

# WP-CEP-12C-200VPE1

## 12W Emergency Back-up Power Inverter

SKU No:

Project Name:

Date:

### IMPORTANT: SAVE THESE INSTRUCTIONS



#### DESCRIPTION

WP-CEP-12C-200VPE1 LED Emergency Battery Backup LED Drivers, using compact metal case, with external installation, is connected between AC source and LED luminaires, without any change to the original structure. With built-in LiFePO4 battery, constant Emergency output power 12W, High Power Factor over 0.9 while charging, it is adapt to 100-347Vac grid and 0-50°C working environment.

#### FEATURES AND BENEFITS

- Self-diagnostic and testing
- Wide input voltage 100-347Vac
- Multiple protection: Short-Circuit Protection, Over-Load Protection, Open-circuit Protection, Over-Charge Protection, Over-Discharge Protection
- 12W & 90 mins durable emergency operating time
- Surge: L-N 3KV, L&N-PE 3KV
- Ring wave: L-N 2.5KV, L&N-PE 2.5KV
- Title 20 Compliant
- Compliant to FCC 47 CFR Part 15 (Class B)
- Compliant to NFPA 101 safety regulation's requirements on Emergency power supply
- UL924 listed
- High PF up 0.99 while charging
- Operating temperature: 32°F - 122°F (0°C - 50°C)

#### APPLICATION SCENARIOS

- When LED Luminaries is higher than 12W, WP-CEP-12C-200VPE1 can control it at 12W under emergency mode through the internal dimming control signal. And in theory, it can support maximum 100W LED Luminaries which have dimming function.
- When LED Luminaries is less than 12W, WP-CEP-12C-200VPE1 can light up it normally as a power source. And in theory, it can support LED Luminaries(<=12W) with or without dimming function.



#### INPUT

PARAMETER	SYMBOL	UNIT	MIN.	TYPICAL	MAX.	REMARKS
RATED INPUT VOLTAGE	U <sub>in</sub>	VAC	--	100-347	--	--
INPUT VOLTAGE RANGE		VAC	90	--	380	--
INPUT FREQUENCY	F	HZ	47	50/60	63	--
INPUT CURRENT	I <sub>in</sub>	A	--	--	0.12	120Vac, while charging
INPUT POWER	P <sub>in</sub>	W	--	--	9.5	120Vac, while charging
INPUT SURGE CURRENT		A	--	--	30	220Vac/50Hz @ 25°C
STANDBY POWER		W	--	--	0.8	347Vac/60Hz, after full charge
POWER FACTOR	PF		0.9	--	--	V <sub>in</sub> =120Vac/60Hz (while charging)
THDI	THDi	%	--	15%	20%	V <sub>in</sub> =120-347Vac/60Hz (while charging)

#### OUTPUT

PARAMETER	SYMBOL	UNIT	MIN.	TYPICAL	MAX.	REMARKS
NO LOAD OUTPUT VOLTAGE	U <sub>o</sub>	V	--	--	250	--
OUTPUT VOLTAGE		V	120	--	200	It varies with the battery voltage, which is only an approximation
EMERGENCY OUTPUT POWER	P <sub>o</sub>	W	--	-12	--	The maximum output power is limited to 12W
EMERGENCY CONVERSION TIME		S	--	--	5	Response time from mains power outage to emergency output
			--	--	2	Response time from emergency mode to charging mode
EMERGENCY DURATION TIME		MIN	90	--	--	Emergency output voltage 12W
MAX. LOAD CURRENT		W	--	--	100	The maximum input power of the matched LED driver, and meanwhile, the minimum input power after dimming (before turning off) shall be less than 10W (black white line).

# WP-CEP-12C-200VPE1

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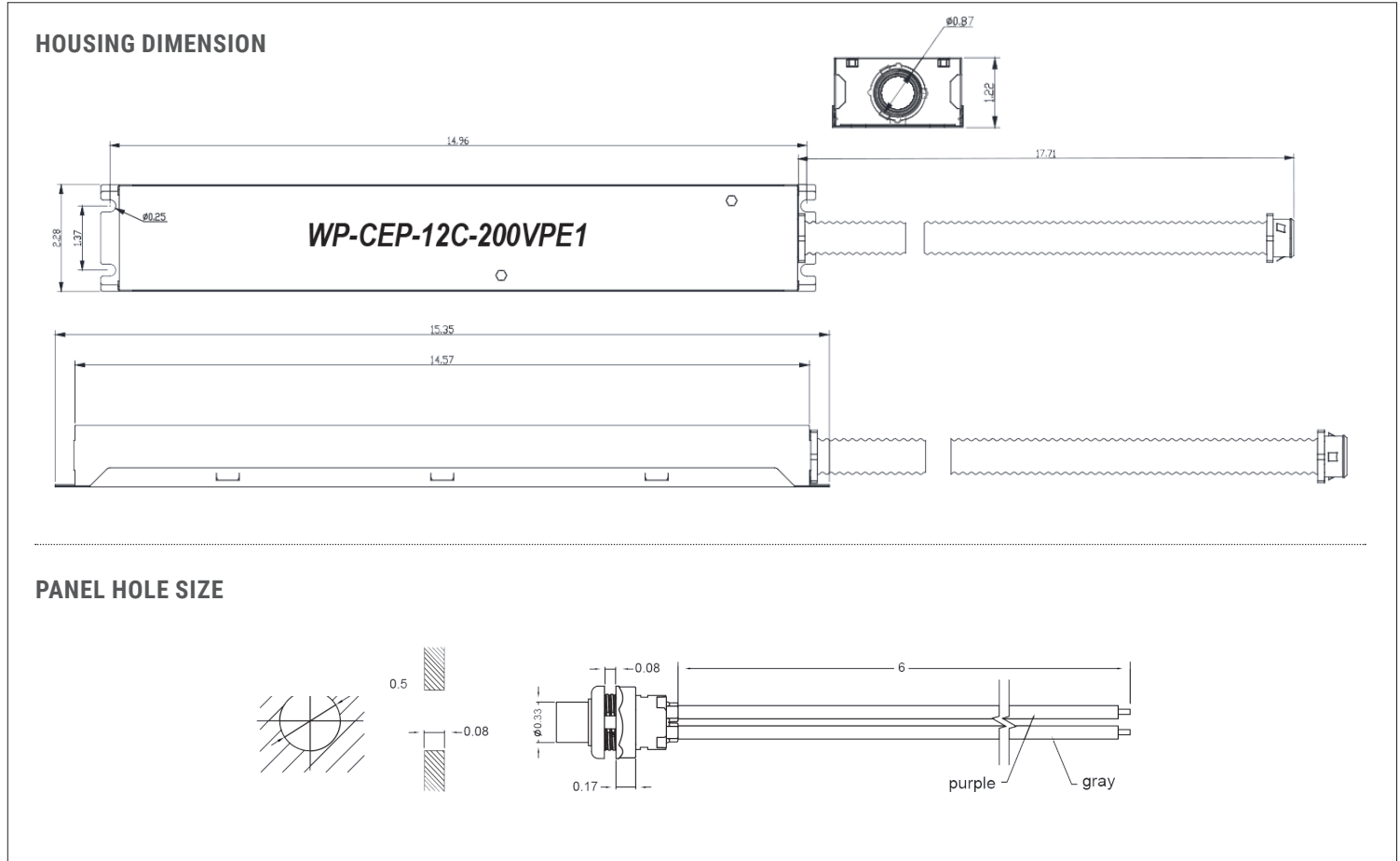
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#### STRUCTURE



#### BATTERY

NAME	PARAMETER
BATTERY TYPE	LiFePO4
BATTERY CAPACITY	3000mAh/12.8V 38.4Wh
CHARGING TIME	24 Hours
MAX. LOAD FOR 90 MINS	12W

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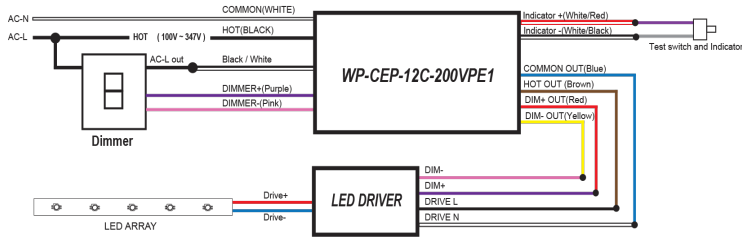
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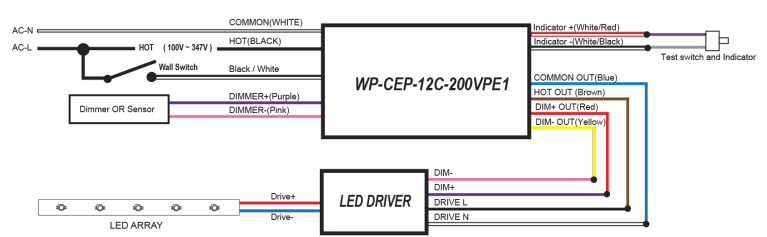
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#### WIRING DIAGRAM

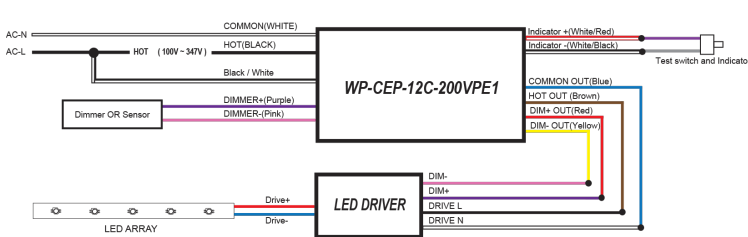
(A): Dimmer Switch



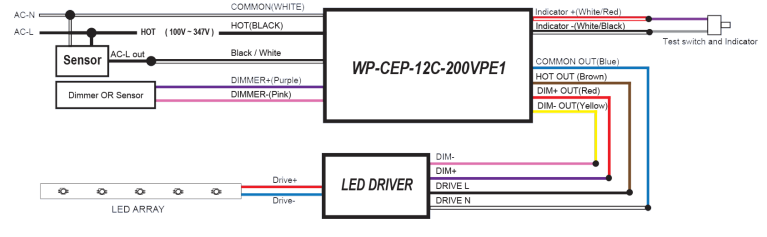
(B): Ordinary Switch



(C): No Switch



(D): Sensor Control



#### INSTALLATION GUIDELINE

##### • Step One - Power Off

- 1 Disconnect AC Power From Fixture.
- 2 AC driver must be sourced from the backup micro inverter.
- 3 Select suitable location & install such output leads to connect to the input leads of the AC driver

##### • Step Two - Install the emergency backup

- 1 Install micro inverter on the T-bar bracket
- 2 Open junction box to install the wiring pipe
- 3 Install the LED lamp on the T-bracket and secure it with screws
- 4 Install the wiring pipe of the LED luminaire, AC wires, and test switch and indicator on the junction box of the T-bar bracket.

##### • Step Three - Wiring the Backup

- 1 Connect the AC power source leads to the input
- 2 Connect the output leads to the AC driver
- 3 Wire the AC driver per manufacturers installation instructions

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#### LIGHT OUTPUT CALCULATION

To ensure sufficient light output in the end application, please estimate by doing the following:

- A.** Check the light efficacy(lm/w) of LED luminaire, which is provided by the luminaire manufacturer or test it directly, or check the test data from 3rd party test laboratory like UL, ETL etc., or visit 3rd party public database(such as Design Lights Consortium, www.designlights.org etc.) or other comparable means.
- B.** Lumens can be calculated by multiplying the output power of the battery backup emergency inverter by the light efficacy of the LED luminaire. In many cases, the actual lumen output in emergency mode will be greater than this calculation gives, however, it will provide a good reference for the lighting design.
- C.** Using the results of this calculation and industry standard lighting design tools, the expected illuminance in the curve can be calculated.

LUMENS IN EMERGENCY MODE = LUMENS PER WATT OF FIXTURE \* OUTPUT POWER OF CHOSEN PRODUCT

\_\_\_\_\_ (Lumens) = \_\_\_\_\_ (lm/W) \* 12(W)

#### INDICATOR

PARAMETER	REMARKS
SOLID GREEN ON	SYSTEM OK / AC OK
INDICATOR OFF	System abnormal, battery voltage too low, or LED Luminaire short circuit
GREEN FLASH (1S ON, 1S OFF, CYCLING)	Battery not detected, check battery connection
GREEN FLASH (0.5S ON, 5S OFF, CYCLING)	Under Emergency Working Mode
GREEN SLOW FLASH (5S ON, 5S OFF, CYCLING)	Discharge time is less than 90 minutes (Self-diagnostic test), LED Luminaire is Open Circuit or Over Load
GREEN FLASH (1S ON, 1S OFF, 5 TIMES)	Disable the Self-diagnostic Test System
GREEN FLASH (1S ON, 1S OFF, 3 TIMES)	Enable the Self-diagnostic Test System

#### TEST SWITCH INDICATOR STATUS

##### • Manual Diagnostic System

Under Normal Charging Mode, after the battery charged for 12 hours or fully charged, long press the test button for 3S and hold it, to enter the Manual Test Mode (the controller will switch to Emergency Mode) , release the button to exit the Manual Diagnostic Mode.

##### • Enable / Disable Self-Diagnostic Test System

Under Normal Charging Mode, press the button twice in two seconds, then press the button longer than 2S and less than 5S, then press the button twice in succession, the indicator light will be on and off for 5 times (1S interval), means disable the Self-Diagnostic Test System successfully. If you want to enable the Self-Diagnostic Test System, repeat the operation above, the indicator light will be on and off for 3 times (1S interval), means "Enable".

##### • Enter Sleep Mode

Under Emergency mode, press the test button 3S, to enter Sleep Mode(Storage and transportation),and activate it by connecting to AC power.

##### • Reset

Under abnormal status, press and hold the test button >5s, the backup micro inverter will shutdown and activate it by connecting to AC power.

#### ACCESSORIES

#	Name	Qty
1	WP-CEP-12C-200VPE1	1
2	CM-221-2P Terminals 2P	8
3	CM-221-3PTerminals 3P	2
4	User Manual Book	1

# WP-CEP-12C-200VPE1

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**WHEN USING ELECTRICAL EQUIPMENT AND THIS LIGHTING DEVICE BASIC SAFETY PRECAUTION SHOULD BE FOLLOWED AT ALL TIMES INCLUDING BUT NOT LIMITED TO THE FOLLOWING:**

**PLEASE READ CAREFULLY AND FOLLOW ALL INSTRUCTIONS FOR YOUR OWN SAFETY**

**WARNING:** AC power must be off before proceeding with assembly or installation of emergency driver.

**IMPORTANT:** For use with non-dimming LED fixtures up to 12W. For use with LED fixtures (MAX 100W) that utilize 0-10V dimming that are above 12W, but this inverter will be limited to 12W(Including driver).

**IMPORTANT:** An un-switched AC power source of 100Vac to 277Vac is required.

**CAUTION:** Make sure all electrical connections conform to the National Electrical Code and all applicable local regulations.

**CAUTION:** Do not let power supply cords touch hot surfaces.

**CAUTION:** Do not mount near gas or electric heaters.

**CAUTION:** Use with grounded, UL Listed, dry or damp or wet location rated fixtures.

**CAUTION:** The equipment is intended for ordinary location and for permanent installation into one or more Listed emergency luminaires.

**CAUTION:** Battery is rechargeable LiFePO4 type and must be recycled or disposed of properly. Do not use this emergency driver with accessory equipment other than recommended by manufacturer; failure to follow this may cause an unsafe condition. Servicing should only be performed by qualified service personnel. Do not use this emergency driver for other than intended use. Not suitable for high-risk task area lighting. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.

**IMPORTANT:** Indicator (LED light) illuminated indicates battery in charge mode when AC power is applied. It is recommended and required by applicable code to test emergency ballast to ensure proper function of the system; push the test switch every thirty (30) days to ensure the emergency driver is functioning by illuminating the light source. Conduct a ninety (90) minutes discharge test one (1) time per year; LED light source should be illuminated for a minimum of ninety (90) minutes .

**TESTING SYSTEM:** The emergency battery requires a charge minimum of one (1) hour before testing the circuit. A full charge requires twenty four (24hours)