MCC750 Series

750 W AC-DC Power Supplies

The MCC750 Series of AC-DC power supplies provides up to 750 W of regulated output power through wide input voltage range 85 – 305 VAC in a single output of 24 VDC or 48 VDC. The natural convection cooling operation (without fan), is particularly suitable for environments sensitive to acoustical noise.

The MCC750 Series comes in two U-shaped 1.6” high packages, with and without a protective cover, offering 12 and 5 VSB standby outputs and a full set of protection features.

The MCC750 Series supports digital power management over the Power Management Bus communications protocol. Multiple units may be connected in parallel for redundancy and / or higher power, enabled with the internal OR-ing and current sharing functions.

The MCC750 Series complies with the latest edition of the IEC/EN 60601-1 safety standards for medical equipment requiring 2x MoPP protection grade and displays the CE-Mark for the European Low Voltage Directive (LVD).

Key Features & Benefits

- Universal input voltage range
  90 – 305 V_{AC}, MoOP; 90 – 264 V_{AC}, MoPP
- Input inrush current limiting
- 750 W rated power (900 W peak for <10 s)
- High efficiency up to 94%
- 24 VDC / 48 VDC output voltage available
- Active PFC, EN61000-3-2 compliant (Class C, >25% load)
- Low earth / touch leakage current
- Natural convection cooling
- Over temperature, OV, OC and SC protections
- +12 V, 0.5 A; +5 V, 1 A Stand by outputs
- Built-in current sharing and OR-ing for parallel operation and N+1 redundancy
- Power good and remote sense signals
- Remote On / Off signal
- Power Management Bus communication protocol supported
- Medical safety approval to IEC 60601-1 3rd edition, 2x MoPP rated and BF appliances compatible
- IEC 60601-1-2 4th edition EMC compliant

Applications

- X-Ray / CT Scanner
- Dental Equipment
- Laboratory / Analysis Equipment
- Medical Devices / Applications

1. MODEL SELECTION

MODEL NUMBER	PACKAGE & COOLING	INPUT VOLTAGE RANGE [VAC]	NOM. OUTPUT VOLTAGE [VDC]	MAX. OUTPUT POWER [W]	MAX. OUTPUT CURRENT [A]	DIMENSIONS
MCC750-1T24	U-chassis Natural Convection	85 - 305	24	750	31.2	101.6 x 234.0 x 41.0 mm 4.00 x 9.21 x 1.61 in
MCC750-1T48	U-chassis Natural Convection	85 - 305	48	750	15.6	101.6 x 234.0 x 41.0 mm 4.00 x 9.21 x 1.61 in
MCC750-1T24-PC	U-chassis + Protective Cover Natural Convection	85 - 305	24	750	31.2	101.6 x 234.7 x 41.0 mm 4.00 x 9.24 x 1.61 in
MCC750-1T48-PC	U-chassis + Protective Cover Natural Convection	85 - 305	48	750	15.6	101.6 x 234.7 x 41.0 mm 4.00 x 9.24 x 1.61 in

2. INPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	MIN	NOM	MAX	UNIT
AC Input Voltage	PS starts at 85 V_{AC} at all load conditions Operating input voltage range MCC750 Series is designed to operate with a square or trapezoidal input voltage wave form (i.e. from UPS)	85	100-277	305	V_{RMS}
DC Input Voltage	Built in fuses safety certified up to 250 V_{DC}. Operating the MCC750 above that limit up to 300 V_{DC}, does require an external fuse protection *	120	-	300	V_{DC}
Input Frequency		47	50/60	63	Hz
Input Current	At 180 V_{AC}, 750 W, 50 / 60 Hz At 85 V_{AC}, 600 W load, 50 / 60 Hz 163 V_{DC}, maximum load 120 V_{DC}, 650 W	-	-	5.0 8.7 5.6 6.0	A_{RMS} A
Inrush Current	At power-on asserted Cold start, 25 °C ambient, full load Any point of the AC input sine 230 V_{AC} 277 V_{AC}	- -	- -	30 50	A
Fusing	High breaking, 16 / 20 A, 277 V_{AC} (250 V_{DC}) on each AC line.	-	-	16 / 20	A
Efficiency	At 120 V_{AC} 20% rated load At 120 V_{AC} 50% rated load At 120 V_{AC} 100% rated load At 230 V_{AC} 20% rated load At 230 V_{AC} 50% rated load At 230 V_{AC} 100% rated load	85 92 92 87 93 94	- - - - - -	- - - - - -	%
Input Power Consumption	At power on, no load, 100-277 VAC range Stand by, no load, nominal 100-277 VAC range	- -	6.0 3.5	- -	W
Power Factor	Any nominal input line voltage, 50/60 Hz, from 50 to 100% maximum load	0.95	-	-	-
THDi	From 50 to 100% rated load, 100-277 V_{AC},50/60 Hz.	-	-	20	%
Harmonic Current Fluctuations and Flicker	Complies with EN 61000-3-2 at 230 V_{AC}, 50/60 Hz, Class A, D. Complies with EN 61000-3-2 Class C at 230 V_{AC}, 50/60 Hz, >300 W load. Complies with EN 61000-3-3 at nominal voltages and full load.				
Earth Leakage Current	Normal conditions 115 V_{RMS}, 60 Hz 230 V_{RMS}, 50 Hz 264 V_{RMS}, 60 Hz (worst case)	- - -	150 170 -	- - 400	µA
Touch Leakage Current	264 V_{RMS}, 60 Hz Normal Condition (NC) Single Fault Condition (SFC)	- -	- -	100 500	µA
Patient Leakage Current	264 V_{RMS}, 60 Hz Normal Condition (NC) Single Fault Condition (SFC)	- -	- -	100 500	µA

* Suggested fuse SIBA 5012434.16 and fuse holder SIBA 5105805.1