



Installation Manual

● **Type : LED Power Supply**

(Families : AP, CEN, CLG, ELG, ELN, GSC, HBG, HLG, HLN, HLP, HSG, HVG, LCM, LP, LPF, PLC, NPF, OWA, PCD, PLC, PLD, PLM, PLN, PLP, PWM, ULP)

● **Introduction**

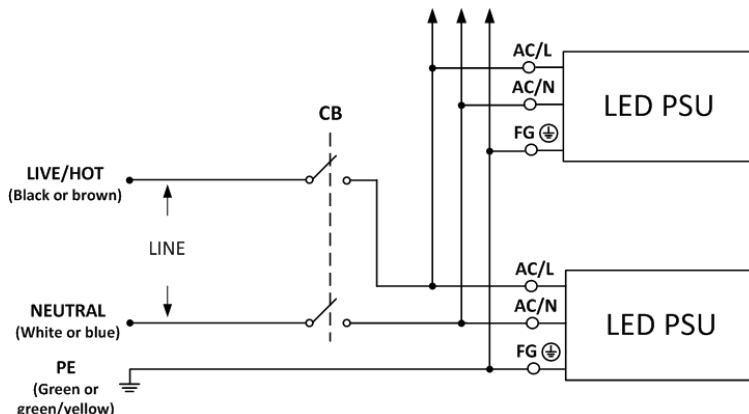
The LED power supply is a dedicated LED driving device that delivers a constant current/voltage or generates an adjustable current controlled by an external dimmer to LEDs. Depending on its types or design concept, some of them not only have PFC capability but also can be located in a harsh environment such as dusty, humid places. Mean Well's LED power supplies include metal case, plastic case, and PCB types.

● **Installation**

- (1) Before commencing any installation or maintenance work, please disconnect the power supply from the utility. Ensure that it cannot be re-connected inadvertently!
- (2) Keep proper ventilation around the unit and do not stack any object on it. Also a 10-15 cm clearance must be kept when the adjacent device is a heat source.
- (3) Mounting orientations other than standard orientation or operate under high ambient temperature may increase the internal component temperature and will require a de-rating in output current. Please refer to the specification sheet to receive the optimum mounting position and information about the de-rating curve.
- (4) Current rating of an approved primary /secondary cable should be greater than or equal to that of the unit. Please refer to its specification.
- (5) For LED power supplies with waterproof connectors, verify that the linkage between the unit and the lighting fixture is tight so that water cannot intrude into the system.
- (6) For dimmable LED power supplies, make sure that your dimming controller is capable of driving these units. For ELN series, either "D" or "P" type, require 40mA each unit; for those with "3 in 1" dimming function, e.g. HLG and LPF series, require 0.15mA each unit.
- (7) Wiring: The wire color will vary by country, please refer to the table below.

| | North America | European Harmonized |
|--------------------------|---------------|---------------------|
| Live and ACL | Black | Brown |
| Neutral and ACN | white | Blue |
| PE and FG (Class I only) | Green | Green/yellow |

- (a) Connect the FG wire (green or green/yellow) of the LED power supply to PE (green or green/yellow), this step can be skipped when the unit is marked class II, ungrounded.
- (b) Connect the ACL wire (black or brown) of the LED power supply to Live (black or brown).
- (c) Connect the ACN wire (white or blue) of the LED power supply to Neutral (white or blue).





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(8) The maximum number of the LED PSUs that can be connected to a circuit breaker at 230V is shown as below.

| Model | B10 | B16 | C10 | C16 | D10 | D16 |
|-----------|-----|-----|-----|-----|-----|-----|
| APC-8 | 11 | 17 | 18 | 29 | 37 | 59 |
| APC-12 | 11 | 17 | 18 | 29 | 37 | 59 |
| APC-16 | 8 | 13 | 14 | 23 | 28 | 46 |
| APC-25 | 5 | 9 | 9 | 15 | 18 | 30 |
| APC-35 | 3 | 5 | 6 | 9 | 12 | 19 |
| APC-8E | 11 | 17 | 18 | 29 | 37 | 59 |
| APC-12E | 11 | 17 | 18 | 29 | 37 | 59 |
| APC-16E | 8 | 13 | 14 | 23 | 26 | 42 |
| APV-8 | 11 | 17 | 18 | 29 | 37 | 59 |
| APV-12 | 11 | 17 | 18 | 29 | 37 | 59 |
| APV-16 | 8 | 13 | 14 | 22 | 28 | 44 |
| APV-25 | 5 | 9 | 9 | 15 | 18 | 30 |
| APV-35 | 4 | 6 | 6 | 10 | 13 | 21 |
| APV-8E | 11 | 17 | 18 | 29 | 37 | 59 |
| APV-12E | 11 | 17 | 18 | 29 | 37 | 59 |
| APV-16E | 8 | 13 | 14 | 22 | 28 | 44 |
| CEN-60 | 20 | 32 | 20 | 32 | 20 | 32 |
| CEN-75 | 16 | 25 | 16 | 25 | 16 | 25 |
| CEN-100 | 11 | 19 | 11 | 19 | 11 | 19 |
| CLG-60 | 20 | 32 | 20 | 32 | 20 | 32 |
| CLG-100 | 1 | 3 | 3 | 5 | 6 | 10 |
| CLG-150 | 1 | 3 | 3 | 5 | 6 | 10 |
| ELG-75 | 4 | 7 | 7 | 11 | 14 | 23 |
| ELG-100 | 2 | 3 | 4 | 6 | 8 | 12 |
| ELG-150 | 2 | 3 | 3 | 5 | 6 | 11 |
| ELG-75-C | 4 | 7 | 7 | 11 | 14 | 23 |
| ELG-100-C | 2 | 3 | 4 | 6 | 8 | 12 |
| ELG-150-C | 2 | 3 | 4 | 6 | 8 | 13 |
| ELN-30 | 3 | 4 | 5 | 8 | 10 | 16 |
| ELN-60 | 2 | 3 | 3 | 5 | 7 | 11 |
| GSC18 | 26 | 42 | 26 | 42 | 26 | 42 |
| GSC25 | 26 | 42 | 26 | 42 | 26 | 42 |
| GSC40 | 22 | 36 | 22 | 36 | 22 | 36 |
| HBG-100 | 3 | 4 | 5 | 8 | 10 | 16 |
| HBG-160 | 2 | 4 | 4 | 7 | 8 | 12 |
| HBG-240 | 1 | 2 | 2 | 3 | 4 | 7 |
| HBG-60 | 18 | 28 | 20 | 32 | 20 | 32 |



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| Model | B10 | B16 | C10 | C16 | D10 | D16 |
|-----------------|-----|-----|-----|-----|-----|-----|
| HLG-40H | 7 | 12 | 13 | 20 | 26 | 41 |
| HLG-60H | 6 | 9 | 10 | 16 | 20 | 32 |
| HLG-80H | 2 | 3 | 3 | 6 | 7 | 12 |
| HLG-100H | 3 | 4 | 5 | 8 | 10 | 16 |
| HLG-120H | 3 | 5 | 5 | 9 | 10 | 17 |
| HLG-150H | 2 | 4 | 4 | 7 | 8 | 13 |
| HLG-185H | 2 | 4 | 4 | 7 | 6 | 11 |
| HLG-240H | 1 | 2 | 3 | 4 | 5 | 8 |
| HLG-320H | 1 | 1 | 1 | 2 | 3 | 5 |
| HLG-600H | 1 | 1 | 1 | 2 | 2 | 3 |
| HLG-60H-C | 5 | 8 | 8 | 13 | 16 | 26 |
| HLG-80H-C | 3 | 4 | 5 | 8 | 10 | 16 |
| HLG-120H-C | 2 | 4 | 4 | 6 | 8 | 13 |
| HLG-185H-C | 1 | 2 | 2 | 3 | 4 | 7 |
| HLG-240H-C | 1 | 2 | 2 | 3 | 4 | 7 |
| HLG-320H-C | 0 | 1 | 1 | 2 | 3 | 5 |
| HLN-40H | 7 | 12 | 13 | 20 | 26 | 41 |
| HLN-60H | 6 | 9 | 10 | 16 | 20 | 32 |
| HLN-80H | 2 | 3 | 3 | 6 | 7 | 12 |
| HLP-40H | 7 | 12 | 13 | 20 | 26 | 41 |
| HLP-60H | 6 | 9 | 10 | 16 | 20 | 32 |
| HLP-80H | 2 | 3 | 3 | 5 | 6 | 10 |
| HSG-70 | 4 | 6 | 7 | 11 | 14 | 22 |
| HVG-65 (480V) | 7 | 12 | 12 | 20 | 25 | 40 |
| HVG-100 (480V) | 3 | 5 | 5 | 8 | 10 | 17 |
| HVG-150 (480V) | 2 | 4 | 4 | 6 | 8 | 13 |
| HVG-240 (480V) | 2 | 4 | 4 | 7 | 9 | 15 |
| HVG-320 (480V) | 1 | 2 | 2 | 4 | 5 | 8 |
| HVGC-65 (480V) | 7 | 12 | 12 | 20 | 25 | 40 |
| HVGC-100 (480V) | 3 | 5 | 5 | 8 | 10 | 17 |
| HVGC-150 (480V) | 2 | 4 | 4 | 6 | 8 | 13 |
| HVGC-240 (480V) | 2 | 4 | 4 | 7 | 9 | 15 |
| HVGC-320 (480V) | 1 | 2 | 2 | 4 | 5 | 8 |
| LCM-25 | 16 | 26 | 27 | 44 | 50 | 80 |
| LCM-40 | 16 | 26 | 27 | 44 | 29 | 47 |
| LCM-60 | 15 | 25 | 20 | 32 | 20 | 32 |
| LCM-25DA | 16 | 26 | 27 | 44 | 50 | 80 |
| LCM-40DA | 16 | 26 | 27 | 44 | 29 | 47 |
| LCM-60DA | 15 | 25 | 20 | 32 | 20 | 32 |
| LPC-20 | 5 | 8 | 9 | 14 | 18 | 29 |
| LPC-35 | 2 | 4 | 4 | 7 | 9 | 15 |



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| Model | B10 | B16 | C10 | C16 | D10 | D16 |
|-----------------|-----|-----|-----|-----|-----|-----|
| LPC-60 | 2 | 3 | 3 | 6 | 7 | 12 |
| LPC-100 | 1 | 1 | 1 | 2 | 3 | 5 |
| LPC-150 | 2 | 3 | 4 | 6 | 5 | 8 |
| LPF-16 | 9 | 14 | 15 | 24 | 30 | 48 |
| LPF-25 | 8 | 12 | 13 | 21 | 27 | 43 |
| LPF-40 | 7 | 12 | 13 | 20 | 26 | 41 |
| LPF-60 | 5 | 8 | 9 | 14 | 18 | 29 |
| LPF-90 | 2 | 4 | 4 | 6 | 8 | 13 |
| LPF-16D | 9 | 14 | 15 | 24 | 30 | 48 |
| LPF-25D | 8 | 12 | 13 | 21 | 27 | 43 |
| LPF-40D | 7 | 12 | 13 | 20 | 26 | 41 |
| LPF-60D | 5 | 8 | 9 | 14 | 18 | 29 |
| LPF-90D | 2 | 4 | 4 | 6 | 8 | 13 |
| LPH-18 | 10 | 17 | 18 | 28 | 36 | 57 |
| LPHC-18 | 8 | 13 | 14 | 22 | 28 | 44 |
| LPL-18 (115V) | 10 | 16 | 16 | 27 | 20 | 32 |
| LPLC-18 (115V) | 7 | 12 | 12 | 20 | 20 | 32 |
| LPV-20 | 5 | 8 | 9 | 14 | 18 | 29 |
| LPV-35 | 2 | 4 | 4 | 7 | 9 | 14 |
| LPV-60 | 2 | 3 | 4 | 6 | 8 | 12 |
| LPV-100 | 1 | 2 | 2 | 3 | 4 | 7 |
| LPV-150 | 1 | 2 | 2 | 3 | 4 | 7 |
| LPVL-150 (115V) | 1 | 1 | 1 | 2 | 2 | 4 |
| NPF-40 | 6 | 9 | 10 | 16 | 20 | 32 |
| NPF-60 | 6 | 9 | 10 | 16 | 20 | 32 |
| NPF-90 | 2 | 3 | 3 | 6 | 7 | 12 |
| NPF-120 | 2 | 4 | 4 | 6 | 8 | 13 |
| NPF-40D | 6 | 9 | 10 | 16 | 20 | 32 |
| NPF-60D | 6 | 9 | 10 | 16 | 20 | 32 |
| NPF-90D | 2 | 3 | 3 | 6 | 7 | 12 |
| NPF-120D | 2 | 4 | 4 | 6 | 8 | 13 |
| OWA-60E | 1 | 2 | 2 | 4 | 5 | 8 |
| OWA-90E | 2 | 3 | 3 | 6 | 7 | 12 |
| OWA-120E | 2 | 4 | 4 | 6 | 8 | 13 |
| OWA-60U | 1 | 2 | 2 | 4 | 5 | 8 |
| OWA-90U | 2 | 3 | 3 | 6 | 7 | 12 |
| OWA-120U | 2 | 4 | 4 | 6 | 8 | 13 |
| PCD-16A (115V) | 36 | 58 | 36 | 58 | 36 | 58 |
| PCD-16B | 80 | 128 | 80 | 128 | 80 | 128 |
| PCD-25A (115V) | 23 | 37 | 23 | 37 | 23 | 37 |
| PCD-25B | 50 | 80 | 50 | 80 | 50 | 80 |

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| Model | B10 | B16 | C10 | C16 | D10 | D16 |
|----------------|-----|-----|-----|-----|-----|-----|
| PCD-40B | 29 | 47 | 29 | 47 | 29 | 47 |
| PCD-60B | 20 | 32 | 20 | 32 | 20 | 32 |
| PLC-30 | 40 | 64 | 40 | 64 | 40 | 64 |
| PLC-45 | 26 | 42 | 26 | 42 | 26 | 42 |
| PLC-60 | 20 | 32 | 20 | 32 | 20 | 32 |
| PLC-100 | 1 | 3 | 3 | 5 | 6 | 10 |
| PLD-16A (115V) | 36 | 58 | 36 | 58 | 36 | 58 |
| PLD-16B | 80 | 128 | 80 | 128 | 80 | 128 |
| PLD-25 | 45 | 72 | 50 | 80 | 50 | 80 |
| PLD-40B | 29 | 47 | 29 | 47 | 29 | 47 |
| PLD-60B | 20 | 32 | 20 | 32 | 20 | 32 |
| PLM-12 | 100 | 160 | 100 | 160 | 100 | 160 |
| PLM-25 | 50 | 80 | 50 | 80 | 50 | 80 |
| PLM-40 | 29 | 47 | 29 | 47 | 29 | 47 |
| PLN-20 | 61 | 98 | 61 | 98 | 61 | 98 |
| PLN-30 | 40 | 64 | 40 | 64 | 40 | 64 |
| PLN-45 | 26 | 42 | 26 | 42 | 26 | 42 |
| PLN-60 | 20 | 32 | 20 | 32 | 20 | 32 |
| PLN-100 | 1 | 3 | 3 | 5 | 6 | 10 |
| PLP-20 | 57 | 92 | 61 | 98 | 61 | 98 |
| PLP-30 | 40 | 64 | 40 | 64 | 40 | 64 |
| PLP-45 | 26 | 42 | 26 | 42 | 26 | 42 |
| PLP-60 | 20 | 32 | 20 | 32 | 20 | 32 |
| PWM-40 | 6 | 9 | 10 | 16 | 20 | 32 |
| PWM-60 | 6 | 9 | 10 | 16 | 20 | 32 |
| PWM-90 | 2 | 3 | 3 | 6 | 7 | 12 |
| PWM-120 | 2 | 4 | 4 | 6 | 8 | 13 |
| ULP-150 | 2 | 4 | 4 | 6 | 8 | 13 |

Note: These calculated values are based on MCB *S200 series* manufactured by *ABB* except for HVG/HVGC series, which are calculated by using MCB *S260 series* of the same manufacturer.

(9) For other information about the products, please refer to www.meanwell.com for details.

● **Warning / Caution !!**

- (1) Risk of electrical shock and energy hazard. All failure should be examined by a qualified technician. Please do not remove the case of the power supply by yourself!
- (2) Risk of irreparable damage. LED power supplies with IP64 to IP66 rating must be located indoors or in a location where these units can be sheltered from the rain if outdoors.
- (3) Please do not install LED power supplies in places with high ambient temperature or close to fire source. Please refer to the specifications about the maximum ambient temperature limitations.



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- (4) Output current and output wattage must not exceed the rated values on the specifications.
- (5) The FG (⊕) must be well connected to PE(protective earth) if the unit equips with it.
- (6) All MW's PSUs are designed in accordance with EMC regulations and the related test reports are available by request. Since they are belong to component power supplies and will be installed inside system enclosure, when they are integrated into a system, the EMC characteristics of the end system must be re-verified again.

Manufacturer :

MEAN WELL ENTERPRISES Co., LTD.
No.28, Wuquan 3rd Rd., Wugu Dist.,
New Taipei City 24891, Taiwan
Tel: +886-2-2299-6100
Web: www.meanwell.com

Branch Office :

China

MEAN WELL (GUANGZHOU) ENTERPRISES Co., LTD.
2F, A Building, Yuean Industry Park, Huangcun,
Dongpu Yown, Tianhe District, Gungzhou, China
Post Code:510660
Tel: +86-20-2887-1200
Web: www.meanwell.com.cn

U.S.A.

MEAN WELL USA, INC.
44030 Fremont Blvd.,
Fremont,
CA 94538, U.S.A.
Tel: +1-510-683-8886
Web:
www.meanwellusa.com

Europe

MEAN WELL EUROPE B.V.
Langs de Werf 8,
1185XT Amstelveen,
The Netherlands
Tel: +31-20-758-6000
Web: www.meanwell.eu