MCHQ80V-GA series

80W LED Switching Power Supply (CV+CC) with output voltage and current level adjustment

■ Features:

- Constant voltage / Constant current mode
- Universal AC input range (max. 305VAC)
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- High surge protection: 4kV – differential mode, 6kV – common mode
- IP65 protection class
- Suitable for dry, humid and rainy environment

CONSTANT CURRENT
CONSTANT VOLTAGE
SELV IP65

ELECTRICAL SPECIFICATION

MODEL	MCHQ80V12-GA	MCHQ80V24-GA
OUTPUT		
Rated Voltage	12V	24V
Rated Current	6.67A / 200 ÷ 240VAC, 277VAC	3.33A / 200 ÷ 240VAC, 277VAC
	6.25A / 100 ÷ 200VAC	3.125A / 100 ÷ 200VAC
Voltage Adjustment Range – Vadj potentiometer	10.5 ÷ 13.5V	22 ÷ 26V
Current Adjustment Range – Iadj potentiometer	3.2 ÷ 6.66A	1.6 ÷ 3.33A
Minimum voltage for Constant Current mode	7.2V	14.4V
Rated power	80W / 200 ÷ 277VAC; 75W / 100 ÷ 200VAC	
Line Regulation	± 1%	
Load Regulation	± 2%	
Current Accuracy	± 5%	
Voltage ripple (pk-pk)	± 2%	
Current ripple (pk-pk)	± 5%	
Setup, Rise time	400ms, 100ms / 230Vac	

INPUT	
Voltage Range	90 ÷ 305Vac (refer to Derating Curve)
Frequency Range	47 ÷ 63Hz
AC current (max.)	0.42A / 110VAC; 0.81A / 230VAC
Inrush current (max.)	60A / 230VAC(25°C)
Power Factor (typ.)	PF > 0.97 / 230VAC at full load (refer to PF curve)
THD (max.)	THD < 8.5% / 230VAC at full load (refer to THD curve)
Efficiency (typ.)	88.5%
Leakage Current (max.)	0.7mA / 230VAC at full load
No load power consumption (max.)	0.5W / 230VAC

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PROTECTIONS

Over load	Range: 110 ÷ 160% rated load
	Type: constant current limiting to 60% rated voltage next hiccup mode. Recovers automatically after fault condition is removed.
Short Circuit	Type: hiccup mode. Recovers automatically after fault condition is removed.
Over Voltage	Range: 150% rated voltage
	Type: shut down output voltage. Re-power on to recovery.
Over Temperature	110°C
	Type: shut down output voltage. Re-power on to recovery.

WORKING ENVIRONMENT

Working Temperature	-40°C ÷ 70°C; tc=90°C (refer to derating curve)
Working Humidity	10 ÷ 90% RH non-condensing
Storage Temperature and Humidity	-40°C ÷ 85°C, 5 ÷ 95% RH non-condensing

SAFETY and EMC STANDARDS

Safety Standards	Compliance to EN61347-1, EN61347-2-13 , EN 62493
EMC emission	Compliance to EN55015
EMC Immunity	Compliance to EN61547
Harmonic Current	Compliance to EN61000-3-2, EN61000-3-3
Withstand Voltage	IN/OUT: 3200VAC / 5mA, 60s
	IN/GND: 1600VAC / 5mA, 60s
	OUT/GND: 1000VAC / 5mA, 60s
Insulation Resistance	IN/OUT: ≥ 10MΩ / 500VDC
Grounding Resistance	≤ 0.1Ω / 25A, 1min
IP Protection Class	IP65

OTHERS

MTBF	200 000 hours / 25°C, full load, according to MIL-HDBK-217F
Lifetime	55 000 hours / 230VAC, full load, tc=75°C
Dimensions	172 x 52.9 x 36.5mm (L x W x H)
Weight and packing	0.46kg; 15pcs./box; box weight and dimension: 8.9kg; 26.5x21.5x25.5cm
Primary cable	H05RN-F 105°C 3Gx1.0mm^2, length = 300 ± 30mm
Secondary cable	12V: SJTW, 2*18AWG / 2*0.824mm^2, 105°C, length = 300 ± 30mm
	24V: SJTW, 2*18AWG / 2*0.824mm^2, 105°C, length = 300 ± 30mm
EAN Code	5 902135 139363
	5 902135 139370

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2.Power supply is considered as component not indented to apply by end-user. Power supply meets safety and EMC standards however the final equipment with power supply must be re-quality to comply with EMC Directives.

MECHANICAL SPECIFICATION

INPUT

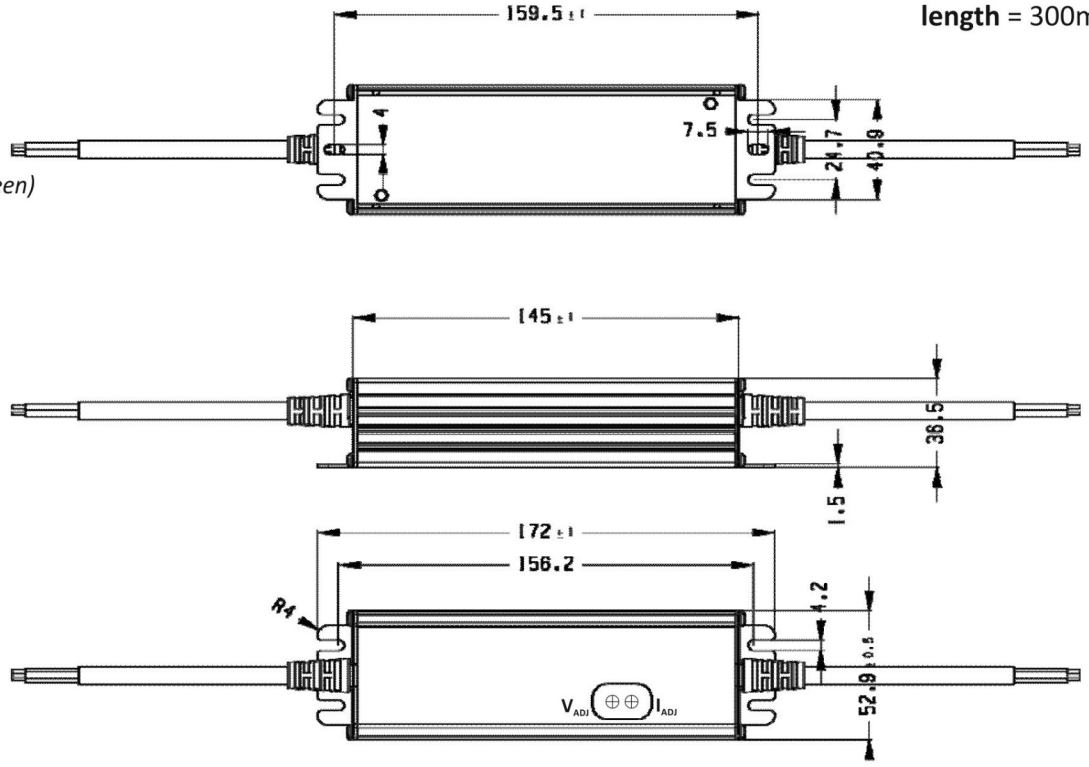
H05RN-F 105°C 3Gx1.0mm^2
length = 300mm ± 30mm

***AC/L**(brown)*
***AC/N**(blue)*
***GND**(yellow-green)*

OUTPUT

12V: SJTW, 2*18AWG / 2*0.824mm2, 105°C
24V: SJTW, 2*18AWG / 2*0.824mm2, 105°C
length = 300mm ± 30mm

***V+** (white)*
***V-** (black)*



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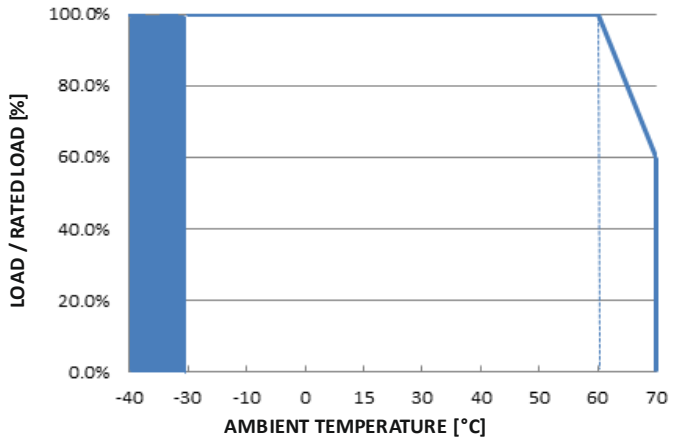
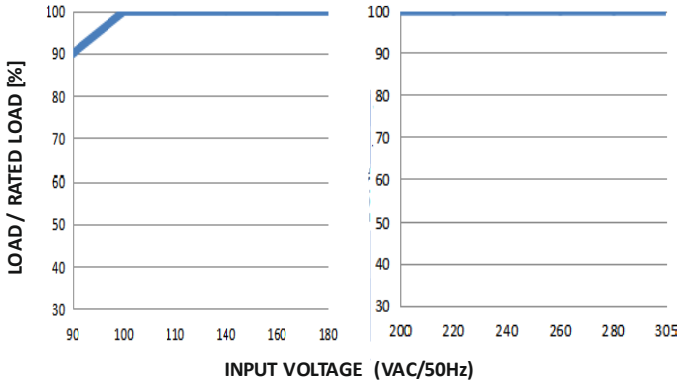
CHARACTERISTICS

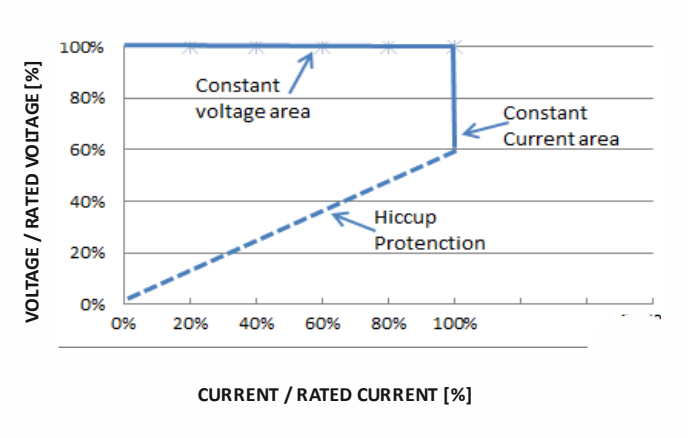
DERATING CURVE



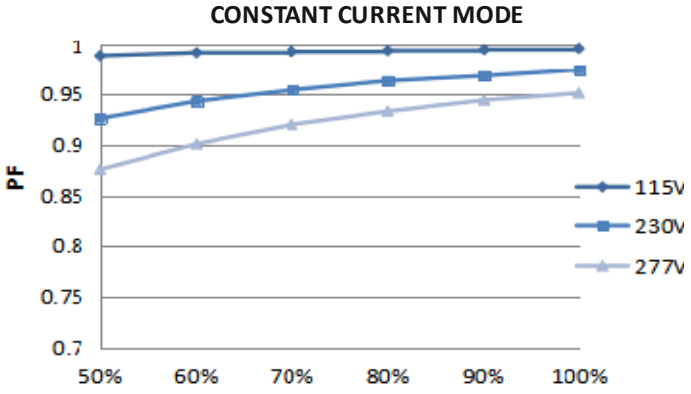
STATIC CHARACTERISTICS



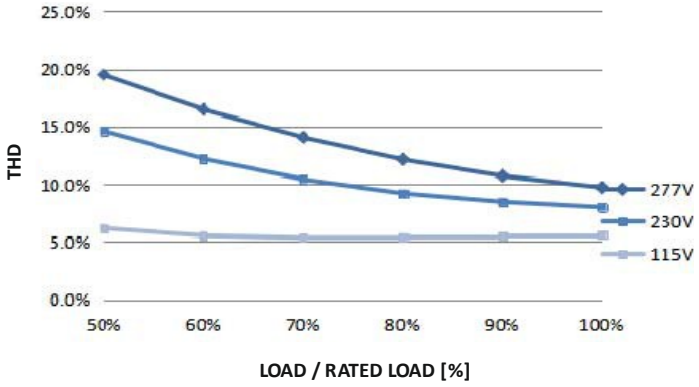
I-V CURVE



PF CURVE



THD Curve



EFFICIENCY CURVE