

### Features:

- Wide Operating Voltage 81 to 280 VAC, 47 to 400 Hz or 90 to 420VDC
- Internal EMI filter
- Single to Quad Output
- Size: 3"x5"x1.1"
- Power Fail Detect (Optional)
- Operating temperature -40~70°C
- Class I
- 3 year warranty



**PRELIMINARY**

### Electrical Characteristics:

Vin	Universal Input Voltage		90~264VAC 106~250VDC
	Operating Voltage		81~280VAC 90~420VDC
fin	Input Frequency		47~63Hz
Po	Output Power Range		See rating chart
Vo	Output Voltage Range		See rating chart
Io	Output Current Range		See rating chart
Iil	Input Current (Low Line)	Io=Full load, Vin=100VAC or 160VDC	1.6A
Iih	Input Current (High Line)	Io=Full load, Vin=240VAC or 325VDC	0.8A
Ir	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC or 160VDC	35A (max.)
	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC or 325VDC	70A (max.)
Eff	Efficiency	Io=Full load, Vin=230VAC or 325VDC	70~88%
REG-i	Line Regulation	Io=Full Load	0.5~1%
REG-o	Load Regulation	Vin=230VAC or 325VDC	5~6%
OVP	Over Voltage Protection		112~132%
OCP	Over Current Protection		110~150%
Ttr	Time of Transient Response	Io=Full Load to Half Load, Vin=100VAC or 140VDC	5mS (max.)
Th	Hold-Up Time	Io=Full Load, Vin=110VAC or 160VDC	16mS (min.)
Ts	Start Up Time	Io=Full Load, Vin=100VAC or 140VDC	2S (max.)
Vp-p	Ripple & Noise(Peak to Peak)	Full Load, Vin=85VAC or 100VDC	1% (max.)
Iik	Safety Ground Leakage Current	Vin=240VAC/60Hz	0.45mA (max.)
TC	Temperature Coefficient	All output	±0.05%/°C
Pno	No-Load Power Consumption	No load, Vin=230VAC	See rating chart
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242VDC (min.)
Vpg	Dielectric Withstanding Voltage for Primary to PE	Primary to PE	2414VDC (min.)
Ris	Isolation Resistance	Test Voltage=500VDC	50MΩ (min.)

Note: The Ripple & Noise which is under 3.3VDC at 2% max

### Environmental

To	Operating Temperature	See derating curve
Ts	Storage Temperature	-40~85°C
Ho	Operating Humidity	0~95%
Hr	Storage Humidity	0~95%
MTBF	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	0.1M Hrs (min.)
Pd	Derate linearly from 100% load at 50°C to 50% load at 70°C	

### Application:

- Monitor
- Industrial PC
- Set-top box
- AV equipment
- CCD recorder

### Safety Approvals:

**RoHS2**  
2011/65/EU



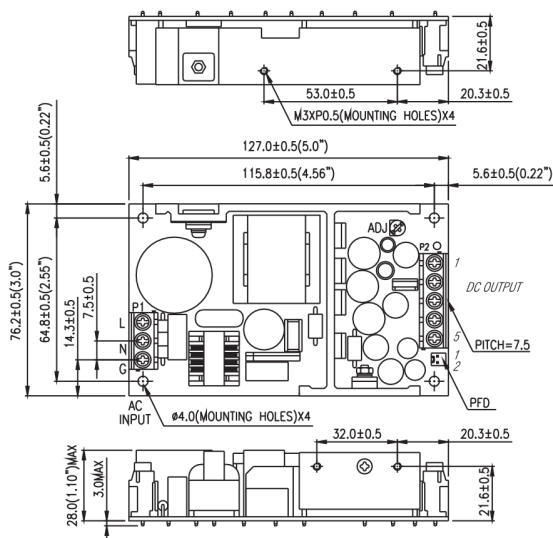
## Output Voltage And Current Rating Chart ( Single Output ) :

Model Number	Output Voltage	Output Current	Total Regulation	Max. Output Power	Pno (max.)
ABU60-101	3 ~ 5 VDC	16.66 ~ 10.0 A	5%	50W	2W
ABU60-102	5 ~ 6 VDC	11.00 ~ 9.16 A	5%	55W	2W
ABU60-103	6 ~ 8 VDC	10.00 ~ 7.50 A	5%	60W	2W
ABU60-104	8 ~ 11 VDC	7.87 ~ 5.72 A	3%	63W	2W
ABU60-105	11 ~ 13 VDC	5.72 ~ 4.84 A	3%	63W	2W
ABU60-105-1	11 ~ 13 VDC	4.09 ~ 3.46 A	3%	45W	2W
ABU60-106	13 ~ 16 VDC	4.84 ~ 3.93 A	3%	63W	2W
ABU60-107	16 ~ 21 VDC	3.93 ~ 3.00 A	3%	63W	2W
ABU60-108	21 ~ 27 VDC	3.00 ~ 2.33 A	2%	63W	2W
ABU60-109	27 ~ 33 VDC	2.33 ~ 1.90 A	2%	63W	2W
ABU60-110	33 ~ 40 VDC	1.90 ~ 1.57 A	2%	63W	2W
ABU60-111	40 ~ 48 VDC	1.57 ~ 1.31 A	2%	63W	2W

## Output Voltage And Current Rating Chart ( Multi Output ) :

Model Number	Output #1				Output #2				Output #3				Output #4				Max. Output Power	Pno (max.)
	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax	Vonom	Iomin	Iomax	Regmax		
ABU60-200	+3.3V	1.4A	7A	6%	+12V	0.6A	3A	5%									59.1W	2W
ABU60-201	+5V	0.7A	7A	5%	+12V	0.3A	3A	5%									63W	2W
ABU60-202	+5V	0.7A	7A	5%	+15V	0.3A	3A	5%									63W	2W
ABU60-203	+5V	0.7A	7A	5%	+24V	0.4A	2A	5%									63W	2W
ABU60-204	+3.3V	1.4A	7A	6%	+5V	0.5A	5A	5%									48.1W	2W
ABU60-215	+5V	1.4A	7A	5%					-24V	0.2A	2A	5%					63W	2W
ABU60-300	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%					63W	2W
ABU60-300-1	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%					63W	2W
ABU60-301	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-5V	0A	0.8A	5%					63W	2W
ABU60-301-1	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+5V	0A	0.8A	5%					63W	2W
ABU60-302	+5V	0.6A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%					63W	2W
ABU60-302-1	+5V	0.6A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%					63W	2W
ABU60-303	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%					63W	2W
ABU60-303-1	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%					63W	2W
ABU60-305	+5V	1.2A	6A	5%	+24V	0.4A	2A	5%	-12V	0A	0.8A	5%					63W	2W
ABU60-305-1	+5V	1.2A	6A	5%	+24V	0.4A	2A	5%	+12V	0A	0.8A	5%					63W	2W
ABU60-306	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	-5V	0A	0.8A	5%					59.8W	2W
ABU60-306-1	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	+5V	0A	0.8A	5%					59.8W	2W
ABU60-308	+3.3V	0.5A	5A	6%	+5V	0.5A	5A	5%	-12V	0A	1A	5%					53.5W	2W
ABU60-308-1	+3.3V	0.5A	5A	6%	+5V	0.5A	5A	5%	+12V	0A	1A	5%					53.5W	2W
ABU60-400	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	2W
ABU60-400-1	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	2W
ABU60-400-2	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	2W
ABU60-400-3	+3.3V	1.2A	6A	6%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	2W
ABU60-401	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	2W
ABU60-401-1	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	2W
ABU60-401-2	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	2W
ABU60-401-3	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	2W
ABU60-402	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-12V	0A	0.8A	5%	63W	2W
ABU60-402-1	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+12V	0A	0.8A	5%	63W	2W
ABU60-402-2	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-12V	0A	0.8A	5%	63W	2W
ABU60-402-3	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+12V	0A	0.8A	5%	63W	2W
ABU60-403	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-24V	0A	0.8A	5%	63W	2W
ABU60-403-1	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+24V	0A	0.8A	5%	63W	2W
ABU60-403-2	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-24V	0A	0.8A	5%	63W	2W
ABU60-403-3	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+24V	0A	0.8A	5%	63W	2W
ABU60-404	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	2W
ABU60-404-1	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	2W
ABU60-404-2	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W	2W
ABU60-404-3	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W	2W

## Mechanical Specifications :



## PIN CHART

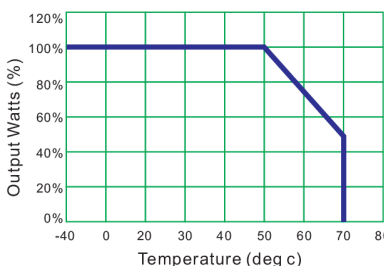
MODEL	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5
ABU60-1XX	OUT	OUT	RTN	RTN	RTN
ABU60-2XX	Vo2	Vo1	COM	N/C	N/C
ABU60-215	N/C	Vo1	COM	Vo3	N/C
ABU60-3XX	Vo2	Vo1	COM	Vo3	N/C
ABU60-4XX	Vo2	Vo1	COM	Vo3	Vo4

Note: Vo1:Output#1 Vo2:Output#2 Vo3:Output#3 Vo4:Output#4

## PFD (Optional)

Other connector	
1	2
OUT	OUT
Vo2	Vo1
N/C	Vo1
Vo2	Vo1
Vo2	Vo1

## Derating Curve :



- Note:
- Dimensions are shown in inches or mm.
  - Weight: 300gs approx.
  - Input connector mates with screw terminal (DINKLE#ESK750V-03P)(10-24AWG).
  - Output connector mates with screw terminal (DINKLE#ESK750V-05P)(10-24AWG).

- Operating Temperature: -40 to 70°C
- Derate linearly from 100% load at 50°C to 50% load at 70°C

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