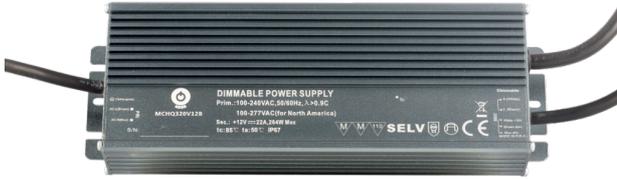


MCHQ320VxB series

320W LED Switching Power Supply (CV+CC) with 3 in 1 dimming function



■ Features:

- Universal AC input / Full range (Max. 305VAC)
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Built-in active PFC function
- IP67 design for indoor and outdoor appliances
- Compliance to worldwide regulations for lighting
- Built-in 3 in 1 dimming function: 0-10V or PWM or resistance



ELECTRICAL SPECIFICATION

MODEL	MCHQ320V12A	MCHQ320V15A	MCHQ320V24A	MCHQ250V36A	MCHQ320V48A	MCHQ320V54A
OUTPUT						
Rated Voltage	12V	15V	24V	36V	48V	54V
Constant Current Region [2]	6 ÷ 12V	7.5 ÷ 15V	12 ÷ 24V	18 ÷ 36V	24 ÷ 48V	27 ÷ 54V
Rated Current	22A	19A	13A	8.9A	6.7A	6A
Rated Power	264W	285W	312W	320.4W	321.6W	324W
No Output Voltage (max.)	15V	19V	30V	44V	55V	62V
Line Regulation	± 1%					
Load Regulation	± 2%					
Voltage Tolerance [3]	± 3%					
Current Tolerance [3]	± 5%					
Ripple & Noise (max.) [4]	150mV _{p-p}	150mV _{p-p}	300mV _{p-p}	300mV _{p-p}	300mV _{p-p}	300mV _{p-p}
Setup, Rise, Holdup time [5]	500ms, 30ms, 30ms / 230VAC; 500ms, 30ms, 10ms / 230VAC					
INPUT						
Voltage Range	90 ÷ 305VAC					
Frequency Range	47 ÷ 63Hz					
Power Factor (typ.)	PF > 0.98 / 115VAC; PF > 0.95 / 230VAC at full load					
Efficiency (typ.)	92%	93%	94%	94.5%	95%	95%
AC current (typ.)	4A / 115VAC; 2A / 230VAC					
Inrush current (max.)	45A / 230VAC(25°C)					

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PROTECTIONS

Over Current	Range: 110 ÷ 160%					
	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	Max. 18V	Max. 25V	Max. 35V	Max. 50V	Max. 65V	Max. 72V
	Type: shut down output voltage. Re-power on to recovery.					
Over Temperature	Range: 110°C ± 10°C					
	Type: shut down output voltage. After temperature goes down re-power on to recovery.					

WORKING ENVIRONMENT

Working Temperature	-40°C ÷ 70°C (refer to Derating Curve)
Working Humidity	15 ÷ 95% RH non-condensing
Storage Temperature and Humidity	-40°C ÷ 80°C, 10 ÷ 95% RH non-condensing
Temperature Coefficient	± 0.05% / °C (-10°C ÷ 45°C)
Vibration	10 ÷ 500Hz, 5G, 10min / cycle, period 30min. each along X, Y, Z axes

SAFETY AND EMC REGULATIONS

Safet Standards	Compliance to EN61347-1, EN61347-2-13
Withstand Voltage	IN/OUT: 5.3kVDC/1min
Isolation Resistance	IN/OUT; IN/GND; OUT/GND: 50MΩ/500VDC/25°C/70%
EMC Emission	Compliance to EN55015
EMC Immunity	Compliance to EN61547; EN61000-4-2, -3, -4, -5, -6, -8, -11; EN55024
Harmonic Current	Compliance to EN61000-3-3; EN61000-3-2 class C (≥ 100% load)

OTHERS

MTBF	225 000h MIL-HDBK-217F (25°C)
Dimensions	246 x 84 x 41.3mm (L x W x H)
Weight and Packing	1.3kg; 10pcs./box; box weight and dimensions: 16kg, 30.5 x 25x 20.5cm

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.

2. Constant current operation region is within announced range. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.

3. Tolerance includes set up tolerance, line regulation and load regulation.

4. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF i 47μF parallel capacitor.

5. Setup and rise time is measured from 0 to 90% rated output voltage.

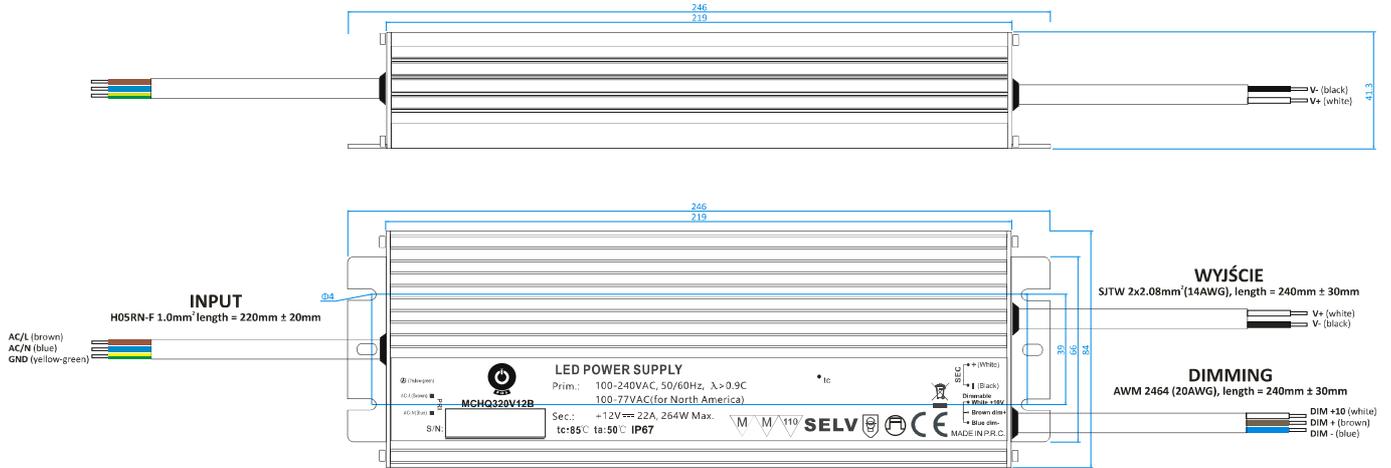
6. Power supply is considered as component not indented to apply by end-user. Power supply meets safety and EMC standards however the final equipment with power supply must be re-quality to comply with EMC Directives.

MCHQ320VxB series

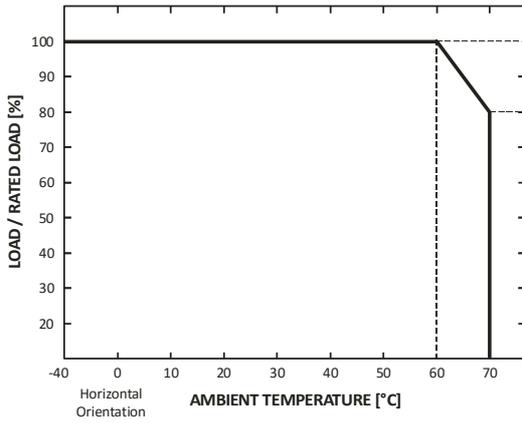
320W LED Switching Power Supply (CV+CC) with 3 in 1 dimming function



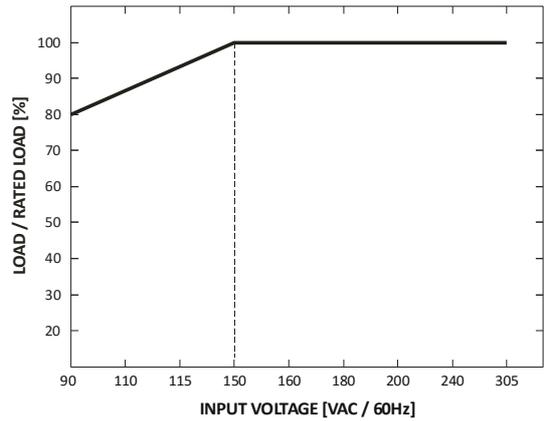
MECHANICAL SPECIFICATION



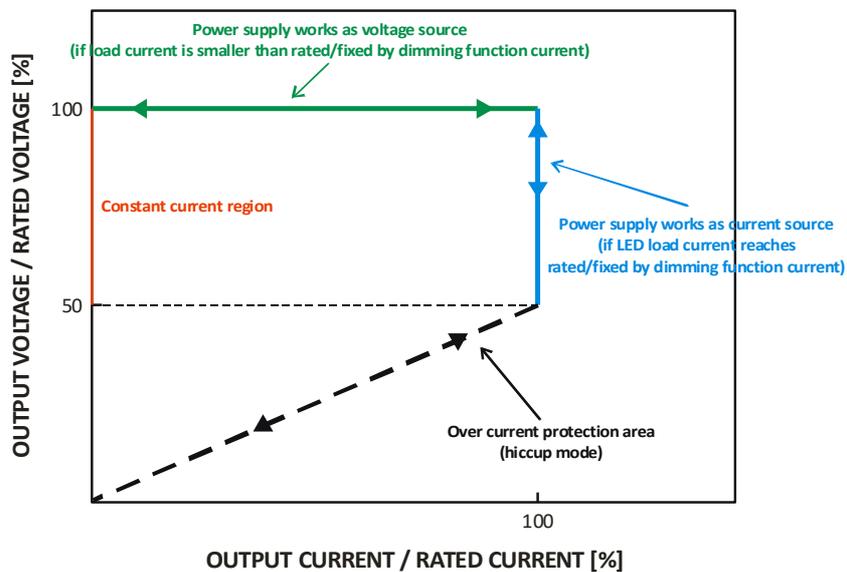
DERATING CURVE



STATIC CHARACTERISTIC



CONSTANT VOLTAGE + CONSTANT CURRENT MODE OPERATION



MCHQ320VxB series

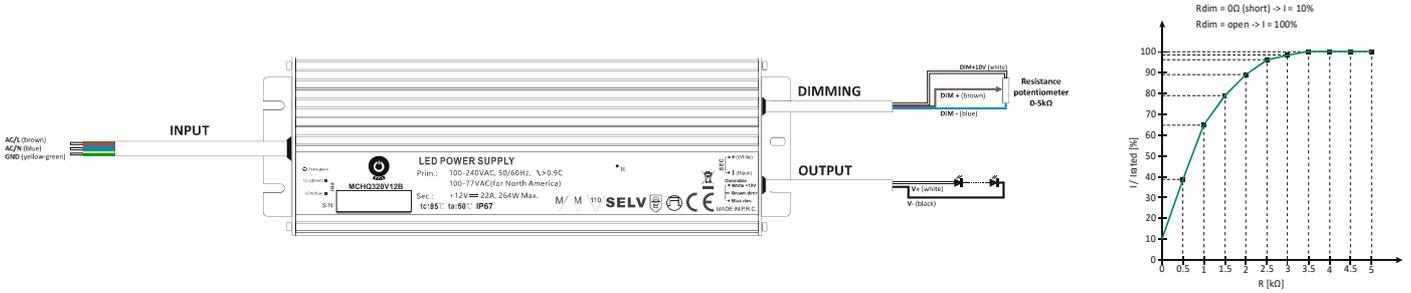
320W LED Switching Power Supply (CV+CC) with 3 in 1 dimming function



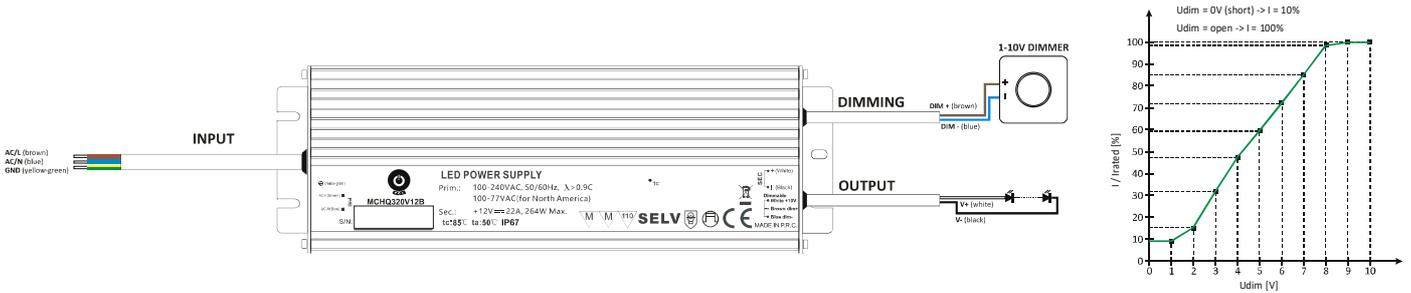
DIMMING OPERATION

For use dimming function connect dimmer to DIM+ and DIM- terminals. Dimming effect is achieved by changing output constant current level in 10%÷100% range. You can use dimming function by one of three ways:

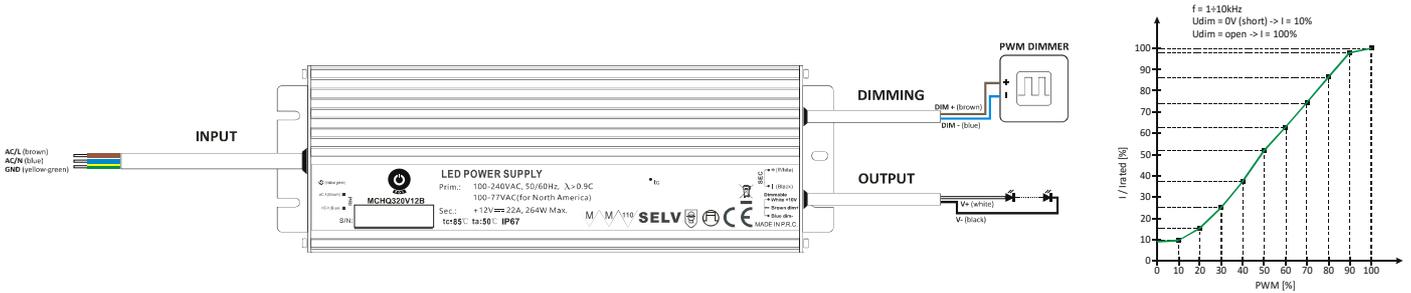
1. By variable resistance 0kΩ÷5kΩ:



2. By variable DC voltage 1÷10V:



3. By variable PWM signal, duty range = 10% ÷ 100%, f = 1kHz ÷ 10kHz, U = 10V:



Compatible dimmers
• OSRAM DIM MCU
• BERKER 2891 10
• Other 1-10V dimmers