

# DY090 SERIES

## 90 Watts For Medical & Industrial Applications

### 135 Watts Peak Current



#### DESCRIPTION

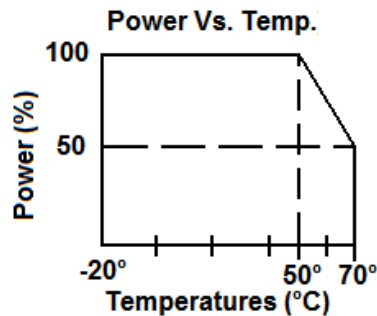
DY090 series is a universal input multiple output power supply. The series is a 90 watts power supply in the size of 3" x 5" with a wattage density of 4.7W/in<sup>3</sup>. The efficiency can reach up to 79-87% depending on model.

#### FEATURES

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

#### APPLICATIONS

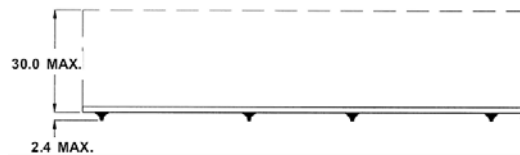
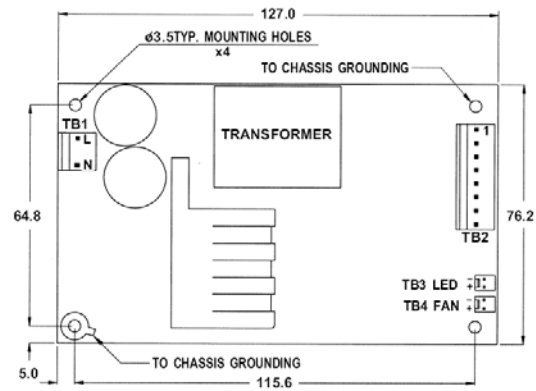
- Computer Peripherals
- Telecommunications
- Tape Drives
- Test Instrumentation Product
- Data Acquisition
- Medical & Dental



#### 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 70°C 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
Oversvoltage 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"



**TRI-MAG, Inc.**  
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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.

- Each output can provide up to peak load temporarily. Continuous staying in more than rated load is not allowed.
- At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
- Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
- Load regulation is defined by changing ±40% of measured output load from 60% rated load.
- The ripple and noise is measured by using 15MHz bandwidth limited oscilloscope and terminated each output with a 0.47 µF capacitor at rated load and nominal line.
- Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to 95% output voltage at rated load and nominal line.
- 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	+5V	+5V	+5V	+5V	GND	GND	GND	GND		
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)**

**ECS**



**EUS**



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 to choose from. The fully enclosed option help to reduce radiated noise.

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

\*Note DY040 pictured in chassis