ETA-USA
Your power supply experts

110 WATT
AC-DC CONVERTER

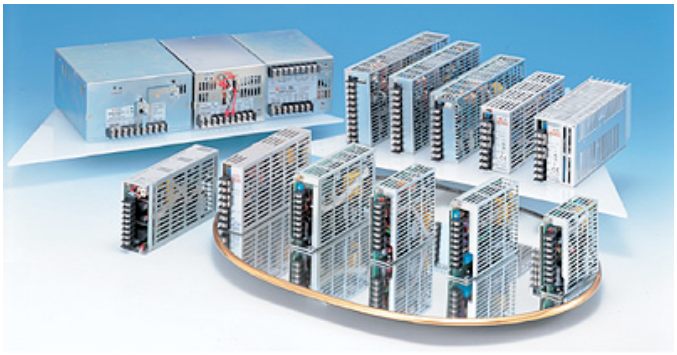
WRDQ-00X Series
4 CHANNEL

General Description

Universal or auto-ranging inputs for world wide use. Output power from 15 to 600 watts. Up to 4 outputs available. Approved to international safety standards.

Dimensions: 33Wx116.5Lx97H (400g)

RoHS



Features

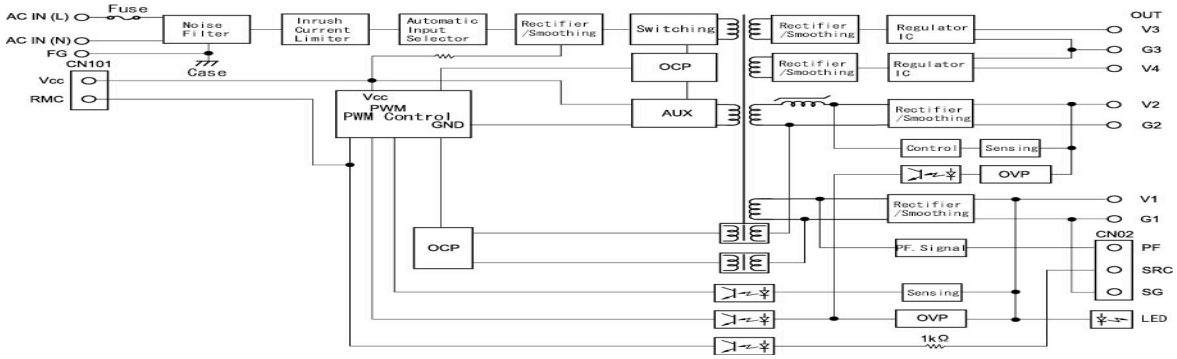
1. Universal input 85-264VAC
2. EMI: meets EN 55022/B, FCC/B
3. Compact size
4. High efficiency and reliability
5. Output voltage adjustable
6. Over voltage protection

Options

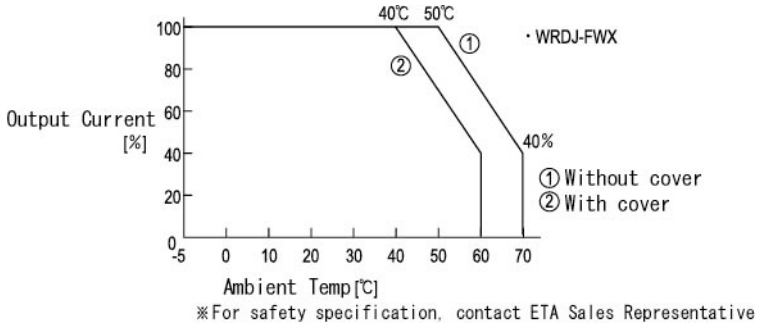
N/A

Specifications<AC/DC>	Model					
WRDQ**X-U 110WATTS/4 OUTPUTS	WRDQ41X	WRDQ42X	WRDQ43X	WRDQ44X	WRDQ45X	WRDQ46X
Input Characteristic						
Input Voltage	AC115/230V					
Input Current	2.4A at AC115V/1.4A at AC230V					
Input Range *1	AC85-132V/170-264V(DC220-350V)					
Input Frequency	50/60Hz					
Input Frequency Range	47-440Hz					
Phase	Single					
Inrush Current *2	23A(maximum) at AC115/46A(maximum) at AC230V					
Efficiency [%] (typical) *3	70	70	70	70	70	70

BLOCK DIAGRAM



DERATING CURVE

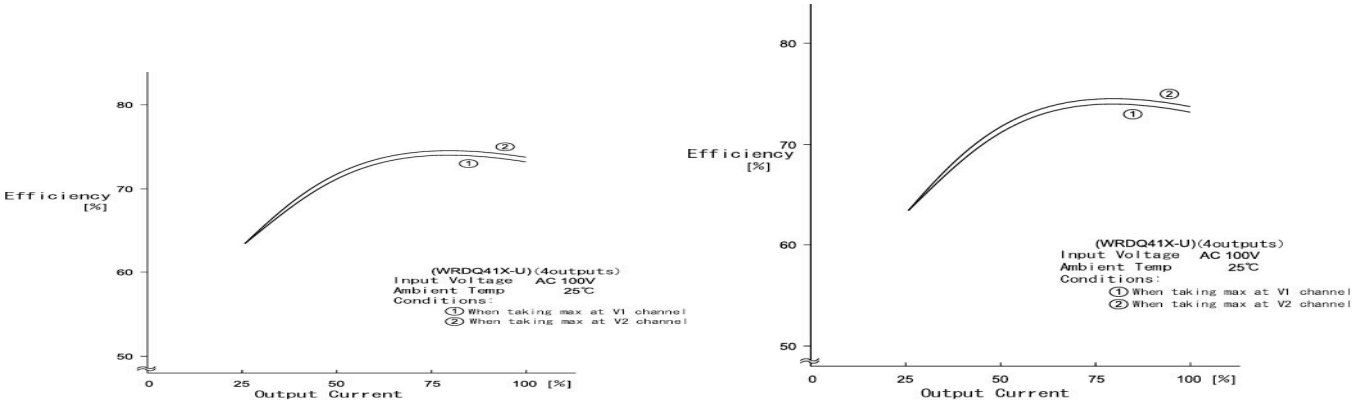


※For safety specification, contact ETA Sales Representative

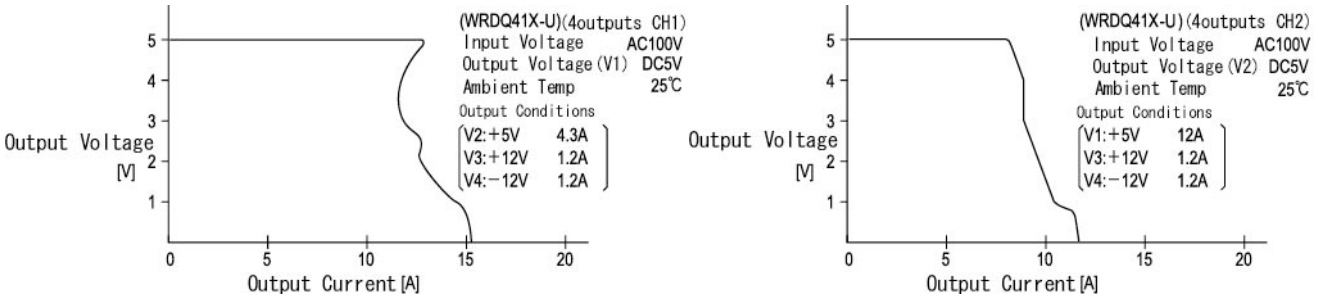
Specifications<AC/DC>	Model																							
WRDQ**X-U	WRDQ41X				WRDQ42X				WRDQ43X				WRDQ44X				WRDQ45X				WRDQ46X			
110WATTS/4 OUTPUTS																								
Output Characteristic																								
Output Voltage [V]	5	5	+12	-12	5	+12	+12	-12	5	24	+12	-12	5	5	+15	-15	5	+12	+15	-15	5	24	+15	-15
Output Current [A]	1.0-12.0	6.0	1.2	1.2	1.0-12.0	4.2	1.2	1.2	1.0-12.0	2.1	1.2	1.2	1.0-12.0	6.0	1.0	1.0	1.0-12.0	4.2	1.0	1.0	1.0-12.0	2.1	1.0	1.0
Power [W]	110(maximum)																							
Voltage Adjust Range	V1:+5%/-0% of Rated Output Voltage(at no load within the input range)																							
	V2:+/-5% of Rated Output Voltage(at no load within the input range)																							
	V3,V4:fixed with tolerance of +/-3%(at no load within the input range)																							
Ripple and Noise [mVp-p](maximum) *4	150	150	220	220	150	220	220	220	150	340	220	220	150	150	250	250	150	220	250	250	150	340	250	250
Regulation																								
a.Statistic Line Regulation [mV](maximum)	25	25	60	60	25	60	60	60	25	120	60	60	25	25	75	75	25	60	75	75	25	120	75	75
b.Statistic Load Regulation [mV](maximum)	50	50	240	240	50	120	240	240	50	240	240	240	50	50	300	300	50	120	300	300	50	240	300	300
c.Temperature Coefficient *5	0.03%/°C																							
d.Drift[mV](maximum) *6	50	50	120	120	50	120	120	120	50	240	120	120	50	50	150	150	50	120	150	150	50	240	150	150
e.Dynamic Load Regulation [mV](typical) *7	not specified																							
F.Recovery Time *7	not specified																							
Rise up time	500mS(maximum) at 25°C and rated input/output																							
Hold up time	20mS(minimum) at 25°C and rated input/output																							
Functions																								
Overcurrent Protection	V1,V2,V3:Current Limiting with automatic recovery V4:by the regulator I.C's characteristics																							
	Please refer to individual spec-sheet																							
Overvoltage Protection ≥120% of Rated Output Voltage[V]	V1,V2:Output shutdown(to reset,leave 3 minutes after shut-off) V3,V4:not available																							
	6	6	-	-	6	14.4	-	-	6	29	-	-	6	6	-	-	6	14.4	-	-	6	29	-	-
Remote Sense	not available																							
Remote On/Off	available																							
Power Fail Detection	available																							
Parallel/series Operation	not available																							
Environmental																								
Operating Temperature *8	-5 to +40°C /open frame type:-5 to +50°C																							
Operating Humidity	30 to 85%RH(non-condensing)																							
Storage Temperature	-20 to +85°C																							
Storage Humidity	10 to 85%RH(non-condensing)																							
Withstanding Voltage	Primary-Secondary AC3,000V for 1minute																							
	Primary-Frame Ground AC2,500V for 1minute																							
	Secondary-Frame Ground AC500V for 1minute																							
Isolation Resistance	Primary-Secondary-Frame Ground 100MΩ(minimum) by DC500V insulation tester																							
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s^2,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)																							
Shock	294m/s^2																							
Cooling	Convection																							
Leakage Current	1mA(maximum) at 25□,rated input/output and rated input frequency																							
Line Conducted Noise																								
Safety	N/A																							
Weight (typical)	1000g[unit without cover:930g]																							
MTBF [H]	230,000																							
Switching Frequency[kHz](typical)	200 Fix.																							

Conditions:
*1 Automatically selected at AC140V +/-2V
*2 at cold start
*3 at DC260V input and output of 110watt
*4 measured by a bayonet probe at the end of a pair of 20cm long wires terminated with a 22uF electrolytic capacitor and a 0.1uF film capacitor in parallel at a 0 to 100MHz
*5 at -5 to +40℃/open frame type:-5 to +50℃
*6 for 7hour period after 1hour warm-up at 25℃ and rated input/output
*7 when output current changed from 25% to 75% of rated output current rapidly at rated input
*8 safety approved at 25℃

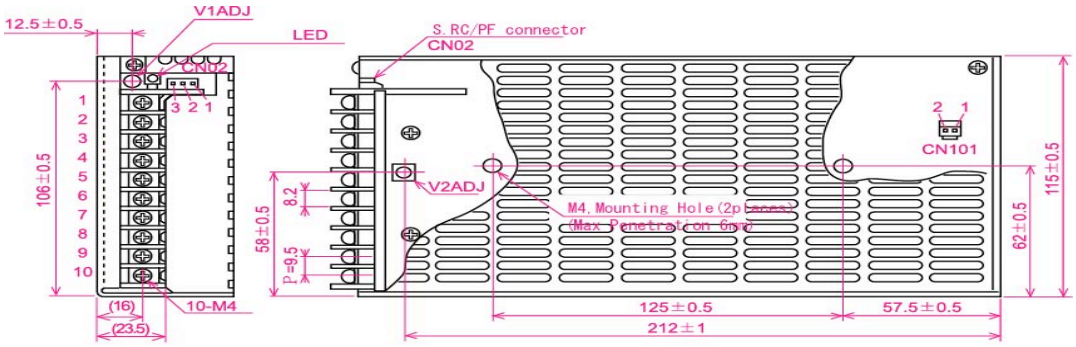
EFFICIENCY CURVE



OCP CURVE

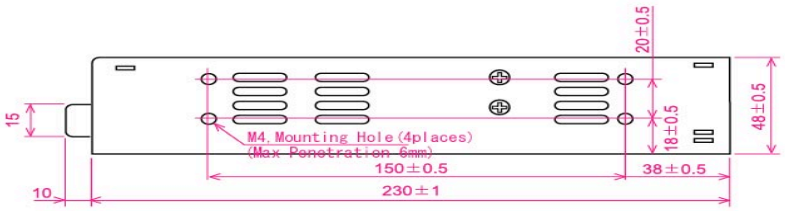


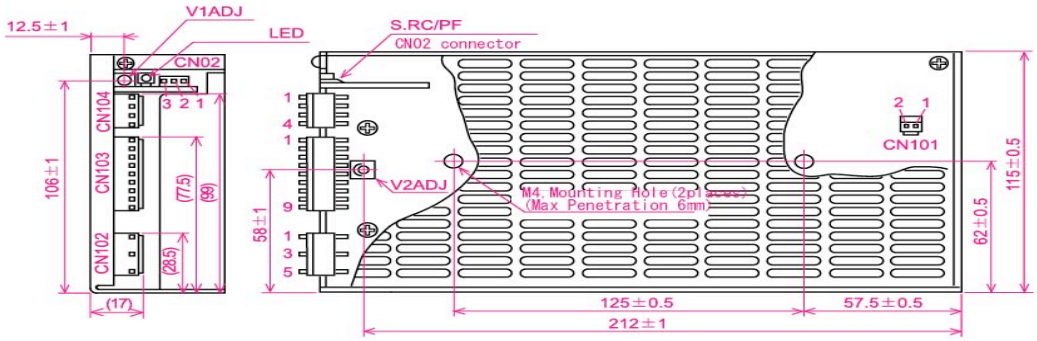
DIMENSION DIAGRAM



Pin Assignments

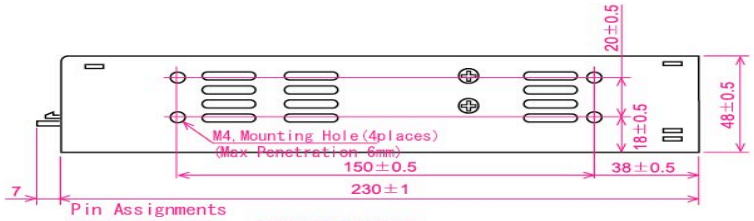
1	V1
2	G1
3	V2
4	G2
5	V3
6	G3
7	V4
8	FG
9	AC in(N)
10	AC in(L)





	Housing
CN101	VHR-2N
CN102	VHR-5N
CN103	VHR-9N
CN104	VHR-4N
CN02	EHR-3

Maker: JST



Pin Assignments

INPUT CONECT

CN102

1	FG
2	NC
3	AC in(N)
4	NC
5	AC in(L)

OUTPUT CONECT

CN101

1	Vcc
2	RMC

CN103

1	V2
2	V2
3	G2
4	G2
5	NC
6	V3
7	G3
8	G3
9	V4

CN104

1	V1
2	V1
3	G1
4	G1

CN02

1	PF
2	SRC
3	SG