

# MCHQ200V-GE series

200W Constant Voltage LED Switching Power Supply



## ■ Features:

- Constant voltage design
- European 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
- IP67 protection class
- Suitable for dry, humid and rainy environment



CONSTANT VOLTAGE **SELV IP67** **PFC** **110** **M** **M** **UK** **CA** **CE** **E**

## ELECTRICAL SPECIFICATION

MODEL	MCHQ200V12-GE	MCHQ200V24-GE					
<b>OUTPUT</b>							
<b>RATED VOLTAGE</b>	12V	24V					
<b>RATED CURRENT</b>	16.6A	8.33A					
<b>RATED POWER</b>	200W	200W					
<b>LINE REGULATION</b>	± 1%	± 1%					
<b>LOAD REGULATION</b>	± 1%	± 1%					
<b>VOLTAGE RIPPLE (PK-PK)</b>	± 2%	± 2%					
<b>SETUP, RISE TIME</b>	100ms, 300ms / 230Vac	100ms, 300ms / 230Vac					
<b>INPUT</b>							
<b>VOLTAGE RANGE</b>	180 ÷ 305Vac (refer to Derating Curve)						
<b>FREQUENCY RANGE</b>	47 ÷ 63Hz						
<b>POWER FACTOR (TYP.)</b>	PF > 0.98 / 230VAC at full load (refer to PF curve)						
<b>THD (MAX.)</b>	10% / 230VAC at full load (refer to THD curve)						
<b>EFFICIENCY (TYP.)</b>	92%	93%					
<b>AC CURRENT (MAX.)</b>	1.2A/230VAC						
<b>INRUSH CURRENT (MAX.)</b>	62A / 230VAC; T <sub>WIDTH</sub> = 1300µs						
<b>MAX. NO. OF PSU ON CIRCUIT BREAKER</b>	B10	B16	C10	C16	D10	D16	
	12V	4	6	8	6	10	13
	24V	4	6	8	6	10	13
<b>LEAKAGE CURRENT (MAX.)</b>	0.7mA / 230VAC at full load						
<b>NO LOAD POWER CONSUMPTION (MAX.)</b>	0.5W / 230VAC						

# MCHQ200V-GE series

200W Constant Voltage LED Switching Power Supply



## PROTECTIONS

<b>OVER LOAD</b>	Range: 110 ÷ 160% rated load Type: hiccup mode. Recovers automatically after fault condition is removed.
<b>SHORT CIRCUIT</b>	Type: hiccup mode. Recovers automatically after fault condition is removed.
<b>OVER VOLTAGE</b>	Range: 150% rated voltage Type: shut down output voltage. Re-power on to recovery.
<b>OVER TEMPERATURE</b>	110°C Type: shut down output voltage. Re-power on to recovery.

## WORKING ENVIRONMENT

<b>WORKING TEMPERATURE</b>	-40°C ÷ +65°C; tc=90°C (refer to derating curve)
<b>WORKING HUMIDITY</b>	10 ÷ 90% RH non-condensing
<b>STORAGE TEMPERATURE AND HUMIDITY</b>	-40°C ÷ 85°C, 10 ÷ 90% RH non-condensing
<b>Tc</b>	tc=90°C / tc=75°C for 5 years warranty

## SAFETY and EMC STANDARDS

<b>SAFETY STANDARDS</b>	Compliance to EN61347-1, EN61347-2-13 , EN 62493
<b>EMC EMISSION</b>	Compliance to EN55015
<b>EMC IMMUNITY</b>	Compliance to EN61547
<b>HARMONIC CURRENT</b>	Compliance to EN61000-3-2 class C, EN61000-3-3
<b>OTHER REGULATIONS</b>	Compliance to Commission Regulation (EU) 2019/2020
<b>WITHSTAND VOLTAGE</b>	IN/OUT: 3200VAC / 5mA, 60s IN/GND: 1600VAC / 5mA, 60s OUT/GND: 1000VAC / 5mA, 60s
<b>INSULATION RESISTANCE</b>	IN/OUT: ≥ 10MΩ / 500VDC
<b>GROUNDING RESISTANCE</b>	≤ 0.1Ω / 25A, 1min
<b>IP PROTECTION CLASS</b>	IP67

# MCHQ200V-GE series

200W Constant Voltage LED Switching Power Supply



## OTHERS

<b>MTBF</b>	200 000 hours / 25°C, full load (MIL-HDBK-217F)
<b>LIFETIME</b>	55 000 hours / 230VAC, full load, $t_c=75^\circ\text{C}$
<b>DIMENSIONS</b>	220.6 x 62.5 x 41.3mm (L x W x H)
<b>WEIGHT AND PACKING</b>	0.9kg ; 10pcs./ctn; ctn dimensions: 26.5 x 19 x 25.5cm
<b>PRIMARY CABLE</b>	H05RN-F 105°C 3Gx1.0mm <sup>2</sup> , length = 300 ± 30mm
<b>SECONDARY CABLE</b>	12V: SJTW, 2*14AWG / 2*2.08mm <sup>2</sup> , 105°C, length = 300 ± 30mm
	24V: SJTW, 2*16AWG / 2*1.31mm <sup>2</sup> , 105°C, length = 300 ± 30mm

EAN CODE



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 intended to apply by end-user. Power supply meets safety and EMC standards however the final equipment with power supply must be re-qualified to comply with EMC Directives.

## MECHANICAL SPECIFICATION

### INPUT

H05RN-F 105°C 3Gx1.0mm<sup>2</sup>  
length = 300mm ± 30mm

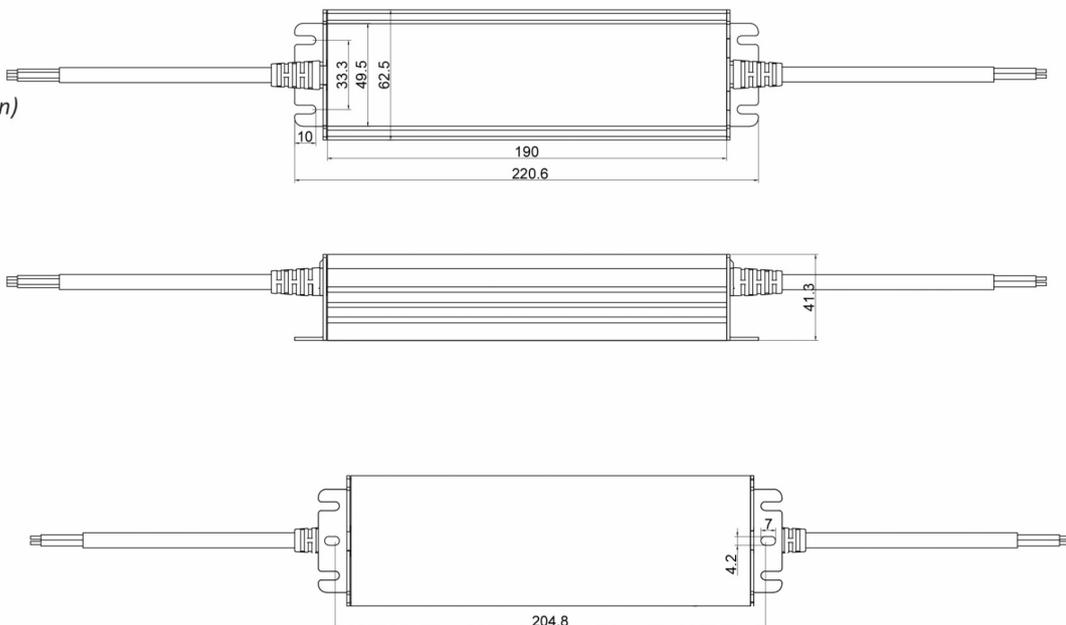
### OUTPUT

12V: SJTW, 2\*14AWG / 2\*2.08mm<sup>2</sup>, 105°C  
24V: SJTW, 2\*16AWG / 2\*1.31mm<sup>2</sup>, 105°C  
length = 300mm ± 30mm

AC/L(brown)

AC/N(blue)

GND(yellow-green)



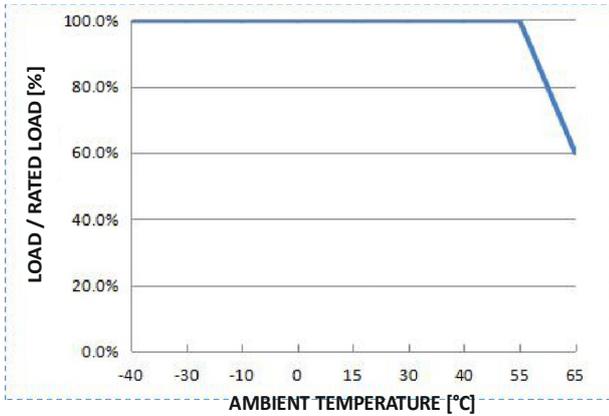
# MCHQ200V-GE series

200W Constant Voltage LED Switching Power Supply

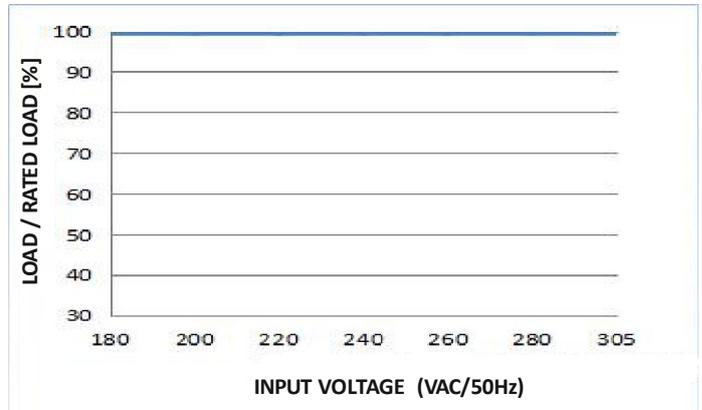


## CHARACTERISTICS

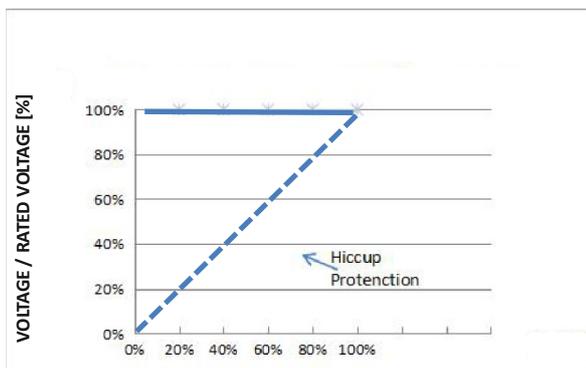
DERATING CURVE



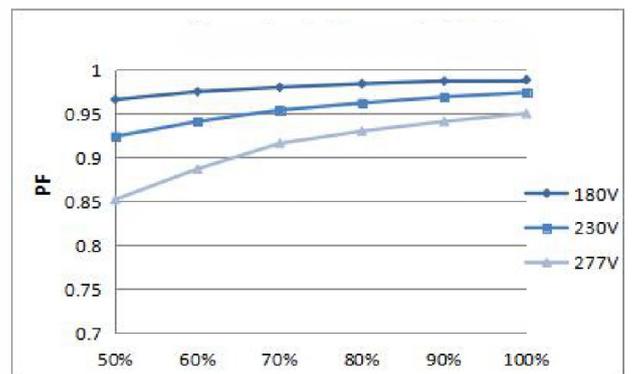
STATIC CHARACTERISTICS



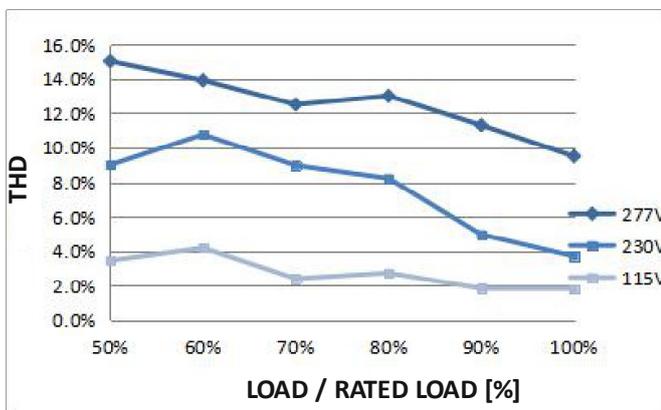
I-V CURVE



PF CURVE



THD Curve



EFFICIENCY CURVE

