



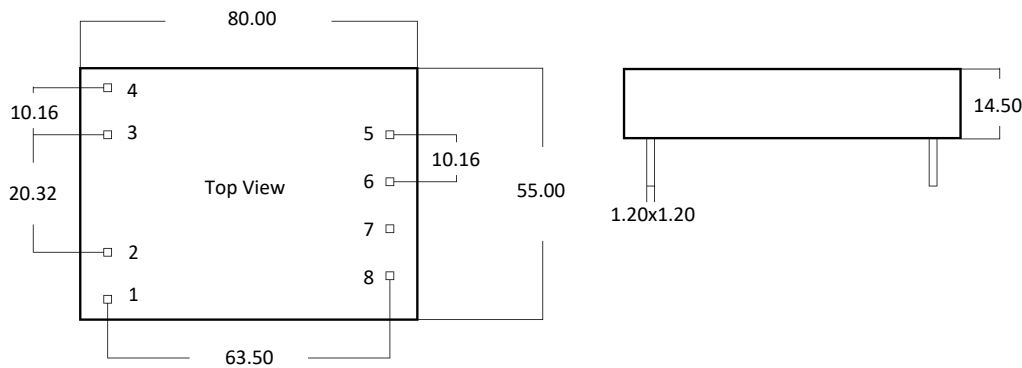
- 2:1 Voltage Input Range
- Both Metal Case and Plastic Case Available
- MTBF: 2.000.000 Calculated Hours
- Single or Dual Output
- Up 6000V Isolation Available

### Electrical Shortform Specifications

Electrical Specification	Input Voltage:	See Product Chart Page 2
	Output Voltage (Vout):	See Product Chart Page 2
	Switch Frequency:	150kHz to 200kHz
	Ripple & Noise:	Max. 50mVp-p
	Efficiency:	Up to 84%
	Output Load Efficiency:	≤ ±1% (0% to 100% Load)
	TEMP. Coefficient:	≤ ±0.02% °C (Celsius)
	MTBF:	2.000.000 Hours
Protection (Auto Recovery)	Isolation I/O:	1000V / 0.5mA for 1min (Up to 6000V Isolation Available)
	Short Circuit Protection:	Short Circuit (1sec)
	Over Load Protection:	Yes
	Over TEMP. Protection:	Yes
Certifications & EMC	Approvals:	CE / RoHS
	EMC	EN61000
Environmental	Operating TEMP.:	-45°C to +85°C
	Storage TEMP.:	-45°C to +125°C
	Cooling:	Natural Cooling
Dimension & Material	Case Material:	Metal
	Case Size (L x W x H):	80.00 x 55.00 x 14.50mm
	Weight:	121g (±0.5)
	Soldering Temperature:	≤10sec 300°C Max.

**Note** - Non Load Operation for a Long time is Not Recommended  
For Complete Datasheet/Specification and Drawing Please Contact Power Outlet

### Drawing & Measurements: mm



WRDxxSxx = Single Output (8-pin)

Pin	Function
1	GND
2	Vin
3	CNT
4	FG
5	TRM
6	+Vout
7	0V
8	NC

WRDxxDxx = Dual Output (8-pin)

Pin	Function
1	GND
2	Vin
3	CNT
4	FG
5	TRM
6	+Vout
7	COM
8	-Vout

### Product Chart

Model	Input Voltage (Vdc)	Output Voltage (Vout)	Load Current (A)	Efficiency (%)	Ripple & Noise (mVp-p Max.)
WRD12S3.3 50W	12Vdc (9-18Vdc)	3.3	15	82	50
WRD12S05 50W		5	10	83	50
WRD12S09 50W		9	5.55	86	50
WRD12S12 50W		12	4.16	86	50
WRD12S15 50W		15	3.33	88	50
WRD12S24 50W		24	2.08	83	50
WRD24S3.3 50W	24Vdc (18-36Vdc)	3.3	15	88	50
WRD24S05 50W		5	10	81	50
WRD24S09 50W		9	5.55	82	50
WRD24S12 50W		12	4.16	84	50
WRD24S15 50W		15	3.33	75	50
WFD24S24 50W		24	2.08	78	50
WRD48S3.3 50W	48Vdc (36-72Vdc)	3.3	15	82	50
WRD48S05 50W		5	10	84	50
WRD48S09 50W		9	5.55	75	50
WRD48S12 50W		12	4.16	78	50
WRD48S15 50W		15	3.33	80	50
WRD48S24 50W		24	2.08	81	50
WRD110S05 50W	110Vdc (70-150Vdc)	5	10	84	50
WRD110S12 50W		12	4.16	78	50
WRD110S24 50W		24	2.08	81	50
<b>Unregulated</b>					
WRD12D3.3 50W	12Vdc (9-18Vdc)	±3.3	±7.50	82	50
WRD12D05 50W		±5	±5	83	50
WRD12D09 50W		±9	±2.78	86	50
WRD12D12 50W		±12	±2.08	86	50
WRD12D15 50W		±15	±1.67	88	50
WRD12D24 50W		±24	±1.04	83	50
WRD24D3.3 50W	24Vdc (18-36Vdc)	±3.3	±7.50	88	50
WRD24D05 50W		±5	±5	81	50
WRD24D09 50W		±9	±2.78	82	50
WRD24D12 50W		±12	±2.08	84	50
WRD24D15 50W		±15	±1.67	75	50
WFD24D24 50W		±24	±1.04	78	50
WRD48D3.3 50W	48Vdc (36-72Vdc)	±3.3	±7.50	82	50
WRD48D05 50W		±5	±5	84	50
WRD48D09 50W		±9	±2.78	75	50
WRD48D12 50W		±12	±2.08	78	50
WRD48D15 50W		±15	±1.67	80	50
WRD48D24 50W		±24	±1.04	81	50
WRD110D05 50W	110Vdc (70-150Vdc)	±5	±5	84	50
WRD110D12 50W		±12	±2.08	78	50
WRD110D24 50W		±24	±1.04	81	50

\* For 3000V Isolation add Suffix "H3", 4000V Isolation "H4", 6000V Isolation "H6" (WRDxxS(D)xxHx xxW)