

# IBU60 SERIES

## 63W Open frame switching power supplies for Industrial Equipment

### Description:

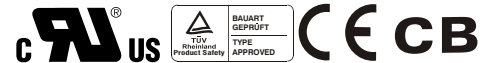
The IBU60 series of compact, open frame constructed, AC/DC or DC/DC switching mode power supplies provide 63 Watts of continuous output power. They are ideally suited for use in CRT terminals, disc drive systems, microprocess or based systems, portable equipments and many other applications, all models are designed to meet the safety requirements of UL/c-UL (UL 60950-1), TUV-Bauart (EN60950-1) and new CE requirements. All units are 100% burned in and tested.



### Features:

- Wide Input Voltage 85 to 280 VAC, 47 to 400 Hz or 100 to 400VDC
- Internal EMI filter
- Single to Quad Output
- Input connector mates with screw terminal (DINKLE#ESK750V-03P)
- Output connector mates with Molex housing 09-50-3081 and Molex 2478 series crimp terminal
- Output Voltage Available From 3 VDC Thru 48VDC
- Input Surge Current and Over Load protection
- Over voltage protection (Crowbar Design)
- Size: 3"x5"x1.1"
- Class I Insulation
- Two Years Warranty
- Power Fail Detect (Optional)

### Safety Approvals :



### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vin	Input Voltage	Universal Input Voltage	90		264	VAC
			106		350	VDC
		Operating Voltage	85		280	VAC
			100		400	VDC
Fin	Input Frequency		47	400	Hz	
Wo	Output Power Range	Vin= Operating Voltage	0		63	W
Vo	Output Voltage Range		See rating chart			V
Io	Output Current Range		See rating chart			A
Iil	Input Current (Low Line)	Io=Full load, Vin=115VAC or 160VDC			1.6	A
Iih	Input Current (High Line)	Io=Full load, Vin=230VAC or 325VDC			0.8	A
Irl	Low Line Inrush Current	Io=Full load, 25 c, Cool start, Vin=115VAC or 160VDC		12	15	A
Irh	High Line Inrush Current	Io=Full load, 25 c, Cool start, Vin=230VAC or 325VDC		26	30	A
Eff	Efficiency	Io=Full Load, Vin=230VAC or 325VDC	70	80	88	%
REG-i	Line Regulation	Io=Full Load		0.5	1	%
REG-o	Load Regulation	Vin=230VAC or 325VDC		3	6	%
OVP	Over Voltage Protection		112		132	%
OCP	Over Current Protection		110		150	%
Ttr	Transient Response	Io=Full Load to Half Load, Vin=100VAC or 140VDC			5	mS
Thold	Hold-Up Time	Io=Full Load, Vin=110VAC or 160VDC	16			mS
Ts	Start Up Time	Io=Full Load, Vin=100VAC or 140VDC	0.3	1	2	S
Vrn	Ripple & Noise (Peak to Peak)	Full Load, Vin=85VAC or 100VDC		1	2	%
Ilk	Safety Ground Leakage Current	Io=Full Load, Vin=240VAC		0.4	0.45	mA
Tc	Temperature Coefficient	All output	-0.05		0.05	%/ c

### Environmental :

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Toper	Operating Temperature		-20		70	°C
Tstg	Storage Temperature		-40		85	°C
Hr	Relative Humidity		5		95	%
Pd	Derate linearly from 100% load at 50°C to 50% load at 70°C					

### Safety Specifications:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242			VDC
Vpg	Dielectric Withstanding Voltage for Primary to Ground	Primary to ground	2121			VDC
Ri	Isolation Resistance	Test Voltage=500VDC	50			MΩ
CISPR	EMI requirements for CISPR-22	Vin=220VAC	B			CLASS
FCC	EMI requirements for FCC PART-15	Vin=110VAC	B			CLASS

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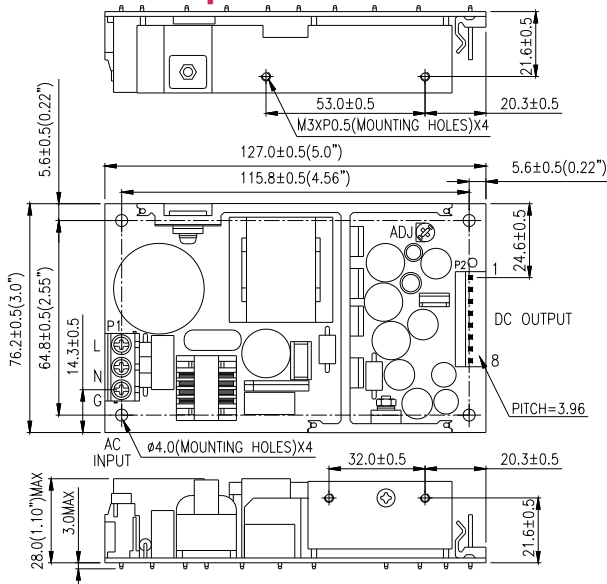
## 63W Open frame switching power supplies for Industrial Equipment Output Voltage And Current Rating Chart (Single Output) :

Model Number	Output Voltage	Output Current	Total Regulation	Maximum Output Power
IBU60-101	3 - 5 VDC	16.66 - 10.0 A	5%	50W
IBU60-102	5 - 6 VDC	11.0 - 9.16 A	5%	55W
IBU60-103	6 - 8 VDC	10.0 - 7.50 A	4%	60W
IBU60-104	8 - 11 VDC	7.87 - 5.72 A	3%	63W
IBU60-105	11 - 13 VDC	5.72 - 4.84 A	3%	63W
IBU60-105-1	11 - 13 VDC	4.09 - 3.46 A	3%	45W
IBU60-106	13 - 16 VDC	4.84 - 3.93 A	3%	63W
IBU60-107	16 - 21 VDC	3.93 - 3.00 A	3%	63W
IBU60-108	21 - 27 VDC	3.00 - 2.33 A	2%	63W
IBU60-109	27 - 33 VDC	2.33 - 1.90 A	2%	63W
IBU60-110	33 - 40 VDC	1.90 - 1.57 A	2%	63W
IBU60-111	40 - 48 VDC	1.57 - 1.31 A	2%	63W

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

Model Number	Output #1				Output #2				Output #3				Output #4				Maximum Output Power
	Voncom	Iomin	Iomax	Regmax	Voncom	Iomin	Iomax	Regmax	Voncom	Iomin	Iomax	Regmax	Voncom	Iomin	Iomax	Regmax	
IBU60-200	+3.3V	1.4A	7A	7%	+12V	0.6A	3A	5%									59.1W
IBU60-201	+5V	0.7A	7A	5%	+12V	0.3A	3A	5%									63W
IBU60-202	+5V	0.7A	7A	5%	+15V	0.3A	3A	5%									63W
IBU60-203	+5V	0.7A	7A	5%	+24V	0.4A	2A	5%									63W
IBU60-204	+3.3V	1.4A	7A	7%	+5V	0.5A	5A	5%									48.1W
IBU60-215	+5V	0.7A	7A	5%	-24V	0.2A	2A	5%									63W
IBU60-300	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%					63W
IBU60-300-1	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%					63W
IBU60-301	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-5V	0A	0.8A	5%					63W
IBU60-301-1	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+5V	0A	0.8A	5%					63W
IBU60-302	+5V	0.6A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%					63W
IBU60-302-1	+5V	0.6A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%					63W
IBU60-303	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%					63W
IBU60-303-1	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%					63W
IBU60-305	+5V	1.2A	6A	5%	+24V	0.4A	2A	5%	-12V	0A	0.8A	5%					63W
IBU60-305-1	+5V	1.2A	6A	5%	+24V	0.4A	2A	5%	+12V	0A	0.8A	5%					63W
IBU60-306	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	-5V	0A	0.8A	5%					59.8W
IBU60-306-1	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	+5V	0A	0.8A	5%					59.8W
IBU60-308	+3.3V	0.5A	5A	7%	+5V	0.5A	5A	5%	-12V	0A	1A	5%					53.5W
IBU60-308-1	+3.3V	0.5A	5A	7%	+5V	0.5A	5A	5%	+12V	0A	1A	5%					53.5W
IBU60-400	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
IBU60-400-1	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
IBU60-400-2	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
IBU60-400-3	+3.3V	1.2A	6A	7%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
IBU60-401	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
IBU60-401-1	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	-12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
IBU60-401-2	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+12V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
IBU60-401-3	+5V	0.6A	6A	5%	+12V	0.3A	3A	5%	+12V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
IBU60-402	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-12V	0A	0.8A	5%	63W
IBU60-402-1	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+12V	0A	0.8A	5%	63W
IBU60-402-2	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-12V	0A	0.8A	5%	63W
IBU60-402-3	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+12V	0A	0.8A	5%	63W
IBU60-403	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	-24V	0A	0.8A	5%	63W
IBU60-403-1	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	-12V	0A	0.8A	5%	+24V	0A	0.8A	5%	63W
IBU60-403-2	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	-24V	0A	0.8A	5%	63W
IBU60-403-3	+5V	1.2A	6A	5%	+12V	0.6A	3A	5%	+12V	0A	0.8A	5%	+24V	0A	0.8A	5%	63W
IBU60-404	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
IBU60-404-1	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	-15V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W
IBU60-404-2	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%	-5V	0A	0.8A	5%	63W
IBU60-404-3	+5V	0.6A	6A	5%	+15V	0.3A	3A	5%	+15V	0A	0.8A	5%	+5V	0A	0.8A	5%	63W

## Mechanical Specifications :



## PIN CHART

MODEL	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8 (Optional)
IBU60-1XX	OUT	OUT	OUT	RTN	RTN	RTN	RTN	PFD
IBU60-2XX	Vo2	Vo1	Vo1	COM	COM	N/C	N/C	PFD
IBU60-3XX	Vo2	Vo1	Vo1	COM	COM	Vo3	N/C	PFD
IBU60-4XX	Vo2	Vo1	Vo1	COM	COM	Vo3	Vo4	PFD

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

## Note:

1. Dimensions are shown in inches or mm.
2. Weight: 300gs approx.
3. Input connector mates with screw terminal (DINKLE#ESK750V-03P).
4. Output connector mates with Molex housing 09-50-3081 and Molex2478 series crimp terminal.