

iStarUSA™

400W AC-DC PFC MEDICAL & ITE DEGREE POWER SUPPLY CP-M0402DE DUAL OUTPUT SERIES



CP-M0402DE Series (Enclosed Type): 9(L) x 5(W) x 1.6(H) inches.

FEATURES:

- ◆ Both Medical & ITE Safety Approvals
- ◆ Power Factor Corrected to EN61000-3-2 class D
- ◆ 3.3/ 5/ 12/ 24V Dual Output Optional Combinations
- ◆ 1U height size and High power density: 6.25 watts/cu inches

PRODUCT SPECIFICATIONS:

Input Voltage: 90-264Vac full range, 47~63Hz.

Input Current: 6.35A at 90VAC full load.

Inrush Current: 35A Max @ 230VAC with full load and cold start.

PFC: Active power factor correction meet EN61000-3-2 class D.

Fan Drive: 12VDC/400mA is available to drive an external fan.

Transient Response: Returns to within 1% in less than 2.5mS for a 50% load change and the peak transient does not exceed 5%.

Overshoot: Turn-on/off not exceed 5% over nominal voltage.

Efficiency: 75% minimum (Measuring at 230V and full load).

Turn On Delay: 1 second maximum at 120 VAC.

Hold Up Time: 20mS min. at 80% of full load.

Adjustability: Output user adjustable +/-5% minimum.

Remote Sense: Designated **RS+** and **RS-** on the CN3.

Remote On-Off: Designated as **RSW** on the CN3, requires a low signal to inhibit output.

Power Supply On: Green LED designated as **LED 1** on the PCB.

LED display: Bi-color green **LED** in front panel;

Any protection occurred or RSW applied low signal will emit orange.

Power Good: Designated as **PG** on the CN3 will go high 100-500mS after regulation and goes low 1mS before loss of regulation.

Input Circuit Protection (primary): Two T8A/250V fuses inserted.

Input Voltage Protection: Power shut down under 80 +/-5Vac, and recovered over 86Vac.

Over-Power Protection: C.C. mode 110-140% and auto-recovery.

Over-Voltage Protection: Latching down will occur when output voltage exceed 130% and recycle AC input to reset.

Over Temp. Protection: Protected at ambient 85C; Auto-recovery.

Short Circuit Protection: Trip without damage and auto-recovery.



Switching Frequency: 30KHZ fixed frequency.

Operating Temperature: 0 to 70°C ambient, de-rating at 2.5% per degree from 50°C to 70°C.

Storage Temperature: -20 to 85 degrees C.

Operating Humidity: 5% to 90% RH, Non-condensing.

Storage Humidity: 5% to 95% RH, Non-condensing.

Vibration: Frequency 5 to 50 Hz, acceleration +/-7.35 M/(SxS) on X,Y and Z Axis.

Emissions: FCC Part 15, CISPR 22 class B, Conducted.

Safety Regulation: Approved to UL60950-1/ 60601-1, CSA C22.2 No. 60950-1-03/ 601.1-M90, TUV EN60950-1/ 60601-1, CE Mark (LVD) EN61204-3/ 60601-1-2/ 61000-3-2,3 & IEC61000-4 Series Regulations and CB.

Leakage Current: Medical degree 300uA; ITE degree is 1.5mA;

HI-POT Test: 1500 VAC between input line and chassis (2mA DC cut off current); 4000VAC between primary and secondary windings; Primary to core 1500VAC. All for 3 sec.

Grounding Test: Apply 40 A from ground pin to the earthed connection point. Maximum allowable resistance is 0.1ohm.

Warranty: 2 years.

MTBF: 100000 Hrs (according to MIL-HBK-217F) at 30°C.

Cooling: CP-M0402DE Series: Enclosed with side built-in fan @400W max.

Burn in: 45 +/- 5 degree C for 1 hour @230Vac with full load.

Enclosure: CP-M0402DE Series: 9(L) x 5(W) x 1.6(H) inches.

Weight: CP-M0402DE Series: 1.6KG.

OUTPUT VOLTAGE / CURRENT RATING CHART: Measured at output power connector.

Model Number	Output Voltage	Max. Output Current	Total Regulation	Ripple & Noise
CP-M0402DE0312	V1: +3.3V	40A	+/- 5%	+/-1%
	V2: +12V	25A	+/- 5%	+/-1%
CP-M0402DE0324	V1: +3.3V	40A	+/- 5%	+/-1%
	V2: +24V	12.5A	+/- 5%	+/-1%
CP-M0402DE0512	V1: +5V	40A	+/- 5%	+/-1%
	V2: +12V	25A	+/- 5%	+/-1%
CP-M0402DE0524	V1: +5V	40A	+/- 5%	+/-1%
	V2: +24V	12.5A	+/- 5%	+/-1%
CP-M0402DE1224	V1: +12V	25A	+/- 5%	+/-1%
	V2: +24V	12.5A	+/- 5%	+/-1%

NOTE:

* CP-M0402DEy Series where y = **0312, 0324, 0512, 0524, and 1224**

* 10% minimum load is required for all outputs to maintain the ripple and regulation. Output is fully isolated.

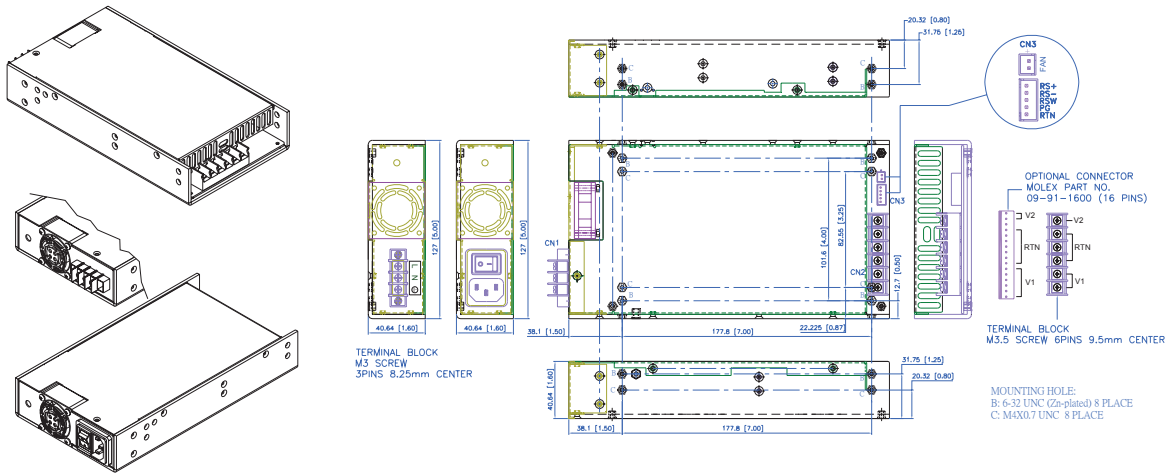
* Total combined power of V1 and V2:

CP-M0402DE1224: 400W

Other CP-M0402DEy: 300W

OUTLINE DRAWING:

CP-M0402DE Series (Enclosed with built-in Fan Type): 9(L) x 5(W) x 1.6(H)inches; Weight: 1.6kg.



I/O Connector pin assignment:

AC Input Connector(CN1):

CP-M0402DE Series: IEC320 or equivalent Snap-in mounting type or DINKLE Terminal block (DT-35-A02W-03).

Output Connector (CN2): Mating Molex 16 pins (09-91-1600), or Howder (HD-121-6P) M3.5, 8 pins terminal block, 9.5MM Center.

Output Pin Assignment: (See below table).

Logic signal connectors (CN3):

Mating JST XHP-5 or equivalent (CHYAO SHIUNN JS-2001-05).

Mating Pins: JST SXH-002T-P0.6 FOR AWG 30 to 26.

Mounting Inserts: 6-32, M4 4 Places individually with maximum penetration 0.15" on bottom side and 0.25" on both side.

	V1	V2	RTN
MOLEX	PINS 1-6	PINS 14-16	PINS 7-13
HOWDER	PINS 1-2	PINS 6	PINS 3-5