Preliminary DATASHEET. For product review purpose only. The specs are subjected to change.

Medical / Industrial AC-DC Power Supply

65 W 2” x 3” / MEP-065A☐J BNA



MEP-065A

Highlights & Features

- 2" x 3" x 1.0" package with base
- Up to 10.83 W/inch^3 power density
- Up to 65 W output with natural convection cooling
- Analog voltage trimming
- Up to 85 °C operating temperature
- Up to 700KHrs MTBF
- 2 x MOPP isolation
- Suited for Type BF medical products.
- Class B conducted and radiated EMI
- Medical and IT safety approvals

Safety Certifications

E131881

Model Number: MEP-065A☐J BRA
Unit Weight: 0.130 kg (0.287 lb)
Dimensions (W × L × H): 50.8 x 76.2 x 25.4 mm (2.0 x 3.0 x 1.0 inch)

General Description

The MEP-065A offers 65W output power and 4 output voltage of 12 V, 15 V, 18 V and 24 V in a 2” x 3” footprint. It supports up to 65 W output power in a wide operating temperature ranging from -30°C to +85°C. Electric shock protection complying with 2 x MOPP, the MEP-065A offers reliable power supply for type BF medical equipment. The MEP-065A is certified with medical, IT and home appliance safety approvals, including UL/ TUV/ CE and CB certification, as well as EMC approvals to EN 55032 Class B.

Model Information

Model Number	Input Voltage	Output Voltage	Output Current
MEP-065A12J BNA	80-264 Vac	12 Vdc	5.42 A
MEP-065A15J BNA	80-264 Vac	15 Vdc	4.34 A
MEP-065A18J BNA	80-264 Vac	18 Vdc	3.61 A
MEP-065A24J BNA	80-264 Vac	24 Vdc	2.71 A

Model Numbering

						CC Code
MEP –	**065**	**A**	**☐**	**J**	**☐**	**BNA**
ME: Delta Medical Power Supply P: Open frame	Max Wattage in Product Series 65: 65 W	Family Code	Output Voltage (Single Output) 12 – 12V 15 – 15V 18 – 18V 24 – 24V	Family Code J: JST connector	Blank	Delta Standard, No conformal coating

All parameters are specified at 25°C ambient unless otherwise noted.
www.DeltaPSU.com (April 2026, Rev. S02)

Medical / Industrial AC-DC Power Supply

65 W 2” x 3” / MEP-065A□J BNA

Specifications

Input Ratings / Characteristics

Model Number		MEP-065A12J	MEP-065A15J	MEP-065A18J	MEP-065A24J
Nominal Input Voltage		100-240 Vac			
Input Voltage Range		80-264 Vac			
Nominal Input Frequency		50-60 Hz			
Input Frequency Range		47-63 Hz			
Input Current (max)		1.5 A @ 115 Vac, 1.0 A @ 230 Vac			
Efficiency @ full load (typ.)	@ 115 Vac	88.3%	88.3%	91.5%	91.5%
	@ 230 Vac	91.5%	91.5%	93.0%	93.0%
No load Power Consumption (typ.)		0.15 W @ 230 Vac			
Inrush Current (typ.)		60 A @ 230 Vac, cold start			
Earth leakage current (max)		0.5 mA @ NC, 1.0 mA @ SFC*1			
Touch current (max)		0.1 mA @ NC, 0.5 mA @ SFC*1			

*1 NC: normal condition, SFC: single fault condition

Output Ratings / Characteristics*2

Model Number	MEP-065A12J	MEP-065A15J	MEP-065A18J	MEP-065A24J
Nominal Output Voltage	12 Vdc	15 Vdc	18 Vdc	24 Vdc
Factory Set Point Tolerance	12 Vdc ± 1%	18 Vdc ± 1%	24 Vdc ± 1%	48 Vdc ± 1%
Output Voltage Adjustment Range	10.8-13.2 Vdc	13.5-16.5 Vdc	16.2-19.8 Vdc	21.6-26.4 Vdc
Output Current	5.42A	4.34A	3.61A	2.71A
Output Power (max)	65 W	65 W	65 W	65 W
Peak Power (max) for 10 sec	81.2W	81.3W	97.4W	98.4W
Line Regulation (max)	± 0.5%			
Load Regulation (max)	± 1%			
PARD*3 (20 MHz) (typ.)	120 mV	120 mV	150 mV	150 mV
Start-up Time (max)	2000 ms @ 115 Vac & 230 Vac			
Hold-up Time (typ.)	8 ms @ 115 Vac & 230 Vac (100% load)			
Rise Time (max)	10 ms @ 115 Vac & 230Vac			
Dynamic Response (Overshoot & Undershoot O/P Voltage)	± 10% @ with 5-100% load change, (50% duty @ 5 Hz & 10 KHz, 2.5 A/us slew rate)			
Start-up with Capacitive loads	8,000 µF Max	8,000 µF Max	8,000 µF Max	8,000 µF Max

*2 For power de-rating from > 50°C to 85°C, see power de-rating on page 3
*3 PARD is measured with an AC coupling mode, and in parallel to end terminal with 0.1 µF ceramic capacitor & 47 µF electrolytic capacitor. PSU need to burn in > 5 minutes.

Mechanical

Package	Open Frame
Dimensions (W x L x H)	50.8 x 76.2 x 25.4 mm (2.0 x 3.0 x 1.0 inch)
Unit Weight	0.130 kg (0.2687 lb)

Medical / Industrial AC-DC Power Supply

65 W 2” x 3” / MEP-065A☐J BNA

Cooling System		Convection
Terminal	Input	JST: B2P3-VH(LF)(SN) or equivalent
	Output	JST: B4P-VH(LF)(SN) or equivalent
Noise (15cm from power supply)		Sound Pressure Level (SPL) < 40 dBA

Environment

Surrounding Air Temperature	Operating	-30°C to +85°C (-40°C Cold Start)
	Storage	-40°C to +85°C
Temperature Power De-rating		>50°C de-rate power by 2% / °C Note: see power de-rating curves below
Line Power De-rating		< 90Vac de-rate power by 1.5% / Vac Note: see power de-rating curves below
Operating Humidity		5-95% RH (Non-Condensing)
Operating Altitude		Up to 5,000 meters (up to 16,400 feet or 106-54 kPa)
Shock Test (Non-Operating)		50 G, 11 ms, 3 shocks for each direction
Vibration (Non-Operating)		5-500 Hz, 2.09 Grms, 20 minutes for each three axis
Over Voltage Category		II
Pollution Degree		2

Power De-rating Curve

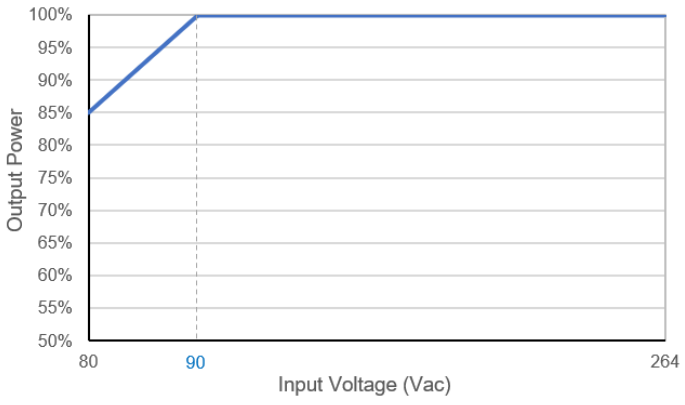


Figure 1. Power De-rating
< 90 Vac de-rate power by 1.5 % / Vac

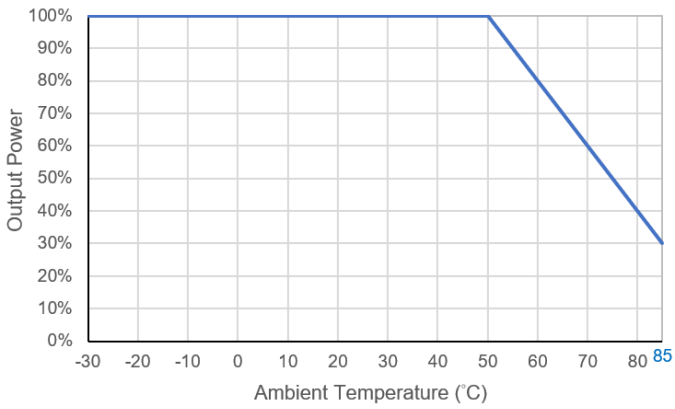


Figure 2. Line Power De-rating
> 50°C de-rate power by 2 % / °C

Medical / Industrial AC-DC Power Supply

65 W 2” x 3” / MEP-065A☐J BNA

Protections

Overvoltage	Main output 110-150% of rated normal voltage, Latch mode
Over load / Over current	Main output 105-225% of rated current, Hiccup Mode
Over Temperature	Latch Mode
Short Circuit	Hiccup Mode (Non-Latching, Auto-Recovery)
Protection Against Shock	Class I

Reliability Data

MTBF at 230 Vac, 100% load, 25 °C	700K hrs based on Telecordia SR-332
Operating life at 230 Vac, 50% load, 40 °C convection air	10 years

Safety Standards / Directives

Medical Safety		IEC60601-1 CB report TUV EN60601-1 ANSI/AAMI ES 60601-1+CAN/CSA-C22.2 No.60601-1
ITE Safety		IEC62368-1 CB report TUV EN 62368-1 UL 62368-1 and CAN/CSA C22.2 No. 62368-1
CE		In conformance with EMC Directive 2014/30/EU and Low Voltage Directive 2014/35/EU EN 60601-1: 2006 + A1: 2013 + A12: 2014 & EN 60601-1-2: 2015
Galvanic Isolation	Input to/Output (2XMOPP) Input to/Ground (1XMOPP) Output to/Ground (1XMOPP)	4000 Vac 2000 Vac 1500 Vac (Type BF application rated)

EMC

Emissions (CE & RE)		EN55032 Class B, AS/NZS CISPR32 Class B
Harmonic Current Emissions	IEC 61000-3-2	Meet Class A limit
Immunity to		
Voltage Flicker	IEC 61000-3-3	
Electrostatic Discharge	IEC 61000-4-2	Level 4 Criteria A[1)] Air Discharge: 15 kV Contact Discharge: 8 kV
Radiated Field	IEC 61000-4-3	Criteria A[1)] 80 MHz-2700 MHz, 10 V/m AM modulation
Electrical Fast Transient / Burst	IEC 61000-4-4	Level 3 Criteria A[1)]: 2 kV
Surge	IEC 61000-4-5	Level 4 Criteria A[1)] Common Mode[3)]: 4 kV Differential Mode[4)]: 2 kV
Conducted	IEC 61000-4-6	Level 2 Criteria A[1)] 150 kHz-80 MHz, 3 Vrms, 6 Vrms at ISM bands and Amateur radio bands

Medical / Industrial AC-DC Power Supply

65 W 2” x 3” / MEP-065A☐J BNA

Power Frequency Magnetic Fields	IEC 61000-4-8	Criteria A[1)] Magnetic field strength 30 A/m
Voltage Dips	IEC 61000-4-11	30% 10ms Criteria A, 60% 100ms Criteria B 100% 5000ms Criteria B
Voltage Dips[5)]	IEC 60601-1-2	Criteria A[2)] 0% U_T, 0.5 cycle (10 ms), (0°,45°,90°,135°,180°,225°,270°,315°,360°) Criteria B[2)] 0% U_T, 1 cycle (20 ms), 0° Criteria B[2)] 70% U_T, 25 cycle (500 ms), 0° Criteria B[2)] 0% U_T, 250 cycle (5000 ms), 0°

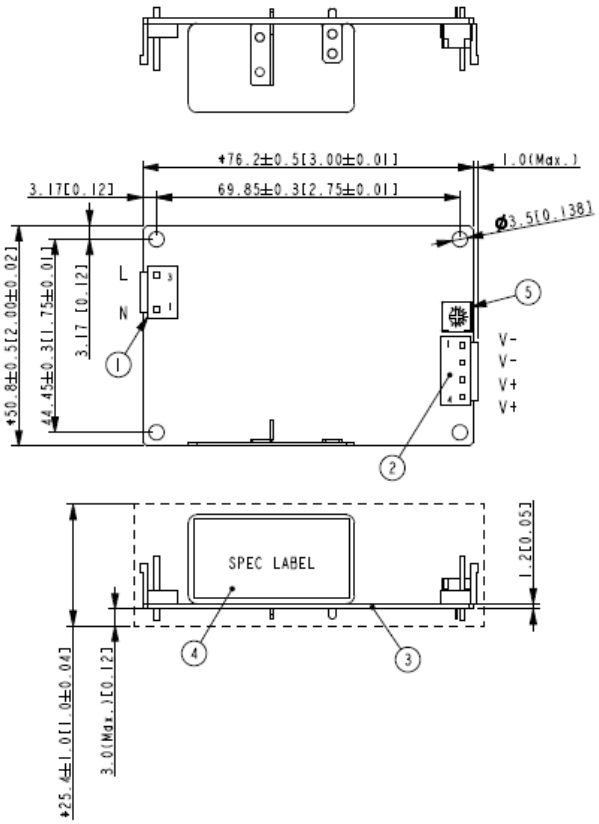
1) Criteria A: Normal performance within the specification limits
2) Criteria B: Output out of regulation, or shuts down during test. Automatically restored to normal operation after test.
3) Asymmetrical: Common mode (Line to earth)
4) Symmetrical: Differential mode (Line to line)

Medical / Industrial AC-DC Power Supply

65 W 2” x 3” / MEP-065A☐J BNA

Dimensions

L x W x H: 50.8 x 76.2 x 25.4 mm (2.0 x 3.0 x 1.0 inch)



TAB1. COMPONENT TABLE

ITEM	PART NAME	COLOR
1	AC INPUT (CN1) JST : B2P3-VH(LF)(SN) MATING WITH JST : VHR-3N	WHITE
2	DC OUTPUT (CN101) JST : B4P-VH(LF)(SN) MATING WITH JST : VHR-4N	WHITE
3	PCB	--
4	SPEC LABLE	WHITE
5	VARIABLE RESISTOR	--

TAB2. CONNECTOR PIN ASSIGNMENT

ITEM	PIN NO.	FNCTION
CN1	1	Neutral
	3	Line
CN101	1	V -
	2	
	3	V +
	4	

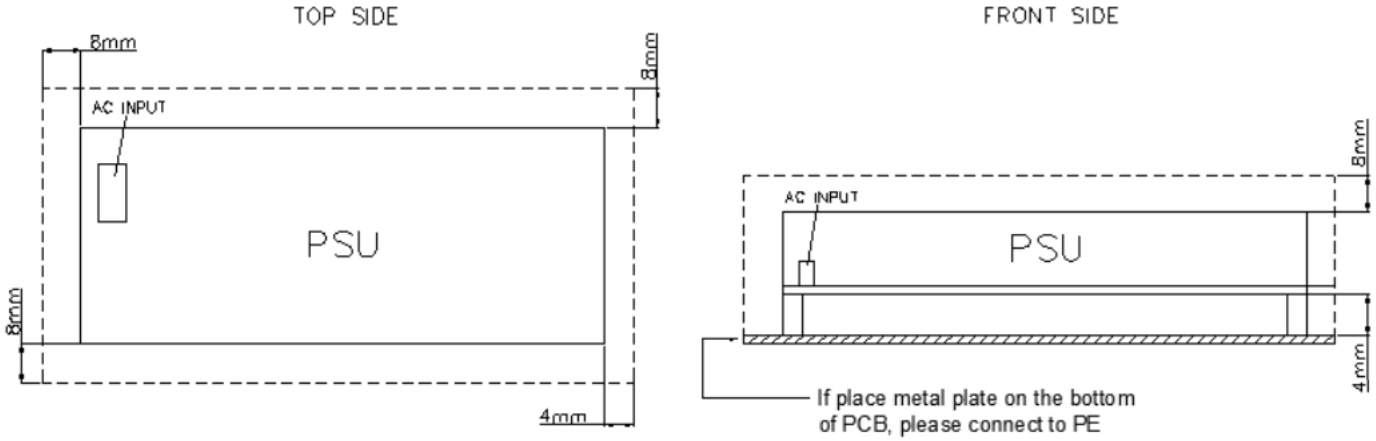
Notes:

- All dimensions are in millimeters and inches.
- VR: clockwise is to reduce the output voltage, anti-clockwise is to increase the output voltage.

Medical / Industrial AC-DC Power Supply

65 W 2” x 3” / MEP-065A☐J BNA

Assembly & Installation



For safety reasons, please ensure the mounted device is kept safety distance as below at all sides from other components and equipments.

a) For Open Frame Type ≥ 8 mm (0.315 inch) from primary side and ≥ 4 mm (0.16 inch) from secondary side.

Please insert an insulation sheet between the system and product, if the safety distance is less than 4 mm (0.16 inch).
If a metal plate is installed on the bottom of the PCB, it must be connected to PE.

Medical / Industrial AC-DC Power Supply

65 W 2” x 3” / MEP-065A□J BNA

Functions

Start-up Time

The time required for the output voltage to reach 90% of its final steady state value, after the input voltage is applied.

Rise Time

The time required for the output voltage to change from 10% to 90% of its final steady state value.

Hold-up Time

Time between the collapse of the AC input voltage, and the output falling to 90% of its steady state value.

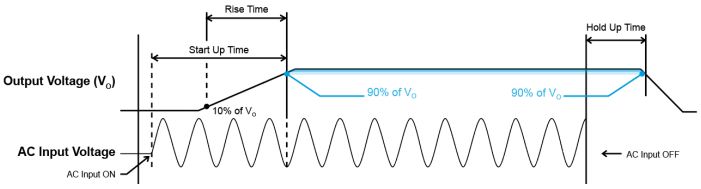


Figure 6. Time Sequence

Dynamic Response (Main Output)

The power supply output voltage will remain within ±10% of its steady state value, when subjected to a dynamic load 5% to 100% of its rated current.

■ **5% to 100% Load**

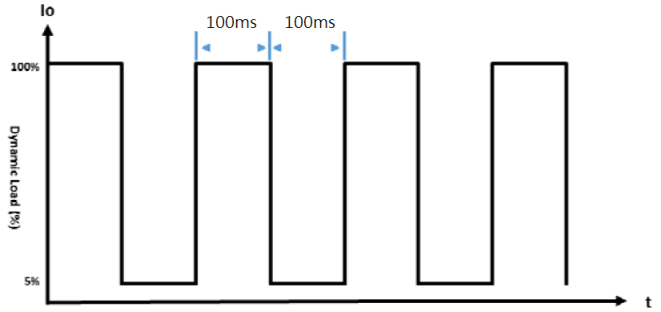


Figure 7-1. Dynamic Load (5 Hz)

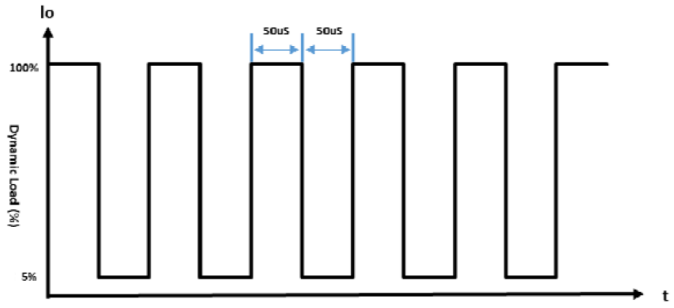


Figure 7-2. Dynamic Load (10K Hz)

Inrush Current

Inrush current is the input current that occurs when the input voltage is first applied. For AC input voltages, the maximum peak value of inrush current will occur during the first half cycle of the applied AC voltage. This peak value decreases exponentially during subsequent cycles of AC voltage.

Overvoltage Protection

The power supply’s overvoltage circuit will be activated when its internal feedback circuit fails. The output voltage shall not exceed its specifications defined on Page 5 under “Protections”. Power supply will latch off, and require removal/re-application of input AC voltage in order to restart.

Overload & Over current Protections

The power supply’s Overload (OLP) and Over current (OCP) Protections will be activated before output current under 225% of I_O (Max load). Upon such occurrence, V_O will start to drop. Once the power supply has reached its maximum power limit, the protection will be activated and the power supply will go into “Hiccup mode” (Auto-Recovery). The power supply will recover once the fault condition causing the OLP and OCP is removed and I_O is back within the specified limit.

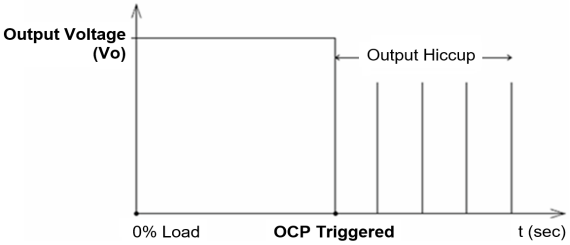


Figure 8. Hiccup at OLP/OCP

Additionally, if the Iout is >100% for a prolong period of time (depending on the load), the Over Temperature Protection (OTP) may be activated due to high temperature on critical components. The power supply will then go into latch mode.

Short Circuit Protection

Output OLP/OCP function also provides protection against short circuits. When a short circuit is applied, the output current will operate in “Hiccup mode”, The power supply will return to normal operation after the short circuit is removed.

Over Temperature Protection

As mentioned above, the power supply also has Over Temperature Protection (OTP). This is activated when the overload condition persists for an extended duration and the output current is below the overload trigger point but >100% load. In the event of a higher operating temperature condition at 100% load, the power supply will run into OTP when the surrounding air temperature is higher than the operating temperature. When activated, the output voltage will go into latch mode until the input voltage is removed; then, reapplied, and the surrounding air temperature drops to its normal operating temperature.

Voltage Adjustment

The power supply provides a potentiometer for user to adjust the output voltage. The output voltage is designed to be able to adjust up to 10% of rated voltage, when the output is adjusted below nominal value, the maximum output current is the same as the nominal output, when the output is adjusted above nominal value, the output power cannot exceed the nominal maximum power (the maximum output current will be reduced accordingly).

Medical / Industrial AC-DC Power Supply

65 W 2” x 3” / MEP-065A☐J BNA

Certificate

All Delta Medical Power products conform to the European directive 2011/65/EU.

ROHS is the abbreviation for “Restriction of the use of certain hazardous substances”

Delta has been certified as meeting the requirement of ISO 13485: 2003 and EN ISO 13485:2012 for the design and manufacture of switching power supply and adaptor for medical device.

In addition to a UL Total Certification Program (TCP) approved client laboratory for IEC60950 and IEC60065. Delta also has participated UL Client Test Data Program (CDTP) for IEC 60601

E356265

Attention

Delta provides all information in the datasheets on an “AS IS” basis and does not offer any kind of warranty through the information for using the product. In the event of any discrepancy between the information in the catalog and datasheets, the datasheets shall prevail (please refer to www.DeltaPSU.com for the latest datasheets information). Delta shall have no liability of indemnification for any claim or action arising from any error for the provided information in the datasheets. Customer shall take its responsibility for evaluation of using the product before placing an order with Delta.

Delta reserves the right to make changes to the information described in the datasheets without notice.

Manufacturer and Authorized Representatives Information

Manufacturer

Taiwan
Delta Electronics, Inc.
3 Tungyuan Road, Chungli Industrial Zone, Taoyuan County
32063, Taiwan

Authorized Representatives

The Netherlands
Delta Greentech (Netherlands) B.V.
Zandsteen 15, 2132 MZ Hoofddorp, The Netherlands

United Kingdom
Delta Electronics Europe Limited
1 Redwood Court, Peel Park Campus,
East Kilbride, Glasgow, G74 5PF, United Kingdom