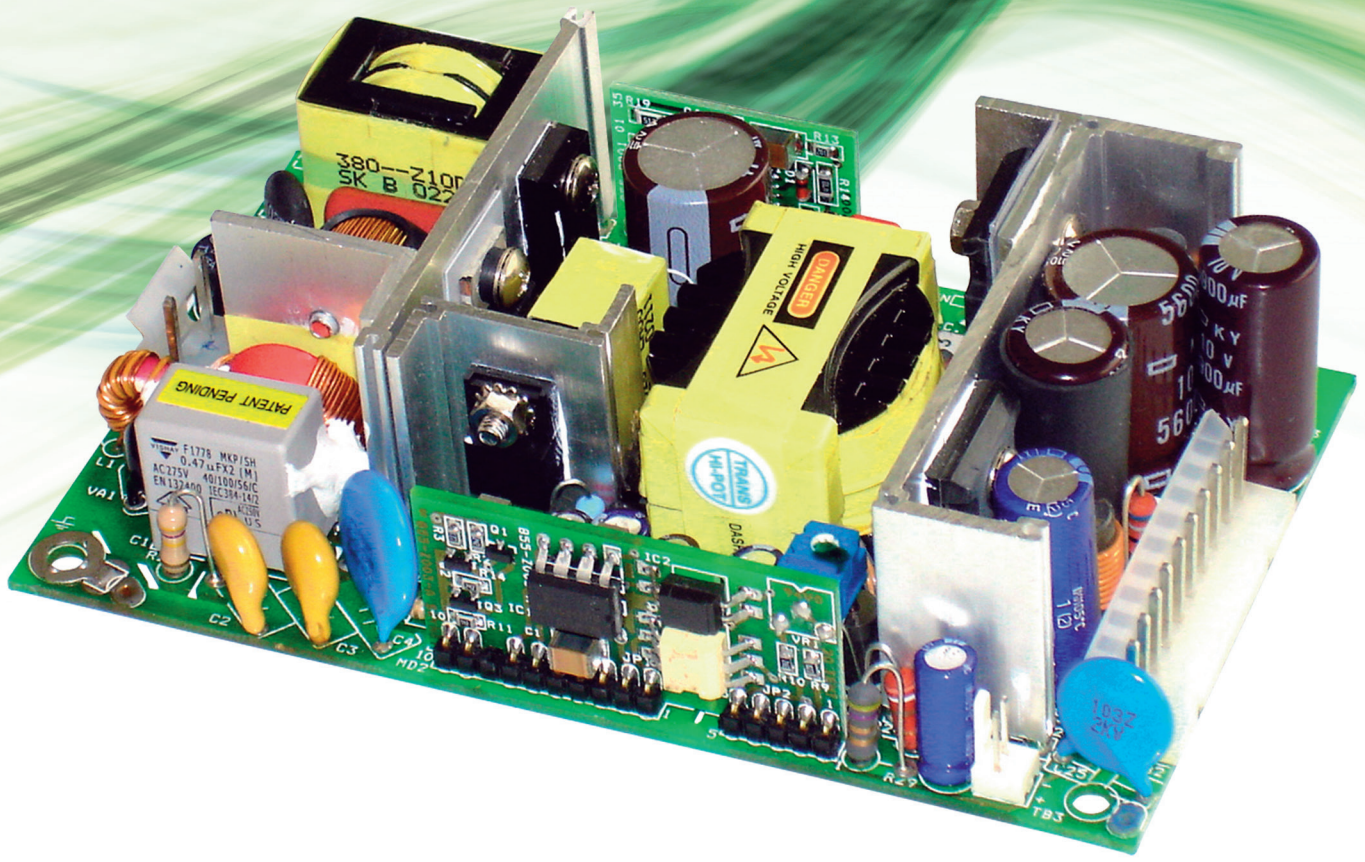
Innovative Engineering Solutions



TRI-MAG®
A *Curtis Industries* Company

The Pride of Tri-Mag Power

TRI-MAG, Inc. was founded in January 1980 to meet the ever growing need for power related products. We manufacture and supply a wide variety of reliable A.C. Line Filters, Switching Power Supplies, DC-DC Converters, Industrial Computer Chassis, and other power related products. Our goal has been to provide quality, cost effective components for the computer, data processing, industrial control/processing, testing/measurement, medical and telecommunication industries. We at TRI-MAG, Inc. take pride in our continuing commitment to the following:

- A commitment to power technology and making it work for you in every aspect.
- A commitment to advanced manufacturing to meet your increasing demands for quality, delivery and cost.
- A commitment to power products and service to meet the diverse needs of our customers now and in the future.
- A commitment to being a world class manufacturer of power products dedicated to the future.
- A commitment to providing the quality your system deserves.

When you do business with us, you will find our service and quality consistent with these commitments and as a TRI-MAG customer, you will receive the benefits of a stringent employee commitment to quality, reliability, variety and delivery.

When you buy a power product from TRI-MAG you are not only buying the product, but also our company with a group of dedicated professionals who will be around to help you for many years to come.

We at TRI-MAG take pride in the products and service we provide to our customers and friends.

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TRI-MAG, LLC
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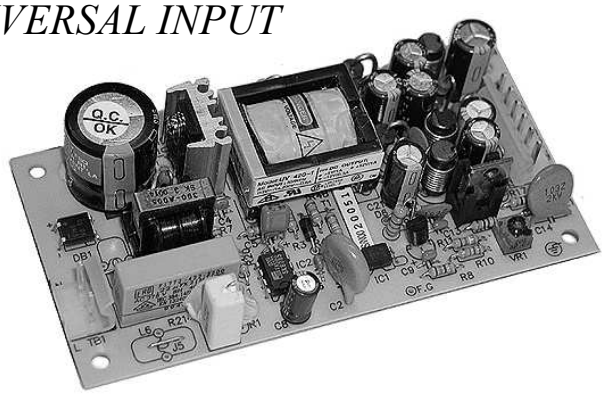
1601 N. CLANCY CT. VISALIA, CA 93291
PH: (559) 651-2222 FAX: (559) 651-0188
http://www.tri-mag.com
sales@tri-mag.com

UV420 SERIES

20 Watt

UNIVERSAL INPUT



DESCRIPTION

Tri-Mag, Inc. UV420 Series, these 20 watt switchers feature small size, low cost, high efficiency with universal input ranging from 85 VAC to 270 VAC without jumpers.

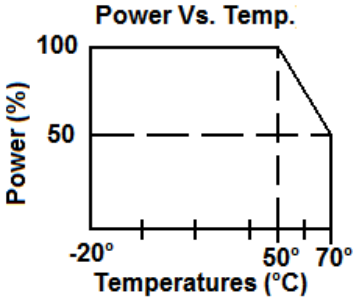
The series have over load hiccup mode protection on all single and multiple outputs. The UV420 Series is designed in full compliance to UL 60950-1, CSA22.2 #234, and VDE EN60950.

FEATURES

- *80 TO 270VAC Universal Input*
- *Innovative Mosfet Design*
- *Low Cost*
- *High Efficiency*
- *100% Hi-Pot Test*
- *100% Cycling On-Off Burn-In Test*
- *Burn-in Line Filter to Meet FCC Class B*

APPLICATIONS

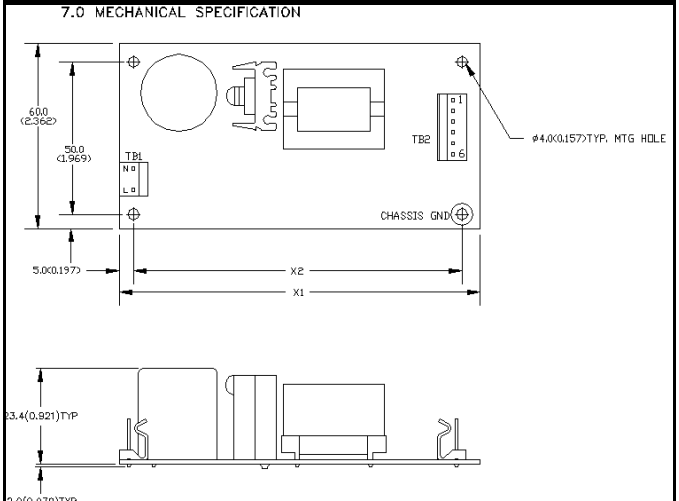
- *Hard Disk Subsystems*
- *External Floppy Disk Systems*
- *External Tape Back-Up Systems*
- *Terminal Systems*
- *Modems*
- *Printers & Plotters*



GENERAL SPECIFICATIONS

Input Voltage…….. 85VAC to 270VAC
or 120VDC to 350VDC
Input Current……... 1 A AT 115VAC
0.6 A AT 230VAC
Input Frequency……...…. 47Hz to 63Hz
Inrush Current (cold)……...…... 15A @ 115VAC
30A @ 230VAC
Operating Temperature……..…….. 0 to 50ºC
Storage Temperature……..……. −40ºC to 85ºC
Cooling…….. Free Air Convection
Efficiency…….……. 70% Typical
Holdup Time……...…. 16ms at 115VAC
Overvoltage Type……..…. Crowbar
Trip Point, 5.7V to 6.7V
or Rated Output +2V
Overload Protection……...…….. Foldback
at 150% laod
Output # 1 Voltage Adjustable……..…. ±10%
Safety:
Designed in full compliance with……... UL 60950-1
CSA 22.2 No. 60950-1
EN60950

MECHANICAL SPECIFICATIONS



MECHANICAL SPECIFICATIONS:
Dimension Shown in IN (Tolerance Specified is ±0.015")

PC Board Size:
4.724" x 2.362" x .945" for -1, -3 model

(120mm x 60mm x 24mm)

4.331" x 2.362" x .945" for other model
(110mm x 60mm x 24mm)

MOUNTING HOLE:
4.331" x 1.969" (110mm x 50mm) for −1, -3 model
3.937" x 1.969" (100mm x 50mm) for other model

TB1:
AC Input, Using Molex 5277-2 or Equivalent

TB2:
DC Output, Using Molex 5273-4, -6 or Equivalent

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UV420 SERIES 20 WATT— PIN ASSIGNMENT

Pin / Model	1	2	3	4	5	6
UV420-1	+5V	+5V	COM	COM	-12V	+12V
UV420-2	+5V	+5V	COM	COM	-5V	+12V
UV420-3	+5V	+5V	COM	COM	N/C	+12V
UV420-5	+5V	COM	COM	+24V	N/C	-
UV420-6	+5V	+5V	COM	COM	-	-
UV420-7	+12V	-12V	COM	COM	-	-
UV420-9	+24V	+24V	COM	COM	-	-

UV420 SERIES 20 WATT— OUTPUT SPECIFICATIONS

Model	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
		Min.	Rate	Peak			Line	Load
UV420-1	+5V +12V -12V	0 0 0	1 1 0.3	3 1.5 0.5	1% 5% 10%	50 mV 100 mV 100 mV	1% 1% 1%	1% 4% 4%
UV420-3	+5V +12V	0 0	1 1	3 1.5	1% 5%	50 mV 100 mV	1% 1%	1% 4%
UV420-5	+5V +24V	0 0	2.5 0.5	3.0 1.0	1% 5%	50 mV 100 mV	1% 1%	1% 5%
UV420-6	+5V	0	4	5	1%	50 mV	1%	1%
UV420-7	+12V	0	2	3	1%	100 mV	1%	1%
UV420-9	+24V	0	1	1.5	1%	150 mV	1%	1%
UV420-2	+5V +12V -5V	0 0 0	1 1 0.6	3 1.5 1.0	1% 5% 10%	50 mV 100 mV 100 mV	1% 1% 1%	1% 4% 4%
UV420-14	+48V	0	0.5	-	1%	400 mV	1%	1%

Note: Contact factory for Safety Agency Approved status.

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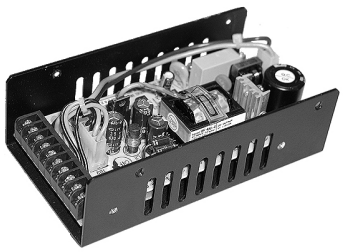
EC & EU SERIES

20 Watt

UNIVERSAL INPUT WITH CHASSIS

EC



EU

DESCRIPTION

Our Standard power supplies, the UV420 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

Dimension Table:

Figure	Inches	(mm)
A	5.52	140.20
B	2.81	71.37
C	1.60	40.64
D	4.00	101.6
E	0.75	19.05
F	2.00	50.8
G	1.50	38.1
H	0.85	21.59
I	1.48	37.59
J	1.30	33.02

FEATURES, APPLICATIONS, SPECIFICATIONS

All features, applications, and electrical specifications are the same as the standard UV420 Series.

Part Number System:
UV420-1 EC (Fully enclosed chassis)
UV420-1 EU ('U' shape chassis)

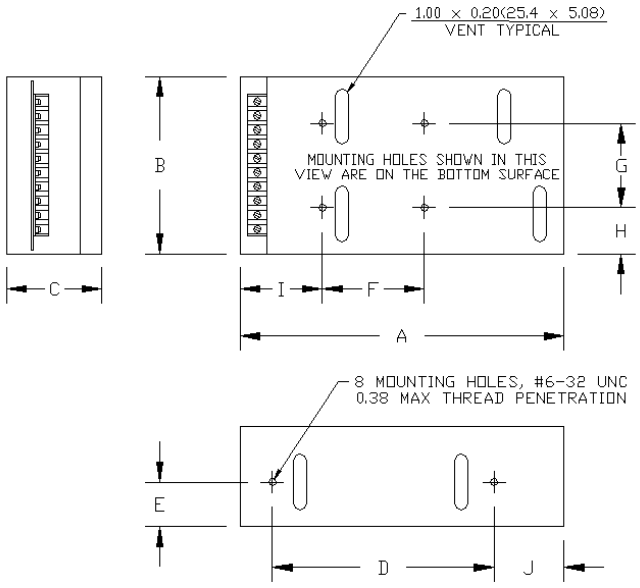
MECHANICAL SPECIFICATIONS

All Dimensions in Inches (mm)

Case Size:
5.92" x 3.20" x 1.80"
(150.3mm x 81.28mm x 45.72mm)

Mounting Holes:
2.00" x 1.50" or 4.00" 2 hole only
(50.8mm x 38.1mm) or (101.6mm 2 hole only)

Color: Black



PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6	7	8	9	10
UV420-1 EC/EU	ACG	ACL	ACN		+5V	+5V	COM	COM	-12V	+12V
UV420-3 EC/EU	ACG	ACL	ACN		+5V	+5V	COM	COM	N/C	+12V
UV420-6 EC/EU	ACG	ACL	ACN		+5V	+5V	COM	COM		
UV420-7 EC/EU	ACG	ACL	ACN		+12V	+12V	COM	COM		
UV420-8 EC/EU	ACG	ACL	ACN		+15V	+15V	COM	COM		
UV420-9 EC/EU	ACG	ACL	ACN		+24V	+24V	COM	COM		

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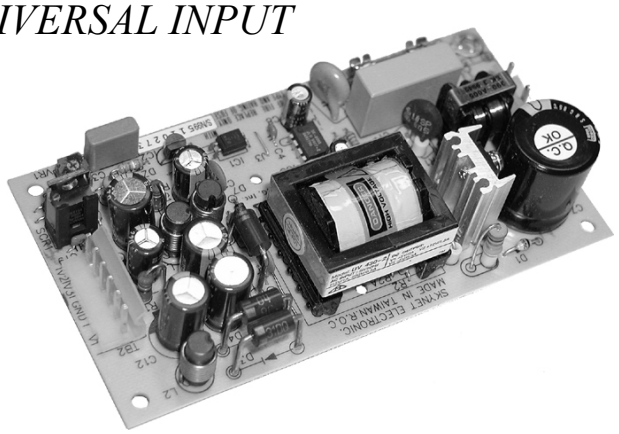
UV430 SERIES

30 Watt

UNIVERSAL INPUT



DESCRIPTION

Tri-Mag, Inc. UV430 Series, these 30 watt switchers feature small size, low cost, high efficiency with universal input ranging from 85 VAC to 264 VAC without jumpers.

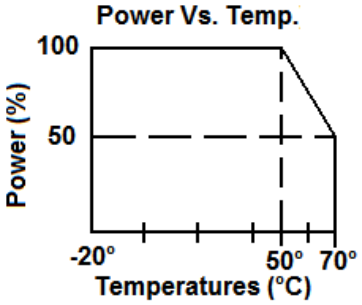
Both single output and multiple output models are available. The UV430 Series is designed in full compliance to UL 60950-1, CSA22.2 #234, and VDE EN60950.

FEATURES

- *80 TO 264VAC Universal Input*
- *Innovative Mosfet Design*
- *Low Cost*
- *High Efficiency*
- *100% Hi-Pot Test*
- *100% Cycling On-Off Burn-In Test*
- *Burn-in Line Filter to Meet FCC Class B*

APPLICATIONS

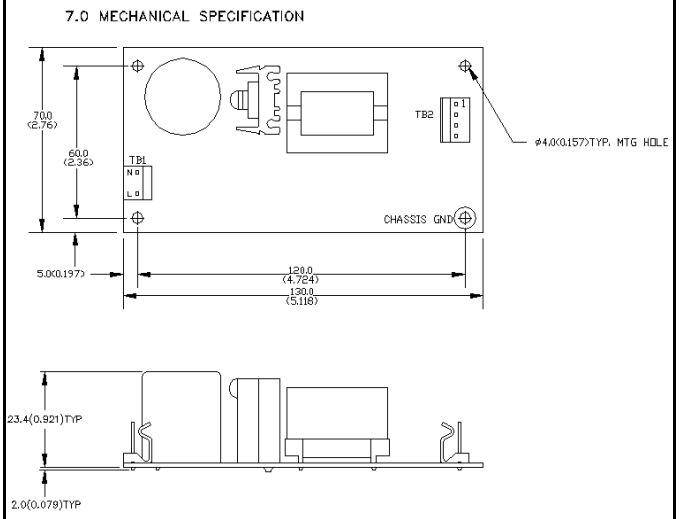
- *Hard Disk Subsystems*
- *External Floppy Disk Systems*
- *External Tape Back-Up Systems*
- *Terminal Systems*
- *Modems*
- *Printers & Plotters*



GENERAL SPECIFICATIONS

Input Voltage…….. 85VAC to 264VAC
or 120VDC to 350VDC
Input Frequency……...… 47Hz to 63Hz
Inrush Current (cold).……...…... 30A @ 115VAC
60A @ 230VAC
Operating Temperature……..…….. 0 to 50ºC
Storage Temperature……..……. −20ºC to 85ºC
Cooling…….. Free Air Convection
Efficiency…….……. 75% Typical
Holdup Time……...… 16ms at 115VAC
Overvoltage Type……..… Crowbar
Trip Point, 6.2V ± 0.4V
or Rated Output +2V
Overload Protection……...…….. Foldback
at 150% laod
Output # 1 Voltage Adjustable……...…. ±10%
Safety:
Designed in full compliance with……... UL 60950-1
CSA 22.2 No. 60950-1
VDE EN60950
EMI……...…… Meet FCC Class “B”
Vfg 243/1991

MECHANICAL SPECIFICATIONS



MECHANICAL SPECIFICATIONS:
Dimension Shown in IN (Tolerance Specified is ±0.016”)

PC Board Size:
5.118” x 2.756” x 1.126”
(130mm x 70mm x 28.6mm)

MOUNTING HOLE:
4.724” x 2.362” (120mm x 60mm)

TB1:
AC Input, Using Molex 5277-2 or Equivalent

TB2:
DC Output, Using Molex 5273-4, -6 or Equivalent

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UV430 SERIES 30 WATT— PIN ASSIGNMENT

Pin / Model	1	2	3	4	5	6
UV430-1	+5V	+5V	COM	COM	-12V	+12V
UV430-2	+5V	+5V	COM	COM	-5V	+12V
UV430-3	+5V	+5V	COM	COM	N/C	+12V
UV430-4	+5V	+5V	COM	COM	-15V	+15V
UV430-5	+5V	+5V	COM	COM	N/C	+24V
UV430-6	+5V	+5V	COM	COM	-	-
UV430-7	+12V	+12V	COM	COM	-	-
UV430-8	+15V	+15V	COM	COM	-	-
UV430-9	+24V	+24V	COM	COM	-	-

UV430 SERIES 30 WATT— OUTPUT SPECIFICATIONS

Model	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
		Min.	Rate	Peak			Line	Load
UV430-1	+5V +12V -12V	0 0 0	2.0 1.5 0.3	3.0 3.0 0.5	1% 5% 8%	50 mV 100 mV 100 mV	1% 1% 1%	1% 4% 4%
UV430-2	+5V +12V -5V	0 0 0	2.0 1.5 0.3	2.0 3.0 0.5	1% 5% 10%	50 mV 100 mV 100 mV	1% 1% 1%	1% 3% 5%
UV430-3	+5V +12V	0 0	2.0 1.5	3.0 3.0	1% 5%	50 mV 100 mV	1% 1%	1% 5%
UV430-4	+5V +15V -15V	0 0 0	1.5 1.2 0.3	3.0 2.0 0.5	1% 5% 7%	50 mV 150 mV 150 mV	1% 1% 1%	1% 4% 4%
UV430-5	+5V +24V	0 0	2.0 0.75	3.0 1.7	1% 5%	50 mV 150 mV	1% 1%	1% 3%
UV430-6	+5V	0	6.0	10.0	1%	50 mV	1%	1%
UV430-7	+12V	0	2.5	4.0	1%	100 mV	1%	1%
UV430-8	+15V	0	2.0	3.0	1%	100 mV	1%	1%
UV430-9	+24V	0	1.3	2.0	1%	150 mV	1%	1%

Note: Contact factory for Safety Agency Approved status.

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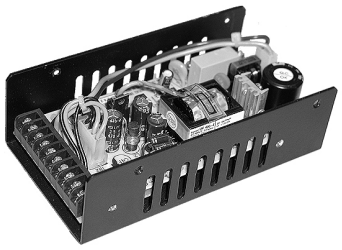
EC & EU SERIES

30 Watt

UNIVERSAL INPUT WITH CHASSIS

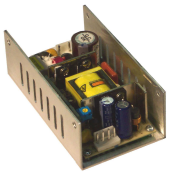
EC



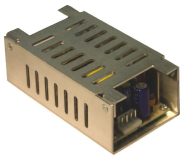
EU

DESCRIPTION

Our Standard power supplies, the UV430 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes and an input output barrier strip termination. The fully enclosed option helps to reduce radiated noise.



EUS



ECS

Other options include the ECS and EUS series, same as EC and EU but with no terminal barrier strip.

Dimension Table:

Figure	Inches	(mm)
A	5.92	150.37
B	3.20	81.28
C	1.80	45.72
D	4.00	101.6
E	0.75	19.05
F	2.00	50.8
G	1.50	38.1
H	0.85	21.59
I	1.48	37.59
J	1.30	33.02

FEATURES, APPLICATIONS, SPECIFICATIONS

All features, applications, and electrical specifications are the same as the standard UV430 Series.

Part Number System:
UV430-1 EC (Fully enclosed chassis)
UV430-1 EU ('U' shape chassis)

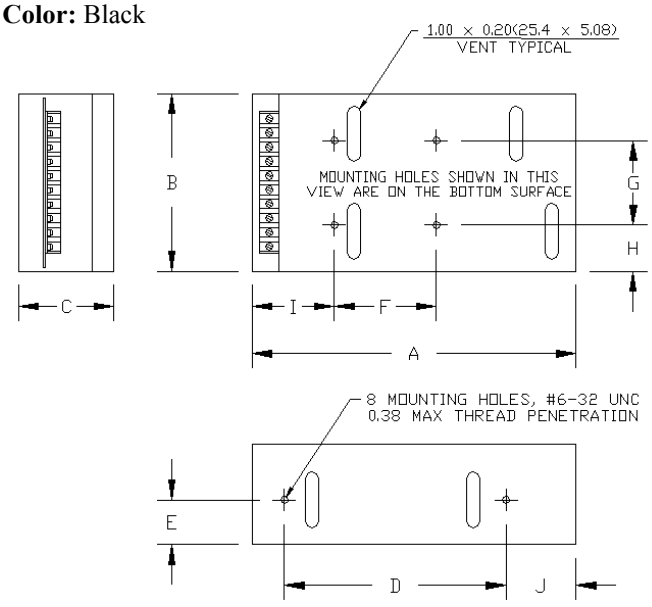
MECHANICAL SPECIFICATIONS

All Dimensions in Inches (mm)

Case Size:
5.92" x 3.20" x 1.80"
(150.3mm x 81.28mm x 45.72mm)

Mounting Holes:
2.00" x 1.50" or 4.00" 2 hole only
(50.8mm x 38.1mm) or (101.6mm 2 hole only)

Color: Black



PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6	7	8	9	10
UV430-1 EC/EU	ACG	ACL	ACN		+5V	+5V	COM	COM	-12V	+12V
UV430-2 EC/EU	ACG	ACL	ACN		+5V	+5V	COM	COM	-5V	+12V
UV430-3 EC/EU	ACG	ACL	ACN		+5V	+5V	COM	COM	N/C	+12V
UV430-4 EC/EU	ACG	ACL	ACN		+5V	+5V	COM	COM	-15V	+15V
UV430-5 EC/EU	ACG	ACL	ACN		+5V	+5V	COM	COM	N/C	+24V
UV430-6 EC/EU	ACG	ACL	ACN		+5V	+5V	COM	COM		
UV430-7 EC/EU	ACG	ACL	ACN		+12V	+12V	COM	COM		
UV430-8 EC/EU	ACG	ACL	ACN		+15V	+15V	COM	COM		
UV430-9 EC/EU	ACG	ACL	ACN		+24V	+24V	COM	COM		

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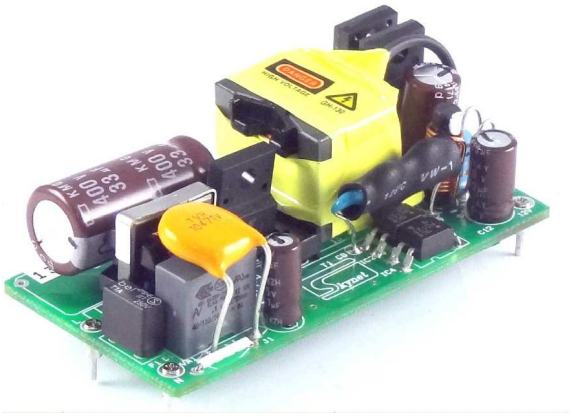
DG020 Series

20 Watts

Universal Input, for Medical & ITE Applications



DESCRIPTION

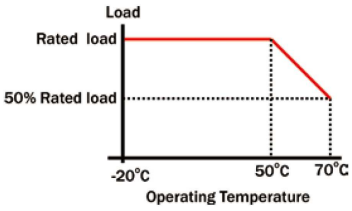
The DG020 Series is a small 20 watt universal Input for medical and ITE applications. It is designed for medical or ITE applications and is green energy approved. The DG020 Series is only for single outputs.

FEATURES

- *ITE/Medical applications*
- *Universal input 90VAC to 264VAC*
- *High power density*
- *Green power*
- *Small Size*
- *Single output*
- *Class II Safety & EMC*

APPLICATIONS

- *ITE/Medical application*
- *Telecommunication*
- *PCB power*
- *Battery charging system*

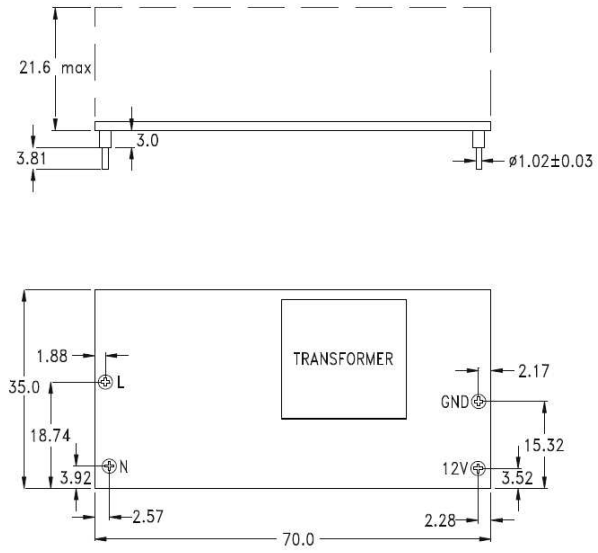


GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC or 60A at 230VAC cold start, 25°C
Operating Temperature…….-20°C to 70ºC
Storage Temperature……..……..–40ºC to 85ºC
Cooling……Convection Cooling
Efficiency……..….>86% Typical
Holdup Time…….>16ms
Overload Protection……..…….……Auto Recovery

Safety :
Designed in full compliance with…….…...UL 60950-1
UL60601-1
EMI……..……. …..EN55022 "B"
Harmonics……..……EN61000-3-2 class A
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions shown in mm above
2. Size: 1.37"x 2.75"x 0.85" (35 x 70 x 21.6)mm
3. Connector: TB1 AC Input : Pin head connector
TB2 DC Output: Pin head connector

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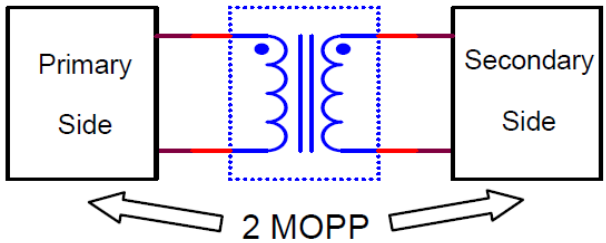
OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance	Ripple & Noise	Efficiency
			Min.	Rate	Constant Current			
DG020-7(-M)	20	+12V	0A	1.6	1.70	+11.8V~+12.2V	120 mV	86%
DG020-8(-M)	20	+15V	0A	1.3	1.40	+14.8V~+15.2V	150 mV	86%
DG020-3(-M)	20	+18V	0A	1.1	1.20	+17.8V~+18.2V	180 mV	86%
DG020-9(-M)	20	+24V	0A	0.8	0.90	+23.7V~+24.3V	240 mV	86%
DG020-T(-M)	20	+48V	0A	0.4	0.45	+47.6V~+48.4V	240 mV	86%

Medical Isolation Grade



Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using a 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to the low limit of the main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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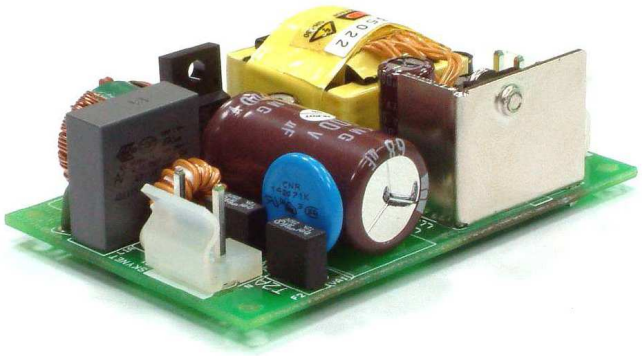
DG040 Series

40 Watts, Peak 55 Watts

Universal Input, for Medical & ITE Applications



DESCRIPTION

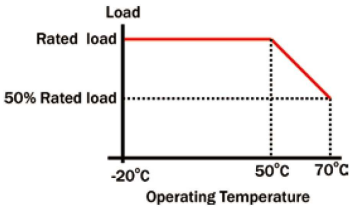
The DG040 Series is a small 40 watt universal Input for medical and ITE applications. The power density is 6.7W/in³ and is designed for medical or ITE applications and is green energy approved. The DG040 Series is only for single outputs.

FEATURES

- *Universal input 90VAC to 264VAC*
- *High power density (6.7W/in³)*
- *Green power*
- *Small Size*
- *Single output*
- *Class II Safety & EMC*

APPLICATIONS

- *ITE/Medical application*
- *Telecommunication*
- *PCB power*
- *Battery charging system*

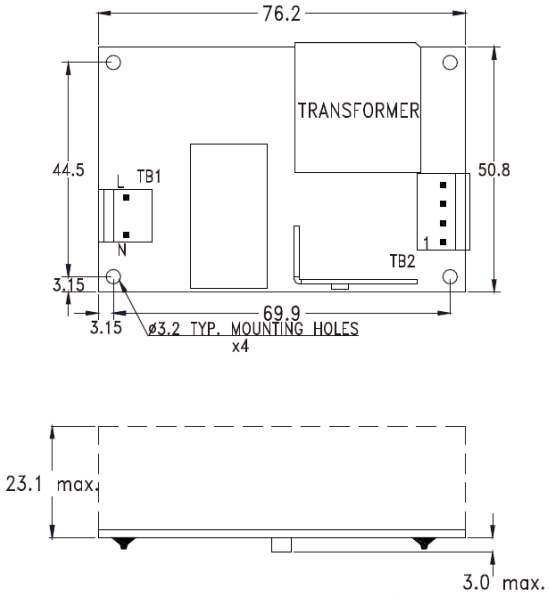


GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC or 60A at 230VAC cold start, 25°C
Operating Temperature…….-20°C to 70ºC
Storage Temperature……..……..–40ºC to 85ºC
Cooling……Convection Cooling
Efficiency……..…..>84% Typical
Holdup Time…….>18ms
Overload Protection……..…….……Auto Recovery

Safety :
Designed in full compliance with…….…...UL 60950-1
UL60601-1
EMI……..……. …..EN55022 "B"
Harmonics……..……EN61000-3-2 class A
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions shown in mm above
2. Size: 2"x 3"x 0.9" (50.8 x 76.2 x 23.1)mm
3. Connector: TB1 AC Input : Molex 5277-02A
TB2 DC Output: Molex 5273-04A

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DG040-7	40	+12V	0A	3.33A	4.70A	1%	100 mV	±0.5%	±1%
DG040-8	40	+15V	0A	2.66A	3.80A	1%	100 mV	±0.5%	±1%
DG040-3	40	+18V	0A	2.22A	3.20A	1%	100 mV	±0.5%	±1%
DG040-9	40	+24V	0A	1.66A	2.40A	1%	150 mV	±0.5%	±1%
DG040-G	40	+28V	0A	1.42A	2.00A	1%	150 mV	±0.5%	±1%
DG040-J	40	+36V	0A	1.11A	1.60A	1%	150 mV	±0.5%	±1%
DG040-14	40	+48V	0A	0.83A	1.16A	1%	150 mV	±0.5%	±1%

DG040 SERIES 40 WATT— PIN ASSIGNMENT

Model \ Pin	1	2	3	4
DG040-7	+12V	+12V	GND	GND
DG040-8	+15V	+15V	GND	GND
DG040-5	+18V	+18V	GND	GND
DG040-9	+24V	+24V	GND	GND
DG040-G	+28V	+28V	GND	GND
DG040-J	+36V	+36V	GND	GND
DG040-14	+48V	+48V	GND	GND

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using a 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to the low limit output of the main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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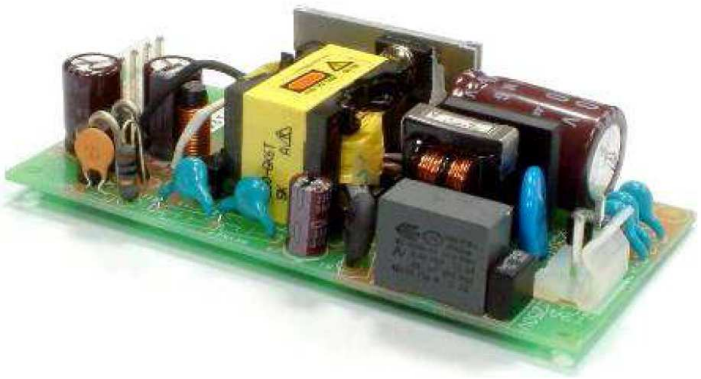
DGK060 Series

60 Watts, Peak 85 Watts

Universal Input, for Medical & ITE Applications



DESCRIPTION

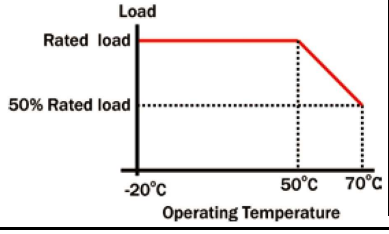
The DGK060 series power supply is a 60 watt unit in a 2" X 4" footprint with a power density of 7.7W/cu in. The DGK060 is Green Energy complaint and typically has an efficiency of 90%.

FEATURES

- *ITE/Medical applications*
- *Universal input 90VAC to 264VAC*
- *Cost effective*
- *Green Power*
- *Small size*
- *Single output*

APPLICATIONS

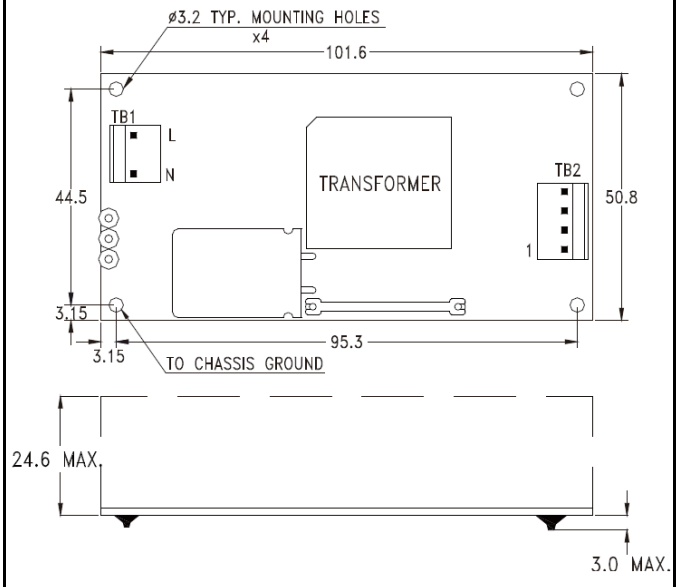
- *ITE/Medical application*
- *Telecommunication*
- *PCB power*
- *Battery charging system*



GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC or 60A at 230VAC cold start, 25°C
Operating Temperature…….-20°C to 70ºC
Storage Temperature……..……...-40ºC to 85ºC
Cooling……Convection Cooling
Efficiency……..….>85% Typical
Holdup Time…….>16ms
Overload Protection……..…….……Auto Recovery
Over Voltage……...Latch-off
Safety :
Designed in full compliance with…….…...UL 60950-1
UL60601-1
EMI……..……. …..EN55022 "B"
Harmonics……..……EN61000-3-2 class A
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions shown in mm above
2. Size: 2"x 4"x 0.97" (50.8 x 101.6 x 24.6)mm
3. Connector: TB1 AC Input : Molex 5277-02A
TB2 DC Output: Molex 5273-04A

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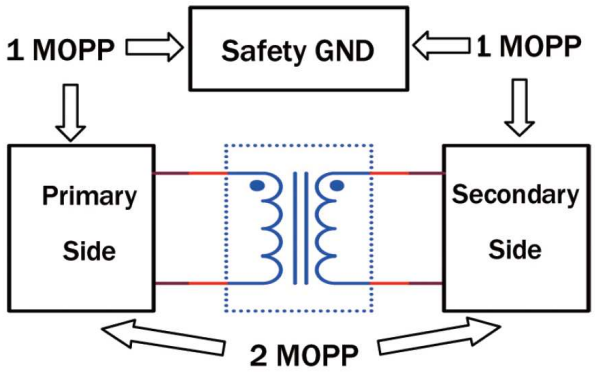
OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DGK060-7	60	+12V	0	5.00	6.50	+11.9V~+12.1V	120 mV	±0.5%	±1%
DGK060-8	60	+15V	0	4.00	5.60	+14.9V~+15.1V	100 mV	±0.5%	±1%
DGK060-3	60	+18V	0	3.33	4.67	+17.9V~+18.1V	100 mV	±0.5%	±1%
DGK060-9	60	+24V	0	2.50	3.50	+23.9V~+24.1V	150 mV	±0.5%	±1%
DGK060-G	60	+28V	0	2.14	3.00	+27.9V~+28.1V	150 mV	±0.5%	±1%
DGK060-J	60	+36V	0	1.66	2.21	+35.8V~+36.2V	200 mV	±0.5%	±1%
DGK060-14	60	+48V	0	1.25	1.75	+47.8V~+48.2V	250 mV	±0.5%	±1%
DGK060-H	60	+60V	0	1.00	1.40	+59.6V~+60.4V	300 mV	±0.5%	±1%

OUTPUT PIN

TB2	1	2	3	4
PIN ASSIGNMENT	+V		RTN	

MEDICAL ISOLATION GRADE



Note: To order medical model add suffix "-M" to end of ITE model name e.g. DGK06X-M

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using a 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to the low limit output of the main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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DG080 Series

80 Watts, Peak 120 Watts

Universal Input, for Medical & ITE Applications

DESCRIPTION

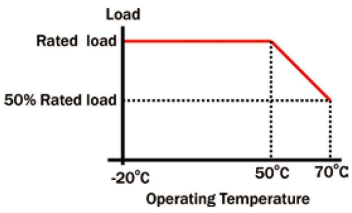
The DG080 Series is a small 80 watt universal Input for medical and ITE applications. It is designed for medical or ITE applications and is Green Energy approved. The DG080 Series is only for single outputs.

FEATURES

- *ITE/Medical applications*
- *Universal input 90VAC to 264VAC*
- *High power density*
- *Green power*
- *Small Size*
- *Single output*
- *Class II Safety & EMC*

APPLICATIONS

- *ITE/Medical application*
- *Telecommunication*
- *PCB power*
- *Battery charging system*

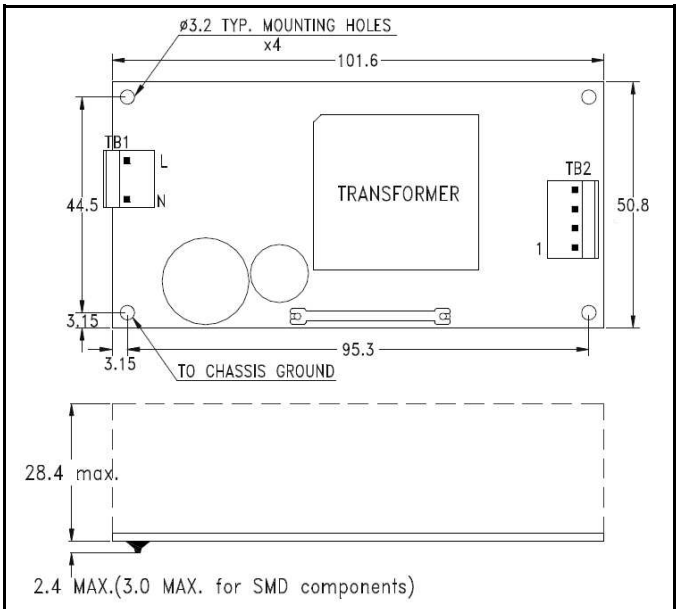


GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC or 60A at 230VAC cold start, 25°C
Operating Temperature…….-20°C to 70ºC
Storage Temperature……..……..–40ºC to 85ºC
Cooling……Convection Cooling
Efficiency……..….>88% Typical
Holdup Time…….>16ms
Overload Protection……...…….……Auto Recovery

Safety :
Designed in full compliance with…….…...UL 60950-1
UL60601-1
EMI……...……. …..EN55022 "B"
Harmonics……..……EN61000-3-2 class A
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions shown in mm above
2. Size: 2"x 4"x 1.1" (50.8 x 101.6 x 28.4)mm
3. Connector: TB1 AC Input : Molex 5277-02A
TB2 DC Output: Molex 5273-04A

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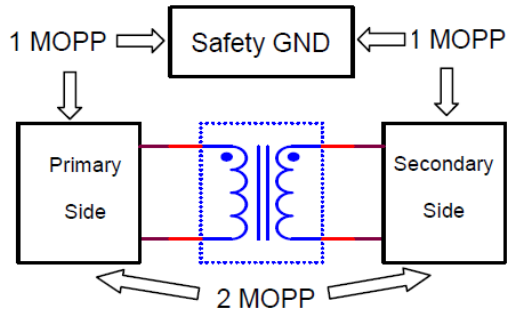
OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance	Ripple & Noise	Efficiency
			Min.	Rate	Peak			
DG080-7(-M)	80	+12V	0A	6.6	10.0	+11.8V~+12.2V	120 mV	88%
DG080-8(-M)	80	+15V	0A	5.3	8.0	+14.8V~+15.2V	150 mV	88%
DG080-3(-M)	80	+18V	0A	4.4	6.6	+17.8V~+18.2V	180 mV	88%
DG080-9(-M)	80	+24V	0A	3.3	5.0	+23.7V~+24.3V	240 mV	88%
DG080-T(-M)	80	+48V	0A	1.7	2.5	+47.6V~+48.4V	240 mV	88%

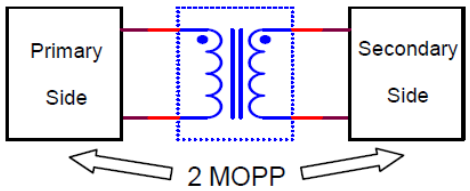
OUTPUT PINS

TBS	1	2	3	3
PINS ASSIGN	+V		GND	

Medical Isolation Grade (Class I)



Medical Isolation Grade (Class II)



Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using a 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to the low limit output of the main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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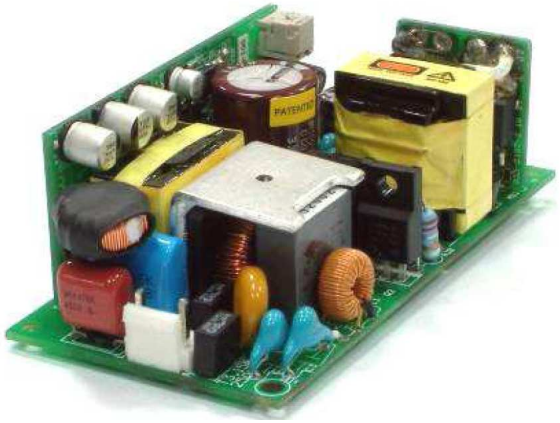
DG120 Series

120 Watts, Peak 200Watts

Active PFC, for Medical & ITE Applications



DESCRIPTION

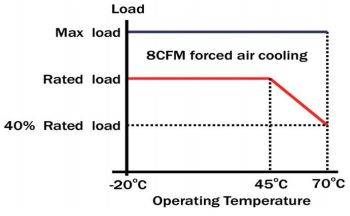
The DG120 series power supply is a 120 Watt unit in a 2" x 4" footprint with a power density of 11W/in³ with an active PFC. The DG120 is Green Energy compliant and has an efficiency of >90%.

FEATURES

- *ITE/Medical applications*
- *Universal input 90VAC to 264VAC*
- *Green power*
- *Small Size*
- *Single output*

APPLICATIONS

- *ITE/Medical application*
- *Telecommunication*
- *PCB power*
- *Battery charging system*

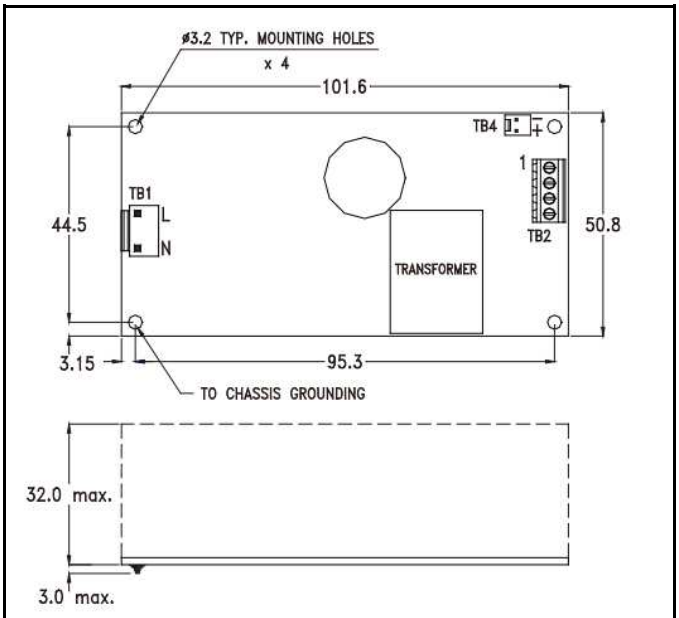


GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC or 60A at 230VAC cold start, 25°C
Operating Temperature…….-20°C to 70ºC
Storage Temperature……..……..–40ºC to 85ºC
Cooling……Convection Cooling
Efficiency……..….>90% Typical
Holdup Time…….>18ms
Overload Protection……..…….……Auto Recovery

Safety :
Designed in full compliance with…….…...UL 60950-1
UL60601-1
EMI……..……. …..EN55022 "B"
Harmonics……..……EN61000-3-2 class A
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions shown in mm above
2. Size: 2"x 4"x 1.28" (50.8 x 101.6 x 32.5)mm
3. Connector: TB1 AC Input : Molex 5277-02A
TB2 DC Output: Molex 5273-04A

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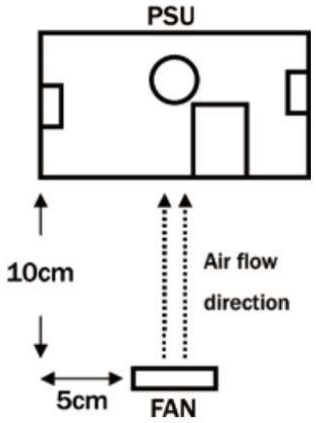
OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)				Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Max.	Peak			Line	Load
DG120-7	120	+12	0	10.0	12.5	16.6	1%	120 mV	±0.5%	±1%
DG120-8	120	+15	0	8.0	10.0	13.3	1%	100 mV	±0.5%	±1%
DG120-3	120	+18	0	6.6	8.3	11.1	1%	150 mV	±0.5%	±1%
DG120-9	120	+24	0	5.0	6.2	8.3	1%	150 mV	±0.5%	±1%
DG120-G	120	+28	0	4.2	5.3	7.1	1%	150 mV	±0.5%	±1%
DG120-J	120	+36	0	3.3	4.1	5.5	1%	200 mV	±0.5%	±1%
DG120-14	120	+48	0	2.5	3.1	4.1	1%	250 mV	±0.5%	±1%

DG120 SERIES 120 WATT— PIN ASSIGNMENT

Mod \ Pin	1	2	3	4
DG120-7	+V	+V	COM	COM
DG120-8	+V	+V	COM	COM
DG120-5	+V	+V	COM	COM
DG120-9	+V	+V	COM	COM
DG120-G	+V	+V	COM	COM
DG120-J	+V	+V	COM	COM
DG120-14	+V	+V	COM	COM

Max. Load Fan Location



Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using a 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to the low limit output of the main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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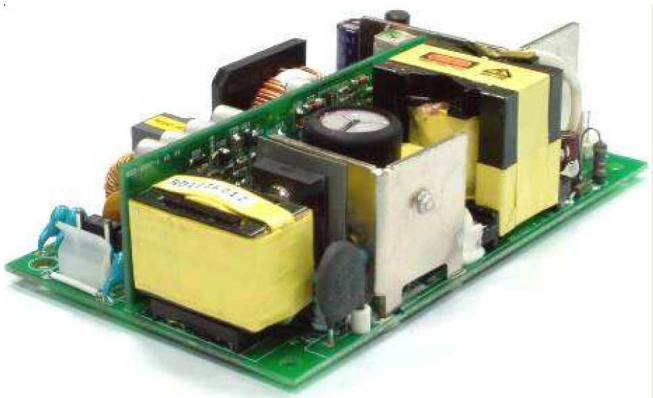
DG160 SERIES

Green Power *California Efficiency*

160 Watts Open Frame

ITE & Medical, Peak 320 Watts!



DESCRIPTION

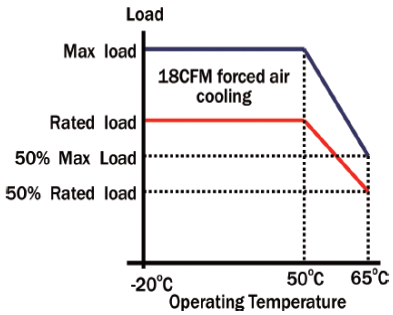
The DG160 Series is a 160 Watt Open Frame power supply that is 3"x 5"x 1.42" providing 8.9 Watts per cubic inch. Each unit has a built-in Active Power Factor Correction and the efficiency of this series is between 89% to 91% depending on model. The DG160 is compliant with Green Power and California Energy Commission (CFC). The Series is rated at 160 Watts free air convection and up to 240 Watts with 18CFM forced air. This series comes with an optional metal enclosure.

FEATURES

- *High Efficiency*
- *Active PFC*
- *Single Output*
- *Universal input 90VAC to 264VAC*

APPLICATIONS

- *IT Applications*
- *Medical Applications*
- *Telecommunications*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Other Applications*

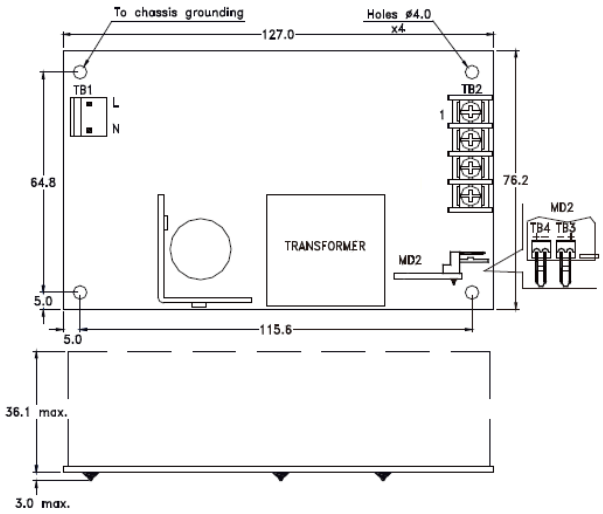


GENERAL SPECIFICATIONS

Line Voltage……... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
No load input power……..……..<0.5W
Inrush Current (cold)…..…… less then 30A at 115VAC
or 60A at 230VAC
Operating Temperature……..…...-20ºC to 70ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling…….. Free Air Convection
240W 18CFM forced air
Efficiency……..…..…. 89% - 91%
Holdup Time……...…. 20ms at 115VAC
Overvoltage Type……..…. latch off
Overload Protection……..……..….Auto recovery
Within 150% rated load

Safety:
Designed in full compliance with… ……...UL 60950-1
EN60950-1
ANSI/AAMI ES60601-1
EN60601-1
EMI……...……. …….FCC class B
EN61000-3-3
EMS……...……EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimension in mm Tolerance: +/-1mm
2. Size: 3"x 5" x 1.42"
3. Connector:
   AC Input: Molex 5277-02A or equivalent
   DC Output: Terminal Block
   Fan, RS: Molex 5045-02A or equivalent

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)				Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
DG160-7	160	+12V	0	13.3	20	26.6	+11.9V~+12.10V	120mVpp	±1%	±1%
DG160-8	160	+15V	0	10.66	16	21.3	+14.90V~+15.10V	150mVpp	±1%	±1%
DG160-3	160	+18V	0	8.88	13.33	17.8	+17.90V~+18.10V	150mVpp	±1%	±1%
DG160-9	160	+24V	0	6.66	10.0	13.3	+23.80V~+24.20V	200mVpp	±1%	±1%
DG160-G	160	+28V	0	5.7	8.55	11.4	+27.90V~+28.10V	200mVpp	±1%	±1%
DG160-J	160	+36V	0	4.45	6.66	8.9	+35.90V~+36.10V	250mVpp	±1%	±1%
DG160-14	160	+48V	0	3.35	5.0	6.67	+47.90V~+48.10V	250mVpp	±1%	±1%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

Optional Chassis enclosure: P/N example DG160-xxEU for the “U” shape chassis and DG160-xxEC for the “U” shape chassis and cover.

DG160-xxEU

DG160-xxEC

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DG200 SERIES

Green Power *California Efficiency*

200 Watts Open Frame

ITE & Medical, 300W Forced Air

DESCRIPTION

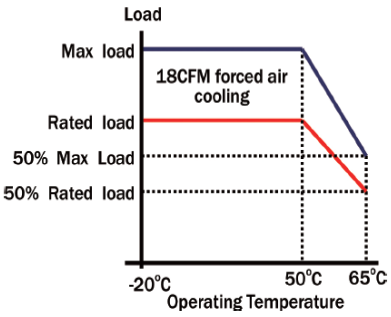
The DG200 Series is a 200 Watt Open Frame power supply that is 3"x 5"x 1.5" providing 8.9 Watts per cubic inch. Each unit has a built-in Active Power Factor Correction and the efficiency of this series is between 89% to 91% depending on model. The DG200 is compliant with Green Power and California Energy Commission (CFC). The Series is rated at 200 Watts free air convection and up to 300 Watts with 18CFM forced air. This series comes with an optional metal enclosure.

FEATURES

- *High Efficiency*
- *Active PFC*
- *Single Output*
- *Universal input 90VAC to 264VAC*

APPLICATIONS

- *IT Applications*
- *Medical Applications*
- *Telecommunications*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Other Applications*

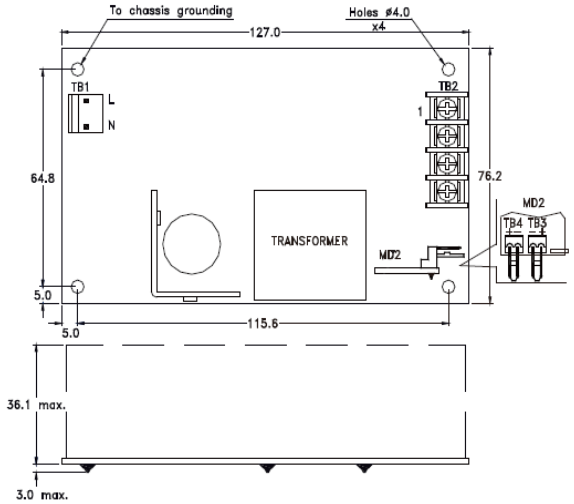


GENERAL SPECIFICATIONS

Line Voltage……... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
No load input power……..……..<0.5W
Inrush Current (cold)…..…… less then 30A at 115VAC
or 60A at 230VAC
Operating Temperature……..…...-20ºC to 65ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling…….. Free Air Convection
300W 18CFM forced air
Efficiency…….…...…. 89% - 91%
Holdup Time……...… 20ms at 115VAC
Overvoltage Type……..… latch off
Overload Protection……..……..….Auto recovery
Within 150% rated load

Safety:
Designed in full compliance with… ……...UL 60950-1
EN60950-1
ANSI/AAMI ES60601-1
EN60601-1
EMI……...……. …….FCC class B
EN61000-3-3
EMS……...……EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimension in mm Tolerance: +/-1mm
2. Size: 3"x 5" x 1.5"
3. Connector:
AC Input: Molex 5277-02A or equivalent
DC Output: Terminal Block Vo+18V<Molex 5273-08A
Fan, RS: Molex 5045-02A or equivalent

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)				Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
DG200-7	200	+12V	0	16.5	25	33.0	+11.9V~+12.10V	120mVpp	±1%	±1%
DG200-8	200	+15V	0	12.0	18	22.5	+14.90V~+15.10V	150mVpp	±1%	±1%
DG200-3	200	+18V	0	11.1	16.6	22.3	+17.90V~+18.10V	150mVpp	±1%	±1%
DG200-9	200	+24V	0	8.4	12.5	16.7	+23.80V~+24.20V	200mVpp	±1%	±1%
DG200-G	200	+28V	0	7.2	10.7	13.0	+27.90V~+28.10V	200mVpp	±1%	±1%
DG200-J	200	+36V	0	5.6	8.3	11.0	+35.90V~+36.10V	250mVpp	±1%	±1%
DG200-14	200	+48V	0	4.2	6.3	8.4	+47.90V~+48.10V	250mVpp	±1%	±1%

Note: Contact factory for Safety Agency Approved status.

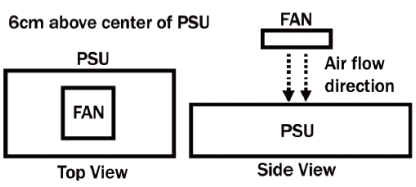
1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

Optional Chassis enclosure: P/N example DG200-xxEU for the “U” shape chassis and DG200-xxEC for the “U” shape chassis and cover.

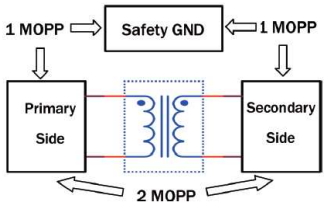
DG200-xxEU

DG200-xxEC

Max. load fan location



Medical Isolation Grade



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DG300 SERIES

Green Power *California Efficiency*

ITE & Medical, PFC with 300 Watts continuous, Peak 600 Watts

DESCRIPTION

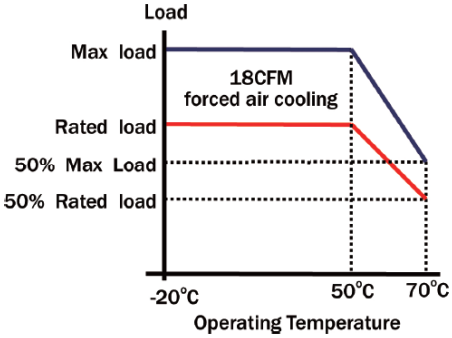
The DG300 Series is a 300 Watt Semi-open frame power supply that is 4.2"x 8"x 1.65" providing 5.4 Watts per cubic inch. Each unit has a built-in Active Power Factor Correction and the efficiency of this series is between 89% to 91% depending on model. AC input and DC output are Molex terminal blocks.

FEATURES

- *High Efficiency*
- *Active PFC*
- *Single Output*
- *Universal input 90VAC to 264VAC*

APPLICATIONS

- *IT Applications*
- *Medical Applications*
- *Telecommunications*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Other Applications*

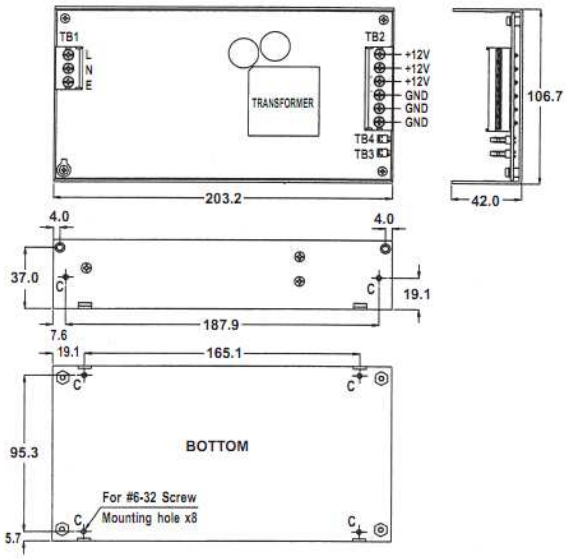


GENERAL SPECIFICATIONS

Line Voltage……... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
No load input power……...……..<0.5W
Inrush Current (cold)…..…… less then 30A at 115VAC
or 60A at 230VAC
Operating Temperature……..…...-20ºC to 70ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling…….. Free Air Convection
Efficiency…….…...…. 89% - 91%
Holdup Time……...…. 20ms at 115VAC
Overvoltage Type…….…. latch off
Overload Protection……...……..….Auto recovery
Within 150% rated load

Safety:
Designed in full compliance with… ……...UL 60950-1
EN60950-1
ANSI/AAMI ES60601-1
EN60601-1
EMI……...……. …….FCC class B
EN61000-3-3
EMS……...……EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions shown in mm as left. Tolerance: +/-1mm
2. Size:106.7 X 203.2 X 42 (mm) 4.2 X 8.0 X 1.65 (inch)
3. Connectors:
AC input: Terminal blocks Fan, Remote sense, LED : Molex 5045-02A or equivalent
DC output: Terminal blocks

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OUTPUT SPECIFICATIONS

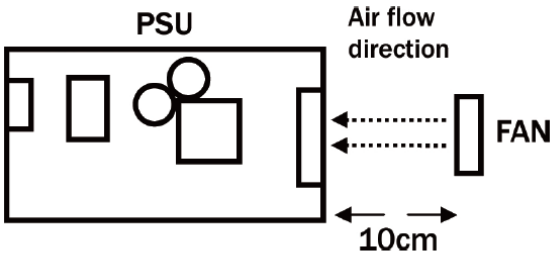
Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max			Line	Load
DG300-7(-M)	300	+12V	0	25	30	+11.9V~+12.10V	100mVpp	±1%	±1%
DG300-8(-M)	300	+15V	0	20	24	+14.90V~+15.10V	100mVpp	±1%	±1%
DG300-3(-M)	300	+18V	0	17	20.5	+17.90V~+18.10V	150mVpp	±1%	±1%
DG300-9(-M)	300	+24V	0	12.5	15	+23.80V~+24.20V	200mVpp	±1%	±1%
DG300-14(-M)	300	+48V	0	6.3	7.6	+47.90V~+48.10V	200mVpp	±1%	±1%
DG300-H(-M)	300	+60V	0	5	6	+58V~+62V	200mVpp	±1%	±1%

Note: (-M) indicates medical model. Use when specifying a medical power supply e.g. DG300-7-M

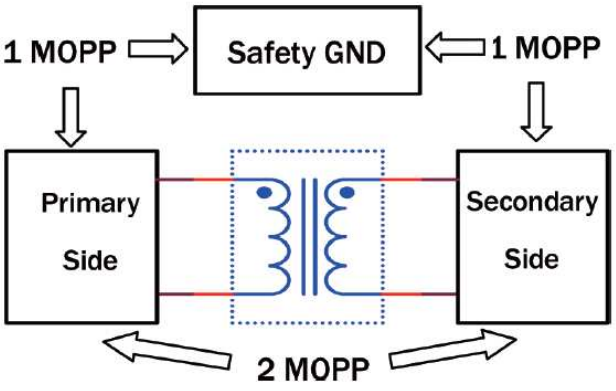
Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

Max. load fan location



Medical Isolation grade



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DE300 SERIES

Enclosed 300 Watts

ITE & Medical, 300W

DESCRIPTION

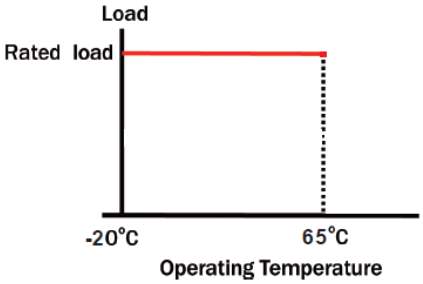
The DE300 Series is a 300 Watt Enclosed power supply that is 3"x 5"x 2.08" providing 9.6 Watts per cubic inch. Each unit has a built in Active Power Factor Correction and the efficiency of this series is between 89% to 91% depending on model. The DE300 has a built-in forced air cooling and each series has Molex input and output.

FEATURES

- *High Efficiency*
- *Active PFC*
- *Single Output*
- *Universal input 90VAC to 264VAC*

APPLICATIONS

- *IT Applications*
- *Medical Applications*
- *Telecommunications*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Other Applications*



California Efficiency

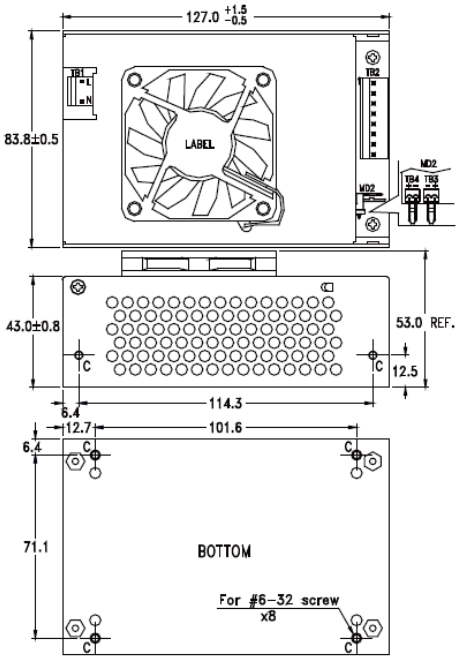
GENERAL SPECIFICATIONS

Line Voltage……... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
No load input power……...……..<0.5W
Inrush Current (cold)…..…… less then 30A at 115VAC
or 60A at 230VAC
Operating Temperature……..…..-20ºC to 65ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling…….. Free Air Convection
300W 24CFM forced air
Efficiency……...…. 89% - 91%
Holdup Time……...… 20ms at 115VAC
Overvoltage Type……..… latch off
Overload Protection……...……..…Auto recovery
Within 150% rated load

Safety:
Designed in full compliance with… ……...UL 60950-1
EN60950-1
ANSI/AAMI ES60601-1
EN60601-1
EMI……...……. …….FCC class B
EN61000-3-3
EMS……...……EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS

Note:
1.Dimension in mm Tolerance: +/-1mm
2.Size: 3"x 5" x 2.08"
3.Connector:
AC Input: Molex 5277-02A or equivalent
DC Output: Molex 5273-08A or equivalent
Fan, RS: Molex 5045-02A or equivalent



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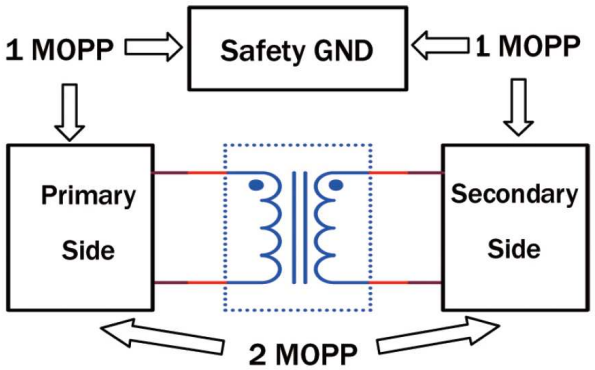
OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max			Line	Load
DE300-7	300	+12V	0	25	-	+11.9V~+12.1V	120mVpp	±1%	±1%
DE300-8	300	+15V	0	18	-	+14.9V~+15.1V	150mVpp	±1%	±1%
DE300-3	300	+18V	0	16.6	-	+17.9V~+18.1V	180mVpp	±1%	±1%
DE300-9	300	+24V	0	12.5	-	+23.9V~+24.1V	200mVpp	±1%	±1%
DE300-G	300	+28V	0	10.7	-	+27.9V~+28.1V	250mVpp	±1%	±1%
DE300-J	300	+36V	0	8.3	-	+35.9V~+36.2V	250mVpp	±1%	±1%
DE300-14	300	+48V	0	6.3	-	+47.9V~+48.2V	250mVpp	±1%	±1%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

MEDICAL ISOLATION GRADE



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DY040 SERIES
45 Watts For Medical & Industrial Applications
60 Watts Peak Current

Low Cost

DESCRIPTION

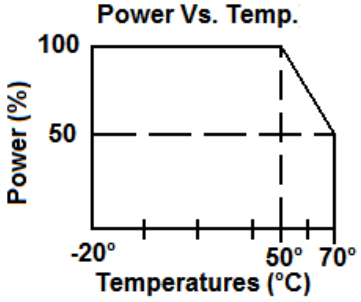
DY040 series is a universal input multiple output power supply. The series is a 45 Watt power supply in the size of 2"x 4" with a wattage density of 4.4W/in^3. The efficiency can reach up to 76-87% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

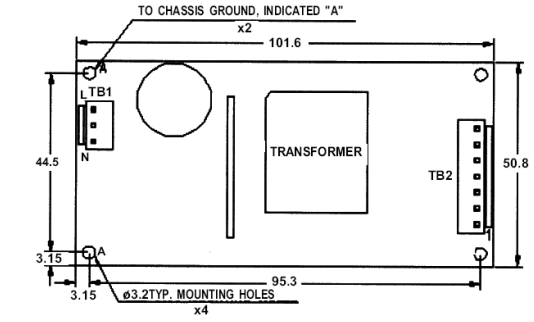
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*

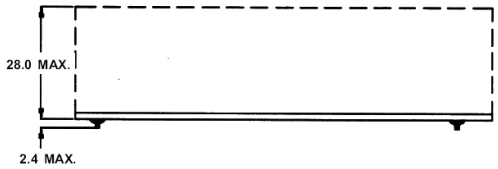


GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...75% to 87%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……...…….. Auto recovery
Short Circuit Protection……Auto recovery
Earth Leakage……...…...300µA Max @ 240VAC
Designed in full compliance with UL 60950-1, UL60601-1
CSA 22.2 #60950-1,60601-1
EN60950-1,EN60601-1
EMI …….……EN55022 "B", EN55011 "B"
FCC docket class "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11

MECHANICAL SPECIFICATIONS





Connector: TB1—AC input : JST B2P3-VH or equivalent
TB2—DC output : JST B4P-VH or equivalent (Single Output)
JST B6P-VH or equivalent (Multiple Output)
(DY040-7: JST B5P-VH or equivalent)

Size: 50.8mm X 101.6mm X 32.4mm, 2.0" X 4.0" X 1.2"

Mounting Holes: 44.5mm X 95.3, 1.75" X 3.75"

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)				Voltage Tolerance ±	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
DY040-2	45	+5V +12 -12	0 0 0	3 2 0.3	4 3	5 4 -	±2% ±5% ±5%	1% 1% 1%	±1% ±1% ±1%	±3% ±3% ±5%
DY040-3	45	+5V +12	0 0	3 2.3	4 3.3	5 4	±2% ±5%	1% 1%	±1% ±1%	±3% ±3%
DY040-11	45	+5V +24V +12V	0 0 0	3 1 0.3	4 1.5	6 2.4 -	±1% ±5% ±5%	1% 1% 1%	±1% ±1% ±1%	±3% ±3% ±5%
DY040-6	45	+5V	0	7		10	±2%	1%	±1%	±3%
DY040-7	45	+12V +5V	0 0	3.3 0.5		5 -	±1% ±5%	1% 1%	±1% ±1%	±1% ±1%
DY040-7-1	45	+12V	0	3.3		5	1%	1%	±1%	±1%
DY040-8	45	+15V +5V	0 0	2.6 0.5		4	±1% ±5%	1% 1%	±1% ±1%	±1% ±1%
DY040-8-1	45	+15V	0	3.0		4	±1%	1%	±1%	±1%
DY040-9	45	+24V +5V	0 0	1.7 0.5		2.5 -	±1% ±5%	1% 1%	±1% ±1%	±1% ±1%
DY040-9-1	45	+24V	0	1.9		2.5	±1%	1%	±1%	±1%
DY040-14	45	+48V	0	1		1.35	±1%	1%	±1%	±1%
DY040-D	45	+3.3V +5V +12	0 0 0	4 3 0.3		5 4 -	±2% ±5% ±5%	1% 1% 1%	±1% ±1% ±1%	±3% ±3% ±5%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 µF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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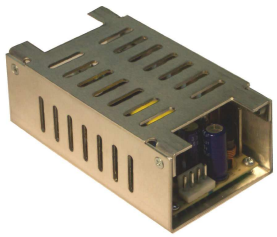
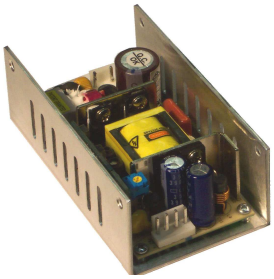
DY040 SERIES 45 WATT— PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6
DY040-2	+5V	+5V	GND	GND	+12V	-12V
DY040-3	+5V	+5V	GND	GND	+12V	NC
DY040-11	+5V	+5V	GND	GND	+24V	+12V
DY040-6	+5V	+5V	GND	GND		
DY040-7	+12V	+12V	GND	GND	+5V	
DY040-7-1	+12V	+12V	GND	GND		
DY040-8	+15V	+15V	GND	GND	+5V	NC
DY040-8-1	+15V	+15V	GND	GND		
DY040-9	+24V	+24V	GND	GND	+5V	NC
DY040-9-1	+24V	+24V	GND	GND		
DY040-14	+48V	+48V	GND	GND		
DY040-D	+3.3V	+3.3V	GND	GND	+5V	+12V

ENCLOSURES (optional)



ECS



EUS

All Dimensions in Inches (mm)

Case Size:
4.25” x 2.38” x 1.5”
108 x 60.5 x 38.1 mm

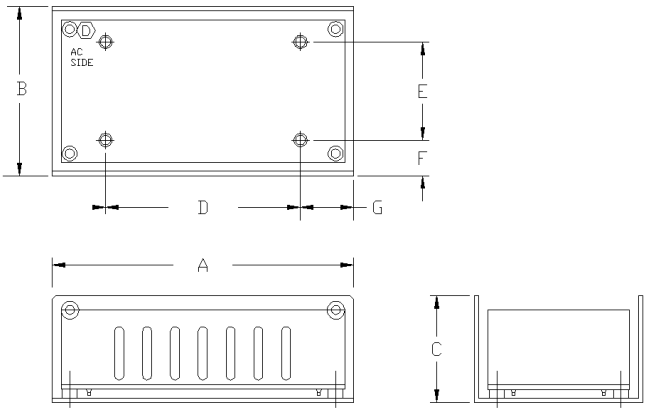
Mounting Holes:
1.38” x 2.75”
35.1 x 69.9 mm

Our Standard power supplies, the DZ040 Series can be installed into a fully enclosed chassis or in a ‘U’ shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

Example Part Number:
DY040-3ECS or DY040-3EUS

Dimension Table:

Figure	Inches	(mm)
A	4.25	108
B	2.38	60.5
C	1.50	38.1
D	2.75	69.9
E	1.38	35.1
F	0.50	12.7
G	0.75	19.1



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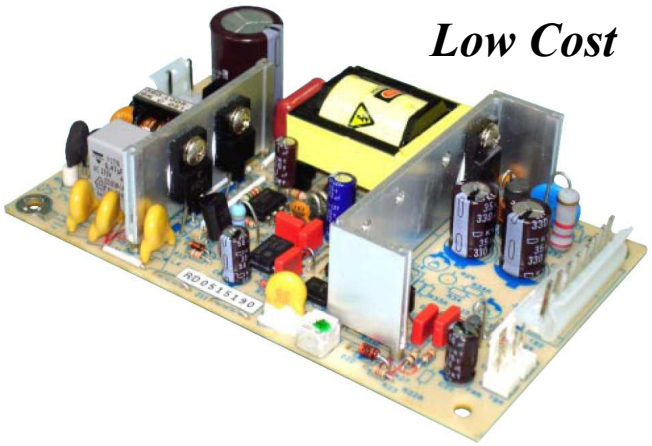
DY060 SERIES

60 WATT POWER SUPPLY FOR MEDICAL AND INDUSTRIAL APPLICATIONS 90 WATT PEAK CURRENT



Low Cost

DESCRIPTION

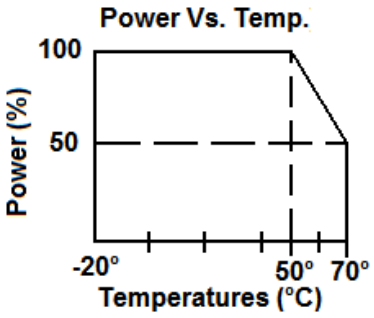
DY060 series is a universal input multiple output power supply. The series is a 60 Watt power supply in the size of 2.5" x 4.5" with a wattage density of 4.2W/in^3. The efficiency can reach up to 78-87% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*

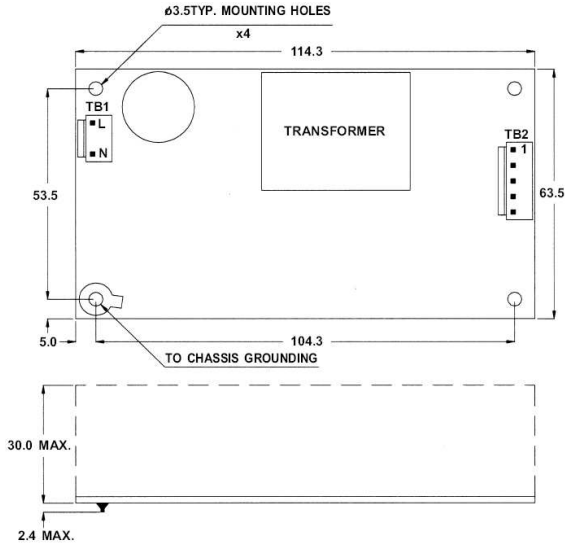


GENERAL SPECIFICATIONS

Input Voltage……..….... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...78% to 87%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Earth Leakage……...…<300µA Max @ 240VAC
Designed in full compliance with UL 60950-1, UL 60601-1, CSA 22.2 #60950-1,601.1 EN60950-1,EN60601-1
EMI ……..……FCC "B" EN55022 "B", EN55011 "B"

EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……..… EN61000-3-2 Class A

MECHANICAL SPECIFICATIONS



Connector:
AC input : JST B3P-VH Remove 1 pin or equivalent
DC output : Single output: JST B4P-VH or equivalent
Multiple Output JST B6P-VH . or equivalent

Size: 63.5mm x 114.3mm x 30mm 2.5" x 4.5" x 1.18"
Mounting Holes: 53.5mm x 104.3mm 2.1" x 4.1"

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Output Rated (A)				Voltage Tolerance ±	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
DY060-1	60	+5V	0	3	5	7	±1%	1%	±1%	±3%
		+12	0	3	4	6	±5%	1%	±1%	±3%
		-12	0	0.3		-	±5%	1%	±1%	±5%
DY060-6	60	+5V	0	10		15	±1%	1%	±1%	±1%
DY060-7	60	+12V	0	4.8		7.5	±1%	1%	±1%	±1%
		+5V	0	0.5		1	±5%	1%	±1%	±1%
DY060-7-1	60	+12V	0	5		7.5	±1%	1%	±1%	±1%
DY060-8	60	+15V	0	3.8		6.0	±1%	1%	±1%	±1%
		+5V	0	0.5		1	±5%	1%	±1%	±1%
DY060-8-1	60	+15V	0	4.0		6.0	±1%	1%	±1%	±1%
DY060-9	60	+24V	0	2.4		3.8	±1%	1%	±1%	±1%
		+5V	0	0.5		1	±5%	1%	±1%	±1%
DY060-9-1	60	+24V	0	2.5		3.8	±1%	1%	±1%	±1%
DY060-14	60	+48V	0	1.25		1.9	±1%	1%	±1%	±1%
DY060-D	60	+3.3V	0	5		7	±1%	1%	±1%	±3%
		+5V	0	4		5.5	±5%	1%	±1%	±3%
		+12V	0	1		-	±5%	1%	±1%	±5%
DY060-11	60	+5V	0	3	5	7	±1%	1%	±1%	±3%
		+24V	0	1.5	2	3	±5%	1%	±1%	±3%
		+12V	0	0.3			±5%	1%	±1%	±5%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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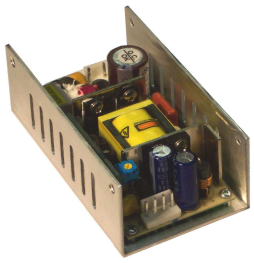
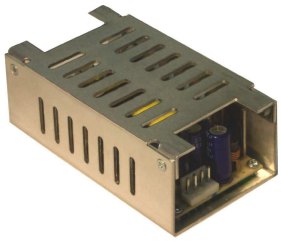
DY060 SERIES 60 WATT— PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6
DY060-1	+5V	+5V	GND	GND	+12V	-12V
DY060-6	+5V	+5V	+5V	GND	GND	GND
DY060-7	+12V	+12V	GND	GND	+5V	NC
DY060-7-1	+12V	+12V	GND	GND		
DY060-8	+15V	+15V	GND	GND	+5V	NC
DY060-8-1	+15V	+15V	GND	GND		
DY060-9	+24V	+24V	GND	GND	+5V	NC
DY060-9-1	+24V	+24V	GND	GND		
DY060-14	+48V	+48V	GND	GND		
DY060-D	+3.3V	+3.3V	GND	GND	+5V	+12V
DY060-11	+5V	+5V	GND	GND	+24V	+12V

ENCLOSURES (optional)

EUS ***ECS***





Our Standard power supplies, the DY060 Series, can be installed into a fully-enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

Example Part Number:
DY060-9ECS or DY060-9EUS

*Note DY040 pictured in chassis

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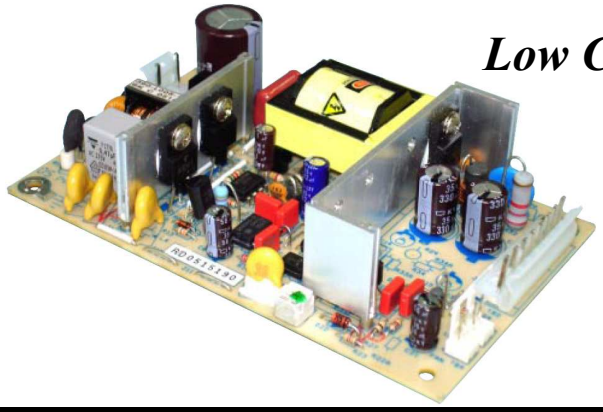
DYL060 SERIES

60 Watts For Medical & Industrial Applications

95 Watts Peak Current



Low Cost

DESCRIPTION

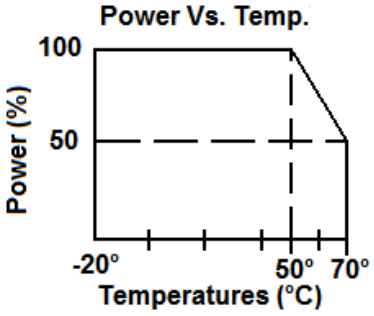
DYL060 series is a universal input multiple output power supply. The series is a 60 Watt power supply in the size of 3" x 5" with a wattage density of 3.1W/in^3. The efficiency can reach up to 75-86% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

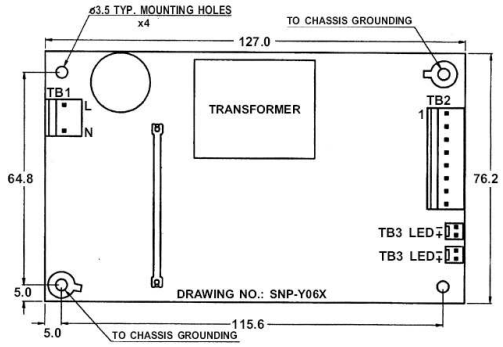
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...75% to 86%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……...…….. Auto recovery
Short Circuit Protection……Auto recovery
Earth Leakage……...…...300µA Max @ 240VAC
Designed in full compliance with UL 60950-1, UL60601-1
CSA 22.2 #60950-1,601.1
EN60950-1,EN60601-1
EMI ……..……EN55022 "B", EN55011 "B"
FCC docket class "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11

MECHANICAL SPECIFICATIONS



Connector: TB1—AC input : Molex 5277-2 or equivalent
TB2—DC output : Molex 5273-8 or equivalent
TB3—For LED : Molex 5045-2 or equivalent for DYL060-1
TB4—For FAN -3, -7, -7-1, -8, -8-1, 9, -9-1, -19, -01-1

TB3—For LED : Molex 5045-2 or equivalent for DYL060-6
TB4—For Remote Sense -18

TB3—For LED : Molex 5045-2 or equivalent for DYL060-14

Size: 76.2mm x 127mm x 30mm ; 3" x 5" x 1.18"
Mounting Holes: 64.8mm x 115.6mm ; 2.551" x 4.551"

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DYL060 SERIES OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)				Voltage Tolerance ±	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
DYL060-1	60	+5V	0	3		5	±1%	1%	±1%	±3%
		+12	0	3		5	±5%	1%	±1%	±3%
		-12	0	0.3		1	±5%	1%	±1%	±5%
DYL060-3	60	+5V	0	3		5	±1%	1%	±1%	±3%
		+12V	0	3.5		5.5	±5%	1%	±1%	±3%
DYL060-6	60	+5V	0	10		15	±1%	1%	±1%	±1%
DYL060-7	60	+12V	0	4.8		7.5	±1%	1%	±1%	±1%
		+5V	0	0.5		1	±5%	1%	±1%	±1%
DYL060-7-1	60	+12V	0	5		7.5	±1%	1%	±1%	±1%
DYL060-8	60	+15V	0	3.8		6.0	±1%	1%	±1%	±1%
		+5V	0	0.5		1	±5%	1%	±1%	±1%
DYL060-8-1	60	+15V	0	4.0		6.0	1%	1%	±1%	±1%
DYL060-9	60	+24V	0.1	2.4		3.8	±1%	1%	±1%	±1%
		+5V	0	0.5		1	±5%	1%	±1%	±1%
DYL060-9-1	60	+24V	0.1	2.7		3.8	±1%	1%	±1%	±1%
DYL060-14	60	+48V	0	1.25		2	±1%	1%	±1%	±1%
DYL060-18	60	+3.3V	0	10		18	±1%	50mv	±1%	±3%
DYL060-19	60	+3.3V	0	5	5	8	±1%	50mv	±1%	±3%
		+5V	0	4	6	7	±5%	1%	±1%	±3%
		+12V	0	1		2	±5%	1%	±1%	±5%
		-12V	0	0.6		1	±5%	1%	±1%	±5%
DYL060-01-1	60	+5V	0	3		5	±1%	1%	±1%	±3%
		+12V	0	3		5	±5%	1%	±1%	±3%
		-12V	0	0.3		1	±5%	1%	±1%	±5%
		-5V	0	0.3		1	±5%	1%	±1%	±5%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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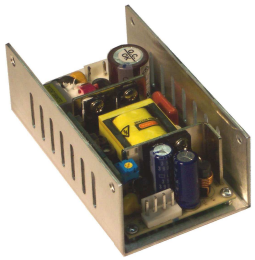
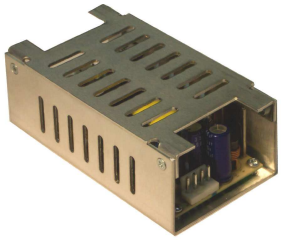
DYL060 SERIES 60 WATT— PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6	7	8
DYL060-1	+5V	+5V	GND	GND	+12V	+12V	-12V	NC
DYL060-3	+5V	+5V	GND	GND	+12V	+12V	NC	NC
DYL060-6	+5V	+5V	+5V	+5V	GND	GND	GND	GND
DYL060-7	+12V	+12V	+12V	GND	GND	GND	GND	+5V
DYL060-7-1	+12V	+12V	+12V	GND	GND	GND	GND	NC
DYL060-8	+15V	+15V	+15V	GND	GND	GND	GND	+5V
DYL060-8-1	+15V	+15V	+15V	GND	GND	GND	GND	NC
DYL060-9	+24V	+24V	+24V	GND	GND	GND	GND	+5V
DYL060-9-1	+24V	+24V	+24V	GND	GND	GND	GND	NC
DYL060-14	+48V	+48V	+48V	GND	GND	GND	GND	NC
DYL060-18	+3.3V	+3.3V	+3.3V	GND	GND	GND	GND	GND
DYL060-19	+3.3V	+3.3V	GND	GND	+5V	+5V	-12V	+12V
DYL060-01-1	+5V	+5V	GND	GND	+12V	+12V	-12V	-5V

ENCLOSURES (optional)

EUS ***ECS***





Our Standard power supplies, the DYL060 Series, can be installed into a fully enclosed chassis or in a ‘U’ shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

Example Part Number:
DYL060-9ECS or DYL060-9EUS

*Note DY040 pictured in chassis

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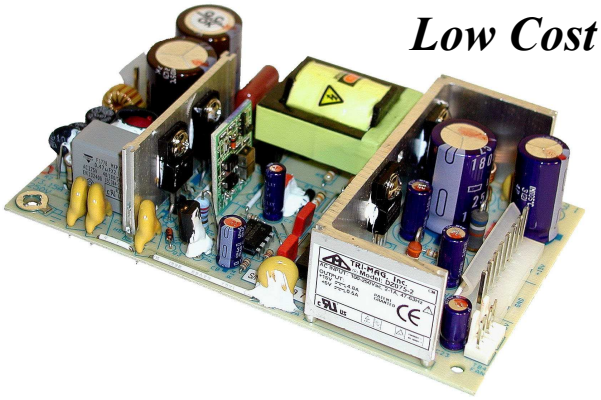
DY075 SERIES

75Watts For Medical & Industrial Applications

120 Watts Peak Current

Low Cost



DESCRIPTION

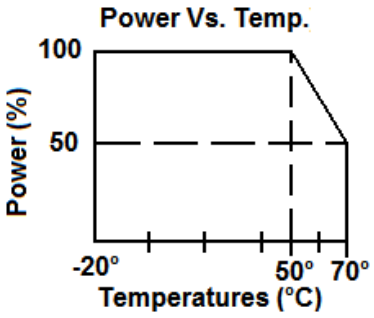
DY075 series is a universal input multiple output power supply. The series is a 75 Watt power supply in the size of 3"x 5" with a wattage density of 3.9W/in^3. The efficiency can reach up to 75-87% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

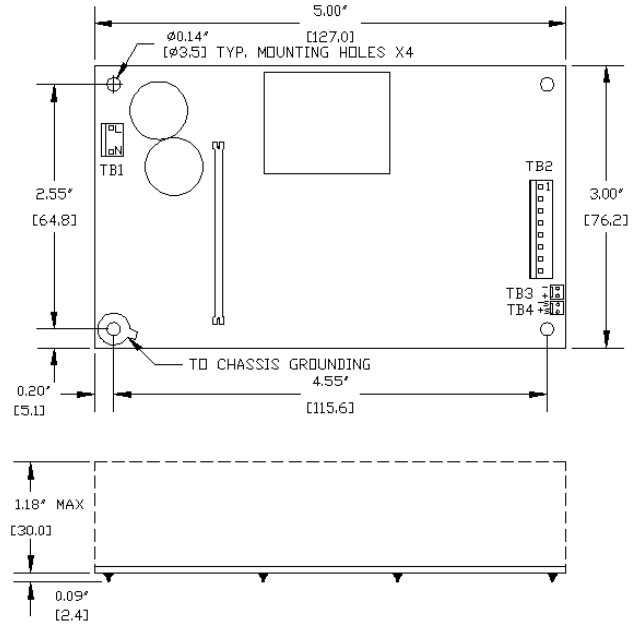
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-20°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...75% to 87%
Holdup Time…….>20ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Earth Leakage……..…...300µA Max @ 240VAC
Designed in full compliance with UL 60950, UL2601-1
CSA 22.2 #601-1,#234
EN60601-1
EMI …….……EN55022 "B", EN55011 "B"
FCC docket class "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……..… EN61000-3-2 Class A

MECHANICAL SPECIFICATIONS



Connector: TB1—AC input : Molex 5277-02A or equivalent
TB2—DC output : Molex 5273-08A or equivalent
TB3 for LED use : Molex 5045-02A or equivalent
TB4 for Remote sense : Molex 5045-02A or equivalent
Size: 76.2mm X 127mm X 30mm, 3" X 5" X 1.18"

Mounting Holes: 64.8mm X 115.6mm, 2.55" X 4.55"

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OUTPUT SPECIFICATIONS

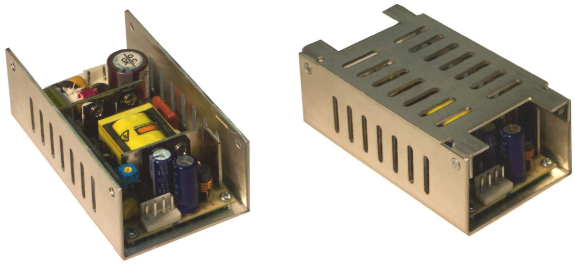
Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DY075-6	75	+5V	0	14	-	1%	100 mV	1.0%	±1%
DY075-7	75	+12V	0	5.6	9.0	1%	100 mV	1.0%	±1%
		+5V	0	0.5	-	5%	50 mV	1.0%	±1%
DY075-8	75	+15V	0	4.8	8.0	1%	100 mV	1.0%	±1%
		+5V	0	0.5	-	5%	50 mV	1.0%	±1%
DY075-9	75	+24V	0	3.0	5.0	1%	200 mV	1.0%	±1%
		+5V	0	0.5	-	5%	50 mV	1.0%	±1%
DY075-3	75	+5V	0	3.5	5.0	1%	50 mV	1.0%	±3%
		+12V	0	4.0	9.0	5%	100 mV	1.0%	±3%
DY075-1	75	+5V	0	3.5	5.0	1%	50 mV	1.0%	±3%
		+12V	0	3.5	9.0	5%	100 mV	1.0%	±3%
		-12V	0	0.3	-	5%	100 mV	1.0%	±5%
DY075-19	75	+3.3V	0	6.0	10.0	3%	50 mV	1.0%	±3%
		+5V	0	4.0	7.0	5%	50 mV	1.0%	±3%
		+12V	0	2.0	-	5%	120 mV	1.0%	±5%
		-12V	0	0.6	-	1%	120 mV	1.0%	±5%
DY075-14	75	+48V	0	1.6	-	1%	300 mV	1.0%	±1%
DY075-18	50	+3.3V	0	15	-	1%	50 mV	1.0%	±1%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope and Each output is terminated with a 0.47 µF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

ENCLOSURES (optional)

EUS ***ECS***



Our Standard power supplies, the DY075 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

Example Part Number:
DY075-9ECS or DY075-9EUS

*Note DY040 pictured in chassis

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DY075 SERIES 75 WATT— PIN ASSIGNMENT								
Pin / Model	1	2	3	4	5	6	7	8
DY075-6	+5V	+5V	+5V	+5V	COM	COM	COM	COM
DY075-7	+12V	+12V	+12V	COM	COM	COM	COM	+5V
DY075-8	+15V	+15V	+15V	COM	COM	COM	COM	+5V
DY075-9	+24V	+24V	+24V	COM	COM	COM	COM	+5V
DY075-3	+5V	+5V	COM	COM	COM	COM	+12V	+12V
DY075-1	+5V	+5V	COM	COM	+12V	+12V	-12V	N/C
DY075-19	+3.3V	+3.3V	COM	COM	+5V	+5V	-12V	+12V
DY075-14	+48V	+48V	+48V	COM	COM	COM	COM	+5V
DY075-18	+3.3V	+3.3V	+3.3V	+3.3V	COM	COM	COM	COM

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DY090 SERIES

90 Watts For Medical & Industrial Applications

135 Watts Peak Current

Low Cost

DESCRIPTION

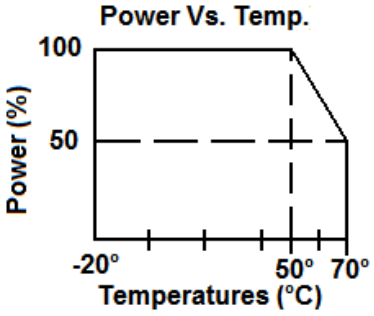
DY090 series is a universal input multiple output power supply. The series is a 90 Watt power supply in the size of 3"x 5" with a wattage density of 4.7W/in^3. The efficiency can reach up to 79-87% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

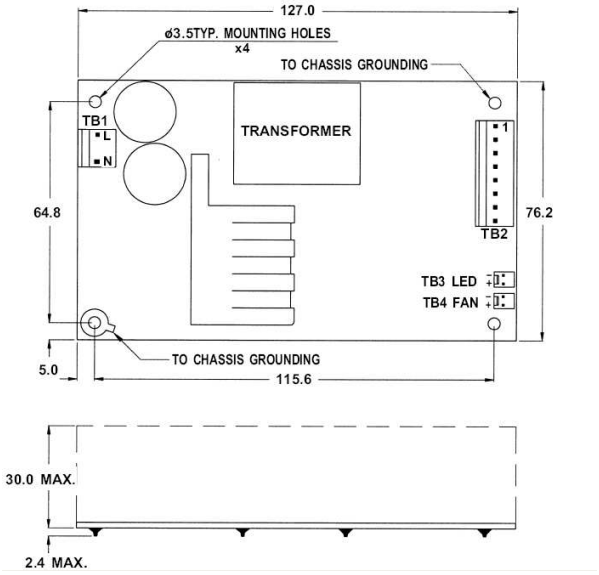
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...79% to 87%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Earth Leakage……..……<300µA @ 240VAC
Designed in full compliance with UL 60950-1, UL60601-1
CSA 22.2 #60950-1,601.1
EN60950-1,EN60601-1
EMI …….……EN55022 "B", EN55011 "B"
FCC docket class "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……..… EN61000-3-2 Class A

MECHANICAL SPECIFICATIONS



Connector: TB1—AC input : Molex 5277-02A or Equivalent
TB2—DC output : Molex 5277-10A Single & Triple Outputs,
: Molex 5277-12A for Quad Outputs,
TB3—LED : Molex 5045-02A or equivalent
TB4—FAN : Molex 5045-02A or equivalent
TB3—Remote Sense : Molex 5045-02A or equivalent

Size: 76.2mm X 127mm X 30mm, 3" X 5" X 1.18"

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)				Voltage Tolerance ±	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
DY090-19	90	+3.3V	0	8	10		±3%	50mvp-p	±1%	±3%
		+5V	0	5	8		±5%	1%	±1%	±3%
		+12V	0	2			±5%	1%	±1%	±5%
		-12V	0	0.5			±5%	1%	±1%	±5%
DY090-6	90	+5V	0	17		-	±1%	1%	±1%	±1%
DY090-7	90	+12V	0	7		11	±1%	1%	±1%	±1%
		+5V	0	1		-	±5%	1%	±1%	±1%
DY090-8	90	+15V	0	5.6		9	±1%	1%	±1%	±1%
		+5V	0	1		-	±5%	1%	±1%	±1%
DY090-9	90	+24V	0	3.5		5.5	±1%	1%	±1%	±1%
		+5V	0	1		-	±5%	1%	±1%	±1%
DY090-14	90	+48V	0	1.85		2.8	±1%	1%	±1%	±1%
DY090-1	90	+5V	0	5	10	15	±2%	1%	±1%	±3%
		+12V	0	4	6	10	±5%	1%	±1%	±3%
		-12V	0	0.5		-	±5%	1%	±1%	±5%
		-5v	0	0.5		-	±5%	1%	±1%	±5%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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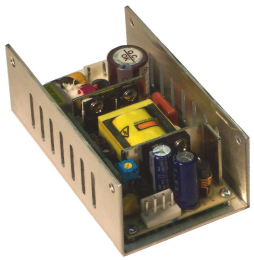
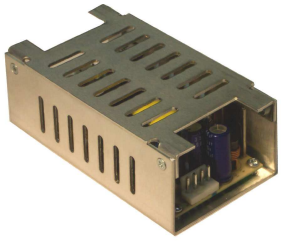
DY090 SERIES 90 WATT— PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6	7	8	9	10
DY090-1	+5V	+5V	+5V	GND	GND	GND	+12V	+12V	-12V	-5V
DY090-6	GND	GND	GND	GND	+5V	+5V	+5V	+5V		
DY090-7	+12V	+12V	+12V	GND	GND	GND	GND	+5V		
DY090-8	+15V	+15V	+15V	GND	GND	GND	GND	+5V		
DY090-9	+24V	+24V	+24V	GND	GND	GND	GND	+5V		
DY090-14	+48V	+48V	+48V	GND	GND	GND	GND	NC		
DY090-19	+3.3V	+3.3V	GND	GND	GND	GND	+5V	+5V	+12V	-12V

ENCLOSURES (optional)

EUS ***ECS***





Our Standard power supplies, the DY090 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

Example Part Number:
DY090-9ECS or DY090-9EUS

*Note DY040 pictured in chassis

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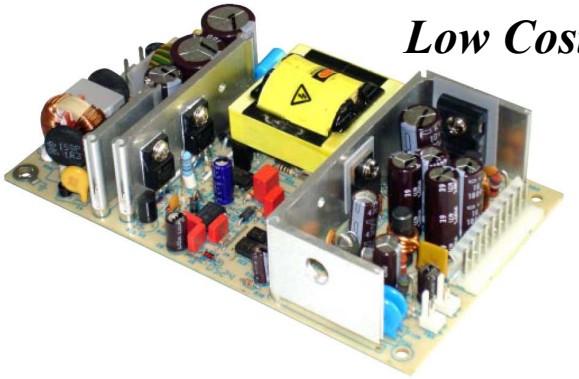
DY110 SERIES

110 Watts For Medical & Industrial Applications

160 Watts Peak Current

Low Cost



DESCRIPTION

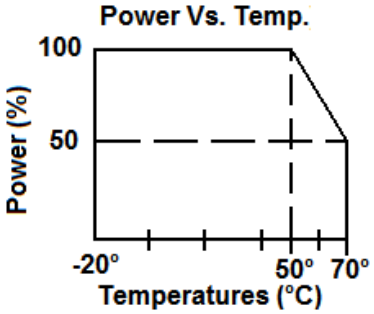
DY110 series is a universal input multiple output power supply. The series is a 110 Watt power supply in the size of 3.5"x 6" with a wattage density of 3.8W/in^3. The efficiency can reach up to 78-87% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*

APPLICATIONS

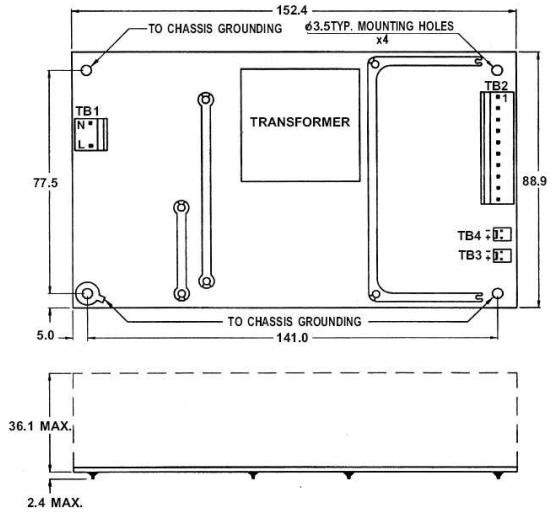
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……...…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...78% to 87% At rated load and 115Vac
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……...…….. Auto recovery
Short Circuit Protection……Auto recovery
Earth Leakage……...…….<300µA
Designed in full compliance with UL 60950-1, UL60601-1
CSA 22.2 #60950-1,601.1
EN60950-1,EN60601-1
EMI …….……EN55022 "B", EN55011 "B"
FCC docket class "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……..… EN61000-3-2 Class A

MECHANICAL SPECIFICATIONS



Connector: TB1—AC input : Molex 5277-02A or Equivalent
TB2—DC output : Molex 5277-10A for Single to Triple Outputs, Molex 5277-12A for Quad Outputs,
TB3—LED : Molex 5045-02A or equivalent
TB4—FAN : Molex 5045-02A or equivalent

Size: 88.95mm X 152.4mm X 36.1mm, 3.5" X 6" X 1.42"
Mounting Holes: 77.5mm X 141, 3.05" X 5.55"

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)				Voltage Tolerance ±	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
DY110-2	110	+5V +12V -12V	0 0 0	7 5 0.5	13 7	20 11 -	±1% ±5% ±5%	1% 1% 1%	±1% ±1% ±1%	±3% ±3% ±5%
DY110-19	110	+3.3V +5V +12V -12V	0 0 0 0	10 8 2 0.2	12 10	12 10 - -	±3% ±5% ±5% ±5%	50m vp-p 1% 1% 1%	±1% ±1% ±1% ±1%	±3% ±3% ±5% ±5%
DY110-6	110	+5V	6	19		-	±1%	1%	±1%	±1%
DY110-7	110	+12V +5V	0 0	8.5 1		13 -	±1% ±5%	1% 1%	±1% ±1%	±1% ±1%
DY110-7-1	110	+12V	0	9		13	±1%	1%	±1%	±1%
DY110-8	110	+15V +5V	0 0	7 1		10.5 1	±1% ±5%	1% 1%	±1% ±1%	±1% ±1%
DY110-8-1	110	+15V	0	7		10.5	±1%	1%	±1%	±1%
DY110-9	110	+24V +5V	0 0	4.5 1		6.5 1	±1% ±5%	1% 1%	±1% ±1%	±1% ±1%
DY110-9-1	110	+24V	0.1	4.5		6.5	±1%	1%	±1%	±1%
DY110-14	110	+48V	0	2.3		3.5	±1%	1%	±1%	±1%
DY110-1	110	+5V +12V -12V -5V	0 0 0 0	6 5 0.5 0.5	13 7	20 11 - -	±2% ±5% ±5% ±5%	1% 1% 1% 1%	±1% ±1% ±1% ±1%	±3% ±3% ±5% ±3%
DY110-11	110	+5V +24V +12V -12V	0 0 0 0	6 2 2 0.3	10 3	15 5.5 - -	±2% ±5% ±5% ±5%	1% 1% 1% 1%	±1% ±1% ±1% ±1%	±3% ±3% ±5% ±5%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 µF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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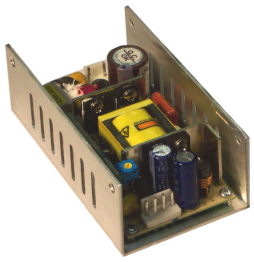
DY110 SERIES 110 WATT — PIN ASSIGNMENTS

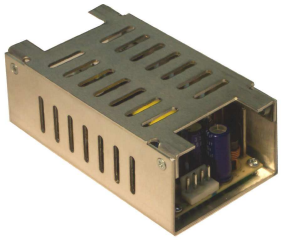
Model \ Pin	1	2	3	4	5	6	7	8	9	10	11	12
DY110-1	+5V	+5V	+5V	GND	GND	GND	+12V	+12V	-12V	GND	-5V	NC
DY110-2	+5V	+5V	+5V	GND	GND	GND	+12V	+12V	-12V	NC		
DY110-6	+5V	+5V	+5V	+5V	GND	GND	GND	GND	NC	NC		
DY110-7	+12V	+12V	+12V	+12V	GND	GND	GND	GND	+5V	NC		
DY110-7-1	+12V	+12V	+12V	+12V	GND	GND	GND	GND	NC	NC		
DY110-8	+15V	+15V	+15V	+15V	GND	GND	GND	GND	+5V	NC		
DY110-8-1	+15V	+15V	+15V	+15V	GND	GND	GND	GND	NC	NC		
DY110-9	+24V	+24V	+24V	+24V	GND	GND	GND	GND	+5V	NC		
DY110-9-1	+24V	+24V	+24V	+24V	GND	GND	GND	GND	NC	NC		
DY110-14	+48V	+48V	+48V	+48V	GND	GND	GND	GND	NC	NC		
DY110-11	+5V	+5V	+5V	GND	GND	GND	+24V	+24V	+12V	GND	-12V	NC
DY110-19	+3.3V	+3.3V	+3.3V	GND	GND	GND	GND	GND	+5V	+5V	+12V	-12V

ENCLOSURES (optional)

EUS



ECS



Our Standard power supplies, the DY090 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

Example Part Number:
DY090-9ECS or DY090-9EUS

*Note DY040 pictured in chassis

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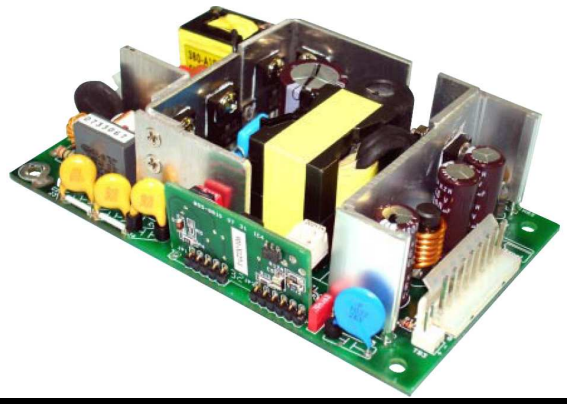
DX120 SERIES

120 Watts For Medical & Industrial Applications

With Built-In PFC



DESCRIPTION

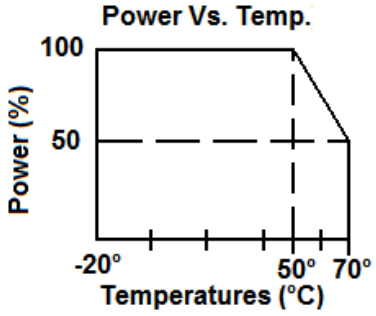
DX120 series is a universal input single output power supply. The series is a 120 Watt power supply in the size of 3"x 5" with a wattage density of 5.87W/in^3. The efficiency can reach up to 85-90% depending on model.

FEATURES

- *Meet Energy Star Version 2.0*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

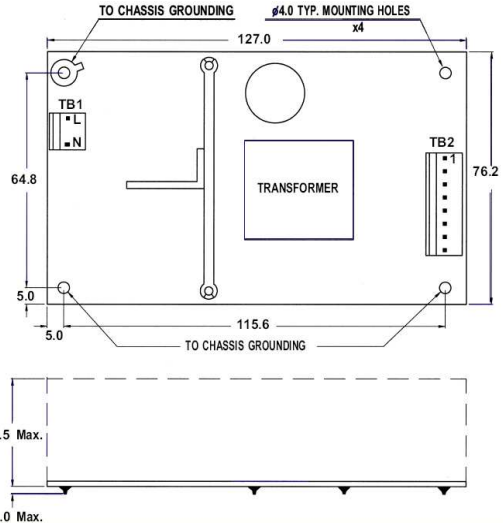
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……...…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…..–20°C to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-20°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...85% to 90% At rated load and 115Vac
Holdup Time…….>20ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Earth Leakage……...…….<300µA
Designed in full compliance with UL 60950-1, UL60601-1
CSA 22.2 #60950-1, 60601.1
EN60950-1,EN60601-1
EMI ……..……...EN55022 "B
FCC docket class "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……...… EN61000-3-2

MECHANICAL SPECIFICATIONS



Connector: TB1—AC input : Molex 5277-02A or equivalent
TB2—DC output : Molex 5273-or equivalent
Remote Sense : Molex 5045-02A or equivalent

Size: 76.2mm X 127mm X 33.5mm, 3" X 5" X 1.319"
Mounting Holes: 64.8mm X 115.6mm, 2.55" X 4.55"

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OUTPUT SPECIFICATIONS

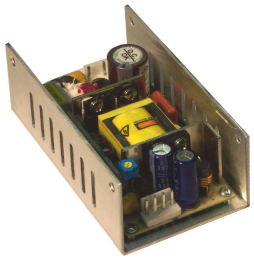
Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max			Line	Load
DX120-7	120	+12V	0	10	11	+11.9V~+12.10V	120mVpp	±0.5%	±1%
DX120-8	120	+15V	0	8	8.8	+14.90V~+15.10V	120mVpp	±0.5%	±1%
DX120-3	120	+18V	0	6.7	7.4	+17.90V~+18.10V	150mVpp	±0.5%	±1%
DX120-9	120	+24V	0	5	5.5	+23.80V~+24.20V	200mVpp	±0.5%	±1%
DX120-14	120	+48V	0	2.5	2.75	+47.60V~+48.40V	200mVpp	±0.5%	±1%
DX120-H	120	+60V	0	2.2	2.4	+59.5V~+60.50V	500mVpp	±0.5%	±1%

Note: Contact factory for Safety Agency Approved status.

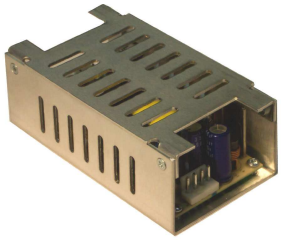
1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

ENCLOSURES (optional)

EUS



ECS



Our Standard power supplies, the DX120 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

Example Part Number:
DX120-9ECS or DX120-9EUS

*Note DY040 pictured in chassis

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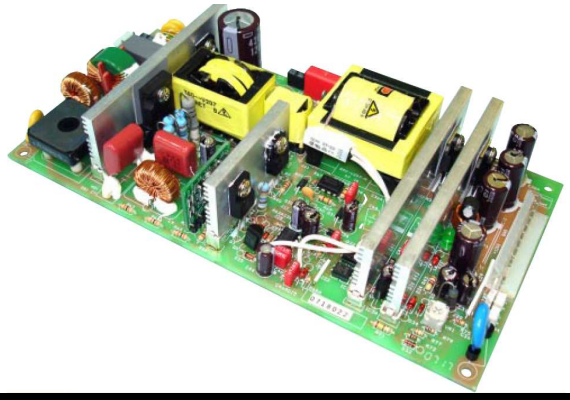
DX200 SERIES

200 Watts For Medical & Industrial Applications

With Built-in PFC



DESCRIPTION

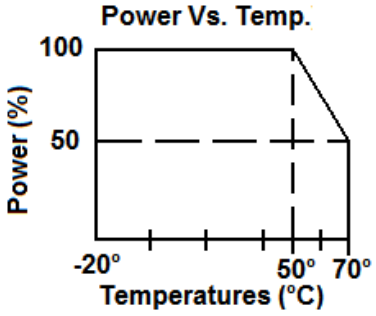
DX200 series is a universal input single output power supply. The series is a 200 Watt power supply in the size of 4.03"x 7.91" with a wattage density of 4.0W/in^3. The efficiency can reach up to 85-88% depending on model.

FEATURES

- *Built in PFC*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

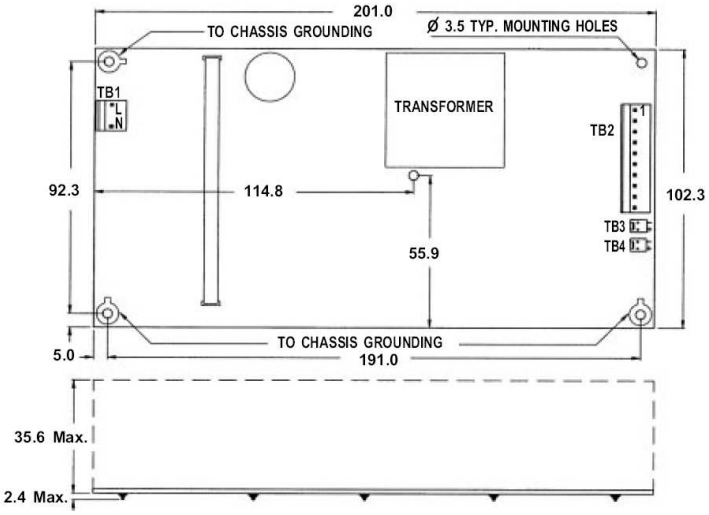
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……...…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…..–20°C to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-20°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...85% to 88% At rated load and 115Vac
Holdup Time…….>20ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Earth Leakage……...…….<300µA
Designed in full compliance with UL 60950-1, UL60601-1
CSA 22.2 #60950-1, 60601.1
EN60950-1,EN60601-1
EMI …….……...EN55022 "B FCC docket class "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics…….....… EN61000-3-2 Class "D"

MECHANICAL SPECIFICATIONS



Connector: TB1—AC input : Molex 5277-02A or equivalent
TB2—DC output : Molex 5273-10A or equivalent
Remote Sense & Fan : Molex 5045-02A or equivalent

Size: 101.6mm X 190.5mm X 35.6mm, 4" X 7.5" X 1.4"
Mounting Holes: 92.3mm X 191.0mm, 3.62" X 7.52"

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OUTPUT SPECIFICATIONS

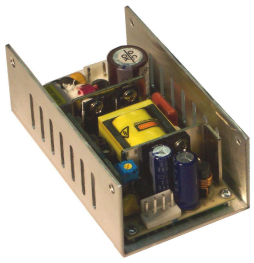
Model	Watts	Voltage (Vdc)	Load (A)				Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
DX200-7	200	+12V	0	16.5	25	31.5	+11.9V~+12.10V	100mVpp	±1%	±1%
DX200-8	200	+15V	0	13.3	20	25	+14.90V~+15.10V	100mVpp	±1%	±1%
DX200-3	200	+18V	0	11.1	16.6	21	+17.90V~+18.10V	100mVpp	±1%	±1%
DX200-9	200	+24V	0	8.3	12.5	15.8	+23.90V~+24.20V	100mVpp	±1%	±1%
DX200-G	200	+30V	0	6.6	9.65	12.6	+29.90V~+30.10V	150mVpp	±1%	±1%
DX200-J	200	+38V	0	5.25	7.9	10	+37.80V~+38.20V	150mVpp	±1%	±1%
DX200-14	200	+48V	0	4.16	6.25	7.9	+47.80V~+48.20V	200mVpp	±1%	±1%
DX200-H	200	+60V	0	3.3	5	9.15	+59.70V~+60.30V	100mVpp	±1%	±1%

Note: Contact factory for Safety Agency Approved status.

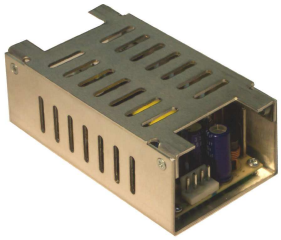
1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

ENCLOSURES (optional)

EUS



ECS



Our Standard power supplies, the DX200 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

Example Part Number:
DX200-9ECS or DX200-9EUS

*Note DY040 pictured in chassis

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DZ-B SERIES

40 - 300 Watts For Medical & Industrial Applications

DESCRIPTION

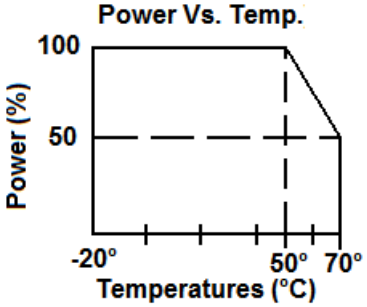
DZ-B series is a universal input single output power supply. The series is a 40W to 300W Power supply enclosed in a metal chassis with a standard 1U height. The efficiency can reach up to 85% depending on model.

FEATURES

- *EMI FCC Class B*
- *Built in LED Power On Indictor*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 264VAC*
- *Wide Output Adjustable Range (22VDC to 30VDC)*

APPLICATIONS

- *Computer Peripherals*
- *Telecommunications*
- *Machinery*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*

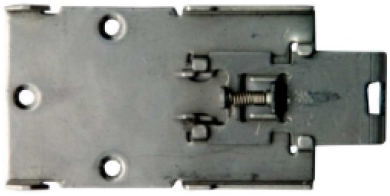


GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..……93% Power > 75 Watts
Inrush Current (cold)……...…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC
De-rated 2.5%/°C > 50°C
Storage Temperature……..……. −20ºC to 85ºC
Cooling……...……Free Air Convection
Efficiency…….……...85% Typical
Holdup Time…….>20ms
Overvoltage Type…… Latch off
Overload Protection……...……..….. Auto-recovery
Short Circuit Protection……...Auto-recovery
Earth Leakage……..…..…....300µ Max @ 240VAC
Designed in full compliance with UL 60950, UL2601-1
CSA 22.2 #234, #601-1
EN60950, EN60601-1
EMI……..…FCC Docket 20780 “B”, EN55022 “B”
Harmonics……..……EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS

Note:
1. A detailed mechanical specification is on the next page.
2. Size: DZ-B04 Series 3.35” X 3.94” X 1.38”
[85.0mm X 100.0mm X 35.0mm]
DZ-B06 Series 3.35” X 5.12” X 1.38”
[85.0mm X 130.0mm X 35.0mm]
DZ-B10 Series 3.35” X 6.3” X 1.38”
[85.0mm X 160.0mm X 35.0mm]
DZ-B15 Series 3.94” X 7.48” X 1.61”
[100.0mm X 190.0mm X 41.0mm]
DZ-B20 Series 3.94” X 8.27” X 1.65”
[100.0mm X 210.0mm X 42.0mm]
DZ-B30 Series 3.94” X 9.06” X 1.65”
[100.0mm X 230.0mm X 42.0mm]
3. Connectors:
AC Input: Terminal Blocks
DC Output: Terminal Blocks
4. Din Rail Mounting Fixture:
Available for each series.



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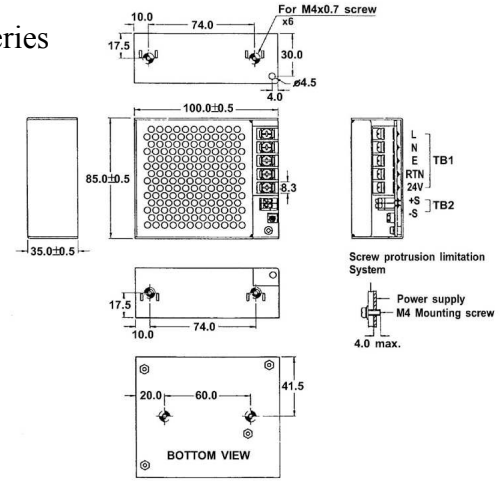
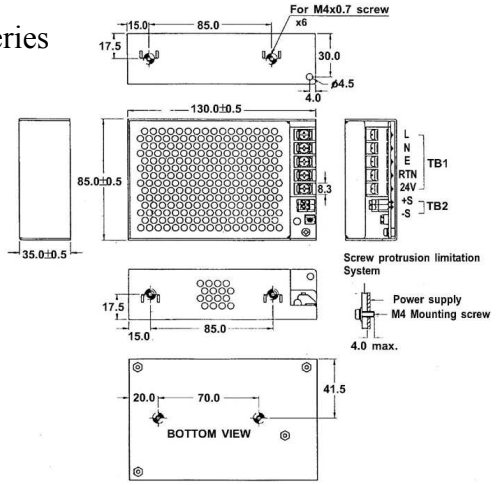
MECHANICAL SPECIFICATIONS FOR THE DZ-B SERIES

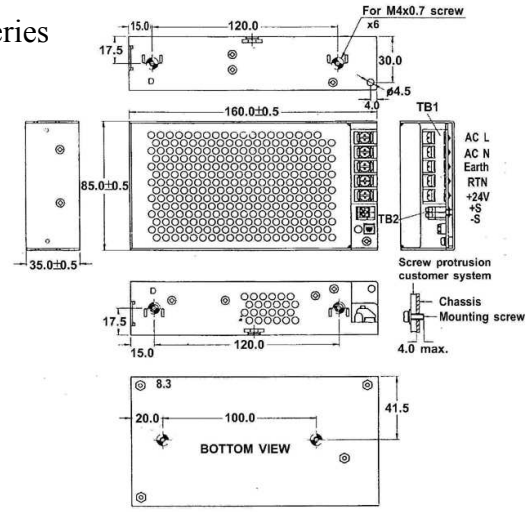
DZ-B04 Series



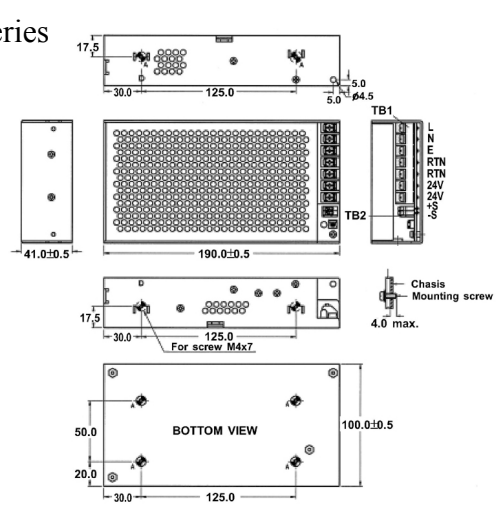
DZ-B06 Series



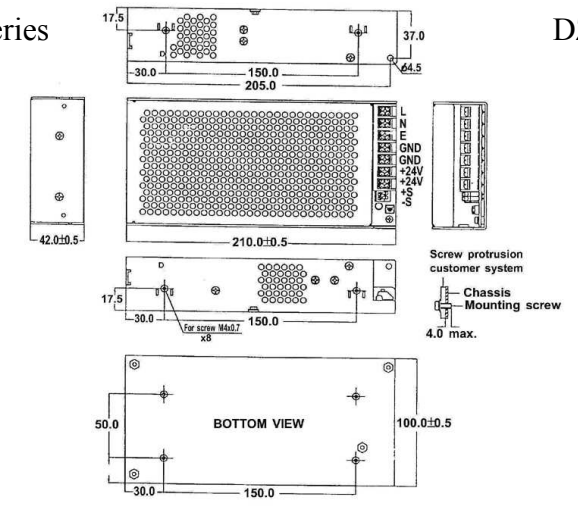
DZ-B10 Series



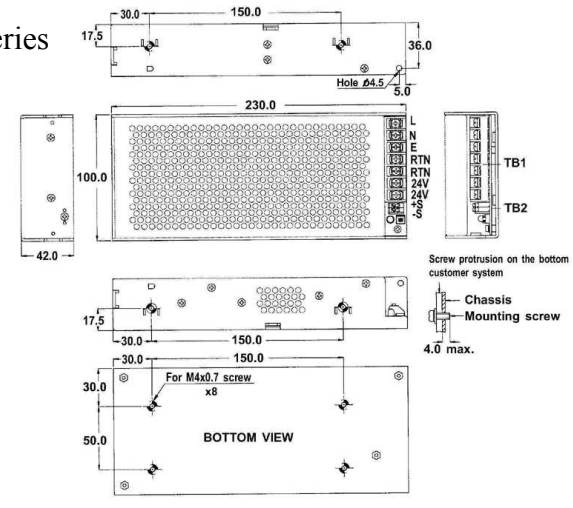
DZ-B15 Series



DZ-B20 Series



DZ-B30 Series



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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ-B045	40	+18V	0	2.2	4.2	2%	50 mV	± 1%	± 1%
DZ-B047	40	+12V	0	3.3	6	2%	50 mV	± 1%	± 1%
DZ-B048	40	+15V	0	2.7	5	2%	50 mV	± 1%	± 1%
DZ-B049	40	+24V	0	1.7	3	2%	50 mV	± 1%	± 1%
DZ-B065	60	+18V	0	3.3	6.7	2%	50 mV	± 1%	± 1%
DZ-B067	60	+12V	0	5	8.5	2%	50 mV	± 1%	± 1%
DZ-B068	60	+15V	0	4	6.5	2%	50 mV	± 1%	± 1%
DZ-B069	60	+24V	0	2.5	5	2%	50 mV	± 1%	± 1%
DZ-B105	100	+18V	0	5.6	8	2%	50 mV	± 1%	± 1%
DZ-B107	100	+12V	0	8.3	12	2%	50 mV	± 1%	± 1%
DZ-B108	100	+15V	0	6.7	10	2%	50 mV	± 1%	± 1%
DZ-B109	100	+24V	0	4.2	6	2%	50 mV	± 1%	± 1%
DZ-B155	150	+18V	0	8.3	10.7	2%	50 mV	± 1%	± 1%
DZ-B157	150	+12V	0	12.5	16	2%	50 mV	± 1%	± 1%
DZ-B158	150	+15V	0	10	13	2%	50 mV	± 1%	± 1%
DZ-B159	150	+24V	0	6.5	8	2%	50 mV	± 1%	± 1%
DZ-B205	200	+18V	0	11	16.5	2%	50 mV	± 1%	± 1%
DZ-B207	200	+12V	0	16.7	25	2%	50 mV	± 1%	± 1%
DZ-B208	200	+15V	0	13.3	20	2%	50 mV	± 1%	± 1%
DZ-B209	200	+24V	0	8.3	10	2%	50 mV	± 1%	± 1%
DZ-B305	300	+18V	0	16.7	26.7	2%	100 mV	± 1%	± 1%
DZ-B307	300	+12V	0	23	37.44	2%	100 mV	± 1%	± 1%
DZ-B308	300	+15V	0	18.5	32	2%	100 mV	± 1%	± 1%
DZ-B309	300	+24V	0	11.66	15	2%	50 mV	± 1%	± 1%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 20MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 µF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down regulation limit.
7. Efficiency is measured at rated and nominal load.

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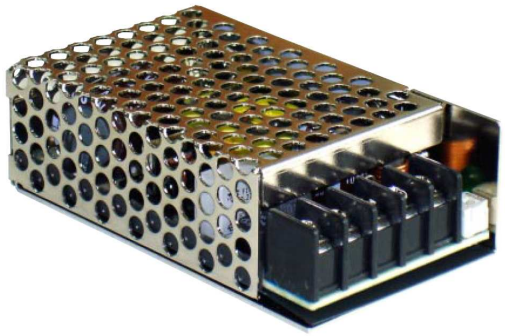
SNP-C03 SERIES

30 Watts

Industrial Applications

45 Watts Peak Current



DESCRIPTION

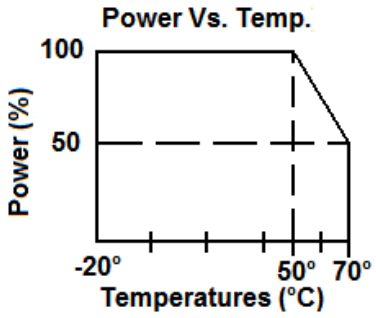
SNP-C03 series is a universal input single output power supply. The series is a 30 Watt power supply in the size of 2"x 3.54" with a wattage density of 3.7W/in^3. The efficiency can reach up to 75-85% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

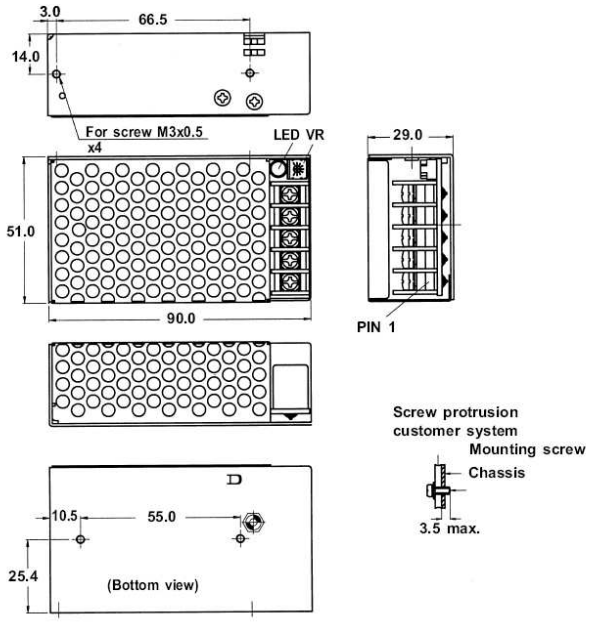
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Industrial*



GENERAL SPECIFICATIONS

Input Voltage……..….... 85VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…… –20 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...75% to 85%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Designed in full compliance with UL 60950-1, CSA 22.2 #60950-1, EN60950-1
EMI ……..…….……FCC "B" EN55022 "B", EN55011 "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……..… …….EN61000-3-2

MECHANICAL SPECIFICATIONS



Connector:
AC input & DC output : Terminal Block 7.62mm / 0.3" Spacing
Size: 51mm x 90mm x 29mm ; 2.0" X 3.54" X 1.142"
Net Weight 180g approx. / Unit

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Peak			Line	Load
SNP-C03B	30	+3.3V	0	6	9	+3.25V~+3.355V	50mVpp	±1%	±1%
SNP-C036	30	+5V	0	6	9	+4.95V~+5.05V	50mVpp	±1%	±1%
SNP-C037	30	+12V	0	2.5	3.75	+11.4V~+12.6V	120mVpp	±1%	±1%
SNP-C038	30	+15V	0	2	3	+14.25V~+15.75V	150mVpp	±1%	±1%
SNP-C039	30	+24V	0	1.3	1.9	+22.8V~+25.2V	240mVpp	±1%	±1%
SNP-C03T	30	+48V	0	0.63	0.95	+45.6V~+50.4V	240mVpp	±1%	±1%

Note: Contact factory for Safety Agency Approved status.

1. Peak Load can be provided up to 8 seconds.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

SNP-C03 SERIES 30 WATT— PIN ASSIGNMENT

Pin / Model	1	2	3	4	5
SNP-C03B	AC/L	AC/N	FG	GND	+3.3V
SNP-C036	AC/L	AC/N	FG	GND	+5V
SNP-C037	AC/L	AC/N	FG	GND	+12V
SNP-C038	AC/L	AC/N	FG	GND	+15V
SNP-C039	AC/L	AC/N	FG	GND	+24V
SNP-C03T	AC/L	AC/N	FG	GND	+48V

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SNP-C04 SERIES

40 Watts

Industrial Applications

60 Watts Peak Current

DESCRIPTION

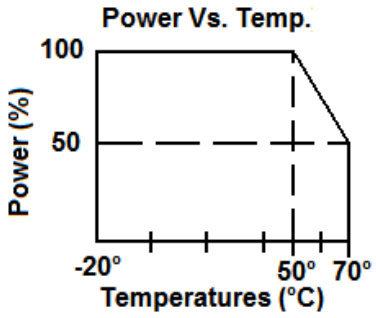
SNP-C04series is a universal input single output power supply. The series is a 40 Watt power supply in the size of 3.22"x 3.89" with a wattage density of 2.26W/in^3. The efficiency can reach up to 75-85% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 264VAC*
- *LED Indicator*

APPLICATIONS

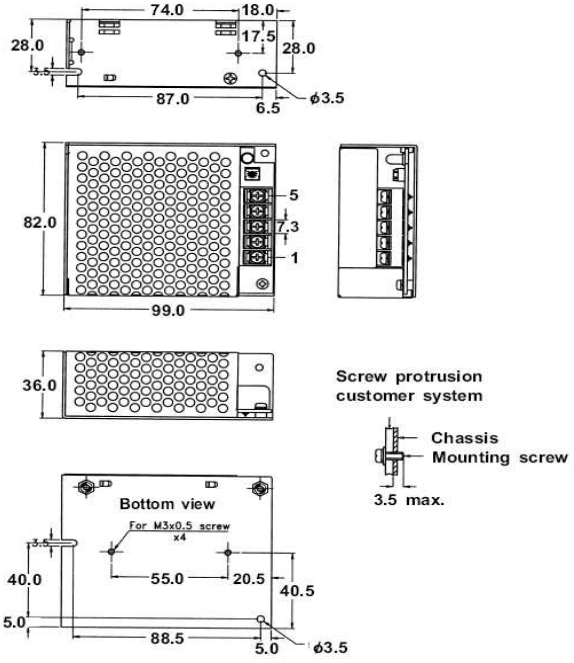
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Industrial*



GENERAL SPECIFICATIONS

Input Voltage……..…... 85VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…… –20 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...75% to 85%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……...…….. Auto recovery
Short Circuit Protection……Auto recovery
Designed in full compliance with UL 60950-1, CSA 22.2 #60950-1, EN60950-1
EMI ……..…….……FCC "B" EN55022 "B", EN55011 "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……...…….. EN61000-3-2

MECHANICAL SPECIFICATIONS



Connector:
AC input & DC output : Terminal Block 8.25mm / 0.325" Spacing
Size: 82mm x 99mm x 36mm ; 3.22" x 3.89" x 1.42"
Net Weight 315g approx. / Unit

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)				Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
SNP-C04B	40	+3.3V	0	9		11	+3.25V~+3.355V	50mVpp	±1%	±1%
SNP-C046	40	+5V	0	7		10.5	+4.95V~+5.05V	50mVpp	±1%	±1%
SNP-C047	40	+12V	0	3		4.5	+11.4V~+12.6V	120mVpp	±1%	±1%
SNP-C048	40	+15V	0	2.4		3.6	+14.25V~+15.75V	150mVpp	±1%	±1%
SNP-C049	40	+24V	0	1.7		2.5	+22.8V~+25.2V	240mVpp	±1%	±1%
SNP-C04T	40	+48V	0	0.8		1.2	+45.6V~+50.4V	240mVpp	±1%	±1%
SNP-C043	40	+5V	0	4	6	8	+4.95V~+5.05V	50mVpp	±1%	±2%
		+12V	0	1.5	2	3	+11.4V~+12.6V	120mVpp	±1%	±3%
SNP-C04A	40	+5V	0	3	5	7	+4.95V~+5.05V	50mVpp	±1%	±1%
		+24V	0	1	1.5	2	+22.8V~+25.2V	240mVpp	±1%	±1%

Note: Contact factory for Safety Agency Approved status.

1. Peak Load can be provided up to 8 seconds.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF + 10μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

SNP-C04 SERIES 40 WATT— PIN ASSIGNMENT

Pin / Model	1	2	4	4	5	6
SNP-C04B	AC/L	AC/N	Earth	GND	+3.3V	
SNP-C046	AC/L	AC/N	Earth	GND	+5V	
SNP-C047	AC/L	AC/N	Earth	GND	+12V	
SNP-C048	AC/L	AC/N	Earth	GND	+15V	
SNP-C049	AC/L	AC/N	Earth	GND	+24V	
SNP-C04T	AC/L	AC/N	Earth	GND	+48V	
SNP-C043	AC/L	AC/N	Earth	+12V	GND	+5V
SNP-C04A	AC/L	AC/N	Earth	+24V	GND	+5V

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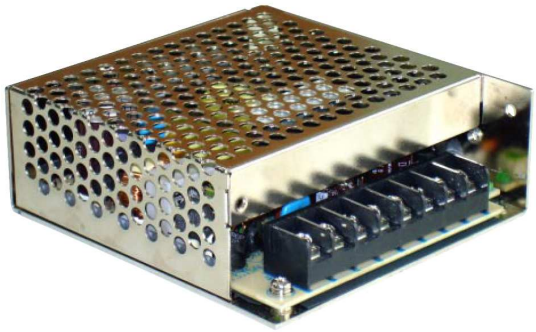
SNP-C06 SERIES

60 Watts

Industrial Applications

90 Watts Peak Current



DESCRIPTION

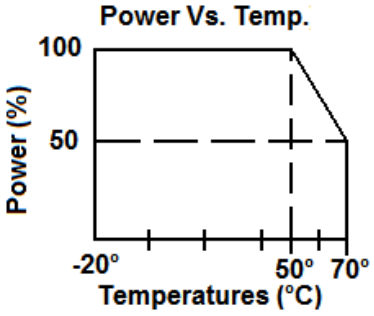
SNP-C06 series is a universal input single output power supply. The series is a 60 Watt power supply in the size of 3.74"x 3.93" with a wattage density of 2.87W/in^3. The efficiency can reach up to 77-86% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single & Multiple Outputs*
- *Universal input 90VAC to 264VAC*
- *LED Indicator*

APPLICATIONS

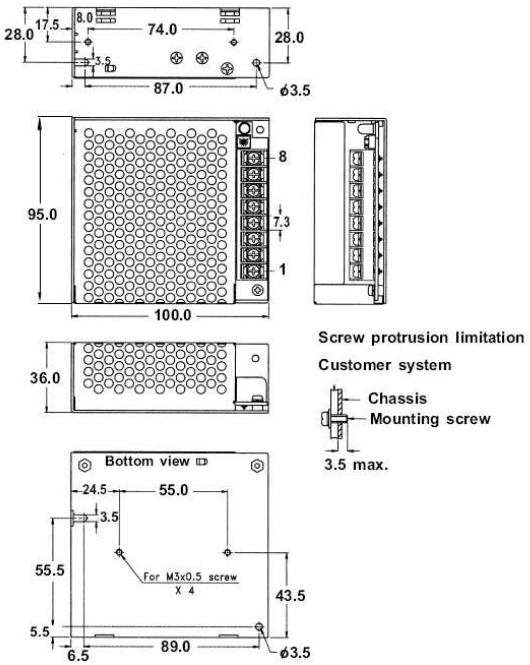
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Industrial*



GENERAL SPECIFICATIONS

Input Voltage……..….. 85VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…… –20 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...75% to 85%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Designed in full compliance with UL 60950-1, CSA 22.2 #60950-1, EN60950-1
EMI ……..…….……FCC "B" EN55022 "B", EN55011 "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……..… EN61000-3-2

MECHANICAL SPECIFICATIONS



Connector:
AC input & DC output : Terminal Block 8.25mm / 0.325" Spacing
Size: 95mm x 100mm x 36mm ; 3.75" x 3.93" x 1.42"
Net Weight 390g approx. / Unit

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)				Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Max	Peak			Line	Load
SNP-C06B	60	+3.3V	0	15		20	+3.25V~+3.355V	50mVpp	±1%	±1%
SNP-C066	60	+5V	0	10		18	+6.95V~+5.05V	50mVpp	±1%	±1%
SNP-C067	60	+12V	0	5		7.5	+11.4V~+12.6V	120mVpp	±1%	±1%
SNP-C068	60	+15V	0	4		6	+14.25V~+15.75V	150mVpp	±1%	±1%
SNP-C069	60	+24V	0	2.5		3.8	+22.8V~+25.2V	240mVpp	±1%	±1%
SNP-C06T	60	+48V	0	1.3		1.9	+45.6V~+50.4V	240mVpp	±1%	±1%
SNP-C063	60	+5V	0	6	8	10	+4.95V~+5.05V	50mVpp	±1%	±2%
		+12V	0	2	3	4	+11.4V~+12.6V	120mVpp	±1%	±2%
SNP-C06A	60	+5V	0	4	5	6	+4.95V~+5.05V	50mVpp	±1%	±1%
		+24V	0	1.5	2	3	+22.8V~+25.2V	240mVpp	±1%	±1%
SNP-C060	60	+5V	0	5	7	8	+4.95V~+5.05V	50mVpp	±1%	±2%
		+12V	0	1.5	2	3	+11.4V~+12.6V	120mVpp	±1%	±2%
		-12V	0	0.5	1		-11.4V~-12.6V	120mVpp	±1%	±3%
		-5V	0	0.5	1		+4.95V~+5.05V	50mVpp	±1%	±3%
SNP-C064	60	+5V	0	5	7	8	+4.95V~+5.05V	50mVpp	±1%	±2%
		+15V	0	1.2	2	2.7	+11.4V~+12.6V	150mVpp	±1%	±2%
		-15V	0	0.5	1		-14.25V~-15.75V	150mVpp	±1%	±3%
		-5V	0	0.5	1		-4.95V~-5.05V	50mVpp	±1%	±3%
SNP-C06F	60	+5V	0	3	5	6	+4.95V~+5.05V	50mVpp	±1%	±2%
		+12V	0	0.9	2	3	+11.4V~+12.6V	120mVpp	±1%	±2%
		+24V	0	0.9	1.5	2	+22.8V~+25.2V	240mVpp	±1%	±3%
		-12V	0	0.5	1		-11.4V~-12.6V	120mVpp	±1%	±3%

Note: Contact factory for Safety Agency Approved status.

SNP-C06 SERIES 60 WATT— PIN ASSIGNMENT

Pin / Model	1	2	4	4	5	6
SNP-C04B	AC/L	AC/N	Earth	GND	+3.3V	
SNP-C046	AC/L	AC/N	Earth	GND	+5V	
SNP-C047	AC/L	AC/N	Earth	GND	+12V	
SNP-C048	AC/L	AC/N	Earth	GND	+15V	
SNP-C049	AC/L	AC/N	Earth	GND	+24V	
SNP-C04T	AC/L	AC/N	Earth	GND	+48V	
SNP-C043	AC/L	AC/N	Earth	+12V	GND	+5V
SNP-C04A	AC/L	AC/N	Earth	+24V	GND	+5V

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SNP-C08 SERIES

80 Watts

Industrial Applications

120 Watts Peak Current

DESCRIPTION

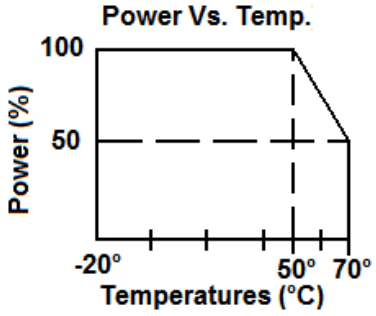
SNP-C08 series is a universal input single output power supply. The series is an 80 Watt power supply in the size of 3.75"x 5.07" with a wattage density of 2.96W/in^3. The efficiency can reach up to 77-86% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single & Multiple Outputs*
- *Universal input 90VAC to 264VAC*
- *LED Indicator*

APPLICATIONS

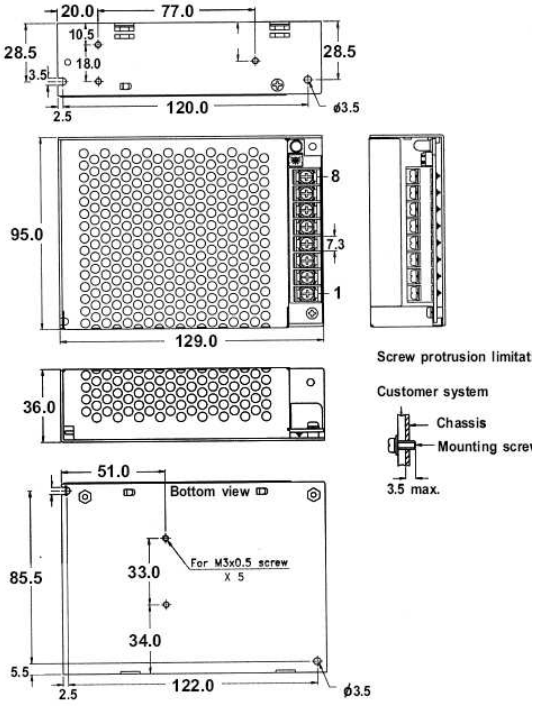
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Industrial*



GENERAL SPECIFICATIONS

Input Voltage……..…... 85VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…… –20 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...75% to 85%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Designed in full compliance with UL 60950-1, CSA 22.2 #60950-1, EN60950-1
EMI ……..…….…….……FCC "B" EN55022 "B", EN55011 "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics…….… EN61000-3-2

MECHANICAL SPECIFICATIONS



Connector:
AC input & DC output : Terminal Block 8.25mm / 0.325" Spacing
Size: 95mm x 129mm x 36mm ; 3.74" x 5.07" x 1.42"
Net Weight 460g approx. / Unit

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Peak			Line	Load
SNP-C08B	80	+3.3V	0	17	27	+3.25V~+3.355V	50mVpp	±1%	±1%
SNP-C086	80	+5V	0	14	23	+4.95V~+5.05V	50mVpp	±1%	±1%
SNP-C087	80	+12V	0	7	10.5	+11.4V~+12.6V	120mVpp	±1%	±1%
SNP-C088	80	+15V	0	5.3	8	+14.25V~+15.75V	150mVpp	±1%	±1%
SNP-C089	80	+24V	0	3.3	5	+22.8V~+25.2V	240mVpp	±1%	±1%
SNP-C08T	80	+48V	0	1.7	2.6	+45.6V~+50.4V	240mVpp	±1%	±1%
SNP-C083	80	+5V +12V	0 0	7 3	12 5	+4.95V~+5.05V +11.4V~+12.6V	50mVpp 120mVpp	±1% ±1%	±2% ±2%
SNP-C08A	80	+5V +24V	0 0	5 2	10 4	+4.95V~+5.05V +22.8V~+25.2V	50mVpp 480mVpp	±1% ±1%	±2% ±2%
SNP-C080	80	+5V +12V -12V -5V	0 0 0 0	6 2.5 0.5 0.5	10 5	+4.95V~+5.05V +11.4V~+12.6V -11.4V~-12.6V +4.95V~+5.05V	50mVpp 120mVpp 120mVpp 50mVpp	±1% ±1% ±1% ±1%	±2% ±2% ±3% ±3%
SNP-C084	80	+5V +15V -15V -5V	0 0 0 0	6 2 0.5 0.5	10 4	+4.95V~+5.05V +14.25V~+15.75V -14.25V~-15.75V -4.95V~5.05V	50mVpp 120mVpp 120mVpp 50mVpp	±1% ±1% ±1% ±1%	±2% ±2% ±3% ±3%
SNP-C08F	80	+5V +12V +24V -12V	0 0	4 1.5 1 0.5	8 4 2.5	+4.95V~+5.05V +11.4V~+12.6V +22.8V~+25.2V -11.4V~-12.6V	50mVpp 120mVpp 240mVpp 120mVpp	±1% ±1% ±1% ±1%	±2% ±2% ±3% ±3%

Note: Contact factory for Safety Agency Approved status.

SNP-C08 SERIES 80 WATT— PIN ASSIGNMENT

Pin / Mode	1	2	4	4	5	6	7	8
SNP-C08B	AC/L	AC/N	Earth	GND	+3.3V			
SNP-C086	AC/L	AC/N	Earth	GND	+5V			
SNP-C087	AC/L	AC/N	Earth	GND	+12V			
SNP-C088	AC/L	AC/N	Earth	GND	+15V			
SNP-C089	AC/L	AC/N	Earth	GND	+24V			
SNP-C08T	AC/L	AC/N	Earth	GND	+48V			
SNP-C083	AC/L	AC/N	Earth	+12V	GND	+5V		
SNP-C08A	AC/L	AC/N	Earth	+24V	GND	+5V		
SNP-C080	AC/L	AC/N	Earth	-12V	-5V	+12V	GND	+5V
SNP-C084	AC/L	AC/N	Earth	-15V	-5V	+15V	GND	+5V
SNP-C08F	AC/L	AC/N	Earth	-12V	+24V	+12V	GND	+5V

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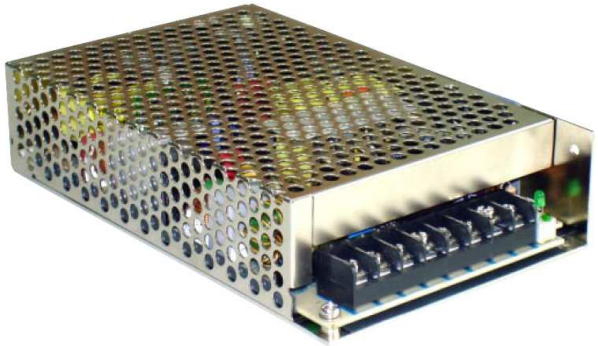
SNP-C10 SERIES

100 Watts

Industrial Applications

150 Watts Peak Current



DESCRIPTION

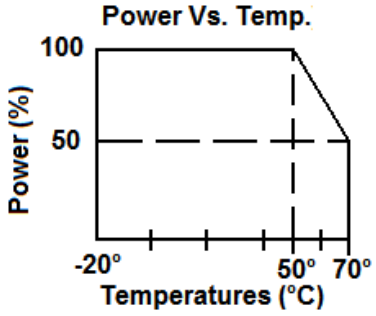
SNP-C10 series is a universal input single output power supply. The series is a 100 Watt power supply in the size of 3.74"x 6.25" with a wattage density of 3.0W/in^3. The efficiency can reach up to 80-86% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single & Multiple Outputs*
- *Universal input 90VAC to 264VAC*
- *LED Indicator*

APPLICATIONS

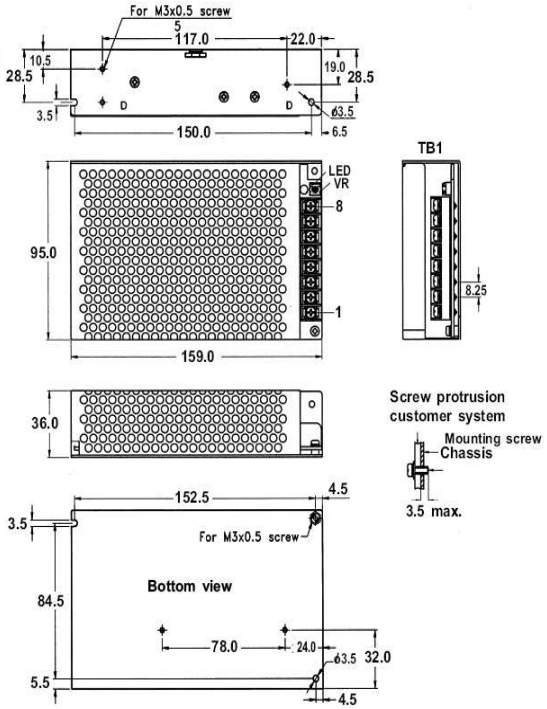
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Industrial*



GENERAL SPECIFICATIONS

Input Voltage……..…... 85VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…… –20 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...80% to 87%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Designed in full compliance with UL 60950-1, CSA 22.2 #60950-1, EN60950-1
EMI ……..…….…….……FCC "B" EN55022 "B", EN55011 "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……...… EN61000-3-2

MECHANICAL SPECIFICATIONS



Connector:
AC input & DC output : Terminal Block 8.25mm / 0.325" Spacing
Size: 95mm x 159mm x 36mm ; 3.74" x 6.25" x 1.42"
Net Weight 610g approx. / Unit

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Peak			Line	Load
SNP-C106	100	+5V	0	18	30	+4.95V~+5.05V	50mVpp	±1%	±1%
SNP-C107	100	+12V	0	9	13.5	+11.4V~+12.6V	120mVpp	±1%	±1%
SNP-C108	100	+15V	0	7	10.5	+14.25V~+15.75V	150mVpp	±1%	±1%
SNP-C109	100	+24V	0	4.5	6.8	+22.8V~+25.2V	240mVpp	±1%	±1%
SNP-C10T	100	+48V	0	2.3	3.4	+45.6V~+50.4V	480mVpp	±1%	±1%
SNP-C103	100	+5V	0	8	12	+4.95V~+5.05V	50mVpp	±1%	±3%
		+12V	0	4.5	8	+11.4V~+12.6V	120mVpp	±1%	±3%
SNP-C10A	100	+5V	0	7	12	+4.95V~+5.05V	50mVpp	±1%	±3%
		+24V	0	2.5	4	+22.8V~+25.2V	240mVpp	±1%	±3%
SNP-C100	100	+5V	0	7	15	+4.95V~+5.05V	50mVpp	±1%	±3%
		+12V	0	4	7	+11.4V~+12.6V	120mVpp	±1%	±3%
		-12V	0	0.5		-11.4V~-12.6V	120mVpp	±1%	±3%
		-5V	0	0.5		-4.95V~-5.05V	50mVpp	±1%	±3%
SNP-C104	100	+5V	0	7	15	+4.95V~+5.05V	50mVpp	±1%	±3%
		+15V	0	3	6	+14.25V~+15.75V	150mVpp	±1%	±3%
		-15V	0	0.5		-14.25V~-15.75V	150mVpp	±1%	±3%
		-5V	0	0.5		-4.95V~-5.05V	50mVpp	±1%	±3%
SNP-C10F	100	+5V	0	5	10	+4.95V~+5.05V	50mVpp	±1%	±3%
		+12V	0	2	5	+11.4V~+12.6V	120mVpp	±1%	±3%
		+24V	0	1.5	3	+22.8V~+25.2V	240mVpp	±1%	±3%
		-12V	0	0.5		-11.4V~-12.6V	120mVpp	±1%	±3%

Note: Contact factory for Safety Agency Approved status.

SNP-C10 SERIES 100 WATT— PIN ASSIGNMENT

Pin / Model	1	2	4	4	5	6	7	8
SNP-C106	AC/L	AC/N	Earth	GND	+5V			
SNP-C107	AC/L	AC/N	Earth	GND	+12V			
SNP-C108	AC/L	AC/N	Earth	GND	+15V			
SNP-C109	AC/L	AC/N	Earth	GND	+24V			
SNP-C10T	AC/L	AC/N	Earth	GND	+48V			
SNP-C103	AC/L	AC/N	Earth	+12V	GND	+5V		
SNP-C10A	AC/L	AC/N	Earth	+24V	GND	+5V		
SNP-C100	AC/L	AC/N	Earth	+12V	-5V	+12V	GND	+5V
SNP-C104	AC/L	AC/N	Earth	-15V	-5V	+15V	GND	+5V
SNP-C10F	AC/L	AC/N	Earth	-12V	+24V	+12V	GND	+5V

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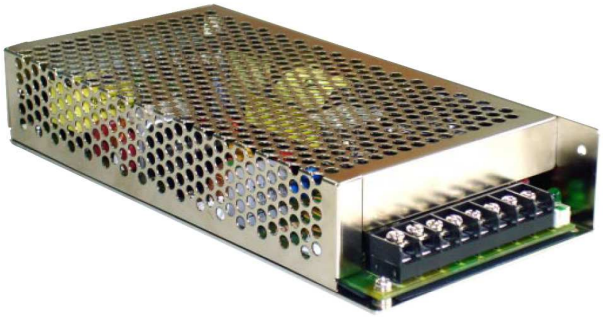
SNP-C15 SERIES

150 Watts

Industrial Applications

225 Watts Peak Current



DESCRIPTION

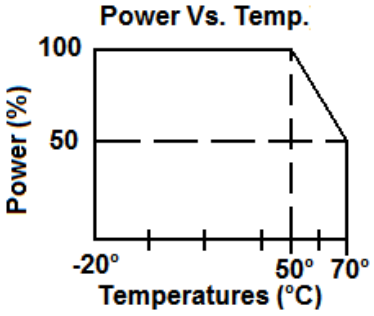
SNP-C15 series is a universal input single output power supply. The series is a 150 Watt power supply in the size of 3.74"x 7.83" with a wattage density of 3.42W/in^3. The efficiency can reach up to 82-87% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single & Multiple Outputs*
- *Universal input 90VAC to 264VAC*
- *LED Indicator*

APPLICATIONS

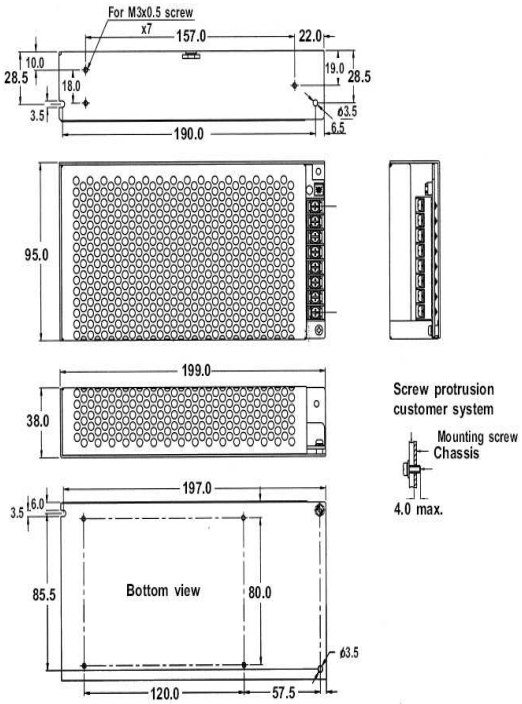
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Industrial*



GENERAL SPECIFICATIONS

Input Voltage……..…... 85VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…… –20 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-40°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…...82% to 87%
Holdup Time…….>16ms at 115VAC
Overvoltage Type…….…… Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Designed in full compliance with UL 60950-1, CSA 22.2 #60950-1, EN60950-1
EMI ……..…….…….FCC "B" EN55022 "B", EN55011 "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics…….… EN61000-3-2

MECHANICAL SPECIFICATIONS



Connector:
AC input & DC output : Terminal Block 8.25mm / 0.325" Spacing
Size: 95mm x 199mm x 38mm ; 3.74" x 7.83" x 1.5"
Net Weight 770g approx. / Unit

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise Pk to Pk	Regulation	
			Min.	Rate	Peak			Line	Load
SNP-C157	150	+12V	0	12.5	19	+11.4V~+12.6V	120mVpp	±1%	±1%
SNP-C158	150	+15V	0	10	15	+14.25V~+15.75V	150mVpp	±1%	±1%
SNP-C159	150	+24V	0	6.5	10	+22.8V~+25.2V	240mVpp	±1%	±1%
SNP-C15T	150	+48V	0	3.2	5	+45.6.8V~+50.4V	240mVpp	±1%	±1%
SNP-C153	150	+5V +12V	0	12 6	18 9	+4.95V~+5.05V +11.4V~+12.6V	50mVpp 120mVpp	±1% ±1%	±1% ±1%
SNP-C15A	150	+5V +24V	0 0	8 4	12 6	+4.95V~+5.05V +22.8V~+25.2V	50mVpp 240mVpp	±1% ±1%	±3% ±3%
SNP-C150	150	+5V +12V -12V -5V	0 0 0 0	12 5 0.5 1	20 10	+4.95V~+5.05V +11.4V~+12.6V -11.4V~-12.6V -4.95V~-5.05V	50mVpp 120mVpp 120mVpp 50mVpp	±1% ±1% ±1% ±1%	±3% ±3% ±3% ±3%
SNP-C154	150	+5V +15V -15V -5V	0 0 0 0	11 4 0.5 1	20 8	+4.95V~+5.05V +14.25V~+15.75V -14.25V~-15.75V -4.95V~-5.05V	50mVpp 150mVpp 150mVpp 50mVpp	±1% ±1% ±1% ±1%	±3% ±3% ±3% ±3%
SNP-C15F	150	+5V +12V +24V -5V	0 0 0 0	7 3 0.5 0.5	10 6 5	+4.95V~+5.05V +11.4V~+12.6V +22.8V~+25.2V -4.95V~-5.05V	50mVpp 150mVpp 240mVpp 120mVpp	±1% ±1% ±1% ±1%	±3% ±3% ±3% ±3%

Note: Contact factory for Safety Agency Approved status.

SNP-C15 SERIES 150WATT— PIN ASSIGNMENT

Pin / Model	1	2	4	4	5	6	7	8
SNP-C157	AC/L	AC/N	Earth	GND	+12V			
SNP-C158	AC/L	AC/N	Earth	GND	+15V			
SNP-C159	AC/L	AC/N	Earth	GND	+24V			
SNP-C15T	AC/L	AC/N	Earth	GND	+48V			
SNP-C153	AC/L	AC/N	Earth	+12V	GND	+5V		
SNP-C15A	AC/L	AC/N	Earth	+24V	GND	+5V		
SNP-C150	AC/L	AC/N	Earth	-12V	-5V	+12V	GND	+5V
SNP-C154	AC/L	AC/N	Earth	-15V	-5V	+15V	GND	+5V
SNP-C15F	AC/L	AC/N	Earth	-12V	+24V	+12V	GND	+5V

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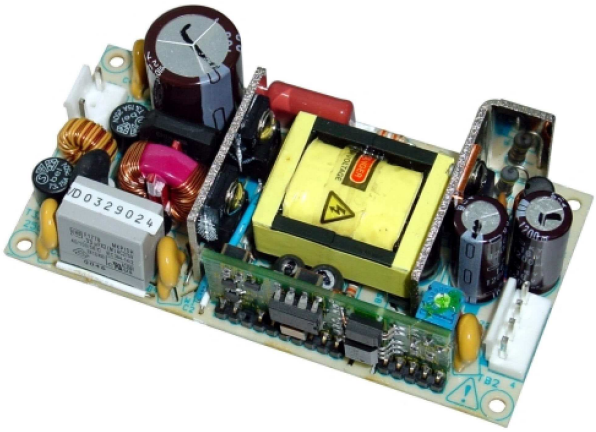
DZ065 SERIES

55 Watts For Medical & Industrial Applications



DESCRIPTION

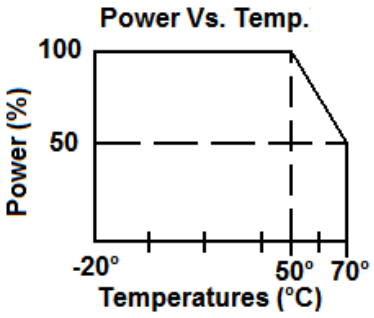
DZ065 series is a universal input power supply. The series is a 55 Watt power supply in the size of 2"x 4" with a wattage density of 5.7W/in^3. The efficiency can reach up to 85%.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage*
- *Double Fused*

APPLICATIONS

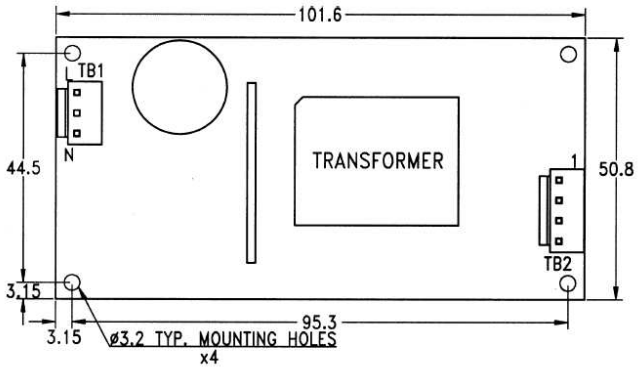
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*

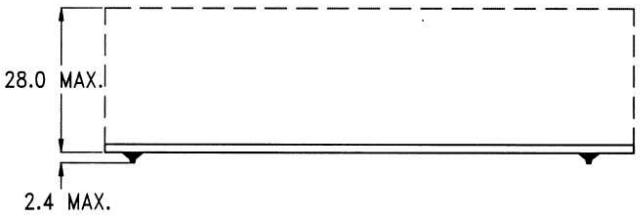


GENERAL SPECIFICATIONS

Input Voltage……..….... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC
Storage Temperature……..……. –40ºC to 85ºC
Cooling…….. Free Air Convection
Efficiency……..…..85 Typical
Holdup Time…….>14ms at 115VAC
Overvoltage Type……..…Latch off
Overload Protection……..……..…Auto-recovery
Short Circuit Protection……...Auto-recovery
Earth Leakage……..…..…....300µ Max @ 240VAC
Designed in full compliance with UL 60950-1, UL60601-1
CSA 22.2 #60950-1,#601.1
EN60950, EN60601-1
EMI ……..……EN55022 "B", EN55011 "B"
FCC docket class "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11

MECHANICAL SPECIFICATIONS





Connector: TB1—AC input : JST B2P3-VH or equivalent
TB2—DC output : JST B4P-VH or equivalent
Size: 101.6mm X 50.8mm X 30.4mm, 4" X 2" X 1.2"
Pin Assignment: P1 Vout
P2 Vout
P3 Com
P4 Com

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ065-7	55	+12V	0	4.6	5.4	1%	100 mV	0.5%	±0.5%
DZ065-8	55	+15V	0	3.7	4.3	1%	100 mV	0.5%	±0.5%
DZ065-9	55	+24V	0	2.3	2.7	1%	200 mV	0.5%	±0.5%
DZ065-14	55	+48V	0	1.15	1.35	1%	200 mV	0.5%	±0.5%
DZ065-18	55	+3.3V	0	8.0	10	1%	50 mV	0.5%	±1.5%
DZ065-6	55	+5V	0	7.0	9.0	1%	50 mV	0.5%	±1.5%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 µF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

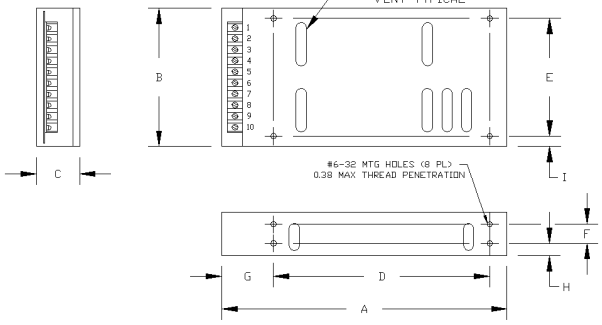
ENCLOSURES (optional)

Note: Package options are available for this series, EU type (U shape) and EC type (Enclosed)

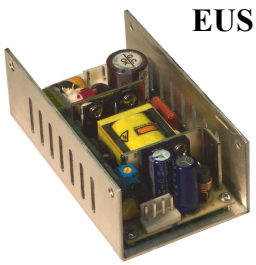
EC

EU

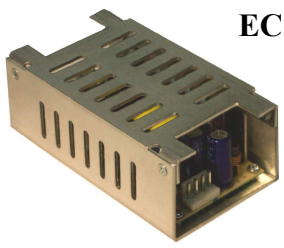
Figure	Inches	(mm)
A	5.00	127
B	2.77	70.4
C	1.60	40.6
D	2.65	67.3
E	2.00	51
F	-	-
G	1.00	25.4
H	0.80	20.3
I	0.38	9.7
J	2.50	63.5



EUS



ECS



*Note DY040 pictured in chassis

Our Standard power supplies, the DZ065 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

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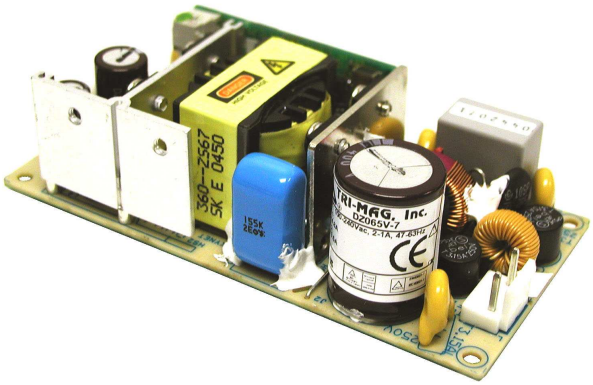
DZ065V SERIES

65 Watts For Medical & Industrial Applications

90 Watts PEAK Current



DESCRIPTION

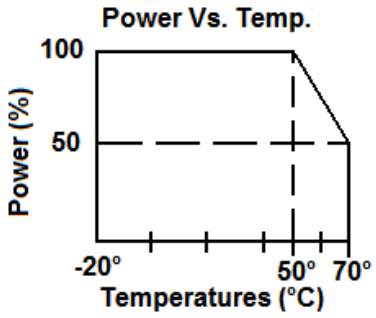
DZ065V series is a universal input power supply. The series is a 65 Watt power supply in the size of 2"x 4" with a wattage density of 6.88W/in^3. The efficiency can reach up to 85%.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage*
- *Double Fused*

APPLICATIONS

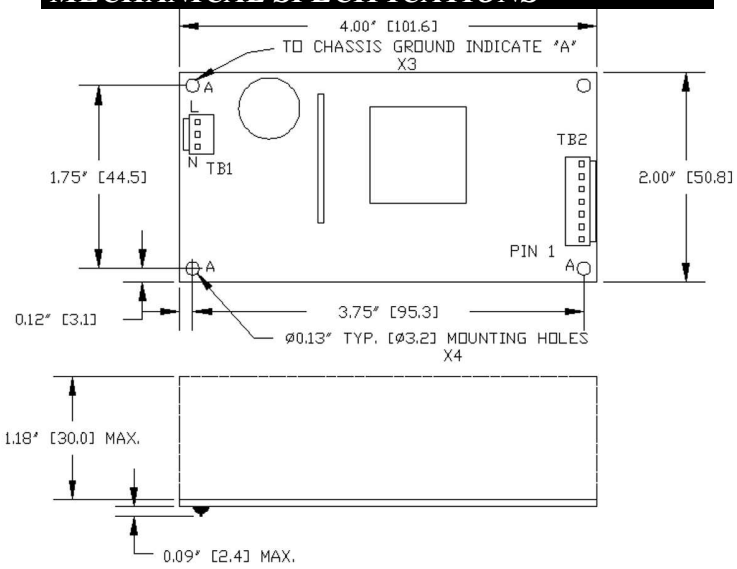
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 60ºC
Derated……...2%/ºC;>50ºC
Storage Temperature……..……. –40ºC to 85ºC
Cooling…….. Free Air Convection
Efficiency……..…..85 Typical
Holdup Time…….>12ms at 115VAC
Overvoltage Type……..… Latching
Overload Protection……..……..... Auto Recovery
Short Circuit protection……...Auto Recovery
Earth Leakage……..…..…...300µ Max @ 240VAC
Designed in full compliance with UL 60950-1, UL60601-1
CSA 22.2 #601-1,#234
EN60950, EN60601-1
EMI ……..……..…...……..…..FCC "B"
EN55022 "B", EN55011 "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11

MECHANICAL SPECIFICATIONS



Size: 4.0" X 2.0" X 1.18" (101.6mm X 50.8mm X 30.6mm)

TB1—AC input : JST B2P3-VH or equivalent
TB2—DC output : JST B4P-VH or equivalent (Single Outputs)
: JST B6P-VH or equivalent (Multiple Outputs)
: JST B7P-VH or equivalent (Multiple Outputs)
Mounting holes: 1.75" X 3.75" (44.5mm X 95.3mm)

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ065V-6	65	+5V	0	10.0	18	1%	50 mV	±1%	±1%
DZ065V-7	65	+12V +5V	0.1 0	4.8 0.5	7.5 -	1% 1%	100 Mv 50 mV	±1% ±1%	±1% ±1%
DZ065V-8	65	+15V	0	4.8	6.0	1%	100 mV	±1%	±1%
DZ065V-9	65	+24V	0	2.7	3.7	1%	200 mV	±1%	±1%
DZ065V-14	65	+48V	0	1.4	1.35	1%	200 mV	±1%	±1%
DZ065V-18	65	+3.3V	0	10	10	1%	50 mV	±1%	±1%
DZ065V-1	65	+5V +12V -12V	0 0 0	3.0 3.0 0.3	5.0 5.0 1.0	1% 5% 5%	50 mV 100 mV 100 mV	±1% ±1% ±1%	±3% ±3% ±5%
DZ065V-3	65	+5V +12V	0 0	3.0 3.0	5.0 5.0	1% 5%	50 mV 100 mV	±1% ±1%	±3% ±3%
DZ065V-19	65	+3.3V +5V +12V	0 0 0	5.0 3.0 0.7	7.0 5.0 -	1% 5% 5%	50 mV 50 mV 100 mV	±1% ±1% ±1%	±3% ±3% ±3%
DZ065V-5	65	+5V +24V	0 0	4.0 1.5	- -	1% 5%	50 mV 200 mV	±1% ±1%	±3% ±3%

(DZ065V-9-1, -7-1, have extra +5V@0.5A)

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 µF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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DZ065V SERIES 65 WATT— PIN ASSIGNMENT

Pin / Mod	1	2	3	4	5	6	7
DZ065V-1	-12V	+5V	+5V	GND	GND	+12V	+12V
DZ065V-3	N/C	+5V	+5V	GND	GND	+12V	+12V
DZ065V-6	GND	GND	GND	+5V	+5V	+5V	
DZ065V-7	+5V	GND	GND	GND	+12V	+12V	
DZ065V-8	N/C	GND	GND	GND	+15V	+15V	
DZ065V-9	N/C	GND	GND	GND	+24V	+24V	
DZ065V-14	N/C	GND	GND	GND	+48V	+48V	
DZ065V-18	N/C	GND	GND	+3.3V	+3.3V	+3.3V	
DZ065V-19	+12V	+5V	+5V	GND	GND	+3.3V	+3.3V
DZ065V-5	+5V	GND	GND	GND	+24V	+24V	

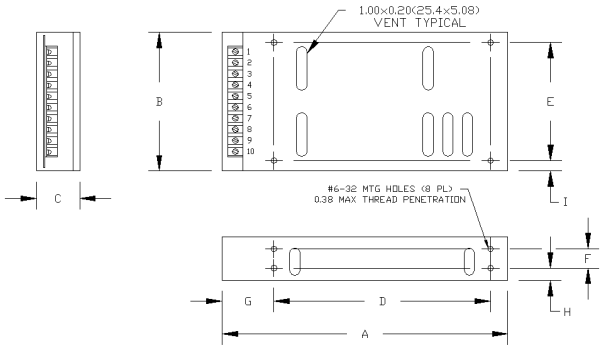
ENCLOSURES (optional)

Note: Package options are available for this series, EU type (U shape) and EC type (Enclosed)

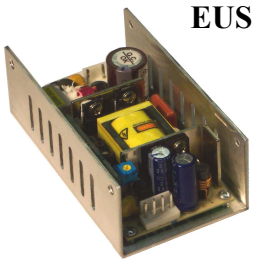
EC

EU

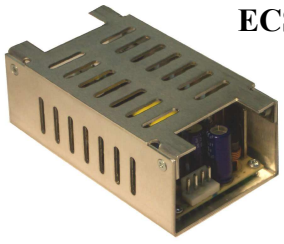
Figure	Inches	(mm)
A	5.00	127
B	2.77	70.4
C	1.60	40.6
D	2.65	67.3
E	2.00	51
F	-	-
G	1.00	25.4
H	0.80	20.3
I	0.38	9.7
J	2.50	63.5



EUS



ECS



*Note DY040 pictured in chassis

Our Standard power supplies, the DZ065 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

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DZ080 SERIES

85Watts For Medical & Industrial Applications

135 Watts Peak Current

DESCRIPTION

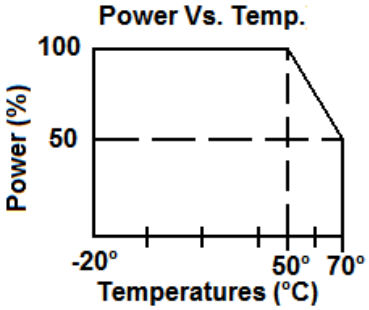
DZ080 series is a universal input multiple output power supply. The series is an 85 Watt power supply in the size of 2.5"x 4.5" with a wattage density of 6.4W/in^3. The efficiency can reach up to 79-87% depending on model.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

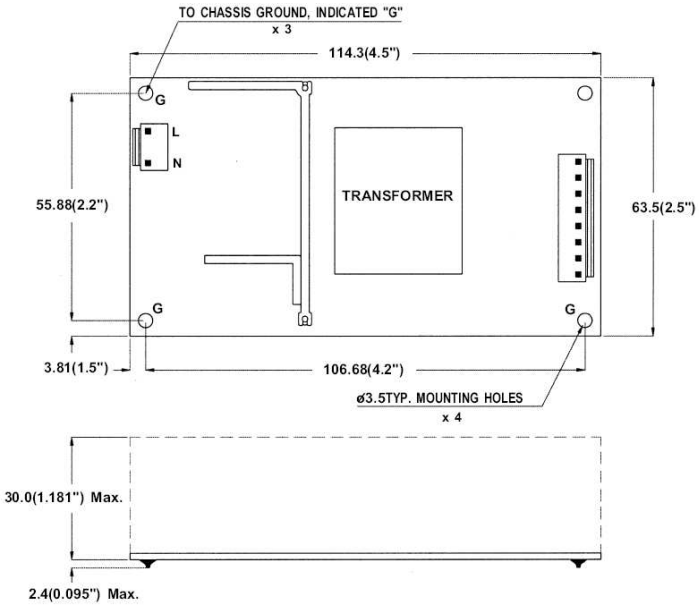
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical & Dental*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC de-rated 2.5%/°C >50°C
Storage Temperature……-20°C to 85°C
Cooling…….. Free Air Convection
Efficiency……..…..82% Typical
Holdup Time…….>20ms at 115VAC
Overvoltage Type……...Latch Off
Overload Protection……..…….. Auto recovery
Short Circuit Protection……Auto recovery
Earth Leakage……...…...300µA Max @ 240VAC
Designed in full compliance with UL 60950-1, UL60601-1
CSA 22.2 #601-1,#60950-1
EN60601-1
EMI ……..……EN55022 "B", EN55011 "B"
FCC docket class "B"
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics……..……. EN61000-3-2

MECHANICAL SPECIFICATIONS



Connector: TB1—AC input : JST B2P3-VH or equivalent
TB2—DC output : JST B6P-VH or equivalent

Size: 63.5mm X 114.3mm X 30mm, 2.5" X 4.5" X 1.18"

Mounting Holes: 55.88mm X 106.68mm, 2.2" X 4.2"
Net Weight: 235g approx. / unit

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ080-1	85	+5V +12V -12V	0 0 0	6 4 0.5	15 10 -	2% 5% 5%	50 mV 120 mV 120 mV	1.0% 1.0% 1.0%	±3% ±3% ±5%
DZ080-3	85	+5V +12V	0 0	6 4	15 10	2% 5%	50 mV 120 mV	1.0% 1.0%	±3% ±3%
DZ080-6	85	+5V	0	15	-	1%	50 mV	1.0%	±1%
DZ080-7	85	+12V +5V	0 0	6.5 0.5	11 -	1% 5%	120 mV 50 mV	1.0% 1.0%	±1% ±1%
DZ080-7-1	85	+12V	0	7	11	1%	120 mV	1.0%	±1%
DZ080-9	85	+24V +5V	0 0	3.6 0.5	5.0 -	1% 5%	240 mV 50 mV	1.0% 1.0%	±1% ±1%
DZ080-9-1	85	+24V	0	3.75	5.6	1%	240 mV	1.0%	±1%
DZ080-11	80	+5V +12V +24V	0 0 0	6 0.5 2	15 - 5	5% 5% 5%	50 mV 50 mV 120 mV	1.0% 1.0% 1.0%	±3% ±3% ±5%
DZ080-14	85	+48V	0	1.88	2.8	1%	480 mV	1.0%	±1%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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DZ080 SERIES 85 WATT— PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6	7	8
DZ080-1	+12V	+12V	COM	COM	COM	+5V	+5V	-12V
DZ080-3	+12V	+12V	COM	COM	COM	+5V	+5V	N/C
DZ080-6	COM	COM	COM	COM	+5V	+5V	+5V	+5V
DZ080-7	COM	COM	COM	+12V	+12V	+12V	+5V	
DZ080-7-1	COM	COM	COM	+12V	+12V	+12V	N/C	
DZ080-9	COM	COM	COM	+24V	+24V	+24V	+5V	
DZ080-9-1	COM	COM	COM	+24V	+24V	+24V	N/C	
DZ080-11	+24V	+24V	COM	COM	COM	+5V	+5V	+12V
DZ080-14	COM	COM	COM	+48V	+48V	+48V	N/C	

ENCLOSURES (optional)

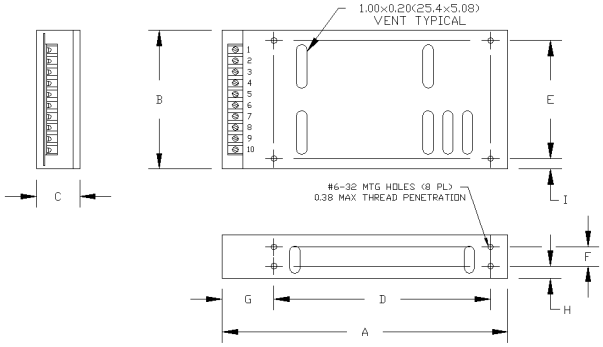
Note: Package options are available for this series, EU type (U shape) and EC type (Enclosed)

EC

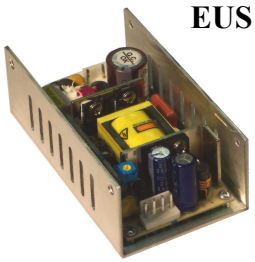
EU

*Note DZ065 pictured in chassis

Figure	Inches	(mm)
A	6.22	158
B	3.66	93
C	1.45	36.8
D	5.00	127
E	1.93	49
F	0.79	20
G	0.79	20
H	0.28	7.11
I	0.86	21.8
J	4.00	101.6



EUS



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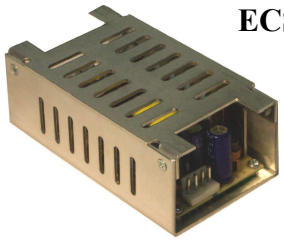

*Note DY040 pictured in chassis

Our Standard power supplies, the DZ080 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

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DZ100 SERIES

100 Watts with PFC

UNIVERSAL INPUT

DESCRIPTION

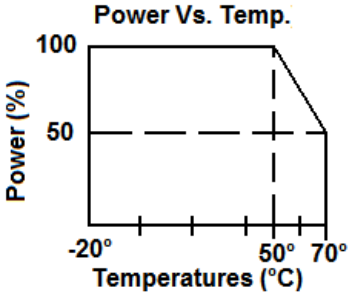
DZ100 series is a univeral input multiple output power supply. The series is a 100 Watt power supply in the size of 3"x 5" with PFC and high density 6W/in^3. The efficiency can reach up to 85-90% depending on model.

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 260VAC*

APPLICATIONS

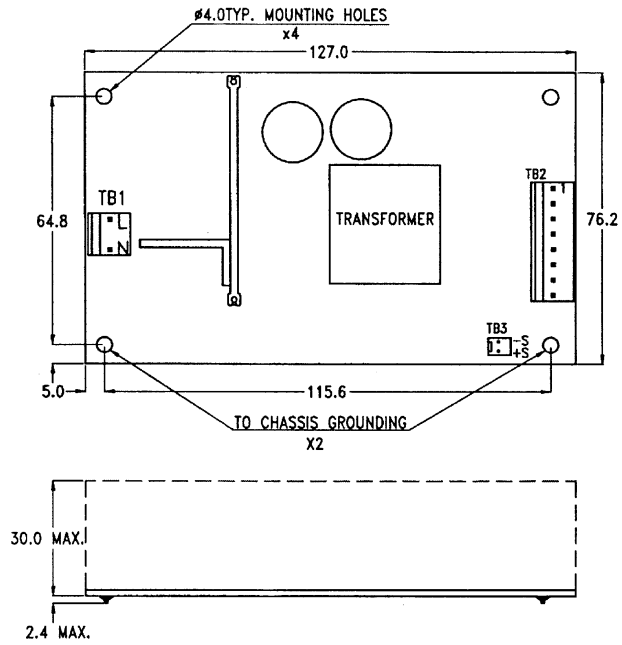
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..>0.95
Inrush Current (cold)……..…… Less than 50A at 220VAC, 25°C
Operating Temperature……..…….. 0 to 70ºC
Storage Temperature……..……. −20ºC to 85ºC
Cooling…….. Free Air Convection for 100W
18CFM for 130W
Efficiency……..85-90% Typical
Holdup Time…….>20ms at 115VAC
Overvoltage Type……..…..……. Latch Off
Overload Protection……..……..….. Auto Recovery
Short Circuit Protection…….. Auto Recovery
Designed in full compliance with……..….. UL 60950-1
CSA 22.2 #234
EN60950-1
EMI……..……. …..EN55022 "B"
FCC docket class "B"
Harmonics……...EN61000-3-2 Class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11

MECHANICAL SPECIFICATIONS



Dimensions shown in mm as above. Tolerance: +/- 0.4mm.

Size: DZ100-6,-7,-8,-9,-14,-18	DZ100-2,-3,-19
127.0mm X 76.2mm X 30mm	127.0mm X 76.2mm X 32mm
5" X 3" X 1.18"	5" X 3" X 1.26"

Connectors: AC input: Molex 5277-02A or equivalent
DC output: Molex 5273 or equivalent
Remote Sense: Molex 5045-02A or equivalent.

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ100-6	100	+5V	0	20	26	1%	50 mV	0.5%	±1%
DZ100-7	100	+12V	0	9	10.8	1%	120 mV	0.5%	±1%
DZ100-8	100	+15V	0	7	8.7	1%	120 mV	0.5%	±1%
DZ100-9	100	+24V	0	4.5	5.4	1%	200 mV	0.5%	±1%
DZ100-2	100	+5V +12V -12V	0 0 0	11.5 3 0.5	15 5 1	1% 5% 5%	50 mV 100 mV 100 mV	0.5% 0.5% 0.5%	±1% ±5% ±5%
DZ100-19	100	+3.3V +5V +12V	0 0 0	10 8 0.5	15 10 1	3% 5% 5%	50 mV 50 mV 100 mV	0.5% 0.5% 0.5%	+1% ±5% ±5%
DZ100-14	100	+48V	0	2.3	2.7	1%	200 mV	0.5%	±1%
DZ100-18	100	+3.3V	0	25	30	1%	50 mV	0.5%	±1%
DZ100-3	100	+5V +12V	0 0	7.0 8.0	10 10	1% 5%	50 mV 120 mV	0.5% 0.5%	+1% ±5%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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DZ100 SERIES 100 WATT— PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6	7	8	9	10
DZ100-2	+5V	+5V	+5V	COM	COM	COM	COM	+12V	-12V	
DZ100-6	+5V	+5V	+5V	COM	COM	COM				
DZ100-7	+12V	+12V	+12V	COM	COM	COM				
DZ100-8	+15V	+15V	+15V	COM	COM	COM				
DZ100-9	+24V	+24V	+24V	COM	COM	COM				
DZ100-14	+48V	+48V	+48V	COM	COM	COM				
DZ100-18	+3.3V	+3.3V	+3.3V	COM	COM	COM				
DZ100-19	+3.3V	+3.3V	COM	COM	COM	C OM	COM	+5V	+5V	+12V
DZ100-3	+12V	+12V	COM	COM	COM	COM	+5V	+5V		

ENCLOSURES (optional)

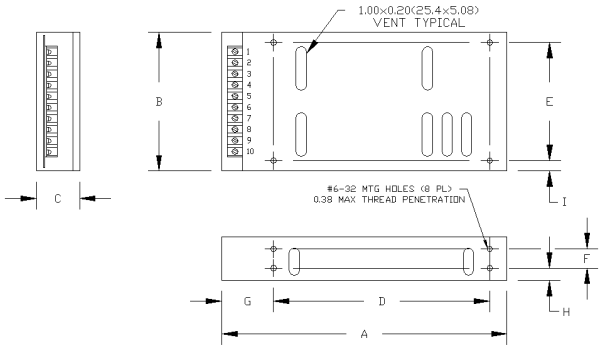
Note: Package options are available for this series, EU type (U shape) and EC type (Enclosed)

EC

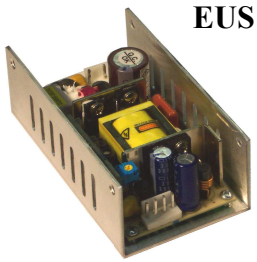
EU

*Note DZ065 pictured in chassis

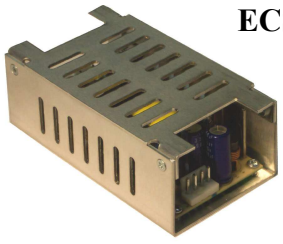
Figure	Inches	(mm)
A	6.22	158
B	3.66	93
C	1.45	36.8
D	5.00	127
E	1.93	49
F	0.79	20
G	0.79	20
H	0.28	7.11
I	0.86	21.8
J	4.00	101.6



EUS



ECS



*Note DY040 pictured in chassis

Our Standard power supplies, the DZ100 Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

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DZ100M SERIES

100 Watts with PFC

FOR MEDICAL APPLICATIONS

DESCRIPTION

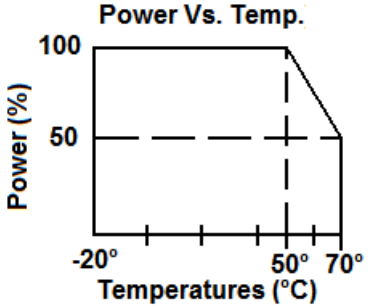
DZ100M series is a univeral input multiple output power supply. The series is a 100 Watt power supply in the size of 3"x 5" with PFC and high density 6W/in^3. The efficiency can reach up to 85-90% depending on model.

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 260VAC*
- *Low Leakage*
- *Double Fused*

APPLICATIONS

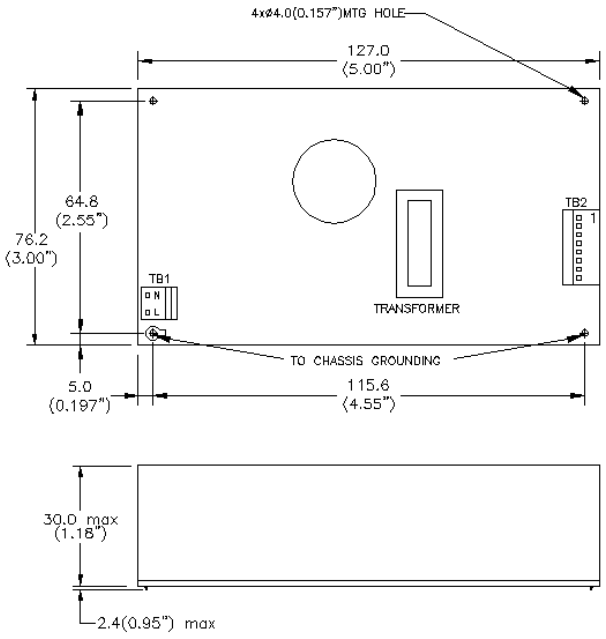
- *Medical equipment*
- *Dental equipment*
- *Equipment with low leakage current requirements*



GENERAL SPECIFICATIONS

Input Voltage……...…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..>0.95
Inrush Current (cold)……..…… Less than 50A at 220VAC, 25°C
Operating Temperature……..…….. 0 to 50ºC
Storage Temperature……..……. −20ºC to 85ºC
Cooling…….. Free Air Convection for 100W
18CFM for 130W
Efficiency……..…..85-90% Typical
Holdup Time…….>20ms at 115VAC
Overvoltage Type……...…...……. Latch Off
Overload Protection……...……..….. Auto Recovery
Short Circuit Protection…….. Auto Recovery
Earth Leakage……...….250µA @240VAC
Designed in full compliance with……... UL 60601-1
CSA 22.2 #601.1
EN60601-1
EMI……...……. …..EN55022 "B"
FCC docket class "B"
Harmonics……...EN61000-3-2 Class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11

MECHANICAL SPECIFICATIONS



TB1—AC input : Molex 5277-02A or equivalent
TB2—DC output : Molex 5273-08A or equivalent
Note: DZ100M-2, -10 Height 1.35" (34.29mm)
127.0mm X 76.2mm X 32mm
5" X 3" X 1.26"

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ100M-6	100	+5V	0	20	26	1%	50 mV	0.5%	+1%
DZ100M-7	100	+12V	0	9	11	1%	100 mV	0.5%	+1%
DZ100M-8	100	+15V	0	7	8.7	1%	100 mV	0.5%	+1%
DZ100M-9	100	+24V	0	4.5	5.4	1%	200 mV	0.5%	+1%
DZ100M-14	100	+48V	0	2.1	2.7	1%	200 mV	0.5%	±1%
DZ100M-2	100	+5V +12V -12V	0 0 0	10 3 0.8	15 4.1 1.1	1% 5% 5%	50 mV 120 mV 120 mV	0.5% 0.5% 0.5%	±1% ±5% ±5%
DZ100M-10	100	+5V +15V -15V	0 0 0	10 2.5 0.8	15 4.1 1.1	1% 5% 5%	50 mV 150 mV 150 mV	0.5% 0.5% 0.5%	+1% ±5% ±5%
DZ100M-21	100	+28V	0	3.8	4.65	1%	100 mV	0.5%	±1%
DZ100M-11	100	+5V +24V -+12V	0 0 0	2.5 2.8 0.7	4 4 1	1% 5% 5%	50 mV 240 mV 120 mV	0.5% 0.5% 0.5%	+1% ±5% ±5%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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DZ100M SERIES 100 WATT— PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6	7	8	9
DZ100M-2	+5V	+5V	+5V	COM	COM	COM	COM	+12V	-12V
DZ100M-6	+5V	+5V	+5V	+5V	COM	COM	COM	COM	
DZ100M-7	+12V	+12V	+12V	COM	COM	COM			
DZ100M-8	+15V	+15V	+15V	COM	COM	COM			
DZ100M-9	+24V	+24V	+24V	COM	COM	COM			
DZ100M-14	+48V	+48V	+48V	COM	COM	COM			
DZ100M-10	+5V	+5V	+5V	COM	COM	COM	COM	+15V	-15V
DZ100M-21	+28V	+28V	+28V	COM	COM	COM			
DZ100M-11	+5V	+5V	+5V	COM	COM	COM	+24V	+24V	+12V

ENCLOSURES (optional)

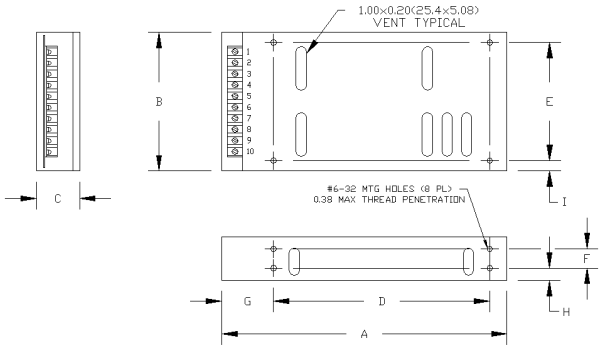
Note: Package options are available for this series, EU type (U shape) and EC type (Enclosed)

EC

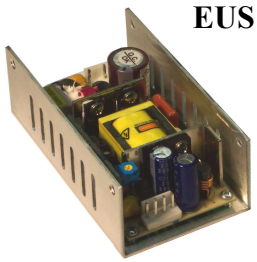
EU

*Note DZ065 pictured in chassis

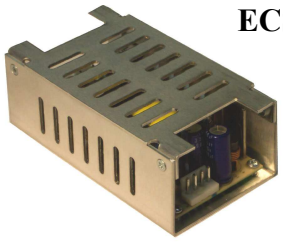
Figure	Inches	(mm)
A	6.22	158
B	3.66	93
C	1.45	36.8
D	5.00	127
E	1.93	49
F	0.79	20
G	0.79	20
H	0.28	7.11
I	0.86	21.8
J	4.00	101.6



EUS



ECS



*Note DY040 pictured in chassis

Our Standard power supplies, the DZ100M Series, can be installed into a fully enclosed chassis or in a 'U' shape chassis as an option. These options offer two mounting planes. The fully enclosed option helps to reduce radiated noise.

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DZ150 SERIES

150 Watts with PFC

For Medical and Industrial Applications

DESCRIPTION

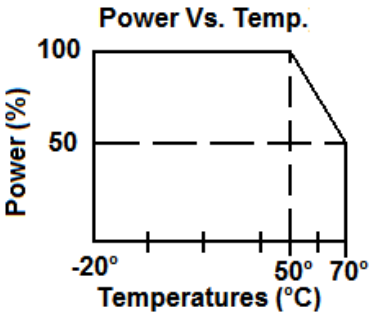
DZ150 series are 150W with active PFC in U shape chassis power supply. With soft-switching topology, low-profile height fits 1U constraints, high efficiency and high density in 4.0 W/in². 220W peak rating for 8 seconds.

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *No Minimum Load Required (Single Outputs Only)*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*

APPLICATIONS

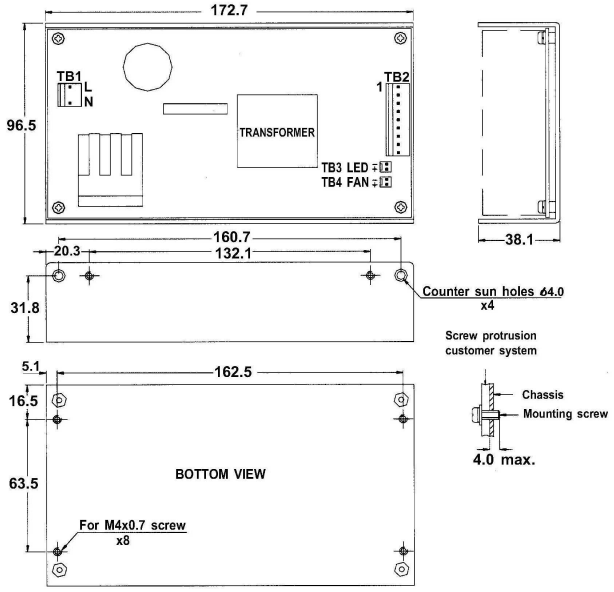
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Medical*



GENERAL SPECIFICATIONS

Input Voltage……...…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..>0.95
Inrush Current (cold)……..…… Less than 20A at 115VAC or 40A at 230VAC cold start, 25°C
Operating Temperature……..…….. 0 to 70ºC
De-rated 2.5%/°C >50°C
Storage Temperature……..……. −20ºC to 85ºC
Cooling……...……Free Air Convection
Efficiency……..…..79-88% Typical
Holdup Time……>20ms
Overvoltage Type…… Latch off
Overload Protection……...……..….. Auto-recovery
Short Circuit Protection……...Auto-recovery
Earth Leakage……..…..…....300µ Max @ 240VAC
Designed in full compliance with. UL 60950-1, UL60601-1
CSA 22.2 #60950-1 No.601.1
EN60950-1, EN60601-1
EMI……FCC "B",EN55022 "B",EN55011"B"
Harmonics……..……EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11

MECHANICAL SPECIFICATIONS



1. Dimension shown in mm as above.
2. Size: 3.8" X 6.8" X 1.5"
   [96.5mm X 172.7mm X 38.1mm]
3. Connectors: AC Input: Molex 5277-02A or equivalent
   DC Output: Molex 5277-12A for Quad output 5277-10A for other
   Fan: Molex 5045-02A or equivalent
   Remote Sense: Molex 5045-02A or equivalent

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ150-1EU DZ150-1EC	150	+5V +12V -12V	0 0 0	10 7 0.5	20 15 -	1% 5% 5%	50 mV 120 mV 120 mV	± 1% ± 1% ± 1%	± 1% ± 5% ± 5%
DZ150-19EU DZ150-19EC	150	+3.3V +5V +12V -12V	0 0 0 0	10 8 3.5 0.5	15 10 - -	3% 2% 5% 5%	50 mV 50 mV 120 mV 120 mV	± 1% ± 1% ± 1% ± 1%	± 3% ± 3% ± 5% ± 5%
DZ150-12EU DZ150-12EC	150	+5V +12V	0 0	10 7	20 15	1% 5%	50 mV 120 mV	± 1% ±1%	±1% ±1%
DZ150-6EU DZ150-6EC	150	+5V	0	28	-	1%	50 mV	±1%	±1%
DZ150-7EU DZ150-7EC	150	+12V +5V	0 0	12 2	18 -	1% 2%	120 mV 50 mV	±1% ±1%	±1% ±1%
DZ150-7EU-1 DZ150-7EC-1	150	+12V	0	12.5	18	1%	120 mV	±1%	±1%
DZ150-8EU DZ150-8EC	150	+15V +5V	0 0	9.6 2	14 -	5%	200 mV	±1%	±1%
DZ150-8EU-1 DZ150-8EC-1	150	+15V	0	10	14	1%	150 mV	±1%	±1%
DZ150-9EU DZ150-9EC	150	+24V +5V	0 0	6 2	8.8 -	1% 2%	200 mV 50 mV	±1% ±1%	±1% ±1%
DZ150-9EU-1 DZ150-9EC-1	150	+24V	0	6.5	8.8	1%	240 mV	±1%	±1%
DZ150-14EU DZ150-14EC	150	+48V	0	3.2	4.6	1%	480 mV	±1%	±1%
DZ150-11EU DZ150-11EC	150	+5V +24V +12V -12V	0 0 0 0	8 3 2 0.5	18 7 - -	2% 5% 5% 5%	50 mV 240 mV 120 mV 120 mV	±1% ±1% ±1% ±1%	±3% ±3% ±5% ±5%

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DZ150 SERIES 150WATT— PIN ASSIGNMENT

Model \ Pin	1	2	3	4	5	6	7	8	9	10	11	12
DZ150-1EU/EC	-12V	+5V	+5V	+5V	COM	COM	COM	COM	COM	+12V	+12V	+12V
DZ150-19EU/EC	+12V	-12V	+3.3V	+3.3V	+3.3V	COM	COM	COM	COM	COM	+5V	+5V
DZ150-12EU/EC	N/C	+5V	+5V	+5V	COM	COM	COM	COM	COM	+12V	+12V	+12V
DZ150-6EU/EC	+5V	+5V	+5V	+5V	+5V	+5V	COM	COM	COM	COM	COM	COM
DZ150-7EU/EC	+5V	COM	COM	COM	COM	+12V	+12V	+12V	+12V			
DZ150-7EU/EC-1	N/C	COM	COM	COM	COM	+12V	+12V	+12V	+12V			
DZ150-8EU/EC	+5V	COM	COM	COM	COM	+15V	+15V	+15V	+15V			
DZ150-8EU/EC-1	N/C	COM	COM	COM	COM	+15V	+15V	+15V	+15V			
DZ150-9EU/EC	+5V	COM	COM	COM	COM	+24V	+24V	+24V	+24V			
DZ150-9EU/EC-1	N/C	COM	COM	COM	COM	+24V	+24V	+24V	+24V			
DZ150-14EU/EC	N/C	COM	COM	COM	COM	+48V	+48V	+48V	+48V			
DZ150-11EU/EC	+12V	-12V	+5V	+5V	+5V	COM	COM	COM	COM	COM	COM	+24V

NOTE: Enclosed (EC) is available

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated and nominal load.

OTHER POWER SUPPLIES FOR MEDICAL APPLICATIONS

1. Desktop Style
   - A. DT430M-5 (30 Watts, +12VDC)
   - B. DT450M-6 (50 Watts, +24VDC)
2. "U" shape and Enclosed
   - A. DZ200M-9EU or EC
     200 Watts, 24V convection cooled 250 Watts with 18 CFM forces air
     dimension: 4.2" x 8.0" x 1/5" (106.7mm x 203.2mm x 38.1mm)
   - B. UV480PM-4
     80 Watts, +5V @ 12.0A and +12V @ 1.0A
     dimension: 3.3" x 5.25" x 1.5" (83.82mm x 133.35mm x 38.1mm)
3. Detailed Specification is available

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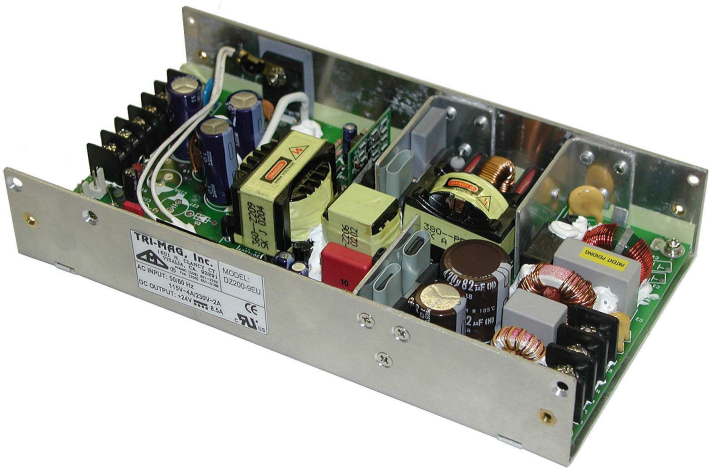
DZ200 SERIES

200 Watts with PFC

UNIVERSAL INPUT



DESCRIPTION

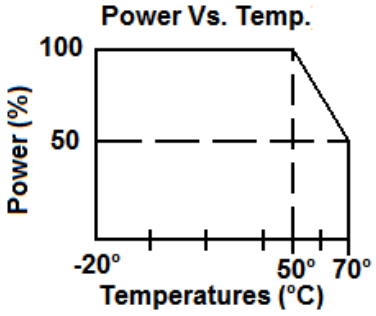
DZ200 series are 200W with active PFC in U shape chassis power supply. With soft-switching topology, low-profile height fits 1U constraints, high efficiency and high density in 4.0 W/in².

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *No Minimum Load Required (Single Outputs Only)*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*

APPLICATIONS

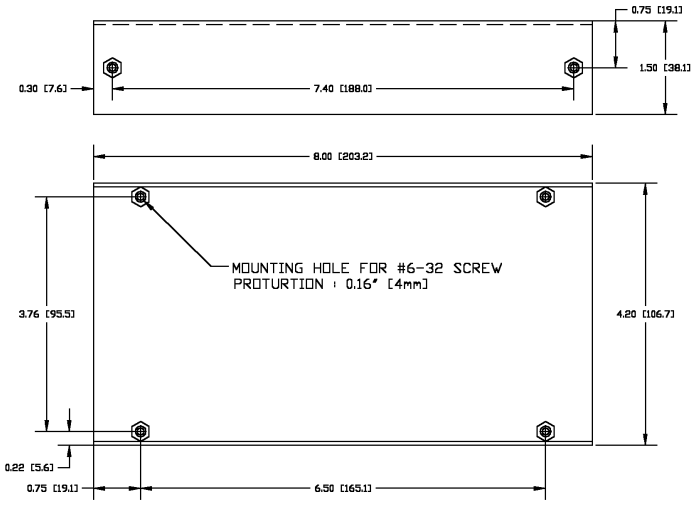
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*



GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..>0.95
Inrush Current (cold)……..…… Less than 20A at 115VAC or 40A at 230VAC cold start, 25°C
Operating Temperature……..…….. 0 to 70ºC
Storage Temperature……..……. −20ºC to 85ºC
Cooling……...……Free Air Convection for 200W
18CFM for 250 W
Efficiency……..82-87% Typical
Holdup Time……>20ms
Overvoltage Type…… Latch off
Overload Protection……...……...….. Auto-recovery
Short Circuit Protection……...Auto-recovery
Safety:
Designed in full compliance with……..…..UL 60950-1
CSA 22.2 #234,
TUV EN60950-1
EMI……..……. …..EN55022 “B”
Harmonics……..……EN61000-3-2 class D
EMS……..EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimension shown in inch [mm] as above.
2. Size:
   4.2” X 8.0” X 1.5”
   [106.7mm X 203.2mm X 38.1mm]
3. Connectors:
   AC Input: Terminal Blocks
   DC Output: Terminal Blocks
   Fan: Molex 5045-02A or equivalent
   Signals: 2 X 5 (10 pin) 0.1” pitch

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ200-4EU DZ200-4EC	200	+5V +12VA +12VB	2 0 0	20 6 2	25 8 3	1% 5% 5%	50 mV 120 mV 120 mV	± 1% ± 1% ± 1%	± 1% ± 5% ± 5%
DZ200-19EU DZ200-19EC	200	+3.3V +5V +12V	2 0 0	16 12 5	30 20 10	3% 5% 5%	50 mV 50 mV 120 mV	± 1% ± 1% ± 1%	± 1% ± 5% ± 5%
DZ200-6EU DZ200-6EC	200	+5V	0	36	45	1%	50 mV	± 1%	±1%
DZ200-7EU DZ200-7EC	200	+12V	0	17	21	2%	120 mV	±1%	±1%
DZ200-8EU DZ200-8EC	200	+15V	0	13.5	17	5%	150 mV	±1%	±1%
DZ200-9EU DZ200-9EC	200	+24V	0	8.5	10.5	1%	200 mV	±1%	±1%
DZ200-14EU DZ200-14EC	200	+48V	0	4.3	5.2	5%	200 mV	±1%	±1%
DZ200-3EU DZ200-3EC	200	+18V	0	11.3	14	5%	150 mV	±1%	±1%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.
8. +12VB is floating.

NOTE: Enclosed (EC) is available

DZ200 SERIES 200 WATT— PIN ASSIGNMENT

Pin / Model	1	2	3	4	5	6	7	8	9
DZ200-4EU	+5V	+5V	COM	COM	COM	+12V	COM(+12)	+12VB	
DZ200-19EU	+12V	+5V	+5V	COM	COM	COM	COM	+3.3V	+3.3V
DZ200-6EU	+5V	+5V	COM	COM	COM	COM	+5V	+5V	
DZ200-7EU	+12V	+12V	+12V	COM	COM	COM			
DZ200-8EU	+15V	+15V	+15V	COM	COM	COM			
DZ200-9EU	+24V	+24V	+24V	COM	COM	COM			
DZ200-14EU	+48V	+48V	+48V	COM	COM	COM			
DZ200-3EU	+18V	+18V	+18V	COM	COM	COM			

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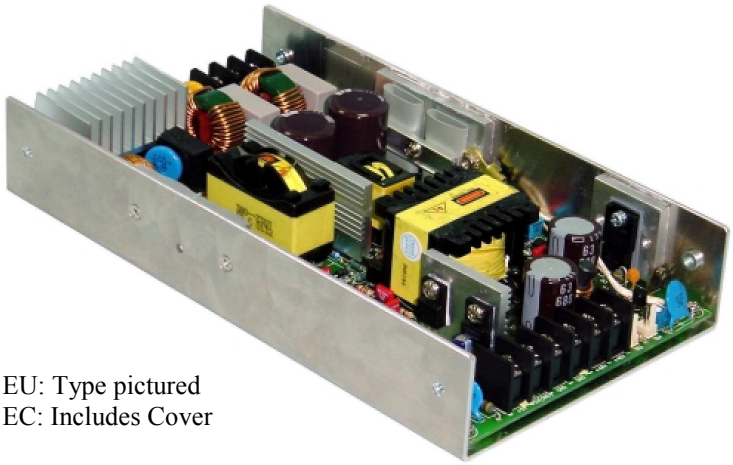
DZ300 SERIES

300 Watts with PFC

UNIVERSAL INPUT



EU: Type pictured
EC: Includes Cover

DESCRIPTION

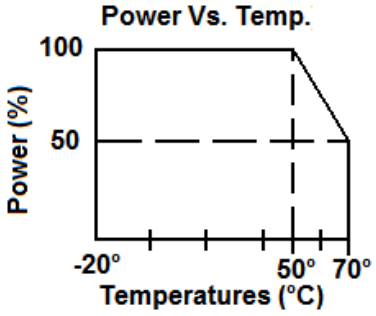
DZ300 series are 300W with active PFC in U shape chassis power supply. With soft-switching topology, low-profile height fits 1.6" constraints, high efficiency and high density in 4.2 W/in².

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *No Minimum Load Required*
- *Single and Multiple Output*
- *Universal input 90VAC to 264VAC*

APPLICATIONS

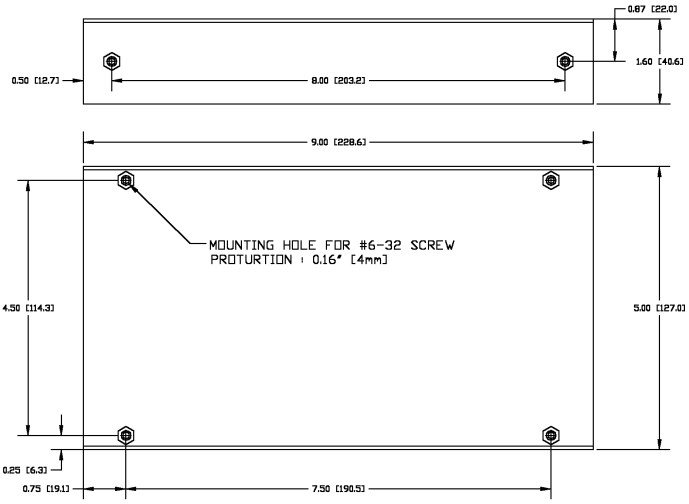
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*



GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..…>0.95
Inrush Current (cold)……..…… Less than 30A at 110VAC or 60A at 220VAC cold start, 25°C
Operating Temperature……..…….. 0 to 70ºC De-rated 2.5%/°C >50°C
Storage Temperature……..……. −20ºC to 85ºC
Cooling……...…Free Air Convection for 300W 18CFM for 360W
Efficiency……..80-90% Typical
Holdup Time……>20ms
Overvoltage Type…… Latch off
Overload Protection……..……..….. Auto-recovery
Short Circuit Protection……..Auto-recovery
Designed in full compliance with…….…...UL 60950-1 CSA 22.2 #234 TUV EN60950-1
EMI……..……FCC "B" EN55022 "B"
Harmonics……..……EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-8,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimension shown in inch [mm] as above.
2. Size:
   5.0" X 9.0" X 1.6"
   [127mm X 228.6mm X 40.6mm]
3. Connectors:
   AC Input: Terminal Blocks (See 2nd page for complete connectors listing)
   DC Output: Terminal Blocks
   Remote Sense and LED Molex 5045-02A or equivalent

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ300-1EU DZ300-1EC	300	+5V +12V -12V	0 0 0	32 10 1	45 14 2	1% 5% 5%	50 mV 100 mV 100 mV	± 1% ± 1% ± 1%	± 1% ± 1% ± 1%
DZ300-19EU DZ300-19EC	300	+3.3V +5V +12V	0 0 0	20 20 8	30 30 10	3% 5% 5%	50 mV 50 mV 100 mV	± 1% ± 1% ± 1%	± 1% ± 1% ± 5%
DZ300-6EU DZ300-6EC	300	+5V	0	60	72	1%	50 mV	± 1%	±1%
DZ300-7EU DZ300-7EC	300	+12V +5V	0 0	25 2	30 -	2% 2%	100 mV 50 mV	±1% ±1%	±1% ±1%
DZ300-12EU DZ300-12EC	300	+24V +5V	0 0	12 2	14.6 -	3% 2%	200 mV 50 mV	±1% ±1%	±1% ±1%
DZ300-20EU DZ300-20EC	300	+48V +5V	0 0	6.25 2	7.3 -	0.5% 2%	200 mV 50 mV	±1% ±1%	±1% ±1%
DZ300-8EU DZ300-8EC	300	+15V +12V	0 0	20 0.5	23 -	2% 2%	150 mV 50 mV	±1% ±1%	±1% ±1%
DZ300-18EU DZ300-18EC	300	+3.3V	0	70	90	1%	50 mV	± 1%	±1%
DZ300-8EU(V1) DZ300-8EC(V1)	300	+15V +5V	0 0	20 2.0	23 -	2% 2%	150 mV 50 mV	±1% ±1%	±1% ±1%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 µF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

DZ300 SERIES 300 WATT— PIN ASSIGNMENT

Pin / Model	1	2	3	4	5	6	7	8	9	10	11	12
DZ300-1EU	+5V	+5V	+5V	COM	COM	COM	COM	COM	+12V	+12V		
DZ300-19EU			+12V	COM +12V	+5V	+3.3V	COM +5V	COM +3.3V				
DZ300-6EU	+5V	+5V	+5V	COM	COM	COM	COM	COM	COM	+5V	+5V	+5V
DZ300-7EU	+12V	+12V	+12V	COM	COM	COM	COM +5V	+5V				
DZ300-12EU	+24V	+24V	COM	COM	COM +5V	+5V						
DZ300-20EU	+48V	+48V	COM	COM	COM +5V	+5V						
DZ300-8EU	+15V	+15V	+15V	COM	COM	COM	COM +12V	+12V				
DZ300-18EU	+3.3V	COM	RS+	ON/OFF	P.S.	RS-						
DZ300-8EU(V1)	+15V	+15V	+15V	COM	COM	COM	COM +5V	+5V				

* P.S = POWER SHARING, RS+ = REMOTE SENSE +, RS- = REMOTE SENSE -

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DESK TOP DT-Z SERIES

Green Power

California Efficiency

20-100 Watts

UNIVERSAL INPUT

DESCRIPTION

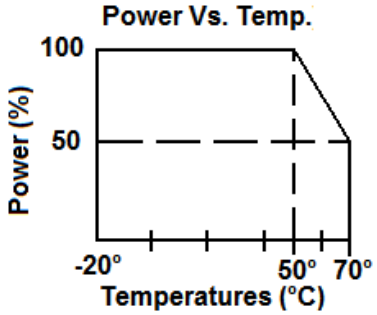
DT-Z Series is a 20, 30, 40, 60, 80 and 100 watt desk series, Desk-Top switching power supply. It comes with an IEC 320 C8, C6, or C14 inlet to accommodate worldwide applications, These power supplies are perfect for low to medium power applications. It is designed with a quasi-resonant topology to increase the efficiency up to 85%. Low input power at no load condition meets green power requirements. With TRI-MAG leadership in universal power supply technology, we have been able to incorporate our proven design into this space-saving desk-top unit.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 264VAC*

APPLICATIONS

- *Computer Peripherals*
- *Modems*
- *Hard Disk Drives*
- *Test Instrumentation Product*
- *Data Acquisition*
- *Other Applications*



GENERAL SPECIFICATIONS

Line Voltage……... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)…… Depend on model; 115VAC, 230VAC
Operating Temperature……..…...-20ºC to 60ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling…….. Free Air Convection
Efficiency……..…… 70% - 85%
Holdup Time……...… 20ms at 115VAC
Overvoltage Type……..… latch off
Overload Protection……..……..…Auto recovery Within 150% rated load
Short Circuit Protection……...Auto Recovery
Safety:
Designed in full compliance with… ...UL 60950-1 LPS
CSA 22.2 #60950-1
EN60950-1
EMI……...……. …….FCC class B
CISPR 22 level B
EMS……...……EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS

Case Size:
DT020Z 3.78” x 2.05” x 1.25” (96 x 52 x 32.5)mm
DT030Z 4.33” x 2.13” x 1.32” (110 x 54 x 33.5)mm
DT040Z 4.73” x 2.29” x 1.46” (120 x 58 x 37.0)mm
DT060Z 5.31” x 2.57” x 1.57” (135 x 65 x 40.0)mm
DT080Z 5.7” x 2.83” x 1.65” (145 x 72 x 42.0)mm
DT099Z 6.57” x 3.03” x 1.85” (167 x 77 x 47.0)mm
Connectors: AC Input IEC320
C8: DT020Z-XX, DT030Z–XX, DT040Z-XX, DT060Z-XX
C6: DT020Z-XX-3, DT030Z-XX-3, DT040Z-XX-3
C14:DT080Z, DT099Z (Only)
Connectors: DC Output
DC Power Plug
DT020Z, DT030Z, DT040Z
2.1mm I.D. x 5.5mm O.D.
4 Pin Hosiden
DT080Z, DT099Z

Length of cable:
6 ft.
DC Output:
Box Color: Black

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DT020Z-4	20	+5V	0	2.0	3.0	1%	50 mV	1%	4%
DT020Z-17	20	+9V	0	1.8	2.5	1%	80 mV	1%	3%
DT020Z-5	20	+12V	0	1.3	2.0	1%	80 mV	1%	2%
DT020Z-8	20	+15V	0	1.0	1.6	1%	80 mV	1%	1%
DT020Z-6	20	+24V	0	0.7	1.0	1%	80 mV	1%	1%
DT020Z-14	20	+48V	0	0.35	0.5	1%	400 mV	1%	1%
DT030Z-17	30	+9V	0	3.3	4.6	1%	150 mV	1%	5%
DT030Z-5	30	+12V	0	2.5	4.0	1%	100 mV	1%	3%
DT030Z-8	30	+15V	0	2.0	3.0	1%	100 mV	1%	2%
DT030Z-6	30	+24V	0	1.3	1.8	1%	200 mV	1%	1%
DT030Z-14	30	+48V	0	0.75	1.0	1%	400 mV	1%	1%
DT040Z-4	40	+5V	0	6.0	9.0	1%	50 mV	1%	5%
DT040Z-17	40	+9V	0	4.5	6.7	1%	150 mV	1%	5%
DT040Z-5	40	+12V	0	3.7	5.6	1%	100 mV	1%	3%
DT040Z-8	40	+15V	0	3.0	4.5	1%	100 mV	1%	2%
DT040Z-6	40	+24V	0	1.9	2.9	1%	200 mV	1%	1%
DT040Z-14	40	+48V	0	1.0	1.5	1%	400 mV	1%	1%
DT060Z-5	60	+12V	0	4.2	5.0	1%	80 mV	1%	3%
DT060Z-8	60	+15V	0	3.6	4.6	1%	80 mV	1%	3%
DT060Z-6	60	+24V	0	2.5	3.0	1%	120 mV	1%	3%
DT060Z-14	60	+48V	0	1.25	1.5	1%	240 mV	1%	3%
DT080Z-5	80	+12V	0	6.0	9.0	1%	100 mV	1%	3%
DT080Z-8	80	+15V	0	5.0	7.5	1%	100 mV	1%	3%
DT080Z-3	80	+18V	0	4.5	6.7	1%	100 mV	1%	3%
DT080Z-6	80	+24V	0	3.3	5.0	1%	100 mV	1%	3%
DT080Z-14	80	+48V	0	1.75	2.5	1%	200 mV	0.5%	3%
DT099Z-5	100	+12V	0	7.5	11	1%	100 mV	0.5%	3%
DT099Z-8	100	+15V	0	6.0	8.6	1%	100 mV	0.5%	3%
DT099Z-6	100	+24V	0	4.2	5.8	1%	100 mV	0.5%	3%
DT099Z-14	100	+48V	0	2.1	2.9	1%	200 mV	0.5%	3%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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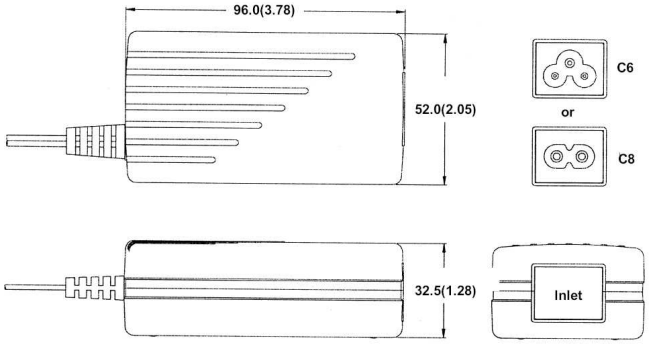
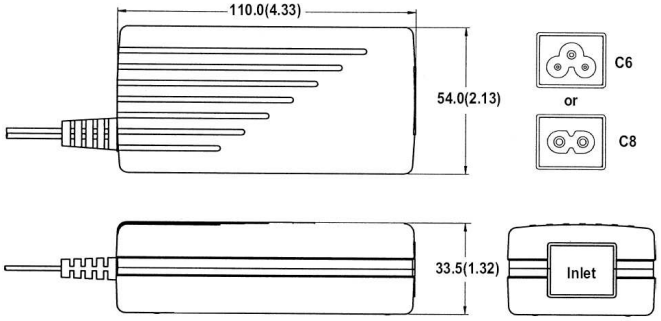
MECHANICAL SPECIFICATIONS

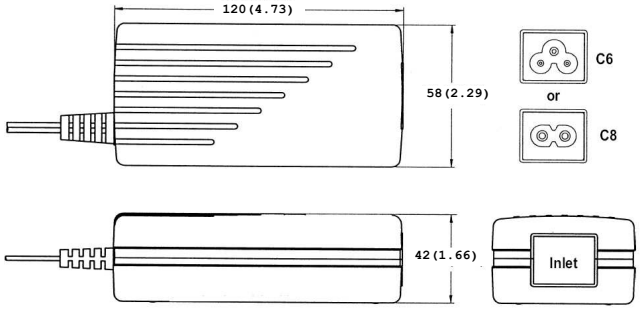
DT020Z SERIES C6: DT020Z-XX-3
3.78" x 2.05" x 1.25" (96 x 52 x 32.5) C8: DT020Z-XX



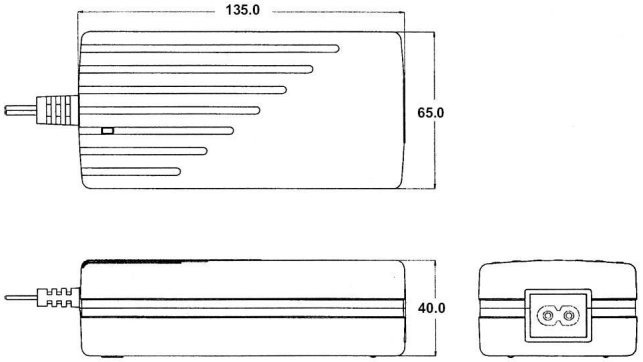
DT030Z SERIES C6: DT030Z-XX-3
4.33" x 2.13" x 1.32" (110 x 54 x 33.5) C8: DT030Z-XX



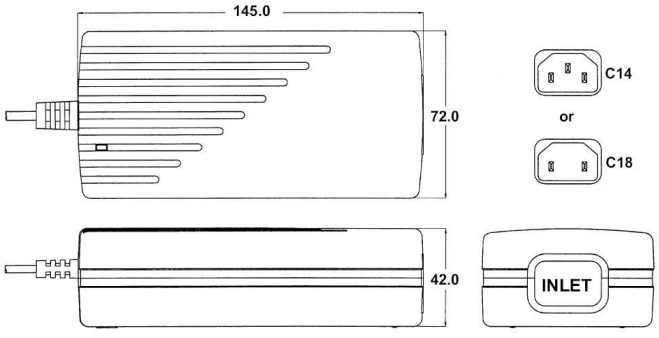
DT040Z SERIES C6: DT040Z-XX-3
4.73" x 2.29" x 1.66" (120 x 58 x 42.0) C8: DT040Z-XX



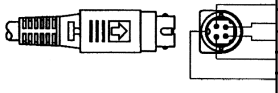
DT060Z SERIES
5.31" x 2.57" x 1.57" (135 x 65 x 40.0)



DT080Z SERIES C14: DT080Z-XX-3
5.7" x 2.83" x 1.65" (145 x 72 x 42.0) C18: DT080Z-XX



DT080Z-XX-3

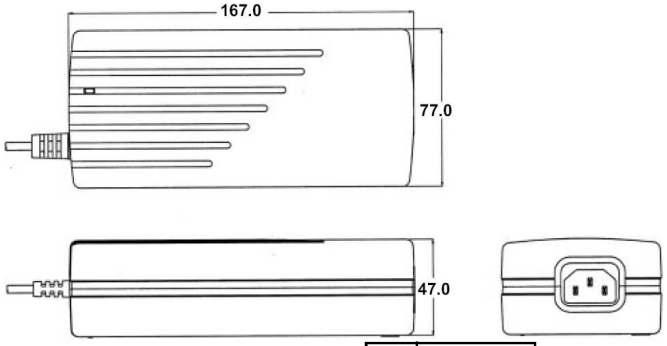


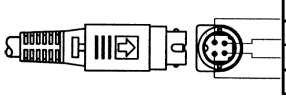
PIN	VOLTAGE
1	GND
3	GND
4	+V
2	+V
EARTH	

PIN	WIRE COLOR
1	GND
3	GND
4	+V
2	+V

DT080Z-XX (Only)

DT099Z SERIES
6.57" x 3.03" x 1.85" (167 x 77x 47.0)





PIN	WIRE COLOR
1	+V
3	GND
4	GND
2	+V

All Dimensions In Inches (mm) **Tolerance:** ±.039" (1mm)

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DESK TOP DT-ZM SERIES

Green Power

California Efficiency

20-100 Watts

For medical Applications

DESCRIPTION

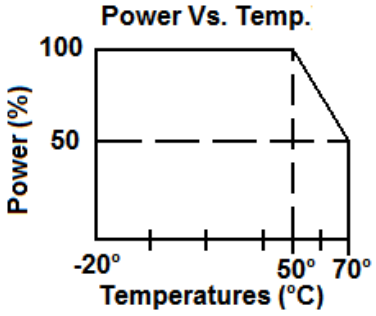
DT-ZM Series is a 20, 30, 40, 60, 80 and 100 watt desk series, Desk-Top switching power supply. It comes with an IEC 320 C8, C6, or C14 inlet to accommodate worldwide applications, These power supplies are perfect for low-to-medium power applications. It is designed with a quasi-resonant topology to increase the efficiency up to 85%. Low input power at no load condition meets green power requirements. With TRI-MAG leadership in universal power supply technology, we have been able to incorporate our proven design into this space saving desk-top unit.

FEATURES

- *EMI FCC Class B*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 264VAC*

APPLICATIONS

- *Medical and Dental Equipment*



GENERAL SPECIFICATIONS

Line Voltage……... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)…… Depend on model; 115VAC, 230VAC
Operating Temperature……..…...-20ºC to 60ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling…….. Free Air Convection
Efficiency…….…..…. 70% - 85%
Holdup Time……...…. 20ms at 115VAC
Overvoltage Type……..…. latch off
Overload Protection……..……..….Auto recovery Within 150% rated load
Short Circuit Protection……...Auto Recovery
Safety:
Designed in full compliance with… ...UL 60601-1 LPS
CSA 22.2 #60601-1
EN60601-1
EMI……...……. …….FCC class B
CISPR 22 level B
EMS……...……EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS

Case Size:
DT020ZM 3.78” x 2.05” x 1.25” (96 x 52 x 32.5)mm
DT030Z M 4.33” x 2.13” x 1.32” (110 x 54 x 33.5)mm
DT040Z M 4.73” x 2.29” x 1.46” (120 x 58 x 37.0)mm
DT060Z 5.31” x 2.57” x 1.57” (135 x 65 x 40.0)mm
DT080Z 5.7” x 2.83” x 1.65” (145 x 72 x 42.0)mm
DT099Z 6.57” x 3.03” x 1.85” (167 x 77x 47.0)mm
Connectors: AC Input IEC320
C8: DT020ZM-XX, DT030ZM–XX, DT040ZM-XX, DT060Z-XX
C6: DT020ZM-XX-3, DT030ZM-XX-3, DT040ZM-XX-3
C14:DT080Z, DT099Z (Only)
Connectors: DC Output
DC Power Plug
DT020ZM-XX, DT030ZM-XX, DT040ZM-XX
2.1mm I.D. x 2.5mm O.D.
DT020ZM-XX-3, DT030ZM-XX-3, DT040ZM-XX-3
Mini IEC Plug
4 Pin Hosiden
DT080Z, DT099Z

Length of cable:
6 ft.
DC Output:
Box Color: Black

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DT020ZM-4	20	+5V	0	2.0	3.0	1%	50 mV	1%	4%
DT020ZM-5	20	+12V	0	1.3	2.0	1%	80 mV	1%	2%
DT020ZM-8	20	+15V	0	1.0	1.6	1%	80 mV	1%	1%
DT020ZM-6	20	+24V	0	0.7	1.0	1%	80 mV	1%	1%
DT030ZM-5	30	+12V	0	2.5	4.0	1%	100 mV	1%	3%
DT030ZM-8	30	+15V	0	2.0	3.0	1%	100 mV	1%	2%
DT030ZM-6	30	+24V	0	1.3	1.8	1%	200 mV	1%	1%
DT040ZM-5	40	+12V	0	3.7	5.6	1%	100 mV	1%	2%
DT040ZM-8	40	+15V	0	3.0	4.5	1%	100 mV	1%	2%
DT040ZM-6	40	+24V	0	1.9	2.9	1%	200 mV	1%	1%
DT060Z-5	60	+12V	0	4.2	5.0	1%	80 mV	1%	3%
DT060Z-8	60	+15V	0	3.6	4.6	1%	80 mV	1%	3%
DT060Z-6	60	+24V	0	2.5	3.0	1%	120 mV	1%	3%
DT060Z-14	60	+48V	0	1.25	1.5	1%	240 mV	1%	3%
DT080Z-5-3	80	+12V	0	6.0	9.0	1%	100 mV	1%	3%
DT080Z-8-3	80	+15V	0	5.0	7.5	1%	100 mV	1%	3%
DT080Z-3-3	80	+18V	0	4.5	6.7	1%	100 mV	1%	3%
DT080Z-6-3	80	+24V	0	3.3	5.0	1%	100 mV	1%	3%
DT080Z-14-3	80	+48V	0	1.75	2.5	1%	200 mV	1%	3%
DT099Z-5	100	+12V	0	7.5	11	1%	100 mV	0.5%	3%
DT099Z-8	100	+15V	0	6.0	8.6	1%	100 mV	0.5%	3%
DT099Z-6	100	+24V	0	4.2	5.8	1%	100 mV	0.5%	3%
DT099Z-14	100	+48V	0	2.1	2.9	1%	200 mV	0.5%	3%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope and terminated. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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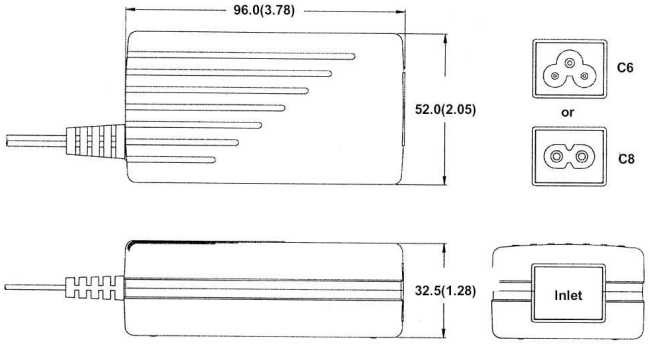
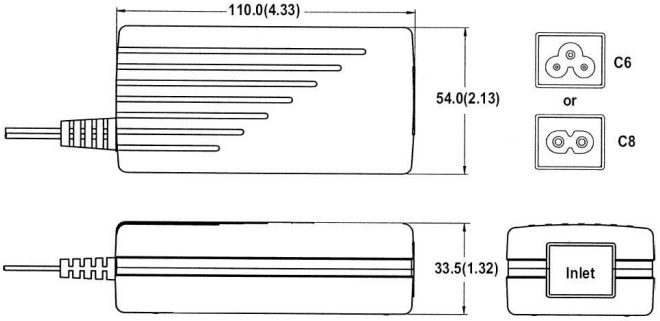
MECHANICAL SPECIFICATIONS

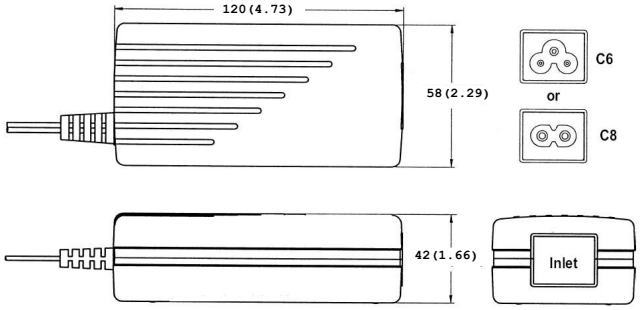
DT020ZM SERIES C6: DT020Z-XX-3
3.78" x 2.05" x 1.25" (96 x 52 x 32.5) C8: DT020Z-XX



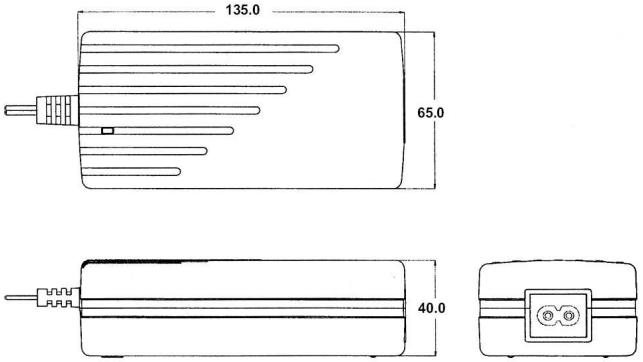
DT030ZM SERIES C6: DT030Z-XX-3
4.33" x 2.13" x 1.32" (110 x 54 x 33.5) C8: DT030Z-XX



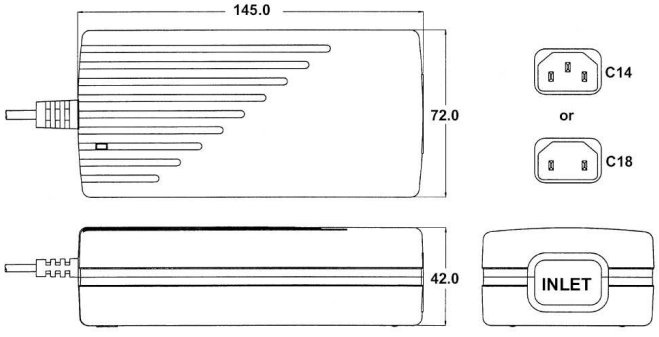
DT040ZM SERIES C6: DT040Z-XX-3
4.73" x 2.29" x 1.66" (120 x 58 x 42.0) C8: DT040Z-XX



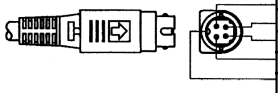
DT060Z SERIES
5.31" x 2.57" x 1.57" (135 x 65 x 40.0)



DT080Z SERIES C14: DT080Z-XX-3
5.7" x 2.83" x 1.65" (145 x 72 x 42.0) C18: DT080Z-XX



DT080Z-XX-3

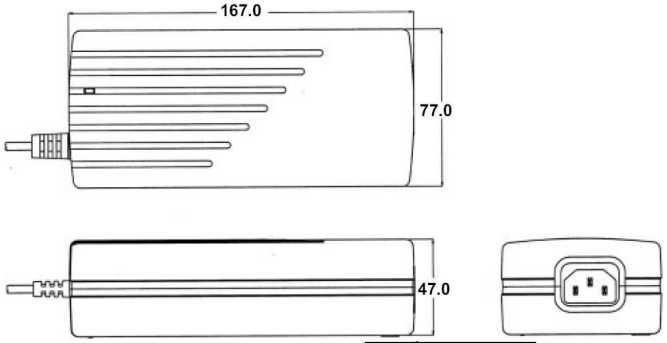


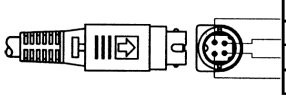
PIN	VOLTAGE
1	GND
3	GND
4	+V
2	+V
EARTH	

PIN	WIRE COLOR
1	GND
3	GND
4	+V
2	+V

DT080Z-XX (Only)

DT099Z SERIES
6.57" x 3.03" x 1.85" (167 x 77x 47.0)





PIN	WIRE COLOR
1	+V
3	GND
4	GND
2	+V

All Dimensions In Inches (mm) **Tolerance:** ±.039" (1mm)

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DT080AG Series

80 Watts Desk Top

Peak 120 Watts , for Medical & ITE

Green Power

DESCRIPTION

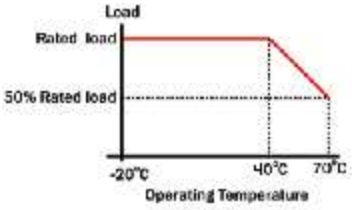
DT080AG-xx(-M) series is designed for both medical and ITE applications. It features no-load input power < 0.5 watt, PF > 0.9 and average efficiency > 87% that can comply with worldwide Green Power requirements. For indicating DC OK, a green LED is provided.

FEATURES

- *ITE/Medical applications*
- *Universal input 90VAC to 264VAC*
- *Green power*
- *80 Watt Desk Top Package*
- *120 Watt Peak*
- *Single output*

APPLICATIONS

- *ITE/Medical application*
- *Telecommunication*
- *PCB power*
- *Battery charging system*

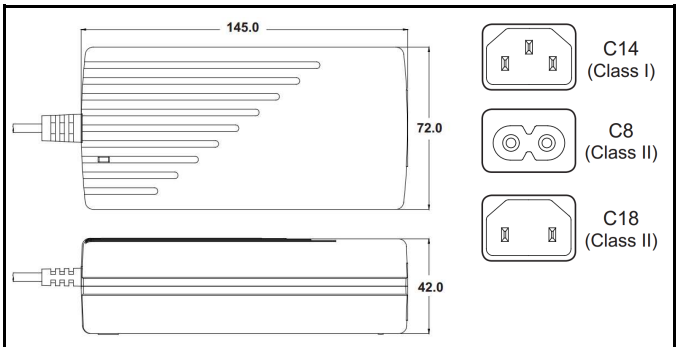


GENERAL SPECIFICATIONS

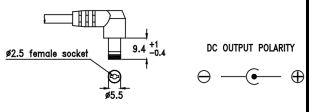
Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 40A at 115VAC or 80A at 230VAC cold start, 25°C
Operating Temperature……0°C to 40ºC
Storage Temperature……..……..–20ºC to 85ºC
Cooling……..…Free Air Convection
Efficiency……..…..>87% Typical
Holdup Time…….>18ms
Overload Protection……...…….……Auto Recovery

Safety :
Designed in full compliance with…….…...UL 60950-1
UL60601-1
EMI……..……..…..FCC "B"
CISPR22 level "B"
Harmonics……..…….EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



(Other model with Vo= +48V)



Note:
1. Dimensions shown in mm (inch) as left. Tolerance: ±1mm
2. Size: 72.0 X 145.0 X 42.0 (mm) 2.8" X 5.71" X 1.65"
3. Connectors:
   AC input : C8, C14, C18
   DC output : See Drawing
4. Output cable length: ~5'
5. DC OK LED: Green light on top of box
6. Box color: Black

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DT087AG-5(-M)	80	+12	0	6.0	8.4	1%	100 mV	±0.5%	±3%
DT088AG-8(-M)	80	+15	0	5.1	7.3	1%	100 mV	±0.5%	±3%
DT085AG-3(-M)	80	+18	0	4.3	6.1	1%	100 mV	±0.5%	±3%
DT089AG-6(-M)	80	+24	0	3.2	4.6	1%	100 mV	±0.5%	±3%
DT080AG-14(-M)	80	+48	0	1.6	2.3	1%	200 mV	±0.5%	±3%

Note: (-M) is for Medical Application

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to low limit output of main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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DT100Z SERIES

120 Watts with PFC

UNIVERSAL INPUT

DESCRIPTION

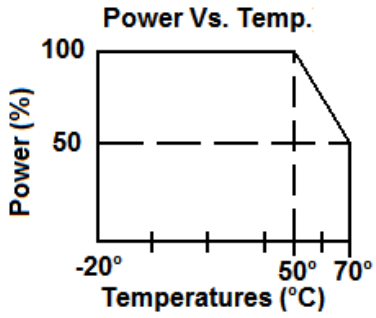
DT100Z series is a 120 Watt, single output, external desktop power for general purpose applications. The design uses active power factor correction and is in full compliance with EN 61000-3-2 regulations and EMI CISPR22 level "B". The efficiency can reach up to 85%.

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 260VAC*

APPLICATIONS

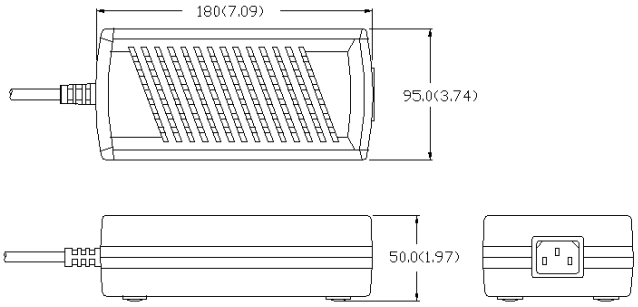
- *Computer Peripherals*
- *Telecommunications*
- *Tape Drives*
- *Test Instrumentation Product*
- *Data Acquisition*



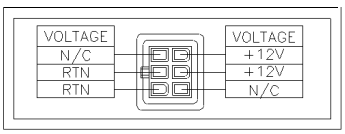
GENERAL SPECIFICATIONS

Input Voltage……..…….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 50A at 220VAC, 25°C
Operating Temperature……..…….. 0 to 40ºC
Storage Temperature……..……. −20ºC to 85ºC
Cooling…….. Free Air Convection
Efficiency…….……..85% Typical
Holdup Time…….>16ms at 115VAC
Overvoltage Type……..… Latchoff
Overload Protection……..…….. Foldback Within 150% rated load
Designed in full compliance with…….. UL 60950-1
CSA 22.2 #60950-1
EN60950-1
EMI……...……. ……..cispr22 "B"
FCC docket class "B"
Harmonics…….…...EN61000-3-2 Class "D"
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



OUTPUT CONNECTOR:



NOTE: OTHER CONNECTORS AVALIABLE UPON REQUEST. CABLE LENGTH TYP. 6.0'.

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DT100Z-5	120	+12V	0	9	15	5%	120 mV	±1%	±3%
DT100Z-8	120	+15V	0	7.5	10	5%	150 mV	±1%	±3%
DT100Z-6	120	+24V	0	5	7	5%	200 mV	±1%	±3%
DT100Z-14	120	+48V	0	2.5	4	5%	200 mV	±1%	±3%
DT100Z-3	120	+18V	0	6.5	9	5%	100 mV	±1%	±3%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 µF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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DT100ZM SERIES

120 Watts with PFC

For Medical Applications

DESCRIPTION

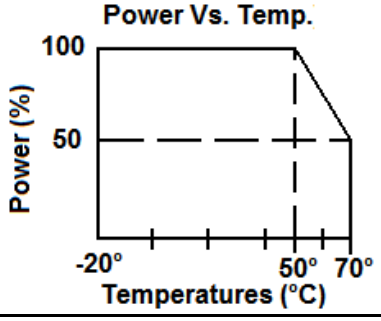
DT100ZM series is a 120 watts, single output, external desktop power for medical equipment applications. The design uses active power factor correction and in full compliance with EN 61000-3-2 regulations and EMI CISPR22 level "B". The efficiency can reach up to 85%.

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *No Minimum Load Required*
- *Single Output*
- *Universal input 90VAC to 264VAC*
- *Low Leakage Current*
- *Double Fused*

APPLICATIONS

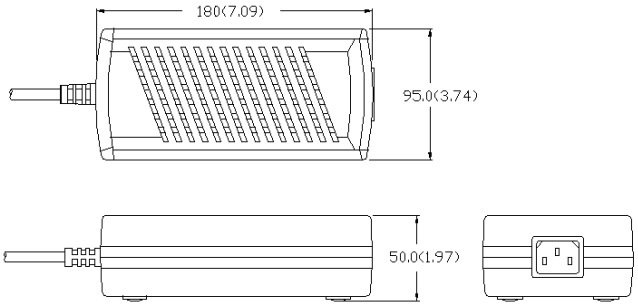
- *Equipment with low leakage current requirements*
- *Medical equipment*
- *Dental equipment*



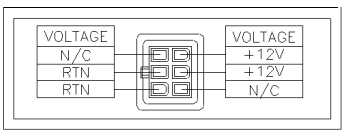
GENERAL SPECIFICATIONS

Input Voltage……..…….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 60A at 220VAC, 25°C
Operating Temperature……..…….. 0 to 40ºC
Storage Temperature……..……. -20ºC to 85ºC
Cooling…….. Free Air Convection
Efficiency…….……...85% Typical
Holdup Time…….>16ms at 115VAC
Overvoltage Protection……..……..… Latch Off
Overload Protection…….…….. Auto Recovery Within 150% rated load
Short Circuit Protection……...Auto Recovery
Earth Leakage……... 300µA Max @ 240VAC
Safety:
Designed in full compliance with.…..……...UL60601-1
CSA 22.2 #601-1
EN60601-1
EMI & EMS……..……...……..EN55011"B"
FCC docket class "B"
EN61000-3-2

MECHANICAL SPECIFICATIONS



OUTPUT CONNECTOR:



NOTE: OTHER CONNECTORS AVALIABLE UPON REQUEST.

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DT100ZM-5	120	+12V	0	9.0	15	5%	120 mV	±1%	±3%
DT100ZM-8	120	+15V	0	7.5	10	5%	150 mV	±1%	±3%
DT100ZM-6	120	+24V	0	5.0	7	5%	200 mV	±1%	±3%
DT100ZM-14	120	+48V	0	2.5	4	5%	200 mV	±1%	±3%
DT100ZM-3	120	+18V	0	6.5	9	5%	100 mV	±1%	±3%

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to peak load temporarily. Continuous operation at greater than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 µF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to 95% output voltage at rated load and nominal line.
7. Efficiency is measured at rated load.

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DT150Z Series

150 Watts Desk Top

Active PFC, for Medical & ITE

Green Power

DESCRIPTION

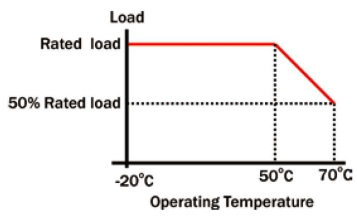
DT150Z-xx(-M) series is designed for both medical and ITE applications. It features no-load input power < 0.5 watt, PF > 0.9 and average efficiency > 87% that can comply with worldwide Green Power requirements. For indicating DC OK, a green LED is provided.

FEATURES

- *ITE/Medical applications*
- *Universal input 90VAC to 264VAC*
- *Green Power*
- *150 Watt Desk Top Package*
- *Single output*

APPLICATIONS

- *ITE/Medical application*
- *Telecommunication*
- *PCB power*
- *Battery charging system*

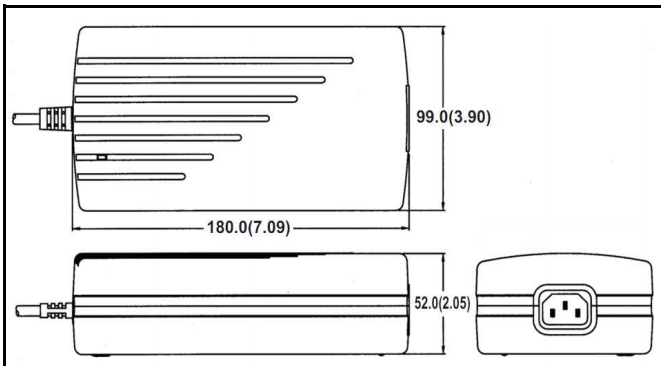


GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 40A at 115VAC or 80A at 230VAC cold start, 25°C
Operating Temperature……0°C to 40ºC
Storage Temperature……..……..–20ºC to 85ºC
Cooling……..…Free Air Convection
Efficiency……..…..>87% Typical
Holdup Time…….>16ms
Overload Protection……..…….……Auto Recovery

Safety :
Designed in full compliance with…….…...UL 60950-1
UL60601-1
EMI……..……..…..FCC "B"
CISPR22 level "B"
Harmonics……..……EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions shown in mm (inch) as left. Tolerance: ±1mm
2. Size: 99.0 X 180.0 X 52.0 (mm) 3.9" X 7.09" X 2.05"
3. Connectors:
   AC input : IEC 320 Inlet
   DC output : Molex 5557-06 or equivalent
4. Output cable length: ~5'
5. DC OK LED: Green light on top of box
6. Box color: Black

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DT150Z-5(-M)	150	+12	0	11.25	14	1%	100 mV	±0.5%	±3%
DT150Z-8(-M)	150	+15	0	9.3	12.1	1%	100 mV	±0.5%	±3%
DT150Z-3(-M)	150	+18	0	7.8	10.1	1%	100 mV	±0.5%	±3%
DT150Z-6(-M)	150	+24	0	6	7.2	1%	100 mV	±0.5%	±3%
DT150Z-14(-M)	150	+48	0	3	N/A	1%	200 mV	±0.5%	±3%

Note: (-M) is for Medical Application

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to low limit output of main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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DT200Z Series

200 Watts Desk Top

Active PFC for Medical & ITE

Green Power

DESCRIPTION

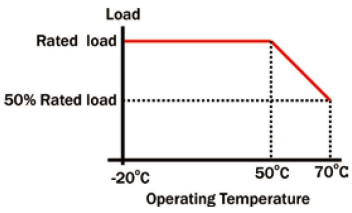
DT200Z-xx(-M) series is designed for both medical and ITE applications. It features no-load input power < 0.5 watt, PF > 0.9 and average efficiency > 87% that can comply with worldwide Green Power requirements. For indicating DC OK, a green LED is provided.

FEATURES

- *Universal input 90VAC to 264VAC*
- *Green Power*
- *200 Watt Desk Top Package*
- *Single output*

APPLICATIONS

- *ITE/Medical application*
- *Telecommunication*
- *PCB power*
- *Battery charging system*

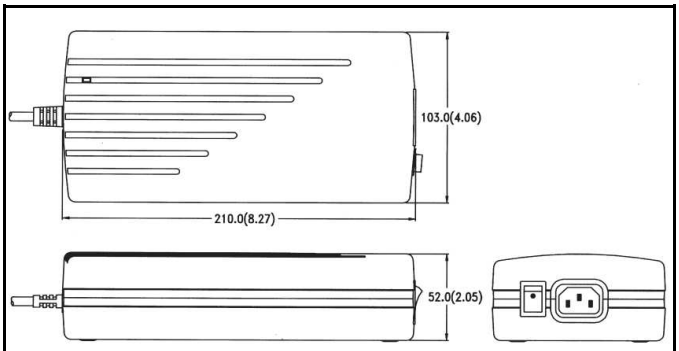


GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 40A at 115VAC or 80A at 230VAC cold start, 25°C
Operating Temperature……0°C to 40ºC
Storage Temperature……..……..–20ºC to 85ºC
Cooling……..…Free Air Convection
Efficiency……..…..>87% Typical
Holdup Time…….>16ms
Overload Protection……...…….……Auto Recovery

Safety :
Designed in full compliance with…….…...UL 60950-1
UL60601-1
EMI……...……..…..FCC "B"
CISPR22 level "B"
Harmonics……..…….EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions shown in mm (inch) as left. Tolerance: ±1mm (Excluding cables).
2. Size: 210.0 X 103.0 X 52.0 (mm)
3. Packing: Net weight: 1.1kg approx. / unit
   Gross weight: 14.0kg approx. / carton, 10 units / carton
   Carton size (mm): 412 (L) x 336 (W) x 387 (H)
4. Connectors:
   AC input : IEC 320-1 Inlet
   DC output : Molex 5557-06 or equivalent
5. Output cable length: 150 cm
6. DC OK LED: Green light on top of box
7. Box color: Black

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DT200Z-5(-M)	200	+12	0	15	33.4	1%	200 mV	±0.5%	±3%
DT200Z-8(-M)	200	+15	0	12	21.6	1%	200 mV	±0.5%	±3%
DT200Z-3(-M)	200	+18	0	10	18.3	1%	200 mV	±0.5%	±3%
DT200Z-6(-M)	200	+24	0	8.4	14	1%	200 mV	±0.5%	±3%
DT200Z-14(-M)	200	+48	0	4.2	6.9	1%	200 mV	±0.5%	±3%

Note: (-M) is for Medical Application

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to low limit output of main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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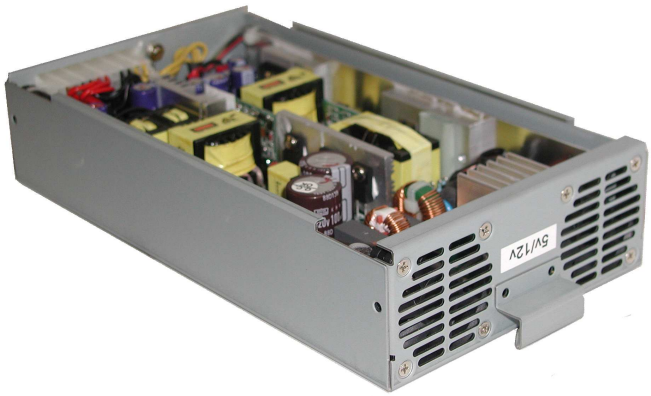
TMG-Z361-B V1

360Watts

Universal Input, for ITE Applications



DESCRIPTION

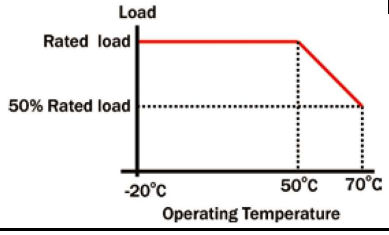
The TMG-Z361-B V1 power supply is a 360 watt with dual outputs +5V and +12V. This power supply has an efficiency of > 85% .

FEATURES

- *Universal input 90VAC to 264VAC*
- *Cost effective*
- *Reliable design*
- *High Quality*
- *Multiple output*

APPLICATIONS

- *ITE/Medical applications*
- *Telecommunication*
- *PCB power*
- *Battery charging system*
- *LED Display/Signage*

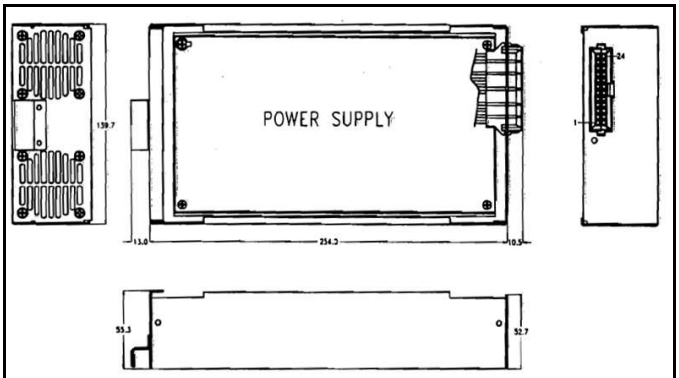


GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC or 60A at 230VAC cold start, 25°C
Operating Temperature…….-20°C to 70ºC
Storage Temperature……..……...-40ºC to 85ºC
Cooling……....Convection Cooling
Efficiency……..….>85% Typical
Holdup Time…….>20ms
Overload Protection……...…….……Auto Recovery
Over Voltage……....Latch-off
Leakage Current……110uA at 115VAC/60Hz and 220uA at 230VAX/50Hz
Safety :
Designed in full compliance with…….…...UL 60950-1

EMI……..……. …..CISPR 22"A"
Harmonics……..…….EN61000-3-2 class A
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions show in mm above
2. Size: 5.5"x 10"x 2.07" (139.7 x 254.0 x 52.7)mm
3. Connector: TB1 AC Input & DC Output: Optional

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
TMG-Z361-B V1	360	+5V	0A	24A	36A	+5.15V~+5.30V	50 mV	±0.5%	±1%
		+12V	0A	20A	30A	+11.9V~+12.2V	120 mV	±0.5%	±1%

OUTPUT PINS

TB1	1	2	3	4	5	6	7	8	9	10	11	12
PIN ASSIGNMENT	ACL	ACN	ACG	N/C	+12V	+12V	COM	COM	COM	COM	+5V	+5V

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to low limit output of main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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TMG-Z369-B V1

360Watts

Universal Input, for ITE Applications

DESCRIPTION

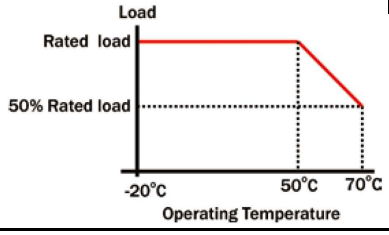
The TMG-Z369-B V1 power supply is a 360 watt with single outputs +24V. This power supply has an efficiency of > 85% and has mounting brackets.

FEATURES

- *Universal input 90VAC to 264VAC*
- *Cost effective*
- *Reliable design*
- *High Quality*
- *Multiple output*

APPLICATIONS

- *ITE/Medical applications*
- *Telecommunication*
- *PCB power*
- *Battery charging system*
- *LED Display/Signage*



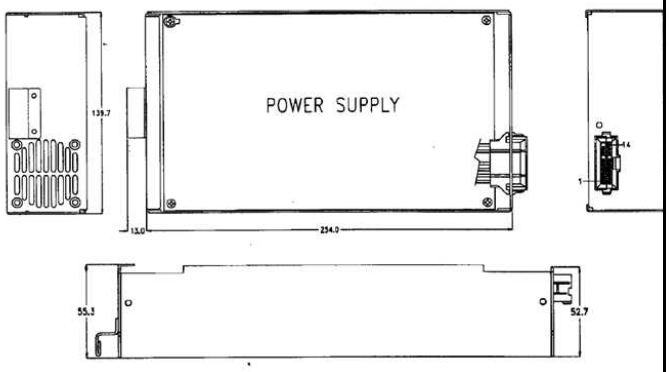
GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC or 60A at 230VAC cold start, 25°C
Operating Temperature…….-20°C to 70ºC
Storage Temperature……..……...-40ºC to 85ºC
Cooling……Convection Cooling
Efficiency……..….>85% Typical
Holdup Time…….>20ms
Overload Protection……...…….……Auto Recovery
Over Voltage……...Latch-off

Safety :
Designed in full compliance with…….…...UL 60950-1

EMI……...……. …..CISPR 22"A"
Harmonics……..……EN61000-3-2 class A
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions show in mm above
2. Size: 5.5"x 10"x 2.07" (139.7 x 254.0 x 52.7)mm
3. Connector: TB1 AC Input & DC Output: Optional

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
TMG-Z369-B V1	360	+24V	0A	15A	40A	+23.8V~+24.2V	240 mV	±0.5%	±1%

OUTPUT PINS

TB1	1	2	3	4	5	6	7	8
PIN ASSIGNMENT	ACL	ACN	ACG	N/C	COM	COM	+24V	+24V

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to low limit output of main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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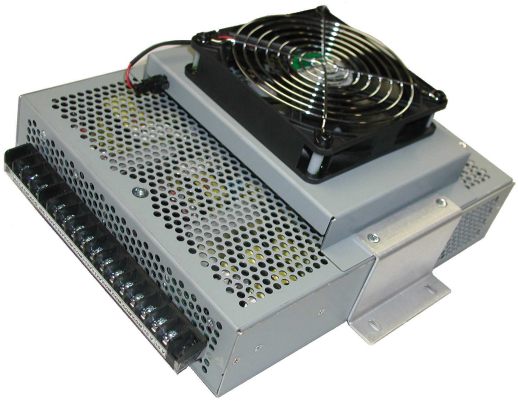
TMG-Z720-B V1

720Watts

Universal Input, ITE Applications with Multiple Outputs.



DESCRIPTION

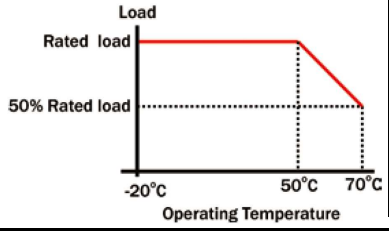
The TMG-Z720-B V1 power supply is a 720 watt with multiple outputs, +5V +12V, and +24V. This power supply has an efficiency of > 85% and has mounting brackets.

FEATURES

- *Universal input 90VAC to 264VAC*
- *Cost effective*
- *Reliable design*
- *High Quality*
- *Multiple output*

APPLICATIONS

- *ITE/Medical applications*
- *Telecommunication*
- *PCB power*
- *Battery charging system*
- *LED Display/Signage*



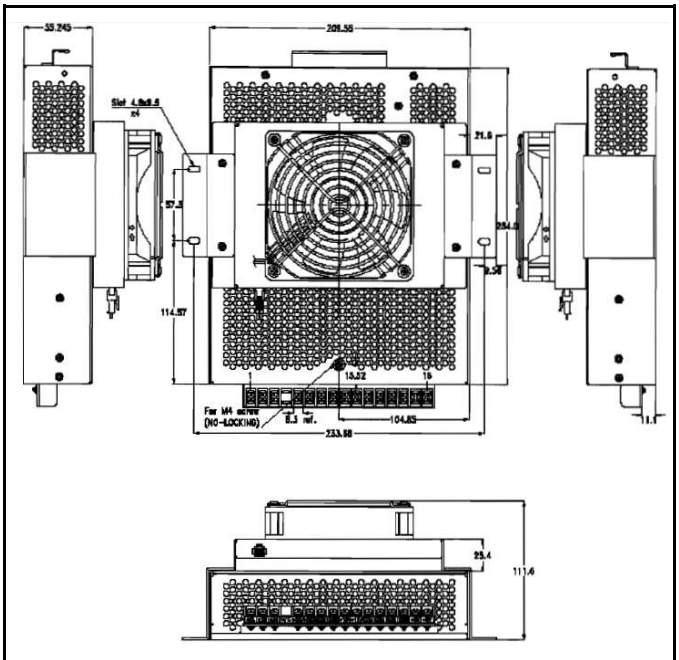
GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Inrush Current (cold)……..…… Less than 30A at 115VAC or 60A at 230VAC cold start, 25°C
Operating Temperature…….-20°C to 70ºC
Storage Temperature……..……...-40ºC to 85ºC
Cooling……...Fan Cooling
Efficiency……..….>85% Typical
Holdup Time…….>20ms
Overload Protection……...…….……Auto Recovery
Over Voltage……....Latch-off
Leakage Current……110uA at 115VAC/60Hz and 220uA at 230VAX/50Hz

Safety :
Designed in full compliance with…….…...UL 60950-1

EMI……..……. …..CISPR 22”A”
Harmonics……..…….EN61000-3-2 class A
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions show in mm above
2. Size: 8.25”x 10”x 4.4” (209.55 x 254.0 x 111.6)mm
3. Connector: TB1 AC Input & DC Output: Terminal block

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
TMG-Z720-B V1	720	+5V	0A	36A	40A	+5.15V~+5.30V	50 mV	±0.5%	±1%
		+12V	0A	15A		+11.40V~+12.60	120 mV	±0.5%	±1%
		+24V	0A	15A		+23.90V~+24.30V	240 mV	±0.5%	±1%

OUTPUT PINS

TB1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PIN ASSIGNMENT	ACL	ACN	ACG	N/C	+24V	+24V	COM	COM	+12V	+12V	COM	COM	COM	COM	+5V	+5V

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to low limit output of main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

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TMG-F60X Series

600 Watts, 1000 Watts Peak

Active PFC with Universal Input
For IT & Medical

DESCRIPTION

The TMG-F60X Series is a high wattage power supply with three different mounting planes including DIN rail. The TMG-F60X Series features 600 Watts of power without a fan and can peak at 1000 Watts .

FEATURES

- *Power Factor Correction*
- *Very High Efficiency*
- *Universal input 90VAC to 264VAC*
- *Standard Over Voltage and Current Protection*
- *Three different mounting configurations*
- *Peak Load of 1000 Watts (8 sec.)*

APPLICATIONS

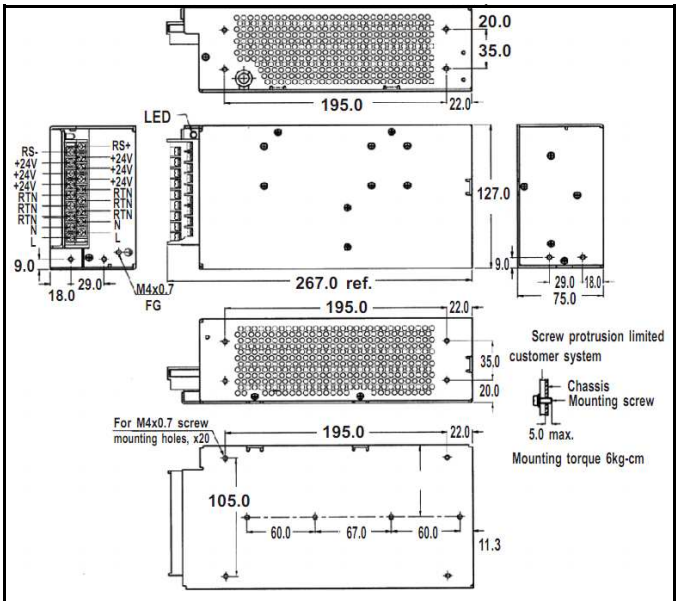
- *"Mission Critical" application*
- *Telecommunication*
- *Industrial*
- *Battery charging system*
- *LED Display/ Signage*

GENERAL SPECIFICATIONS

Input Voltage……..….. 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..>0.93
Inrush Current (cold)……..…… Less than 10A at 115VAC or 20A at 230VAC cold start, 25°C
Operating Temperature……..……...0 to 50ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling……...……...convection cooling
Efficiency……..86-90% Typical
Holdup Time……>12ms
Overload Protection……..……Auto Recovery

Safety (Modules):
Designed in full compliance with…….…...UL 60950-1
UL 60601-1
EMI……..……. …..EN55022 "B"
Harmonics……..……EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions show in mm above
2. Size: 5"x10.83"x3.0"
3. Connector
AC & DC: Terminal Block

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
TMG-F607	600	+12V	0.2A	50A	83.5A	+11.9V~+12.1V	240 mV	±1%	±1%
TMG-F609	600	+24V	0.2A	25A	42A	+23.9V~+24.1V	240 mV	±1%	±1%
TMG-F60G	600	+28V	0.2A	21.4A	35.7A	+27.8V~+28.2V	250 mV	±1%	±1%
TMG-F60J	600	+36V	0.2A	16.7A	27.8A	+35.6V~+36.4V	360 mV	±1%	±1%
TMG-F60T	600	+48V	0.2A	12.5A	20.8A	+47.0V~+49.0V	480 mV	±1%	±1%

Note: To order medical model add suffix "-M" to end of ITE model name e.g. TMG-F607-M

PIN ASSIGNMENT

Pin No.	1	3	5	7	9	11	13	15	17
Pin Assign	L	PE	+V	+V	NC	GND	GND	NC	RS+
Pin No.	2	4	6	8	10	12	14	16	18
Pin Assign	N	NC	+V	+V	+V	GND	GND	GND	RS-

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to low limit output of main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.
8. EMI filter (Delta 15GEEG3E-R) has to be used for the requirements of EMI.
9. Installations (A), (B) and (C) can achieve 100% rated load.

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TMG-F80X Series

800 Watts, 1000 Watts Peak

Active PFC with Universal Input
For IT & Medical

DESCRIPTION

The TMG-F80X Series is a high wattage power supply with three different mounting planes including DIN rail. The TMG-F80X Series features a side mounted cooling fans for a stable continuous 800 Watts of power peaking at 1000 Watts for 8 second duration.

FEATURES

- *Power Factor Correction*
- *Very High Efficiency*
- *Universal input 90VAC to 264VAC*
- *Standard Over Voltage and Current Protection*
- *Three different mounting configurations*
- *Peak Load of 1000 Watts (8 sec.)*

APPLICATIONS

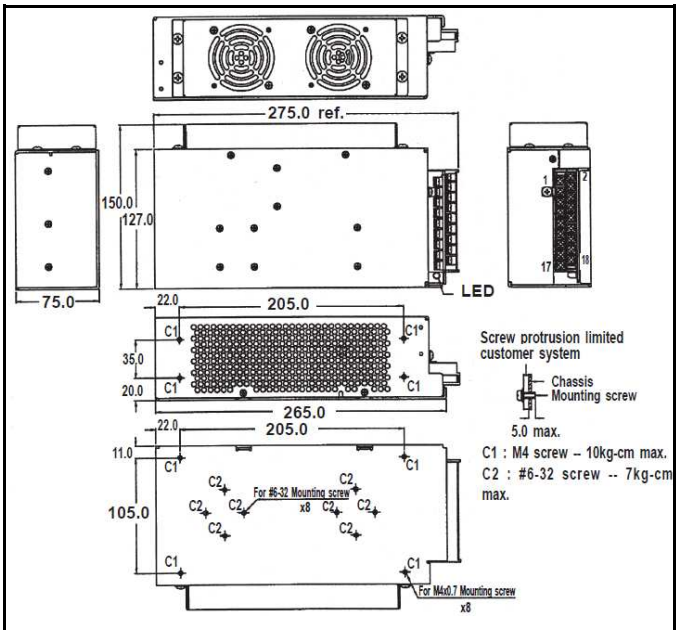
- *"Mission Critical" application*
- *Telecommunication*
- *Industrial*
- *Battery charging system*
- *LED Display/ Signage*

GENERAL SPECIFICATIONS

Input Voltage……...….... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..>0.93
Inrush Current (cold)……...…… Less than 10A at 115VAC or 20A at 230VAC cold start, 25°C
Operating Temperature……..……...0 to 50ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling……...……...……fan cooling
Efficiency……..86-90% Typical
Holdup Time……>12ms
Overload Protection……...…….……Auto Recovery

Safety (Modules):
Designed in full compliance with…….…...UL 60950-1
UL 60601-1
EMI……...……. …..EN55022 "B"
Harmonics……..……EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

MECHANICAL SPECIFICATIONS



Note:
1. Dimensions show in mm above
2. Size: 5.9"x10.83"x3.0"
3. Connector
AC & DC: Terminal Block

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OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Voltage Tolerance	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
TMG-F807	800	+12V	0.2A	66.7A	83.5A	+11.9V~+12.1V	240 mV	±1%	±1%
TMG-F809	800	+24V	0.2A	33.5A	42A	+23.9V~+24.1V	240 mV	±1%	±1%
TMG-F80G	800	+28V	0.2A	28.5A	35.7A	+27.8V~+28.2V	250 mV	±1%	±1%
TMG-F80J	800	+36V	0.2A	22.2A	27.8A	+35.6V~+36.4V	360 mV	±1%	±1%
TMG-F80T	800	+48V	0.2A	16.7	20.8A	+47.0V~+49.0V	480 mV	±1%	±1%

Note: To order medical model add suffix "-M" to end of ITE model name e.g. TMG-F807-M

PIN ASSIGNMENT

Pin No.	1	3	5	7	9	11	13	15	17
Pin Assign	L	PE	+V	+V	NC	GND	GND	NC	RS+
Pin No.	2	4	6	8	10	12	14	16	18
Pin Assign	N	NC	+V	+V	+V	GND	GND	GND	RS-

Note: Contact factory for Safety Agency Approved status.

1. Each output can provide up to max load separately when the power supply starts up. Exceeding the max. output power continuously is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope. Each output is terminated with a 0.47 μF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time when the main output drops down to low limit output of main output at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.
8. EMI filter (Delta 15GEEG3E-R) has to be used for the requirements of EMI.
9. Installations (A), (B) and (C) can achieve 100% rated load.

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ON LINE, 100 WATTS PFC
BBU100 & BBU100M SERIES

UNINTERRUPTABLE POWER SUPPLY FOR MEDICAL AND INDUSTRIAL APPLICATION

DESCRIPTION

BBU100 & BBU100M series is a battery backup power supply. This product adds a battery backup capability to the existing DZ100 and DZ100M series product line providing a different DC output voltage. Nickel metal hydride battery

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *No Minimum Load Required*
- *Single and multiple outputs*
- *Universal Input 90 VAC to 264VAC*
- *High Efficiency*
- *100% Cycling On-Off Burn-In Test*
- *Overload, Short Circuit and Over Voltage Protection*
- *LED & Audio Indicator*
- *Additional Battery, if addition backup time is needed*

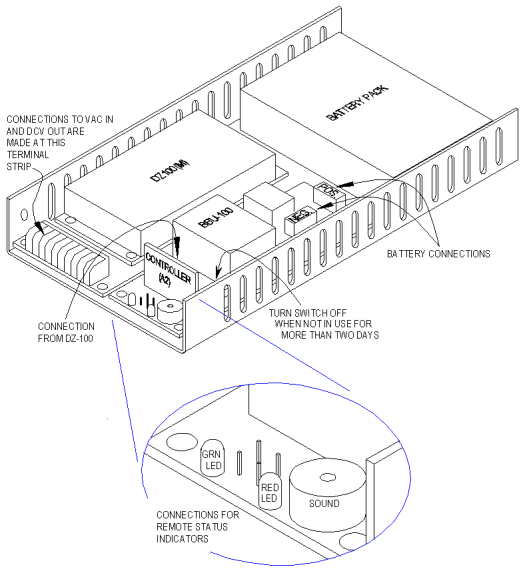
APPLICATIONS

- *Alarm Systems*
- *Telecommunication*
- *Medical Equipment and Devices*
- *Industrial Control*
- *Process Control*
- *Robotic System*
- *Instrumentation*
- *Security Equipment*

GENERAL SPECIFICATIONS

Input Voltage…….. 90VAC to 264VAC
Input Frequency……...… 47Hz to 63Hz
Inrush Current (cold)……...…..<50A @ 220VAC 25ºC
Operating Temperature……..…….. 0 to 40ºC
Storage Temperature……(w/o battery)-20ºC to 85ºC
Cooling…… <100W Air Convection >130W 18 CFM min.
Efficiency…….…. 85-90% Typical
Overvoltage Type……... Latch Off
Overload Protection……..……..….. Auto Recovery
Short Circuit Protection……..Auto Recovery
Safety…….. UL 60950, UL 2601-1 CSA 22.2 #234,#601-1 EN60950, EN6060-1
EMI……..……FCC "B" EN61000-4-2,-3,-4 -5,-6,-8,-11
Harmonics……....EN61000-3-2, LAS A

MECHANICAL SPECIFICATIONS



MECHANICAL SPECIFICATIONS:
Dimension Shown in IN

Chassis Size:
6.0" x 10.6" x 1.6"
(152mm x 269.2mm x 40.6mm)

Input, Output Connectors:
AC Input, DC Output Terminal Block 3PCV-10 or equivalent

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MODEL NUMBER & OUTPUT SPECIFICATIONS

INDUSTRIAL APPLICATION

Model	Watts	Voltage (Vdc)	Load (A)		
			Min.	Rate	Max.
BBU100-6	100	+5V	0	20	26
BBU100-7	100	+12V	0	9	11.0
BBU100-8	100	+15V	0	7	8.7
BBU100-9	100	+24V	0	4.5	5.4
BBU100-14	100	+48V	0	2.3	2.7
BBU100-2	100	+5V +12V -12V	0 0 0	11.5 3 0.5	15 5 1
BBU100-19	100	+3.3V +5V +12V	0 0 0	10 8 0.5	15 10 1
BBU100-18	100	+3.3V	0	25.0	30
BBU100-3	100	+5V +12V	0 0	7.0 8.0	10 10
Detailed Electrical specification, please refer to DZ100 Series.					

MEDICAL APPLICATION

Model	Watts	Voltage (Vdc)	Load (A)		
			Min.	Rate	Max.
BBU100M-6	100	+5V	0	20	26
BBU100M-7	100	+12V	0	9	11.0
BBU100M-8	100	+15V	0	7	8.7
BBU100M-9	100	+24V	0	4.5	5.4
BBU100M-14	100	+48V	0	2.1	2.7
BBU100M-2	100	+5V +12V -12V	0.5 0 0	10 3 0.8	15 4.1 1.1
BBU100M-10	100	+5V +15V -15V	0.5 0 0	10 2.5 0.8	15 4.1 1.1
BBU100M-4	100	+28V	0	3.8	4.65
Detailed Electrical specification, please refer to DZ100M Series.					

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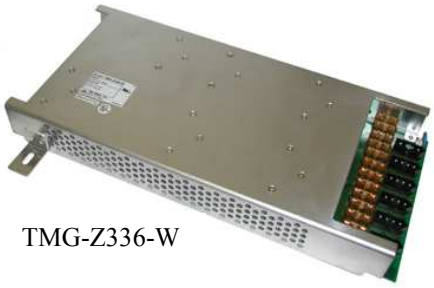
POWER SUPPLIES FOR OUTDOOR LED SIGN APPLICATIONS

DZ240LP-XX



TMG-Z336-W

DESCRIPTION

The DZ240LP, TMG-Z106-W, and the TMG-Z336-W with PFC are designed for outdoor LED sign applications. Continuous output up to 65°C without de-rating. The DZ240LP is potted to withstand outdoor environment.

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *Current Limit Outputs*
- *LED Indicator for Each Channel*
- *Universal input 90VAC to 264VAC*
- *Water Resistant*

APPLICATIONS

- *LED Display or Sign application.*
- *Outdoor Device*

GENERAL SPECIFICATIONS

Input Voltage……..….... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..>0.95
Inrush Current (cold)……..…… Less than 20A at 115VAC or 40A at 230VAC cold start, 25°C
Operating Temperature……..……...-40 to 65ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling……..……Free Air Convection for 200W
Efficiency…….…..82-87% Typical
Holdup Time…….>20ms
Overvoltage Type…… Latch off
Overload Protection……..……..…… Reset
Short Circuit Protection……...Auto-recovery
Safety:
Designed in full compliance with…….……..UL 60950
UL 1310
UL 879
EMI……..……. …..EN55022 “B”
Harmonics……..…….EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

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OUTPUT SPECIFICATIONS

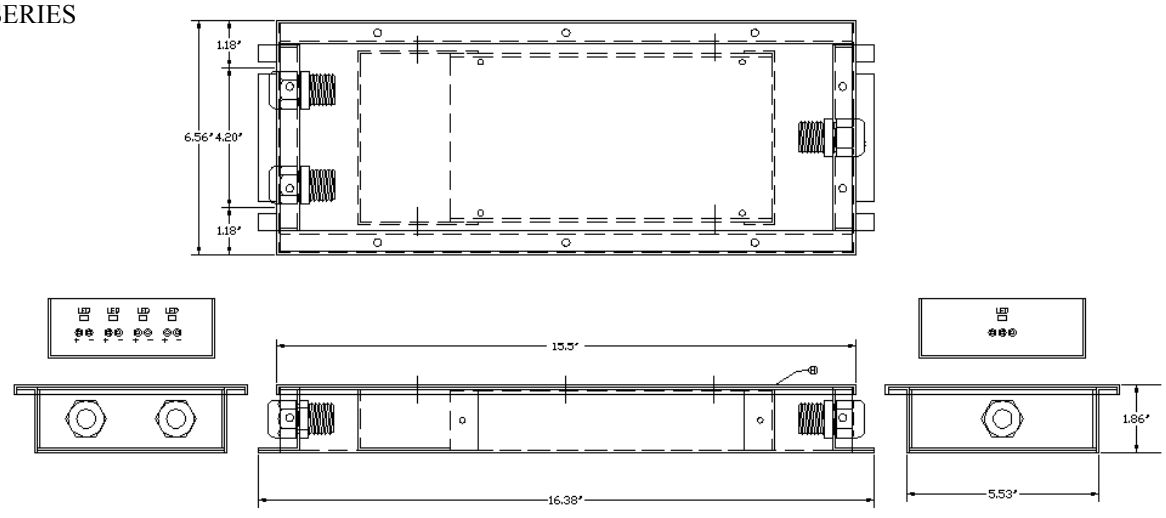
Model	Watts@ 65°C	Voltage	Max load Each Channel	No. Of Channels	Tolerance	Ripple & Noise	Regulation	
							Line	Load
DZ240LP-6	240	5.4V	5.0A	4	1%	50 mV	± 1%	± 1%
DZ240LP-17	240	9.5V	5.0A	4	1%	100 mV	± 1%	± 1%
DZ240LP-7	240	12V	5.0A	4	2%	120 mV	± 1%	± 1%
DZ240LP-8	240	15V	5.0A	3	5%	150 mV	± 1%	± 1%
DZ240LP-9	240	24V	5.0A	2	5%	200 mV	± 1%	± 1%
DZ240LP-14	240	48V	2.50/5.0A	2/1	5%	200 mV	± 1%	± 1%
DZ240LP-18	240	15V	4.0A	4	5%	150 mV	± 1%	± 1%
TMG-Z106-W	106	+5.4V +7.5V	9.6A 1.0A	2 1	1% 5%	60 mV 80 mV	± 1% ± 1%	± 2% ± 2%
TMG-Z336-W	336	+5.4V +8.4V	3.6A 4.2A	6 6	1% 5%	60 mV 90 mV	± 1% ± 1%	± 2% ± 2%

NOTE: Current limit

A. DZ240LP Series, the lesser of 100VA or 5.0 ampers per channel
B. TMG-Z-106-W +5.4V 10A Max
+7.5V 1A Max
C. TMG-Z336-W +5.4V 5.0A Max
+8.4V 5.0A Max
D. DZ240LP Series add "C" at end of part number for cycle shut down. If output current exceeds set current limit, i.e once over current is sensed on channels then it is disabled. After 5 seconds then channel is enabled. If over current is still sensed then it is disabled. This cycle is repeated with 1 minute duration and then 5 minute duration.

MECHANICAL SPECIFICATIONS

DZ200LP SERIES



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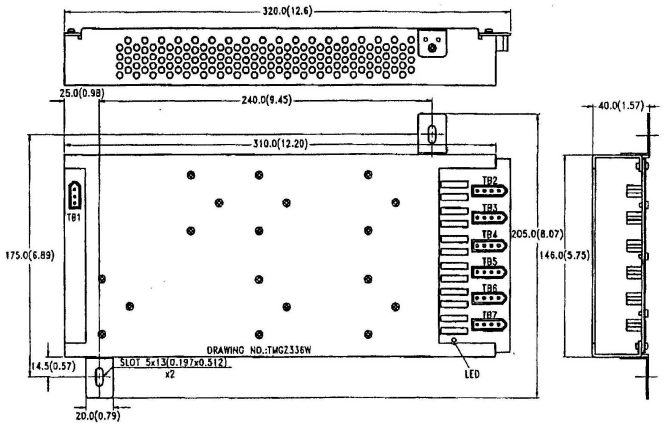
MECHANICAL SPECIFICATIONS

TMG-Z336-W

7.0 MECHANICAL SPECIFICATION



7.1 Dimensions
Dimensions shown in mm (inch) as above. Tolerance specified is +/-0.4mm (0.016inch).

7.2 Connectors
AC input : Molex 10-18-1032 male pin header or equivalent
DC output : 6 pieces of Molex 10-18-1041 male pin header or equivalent

7.3 Pin assignment

TB1

pin		
1	L	
2	N	
3	E	

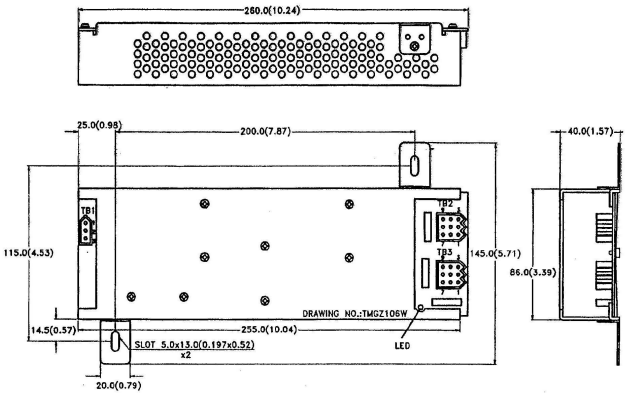
TB2~TB7

pin		
1	+5.4V	
2	GND	
3	+8.4V	
4	GND	

7.4 Output indicator : 2 colors LED
+5.4V OK : Green
+8.4V OK : Red
Both outputs OK : Amber

TMG-Z106-W

7.0 MECHANICAL SPECIFICATION

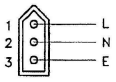


7.1 Dimensions
Dimensions shown in mm (inch) as above. Tolerance is + -0.5mm (0.02inch).

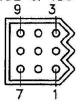
7.2 Connectors
AC input : Molex 10-18-1032 male pin header or equivalent
DC output : 2 pieces of Molex 10-18-1090 male pin header or equivalent

7.3 Pin assignment

TB1



TB2 & TB3



Pin			
1.	+5.4V	6.	GND
2.	+5.4V	7.	GND
3.	+5.4V	8.	GND
4.	+5.4V	9.	+7.5V
5.	GND		

7.4 Output indicator : 2 colors LED
+5.4V OK : Green
+7.5V OK : Red
both outputs OK : Amber

Note: +5.4V output are separated into two paths, one path is in series with 10A rated auto fuse. +7.5 path is in series with one 1.0A rated auto fuse.

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REDUNDANT POWER SYSTEM
DZ400-RD SERIES
400 Watts or 300 Watts N+1
HOT SWAPPABLE, CURRENT SHARING SYSTEM

DESCRIPTION

The DZ400-XXRD uses Tri-Mag's standard DZ100 series units in a hot swappable redundant power system. With an active current sharing controller that monitors and adjusts the modules current for equal sharing, the DZ400-XXRD is configurable for a 100, 200, or 300 Watts redundant N+1 system for "Mission Critical" applications. The system comes in 12.0V, 15.0V, 24.0V, or 48.0V single output.

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *LED Indicator for Each Module*
- *Universal input 90VAC to 264VAC*
- *Redundant N+1 configuration*
- *Hot Swappable*
- *Uses Standard off-the-shelf Power Supplies*
- *Rackmount 1U height*
- *Easy Module replacements*

APPLICATIONS

- *"Mission Critical" application*
- *Telecommunication*
- *Industrial*
- *Medical (use DZ400M-RD series)*

GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..>0.95
Inrush Current (cold)……..…… Less than 20A at 115VAC or 40A at 230VAC cold start, 25°C
Operating Temperature……..……...-40 to 65ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling……..……27 CFM
Efficiency……..…..80-87% Typical
Holdup Time……>20ms
Overload Protection……..……..……. Reset

Safety (Modules):
Designed in full compliance with…….…...UL 60950-1

EMI……..……. …..EN55022 "B"
Harmonics……..……EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

INDIVIDUAL MODULES

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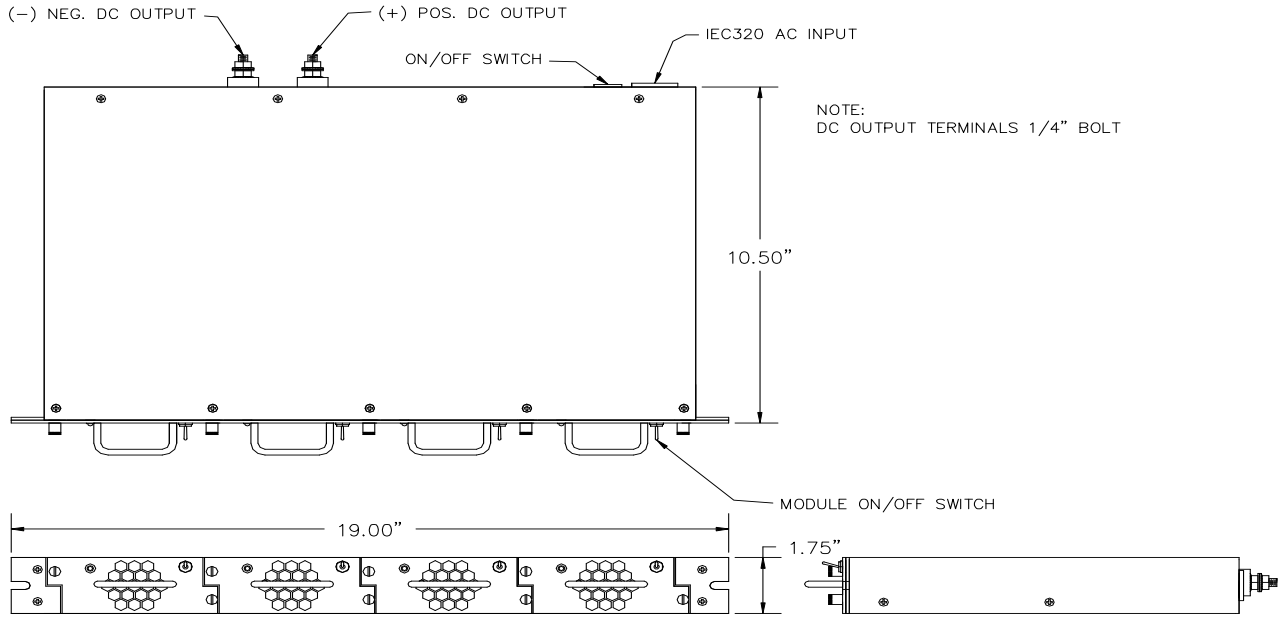
OUTPUT SPECIFICATIONS

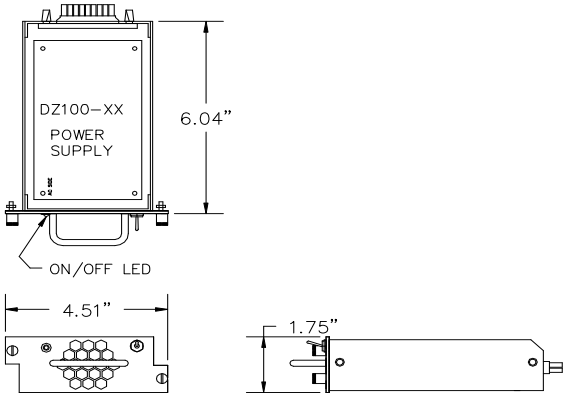
Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ400-7RD	400	+12V	0	33.4	37.5	1%	150 mV	±1%	±2%
DZ400-8RD	400	+15V	0	26.7	30	1%	150 mV	±1%	±2%
DZ400-9RD	400	+24V	0	16.7	18.8	1%	200 mV	±1%	±1.5%
DZ400-14RD	400	+48V	0	8.4	9.4	1%	200 mV	±1%	±1.5%

Medical grade available , add "M" to part number (DZ400M-7RD)

MECHANICAL SPECIFICATIONS



HOT SWAP MODULES



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REDUNDANT POWER SYSTEM
DZ1000-RD SERIES
1000 Watts/720 Watts N+1
HOT SWAPPABLE, CURRENT SHARING SYSTEM

DESCRIPTION

The DZ1000-RD Series uses Tri-Mag's standard DZ300 series units in a hot swappable redundant power system. With an active current sharing controller that monitors and adjusts the modules current, the DZ1000-XXRD is configurable for a 300, 600, or 720 Watts redundant N+1 system for "Mission Critical" applications. The system comes in a 5V, 12V, 15V, 24.0V, or 48.0V single output configuration.

FEATURES

- *EMI FCC Class B*
- *Power Factor Correction*
- *LED Indicator for Each Module*
- *Universal input 90VAC to 264VAC*
- *Redundant N+1 configuration*
- *Hot Swappable*
- *Uses Standard off the shelf Power Supplies*
- *Rackmount 1U height*
- *Easy Module replacements*

APPLICATIONS

- *"Mission Critical" application*
- *Telecommunication*
- *Industrial*
- *Battery charging system*

GENERAL SPECIFICATIONS

Input Voltage……..…... 90VAC to 264VAC
Input Frequency…….. 47Hz to 63Hz
Power Factor……..>0.95
Inrush Current (cold)……..…… Less than 30A at 115VAC or 60A at 230VAC cold start, 25°C
Operating Temperature……..……...0 to 70ºC
Storage Temperature……..…….. -20ºC to 85ºC
Cooling……..……72 CFM
Efficiency……..…..80-90% Typical
Holdup Time……>20ms
Overload Protection……..…….……Auto Recovery

Safety (Modules):
Designed in full compliance with…….…...UL 60950-1

EMI……..……. …..EN55022 "B"
Harmonics……..……EN61000-3-2 class D
EMS……...EN61000-4-2,-3,-4,-5,-6,-11

INDIVIDUAL MODULES

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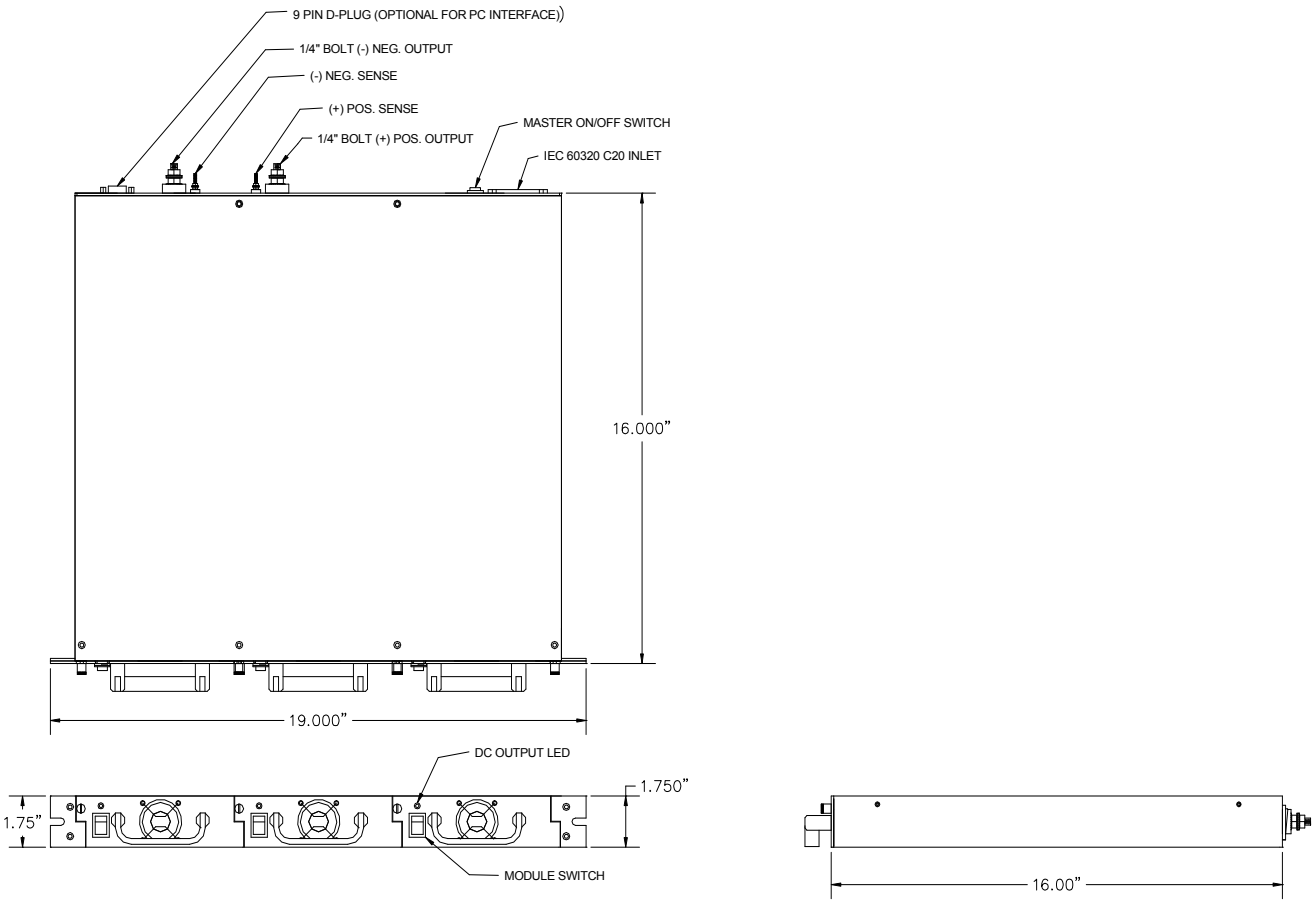
OUTPUT SPECIFICATIONS

Model	Watts	Voltage (Vdc)	Load (A)			Tolerance ±	Ripple & Noise	Regulation	
			Min.	Rate	Peak			Line	Load
DZ1000-7RD	1000	+12V	0	83.4	90	1%	150 mV	±1%	±2%
DZ1000-8RD	1000	+15V	0	66.7	72	1%	150 mV	±1%	±2%
DZ1000-9RD	1000	+24V	0	41.7	45	1%	200 mV	±1%	±1.5%
DZ1000-14RD	1000	+48V	0	20.8	22.5	1%	200 mV	±1%	±1.5%

MECHANICAL SPECIFICATIONS



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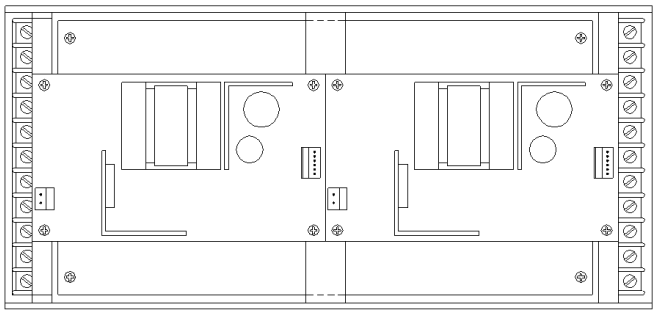
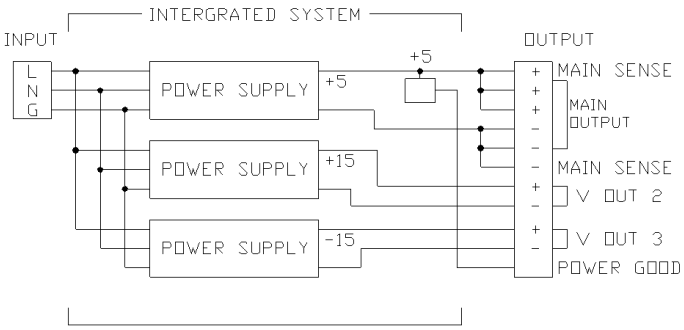
INTEGRATED POWER SUPPLIES

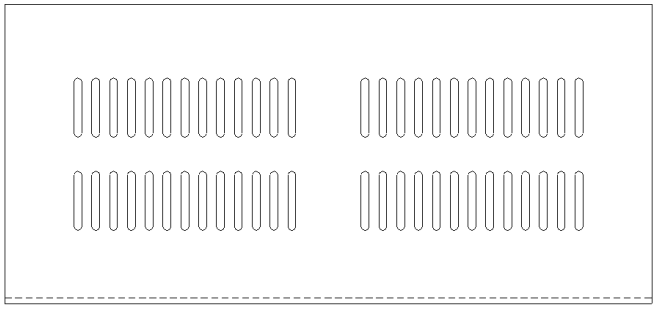
NOTE!

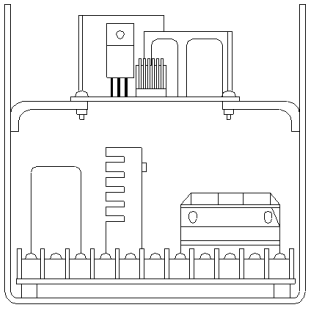
By combining any of the DZ series, or other Power Supplies, with our various DC-DC converters into a "U" shaped chassis, you will be able to select any combination of output voltages and currents that you need by using our Integrated Power Supply Package. For additional power we can parallel the units using a dynamic sense line feedback system that will "Or" the units together for N+1, or give you increased wattage without re-designing a new unit.

This is a low cost, fast turn-around alternative to a high cost, long lead time custom design multiple output power supply. Call the factory for details.









Power Supply Testing Method and Conditions

1. **+5V output is adjusted to +1% at rated load at factory.**

2. **Output Voltage Tolerance.** With nominal input voltage and 60% rated load for all output, the DC output voltage is measured with an accurate, calibrated DC Voltmeter. Output Voltage tolerance is the difference between the measured output voltage and specified nominal value in percent (%).

3. **Line Regulation.** Make and record the following measurements with rated output load at 25°C:
   a. Output voltage at nominal input line voltage.
   b. Output voltage at high line (input) voltage.
   c. Output voltage at low line (input) voltage.
   The line regulation is the maximum of the two deviations of output from the value at nominal input.

4. **Load Regulation.** Make and record the following measurements at nominal line voltage at 25°C:
   a. Output voltage with 60% rated load on the output to be measured. All other output set at rated load.
   b. Output voltage with +40% load change from 60% rated load. The load regulation is the difference between the two measured output voltages as a percent of output voltage at 60% rated load.

5. **Temperature Coefficient.** With the power supply in a temperature test chamber with rated output load, record the following measurements:
   a. Output voltage at 25°C ambient temperature.
   b. Adjust chamber for maximum operating temperature and allow the power supply to stabilize for 15 to 30 minutes, measure and record the output voltage.
   c. Adjust chamber for minimum operating temperature and allow the power supply to stabilize for 15 to 30 minutes, measure and record the output voltage.
   d. Divide each percentage voltage deviation from the 25°C ambient value by the corresponding tempera ture change from 25°C ambient.

6. **Output Ripple and Noise.** Output ripple and noise spike are measured with a 30MHz Bandwidth oscilloscope at the test point as follows:
   a. Directly at the output pins of the power supply without the use of the probe ground clip (See Fig. A).
   b. By using a 12-inch twisted pair of 16AWG copper wired and terminated with a 47µF capacitor of proper polarity and voltage rating. The oscilloscope probe ground lead should connect right to the ground ring on the probe and be as short as possible (See Fig. B).

Fig. A

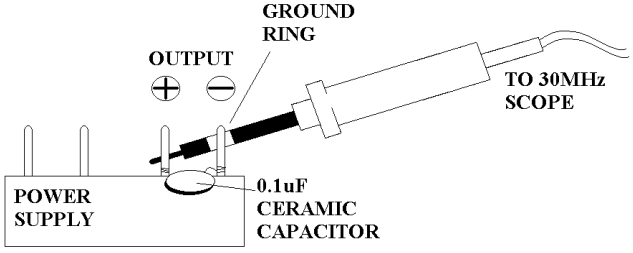
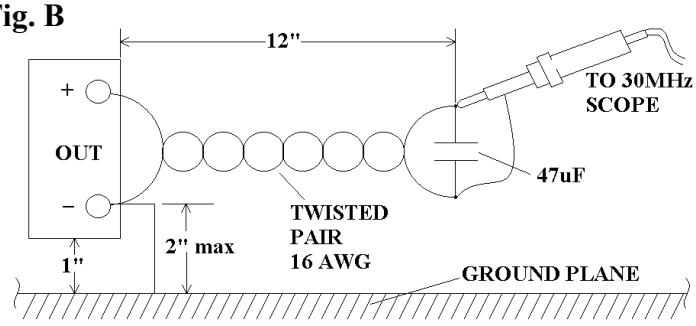


Fig. B



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- Custom Filters
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- Custom Terminal Blocks
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