel connection or plug and play.

TUBE OUTLINE DIMENSIONS



Note:
Unit :mm[inch]
General tolerances:±0.50mm[±0.020inch]
L=530mm[20.866inch] Tube Quantity: 22pcs
L=220mm[8.661inch] Tube Quantity:8pcs

Note:

1. The load shouldn't be less than 10%, otherwise ripple will increase dramatically.
2. Operation under 10% load will not damage the converter; However, they may not meet all specification listed.
3. All specifications measured at Ta=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
4. In this datasheet, all the test methods of indications are based on corporate standards.
5. Only typical models listed, other models may be different, please contact our technical person for more details.