

50W Single Output Switching Power Supply

RS-50 series



Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- All using 105° C long life electrolytic capacitors
- Withstand 300VAC surge input for 5 second
- * High operating temperature up to $70^\circ\!\!\mathbb{C}$
- Withstand 5G vibration test
- No load power consumption<0.5W
- High efficiency, long life and high reliability
- 3 years warranty



GTIN CODE

MW Search: <u>https://www.meanwell.com/serviceGTIN.aspx</u>

SPECIFICATION

	RS-50-3.3	RS-50-5	DO 50 40			1
		K3-30-3	RS-50-12	RS-50-15	RS-50-24	RS-50-48
DC VOLTAGE	3.3V	5V	12V	15V	24V	48V
RATED CURRENT	10A	10A	4.2A	3.4A	2.2A	1.1A
CURRENT RANGE	0~10A	0~10A	0~4.2A	0~3.4A	0~2.2A	0~1.1A
RATED POWER	33W	50W	50.4W	51W	52.8W	52.8W
RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	120mVp-p	120mVp-p	120mVp-p	200mVp-p
VOLTAGE ADJ. RANGE	3V ~ 3.6V	4.75 ~ 5.5V	10.8 ~ 13.2V	13.5 ~ 16.5V	22~27.2V	42 ~ 54V
VOLTAGE TOLERANCE Note.3	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%
LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
LOAD REGULATION Note.5	±2.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%
SETUP, RISE TIME	500ms, 30ms/230VAC 1200ms, 30ms/115VAC at full load					
HOLD UP TIME (Typ.)	60ms/230VAC 14ms/115VAC at full load					
VOLTAGE RANGE	88 ~ 264VAC 125 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)					
FREQUENCY RANGE	47 ~ 63Hz					
EFFICIENCY(Typ.)	78%	83%	84.5%	86%	88%	89%
AC CURRENT (Typ.)	1.3A/115VAC 0.8A/230VAC					
INRUSH CURRENT (Typ.)	COLD START 33A/230VAC					
LEAKAGE CURRENT	<2mA/240VAC					
PROTECTION OVER VOLTAGE	110 ~ 150% rated output power					
	Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	3.8~4.45V	5.75~6.75V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 64.8V
	Protection type : Hiccup mode, recovers automatically after fault condition is removed					
WORKING TEMP.	$-25 \sim +70^{\circ}$ C (Refer to "Derating Curve")					
WORKING HUMIDITY	20 ~ 90% RH non-condensing					
STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH ±0.03%/°C (0 ~ 50°C)					
TEMP. COEFFICIENT						
VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes					
SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, AS/NZS 62368.1, EAC TP TC 004, CCC GB4943.1 approved					
WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC					
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH					
EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3,GB9254 class B,GB17625.1, EAC TP TC 020					
EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2), heavy industry level, EAC TP TC 02					
MTBF	2956.7K hrs min. Telcordia SR-332 (Bellcore) ; 575.2K hrs min. MIL-HDBK-217F (25°C)					
DIMENSION	99*97*36mm (L*W*H)					
PACKING	0.41Kg; 45pcs/19.5Kg/0.94CUFT					
 Ripple & noise are measured Tolerance : includes set up t Line regulation is measured Load regulation is measured The power supply is conside a 360mm*360mm metal plat perform these EMC tests, pl The ambient temperature de 	d at 20MHz of bandy tolerance, line regula from low line to high if from 0% to 100% re- ared a component wh the with 1mm of thickr ease refer to "EMI the erating of 3.5°C/1000	width by using a 12" t tion and load regulativ line at rated load. ated load. nich will be installed in ess. The final equipn sting of component p m with fanless model	wisted pair-wire termi on. noto a final equipment. nent must be re-confi ower supplies." (as a s and of 5 ^{°C} /1000m	All the EMC tests are rmed that it still meets vailable on http://www with fan models for op	47uf parallel capacitor e been executed by m s EMC directives. For meanwell.com) perating altitude higher	ounting the unit on guidance on how to
	ATED POWER ATED POWER ATED POWER IPPLE & NOISE (max.) Note.2 /OLTAGE ADJ. RANGE //OLTAGE TOLERANCE Note.3 INE REGULATION Note.4 .OAD REGULATION Note.5 ETUP, RISE TIME //OLTAGE RANGE //OLTAGE CURRENT (Typ.) //OLTAGE CURRENT (Typ.) //OLTAGE CURRENT (Typ.) //OVERLOAD //OVER VOLTAGE //OVER VOLTAGE //OVERKING TEMP. //ORKING TEMP. //ORKING HUMIDITY //IBRATION //OKAGE TEMP., HUMIDITY //IBRATION //OLTAGE SOLATION RESISTANCE //IBRATION //OLTAGE //ILA PARMETER NOT SPECIAL // ALL PARMETER NOT SPECIAL // Line regulation is measured // The ambient temperature de // Comparison	ATED POWER $33W$ RIPPLE & NOISE (max.) Note.2 $80mVp-p$ /OLTAGE ADJ. RANGE $3V \sim 3.6V$ /OLTAGE TOLERANCE Note.3 $\pm 3.0\%$.INE REGULATION Note.4 $\pm 0.5\%$.OAD REGULATION Note.5 $\pm 2.0\%$ SETUP, RISE TIME $500ms, 30ms/230VAC$ /OLTAGE RANGE $88 \sim 264VAC$ /OLTAGE RANGE $88 \sim 264VAC$ /OLTAGE RANGE $88 \sim 264VAC$ //OLTAGE RANGE $47 \sim 63Hz$:FFICIENCY(Typ.) $1.3A/115VAC$ //NRUSH CURRENT (Typ.) $COLD START 33A/2$.EAKAGE CURRENT $<2mA / 240VAC$.DVERLOAD $110 \sim 150\%$ rated ouProtection type : Hic.DVER VOLTAGE $20 \sim 90\%$ RH non-cc.STORAGE TEMP., HUMIDITY $20 \sim 90\%$ RH non-cc.STORAGE TEMP., HUMIDITY $-40 \sim +85^{\circ}C$, $10 \sim 95^{\circ}$ //IBRATION $10 \sim 500Hz, 5G 10m$.SAFETY STANDARDSUL62368-1, TUV BSVITHSTAND VOLTAGE $I/P-O/P. I/P-FG, O/P$.MC EMISSIONCompliance to BS EN/E.SOLATION RESISTANCE $I/P-O/P. 3KVAC$.ME $99^{\circ}97^{*3}6mm$ (L*W*h.ACKING $0.41Kg; 45pcs/19.5K$. All parameters NOT specially mentioned are mere. Ripple & noise are measured at 20MHz of bandva. The power supply is considered a component wit a 360mm *360mm metal plate with 1mm of thickr perform lows line to high. Load regulation is measured from 0% to 100% ra. The power sup	ATED POWER33W50WRIPPLE & NOISE (max.) Note.2 $80mVp-p$ $80mVp-p$ VOLTAGE ADJ. RANGE $3V \sim 3.6V$ $4.75 \sim 5.5V$ VOLTAGE TOLERANCE Note.3 $\pm 3.0\%$ $\pm 2.0\%$ JINE REGULATIONNote.4 $\pm 0.5\%$ $\pm 0.5\%$ LOAD REGULATIONNote.5 $\pm 2.0\%$ $\pm 1.0\%$ SETUP, RISE TIME500ms, 30ms/230VAC1200ms, 30msAOLD UP TIME (Typ.)60ms/230VAC14ms/115VAC at full loVOLTAGE RANGE88 ~ 264VAC125 ~ 373VDC (WithstaREQUENCY RANGE47 ~ 63HzSETFICIENCY(Typ.)78%83%AC CURRENT (Typ.)1.3A/115VAC0.8A/230VACNRUSH CURRENT (Typ.)COLD START 33A/230VACLEAKAGE CURRENT $2mA / 240VAC$ DVER VOLTAGE110 ~ 150% rated output powerProtection type : Hiccup mode, recovers at $3.8 ~ 4.45V$ $5.75 ~ 6.75V$ Protection type : Hiccup mode, recovers at $3.8 ~ 4.45V$ $5.75 ~ 6.75V$ Protection type : Hiccup mode, recovers at $3.8 ~ 4.45V$ $5.75 ~ 6.75V$ Protection type : Hiccup mode, recovers at $3.8 ~ 4.45V$ $5.75 ~ 6.75V$ Protection type : Hiccup mode, recovers at $3.8 ~ 4.45V$ $5.75 ~ 6.75V$ Protection type : Hiccup mode, recovers at $3.8 ~ 4.45V$ $5.75 ~ 6.75V$ Protection type : Hiccup mode, recovers at $3.8 ~ 4.45V$ $5.75 ~ 6.75V$ Protection type : Hiccup mode, recovers at $3.8 ~ 4.45V$ $5.75 ~ 6.75V$ Protection type : Hiccup mode, recovers at $3.8 ~ 4.45V$ $5.75 ~ 6.75V$ Protection type : Hiccup mode, recovers a	KATED POWER 33W 50W 50.4W RIPPLE & NOISE (max.) Note.2 80mVp-p 80mVp-p 120mVp-p VOLTAGE ADJ. RANGE 3V ~ 3.6V 4.75 ~ 5.5V 10.8 ~ 13.2V VOLTAGE TOLERANCE Note.3 \pm 3.0% \pm 2.0% \pm 1.0% JINE REGULATION Note.4 \pm 0.5% \pm 0.5% \pm 0.5% JOAD REGULATION Note.5 \pm 2.0% \pm 1.0% \pm 0.5% JOAD REGULATION Note.5 \pm 2.0% \pm 1.0% \pm 0.5% JOAD REGULATION Note.5 \pm 2.0% \pm 1.0% \pm 0.5% JOAD REGULATION Note.5 \pm 2.0% \pm 1.0% \pm 0.5% SETUP, RISE TIME 500ms, 30ms/230VAC 14ms/15VAC at full load 100L 04 VIELON 60ms/230VAC 14ms/15VAC at full load 300VAC surget or 14ms/15VAC at full load VERUAREE 87 ~ 63Hz 83% 84.5% SC CURRENT (Typ.) COLD START 33A/230VAC VERLOAD COLD START 33A/230VAC 2π A/ 240VAC 2π A/ 240VAC 2π A/ 240VAC 2π A/ 240VAC 2π A/ 24	EATED POWER 33W 50W 50.4W 51W RIPPLE & NOISE (max.) Note.2 80mVp-p 80mVp-p 120mVp-p 120mVp-p 120mVp-p 70DTAGE ADJ. RANGE 3V - 3.6V 4.75 - 5.5V 10.8 - 13.2V 13.5 - 16.5V 70DTAGE TOLERANCE Note.3 ±3.0% ±2.0% ±1.0% ±1.0% ±1.0% 10R REGULATION Note.4 ±0.5% ±0.5% ±0.5% ±0.5% OAD REGURATION Note.5 ±2.0% ±1.0% ±0.5% ±0.5% STUP, RISE TIME 500ms/230VAC 1200ms, 30ms/115VAC at full load 10D UP TIME (Typ.) 60ms/230VAC 120-37VDC (Withstand 300VAC surge for 5sec. Without damage REQUENCY RANGE 47 - 63Hz - 575 - 6.75V 13.8 - 16.2V 17.25 - 20.25V RRURENT (Typ.) COLD START 33A/230VAC - 575 - 6.75V 13.8 - 16.2V 17.25 - 20.25V Protection type : Hiccup mode, recovers automatically after fault condition is removed 3.8 - 4.45V 5.75 - 6.75V 13.8 - 16.2V 17.25 - 20.25V Protection type : Hiccup mode, recovers automatically after fault condition is removed 3.8 -	EATED POWER 33W 50W 50.4W 51W 52.8W NIPPLE & NOISE (max), Note, 2 80m/yp-p 80m/yp-p 120m/yp-p 120m/yp-p





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