

MCHQ100 series

100W Constant Voltage Single Output LED Power Supply



■ Features:

- Universal AC Input / Full Range
- Protections: Short circuit / Over load / Overvoltage / Over temperature
- Cooling by free air convection
- Built-in active PFC function
- IP67 design for indoor and outdoor applications
- Compliance to worldwide safety regulations for lighting



ELECTRICAL SPECIFICATION

MODEL	MCHQ100V12	MCHQ100V24
OUTPUT		
RATED VOLTAGE	12V	24V
RATED CURRENT	8.33A	4.17A
POWER RANGE	1 ÷ 100W	
RATED POWER	100W	100W
LINE REGULATION	± 1%	
LOAD REGULATION	± 1%	
VOLTAGE TOLERANCE [3]	11.4 ÷ 12.6V	23 ÷ 25V
RIPPLE & NOISE (max.) [2]	440mV _{p-p}	680mV _{p-p}
SETUP, RISE TIME [4]	600ms, 50ms / 115VAC	
HOLD UP TIME (typ.)	30ms / 230VAC at full load	
INPUT		
VOLTAGE RANGE	90 ÷ 264VAC	
FREQUENCY RANGE	47 ÷ 63Hz	
POWER FACTOR (typ.)	PF > 0.94 / 230VAC at full load	
EFFICIENT (typ.)	87%	90%
AC CURRENT (typ.)	1.35A/115VAC, 0.7A / 230VAC	
INRUSH CURRENT (typ.)	80A / 230VAC(25°C)	
LEAKAGE CURRENT (max.)	1mA / 230VAC	
PROTECTIONS		
OVER CURRENT	Range: 110 ÷ 160% rated current	
	Type: Constant current limiting, auto-recovery.	
SHORT CIRCUIT	Type: hiccup mode, auto-recovery.	
OVER VOLTAGE	14 ÷ 20V	28 ÷ 36V
	Type: shut down output voltage, re-power on to recovery.	
OVER TEMPERATURE	Range: chip junction temperature control	
	Type: shut down output voltage, re-power on to recovery.	

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ENVIRONMENT

WORKING TEMPERATURE	-20°C ÷ 45°C
WORKING HUMIDITY	20 ÷ 98% RH non-condensing
STORAGE TEMPERATURE AND HUMIDITY	-30°C ÷ 70°C, 10 ÷ 98% RH non-condensing
TEMPERATURE COEFFICIENT	± 0.05% / °C (-20°C ÷ 45°C)
VIBRATION	10 ÷ 500Hz, 5G, 12min / cycle, period for 30min. each along X, Y, Z axes
IP PROTECTION	IP67

SAFETY & EMC REGULATIONS

SAFETY STANDARDS	Compliance to EN61347-1, EN61347-2-13 (TUV Certificate No. R 50199045)
WITHSTAND VOLTAGE	I-P/O-P: 5.3kVDC/1min; I-P/FG: 2.7kVDC/1min; O-P/FG: 0.7kVDC/1min
ISOLATION RESISTANCE	I-P/O-P; O-P/FG; I-P/FG: 50MΩ/500VDC/25°C/70%
EMC EMISSION	Compliance to EN55015 (TUV Certificate No. CC 5020998)
EMC IMMUNITY	Compliance to EN61547; EN55024; EN61000-4-2, -3, -4, -5, -6, -8, -11 (TUV Certificate No. CC 5020998)
HARMONIC CURRENT	Compliance to EN61000-3-3; EN61000-3-2 class C(100% load), (TUV Certificate No. CC 5020998)

OTHERS

MTBF	330 000 hrs MIL-HDBK-217F (25°C)
DIMENSIONS	230 x 87 x 42mm
WEIGHT AND PACKING	1.25kg; 15szt./box; box weight and dimensions: 19.7kg, 33 x 24.5 x 30.5cm

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF i 47μF parallel capacitor.
3. Tolerance includes set up tolerance, line regulation and load regulation.
4. Setup and rise time is measured from 0 to 90% rated output voltage.
5. Power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment must be re-qualify to comply with EMC Directives.

MECHANICAL SPECIFICATION

