

- 63W U-bracket type switching power supplies for Medical Equipment

## DESCRIPTION

The NSP-MU60 series of compact, open frame constructed, AC/DC switching mode power supplies provide 63 Watts of continuous output power . They are ideally suited for use in hospital instrument and many other applications, All models meet FCC Part-18 class B and CISPR-11 EN55011 class B emission limits and are designed to comply with UL/c-UL(UL 60601-1), TUV-T-mark(EN 60601-1) and new CE requirements. All units are 100% burned in and tested.



## FEATURES

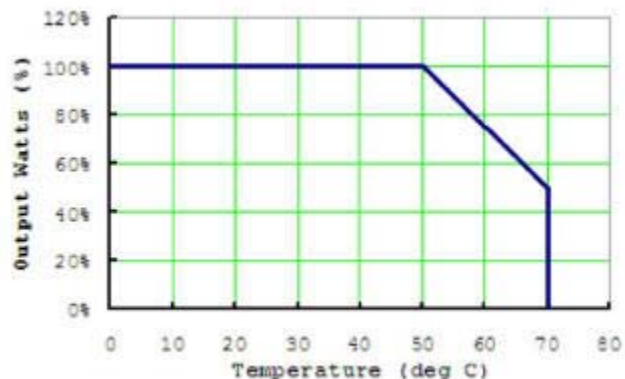
- Wide Input Voltage 90 to 264 VAC, 47 to 63 Hz
- Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal
- Output connector mates with Molex housing 09-50-3081 and Molex 2478 series crimp terminal
- Output Voltage Available from 3VDC through 40VDC
- Single to Quad Output
- Input Surge Current, Over Voltage and Over Load Protection
- Class I Insulation
- Power Fail Detect (Optional)
- 3 year warranty

## ELECTRICAL CHARACTERISTICS

- Efficiency: 85% max.
- Line Regulation: 1% max.
- Load Regulation: 7% max.
- Hold-up Time: 16mS min.
- Output ripple and noise: 0.5% (Typ.).  
(The Ripple & Noise which is under 3.3VDC at 2% max)

## ENVIRONMENTAL

- Operating Temperature: 0 to 70°C
- Derate linearly from 100% load at 50°C to 50% load at 70°C
- Storage Temperature: -40 to 85°C
- Relative Humidity: 5 to 95%
- MTBF: 100,000 calculated hours.



## OUTPUT VOLTAGE AND CURRENT RANGE

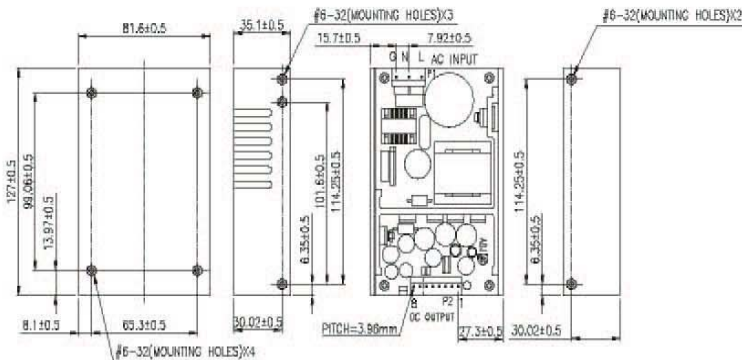
Model No.	Output Voltage	Max. Output Current	Total Regulation	Max. Output Power	Safety
▶ NSP-MU60-101	3-5VDC	16.66-10.0A	7%	50W	UL/cUL, T- mark, CE
▶ NSP-MU60-102	5-6VDC	11.0-9.16A	7%	55W	UL/cUL, T- mark, CE
▶ NSP-MU60-103	6-8VDC	10.0-7.50A	5%	60W	UL/cUL, T- mark, CE
▶ NSP-MU60-104	8-11VDC	7.87-5.72A	5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-105	11-13VDC	5.72-4.84A	5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-105-1	11-13VDC	4.09-3.46A	5%	45W	UL/cUL, T- mark, CE
▶ NSP-MU60-106	13-16VDC	4.84-3.93A	5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-107	16-21VDC	3.93-3.00A	5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-108	21-27VDC	3.00-2.33A	5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-109	27-33VDC	2.33-1.90A	5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-110	33-40VDC	1.90-1.57A	2%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-200	+3.3VDC +12.0VDC	7.0A 3.0A	6% 5%	59.1W	UL/cUL, T- mark, CE
▶ NSP-MU60-201	+5.0VDC +12.0VDC	7.0A 3.0A	5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-202	+5.0VDC +15.0VDC	7.0A 3.0A	5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-203	+5.0VDC +24.0VDC	7.0A 2.0A	5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-204	+3.3VDC +5.0VDC	7.0A 5.0A	6% 5%	48.1W	UL/cUL, T- mark, CE
▶ NSP-MU60-215	+5.0VDC -24.0VDC	7.0A 2.0A	5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-300	+3.3VDC +12.0VDC -12.0VDC	6.0A 3.0A 0.8A	6% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-300-1	+3.3VDC +12.0VDC +12.0VDC	6.0A 3.0A 0.8A	6% 5% 5%	63W	UL/cUL, T- mark, CE

▶ NSP-MU60-301	+5.0VDC +12.0VDC -5.0VDC	6.0A 3.0A 0.8A	5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-301-1	+5.0VDC +12.0VDC +5.0VDC	6.0A 3.0A 0.8A	5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-302	+5.0VDC +12.0VDC -12.0VDC	6.0A 3.0A 0.8A	5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-302-1	+5.0VDC +12.0VDC +12.0VDC	6.0A 3.0A 0.8A	5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-303	+5.0VDC +15.0VDC -15.0VDC	6.0A 3.0A 0.8A	5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-303-1	+5.0VDC +15.0VDC +15.0VDC	6.0A 3.0A 0.8A	5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-305	+5.0VDC +24.0VDC -12.0VDC	6.0A 2.0A 0.8A	5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-305-1	+5.0VDC +24.0VDC +12.0VDC	6.0A 2.0A 0.8A	5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-306	+3.3VDC +12.0VDC -5.0VDC	6.0A 3.0A 0.8A	6% 5% 5%	59.8W	UL/cUL, T- mark, CE
▶ NSP-MU60-306-1	+3.3VDC +12.0VDC +5.0VDC	6.0A 3.0A 0.8A	6% 5% 5%	59.8W	UL/cUL, T- mark, CE
▶ NSP-MU60-308	+3.3VDC +5.0VDC -12.0VDC	5.0A 5.0A 1.0A	6% 5% 5%	53.5W	UL/cUL, T- mark, CE
▶ NSP-MU60-308-1	+3.3VDC +5.0VDC +12.0VDC	5.0A 5.0A 1.0A	6% 5% 5%	53.5W	UL/cUL, T- mark, CE
▶ NSP-MU60-400	+3.3VDC +12.0VDC -12.0VDC -5.0VDC	6.0A 3.0A 0.8A 0.8A	6% 5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-400-1	+3.3VDC +12.0VDC -12.0VDC +5.0VDC	6.0A 3.0A 0.8A 0.8A	6% 5% 5% 5%	63W	UL/cUL, T- mark, CE
▶ NSP-MU60-400-2	+3.3VDC +12.0VDC +12.0VDC -5.0VDC	6.0A 3.0A 0.8A 0.8A	6% 5% 5% 5%	63W	UL/cUL, T- mark, CE

▶ NSP-MU60-400-3	+3.3VDC	6.0A	6%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	+12.0VDC	0.8A	5%		
	+5.0VDC	0.8A	5%		
▶ NSP-MU60-401	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	-12.0VDC	0.8A	5%		
	-5.0VDC	0.8A	5%		
▶ NSP-MU60-401-1	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	-12.0VDC	0.8A	5%		
	+5.0VDC	0.8A	5%		
▶ NSP-MU60-401-2	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	+12.0VDC	0.8A	5%		
	-5.0VDC	0.8A	5%		
▶ NSP-MU60-401-3	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	+12.0VDC	0.8A	5%		
	+5.0VDC	0.8A	5%		
▶ NSP-MU60-402	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	-12.0VDC	0.8A	5%		
	-12.0VDC	0.8A	5%		
▶ NSP-MU60-402-1	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	-12.0VDC	0.8A	5%		
	+12.0VDC	0.8A	5%		
▶ NSP-MU60-402-2	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	+12.0VDC	0.8A	5%		
	-12.0VDC	0.8A	5%		
▶ NSP-MU60-402-3	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	+12.0VDC	0.8A	5%		
	+12.0VDC	0.8A	5%		
▶ NSP-MU60-403	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	-12.0VDC	0.8A	5%		
	-24.0VDC	0.8A	5%		
▶ NSP-MU60-403-1	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	-12.0VDC	0.8A	5%		
	+24.0VDC	0.8A	5%		
▶ NSP-MU60-403-2	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	+12.0VDC	0.8A	5%		
	-24.0VDC	0.8A	5%		

▶ NSP-MU60-403-3	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+12.0VDC	3.0A	5%		
	+12.0VDC	0.8A	5%		
	+24.0VDC	0.8A	5%		
▶ NSP-MU60-404	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+15.0VDC	3.0A	5%		
	-15.0VDC	0.8A	5%		
	-5.0VDC	0.8A	5%		
▶ NSP-MU60-404-1	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+15.0VDC	3.0A	5%		
	-15.0VDC	0.8A	5%		
	+5.0VDC	0.8A	5%		
▶ NSP-MU60-404-2	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+15.0VDC	3.0A	5%		
	+15.0VDC	0.8A	5%		
	-5.0VDC	0.8A	5%		
▶ NSP-MU60-404-3	+5.0VDC	6.0A	5%	63W	UL/cUL, T- mark, CE
	+15.0VDC	3.0A	5%		
	+15.0VDC	0.8A	5%		
	+5.0VDC	0.8A	5%		

### Mechanical Specifications :



### PIN CHART

MODEL	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6	PIN 7	PIN 8 (Optional)
NSP-60MU-1XX	OUT	OUT	OUT	RTN	RTN	RTN	RTN	PFD
NSP-60MU-2XX	Vo2	Vo1	Vo1	COM	COM	N/C	N/C	PFD
NSP-60MU-215	N/C	Vo1	Vo1	COM	COM	Vo3	N/C	PFD
NSP-60MU-3XX	Vo2	Vo1	Vo1	COM	COM	Vo3	N/C	PFD
NSP-60MU-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 mm.
2. Weight: 425gs approx.
3. Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal.
4. Output connector mates with Molex housing 09-50-3081 and Molex 2478 series crimp terminal.