

LED Waterproof Power Supply



- ▶ 96 ~ 240 W **HLG series** - High Efficiency with PFC Function / Metal Case
- ▶ 60 ~ 150 W **CLG series** - PFC Function / Metal Case
- ▶ 60 ~ 96 W **CEN series** - PFC Function / Economical Metal Case
- ▶ 20 ~ 96 W **PLN series** - PFC Function / Plastic Case
- ▶ 30 ~ 96 W **PLC series** - PFC Function / Plastic Case
- ▶ 30 ~ 60 W **ELN series** - Dimming Option / Plastic Case
- ▶ 18 ~ 100 W **LP series** - Economical Plastic Case
- ▶ 20 ~ 60 W **PLP series** - PFC Function / PCB Type
- ▶ 150W **ULP series** - PFC Function / Metal Case (U-Bracket)



Your Reliable Power Partner

About Mean Well

Established in 1982 and located in Taipei, Taiwan, MEAN WELL is a leading branded standard switching power supply manufacturer with broad product lines covering AC/DC power supply, DC/DC converter, DC/AC inverter, and battery charger. Millions of quality switching power supplies are sold under the brand name "MEAN WELL" to over 70 countries every year. Right now we have advanced manufacturing facilities in Taipei Taiwan, GuangZhou China, and SuZhou China and sales offices in China, USA, and Europe.

Many of MEAN WELL industrial power supplies have been widely spreading in the LED moving sign industry all over the world and earned good reputation for their high reliability. To comply with the global trend of energy saving, MEAN WELL invest huge amount of resources to develop new generation of switching power supplies imbued with green concept. The LED power supply family is one of them which are looking for higher in efficiency, lower in power dissipation, and in compliance with the latest lighting regulations all over the world.

MEAN WELL LED power supplies have been widely used for street lighting, architectural lighting, decorative lighting, indoor lighting, stage and theater lighting, embedded lighting, and LED sign board. The robust design with high protection level against dust and moisture makes them suitable for all kind of indoor or outdoor installation of LED related applications.



Index

- 1-2 LP series
- 3 ELN series
- 4 PLN series
- 5 PLC series
- 6 CEN series
- 7 CLG series
- 8 HLG series
- 9 PLP series
- 10 ULP series
- 11 Waterproof connector & Waterproof earth leakage circuit breaker
- 12-13 How to choose a suitable LED power supply?



LP series

18~100W Single Output Class 2 Power Unit

Features

- Universal AC input / Full range (LPV)
- 180~264VAC input only (LPH-18)
- 90~132VAC input only (LPL-18)
- Fully encapsulated with IP67 level
- Protections: Short circuit / Overload / Over voltage / Over temp. (LPH-18/LPL-18 only)
- Constant voltage design (C.V. mode)
- UL1310 Class 2 power unit (except for LPV-100)
- Isolation class II, no F.G.
- Withstand 300VAC surge input for 5 seconds (except for LPH/LPL-18)
- Cooling by free air convection
- Pass LPS (except for LPV-100)
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED-based decorative/architectural lighting, LED stage and theater lighting, and LED electronic displays
- 2 years warranty



| | | | | | | |
|--------------------------|-------|---|---|---|---------------------------|-----------------|
| AC input voltage range | | 90~132VAC | 180~264VAC | 90~264VAC | | |
| AC inrush current (max.) | | Cold start, 40A at 115VAC | Cold start, 50A at 230VAC | Cold start, 70A at 230VAC | Cold start, 60A at 230VAC | |
| Overload Protection | Range | >105% | | 110%~150% | | |
| | Type | Hiccup mode, auto-recovery | | | | |
| Over voltage protection | | 115%~135% rated output voltage | | | | |
| Withstand voltage | | I/P-O/P: 3kVAC | | | | |
| Working temperature | | -30~+70°C | | -30~+70°C | -30~+75°C | -30~+70°C |
| Vibration | | 10~500Hz, 2G 10 minutes /1 cycle, period for 60 minutes each along X, Y, Z axes | | | | |
| Safety standards | | Design refer to UL1310 class 2, CAN/CSA-C22.2 No. 223-M91, EN61347-2-13; TUV EN60950-1 approved(LPH-18) | | UL1310 class 2 (except for LPV-60-5 & LPV-100), CAN/CSA-C22.2 No. 223-M91 (except for LPV-60-5, LPV-60-48 & LPV-100), UL879 (LPV-20 only) approved; Design refer to EN60950-1, EN61347-2-13 | | |
| EMC standards | | FCC part 15 class B | EN55022 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, ENV50204(LPV-100 pending) | | | |
| Connection | Input | UL rated, 18AWGx2C (30cm) | | UL rated, 18AWGx2C (60cm) | UL rated, 18AWGx2C (60cm) | |
| | | | | UL rated, 16AWGx2C (60cm) | UL rated, 14AWGx2C (60cm) | |
| Dimension (LxWxH)(mm) | | 140x 30x 20 | | 118x 35x 26 | 148x 40x 30 | 162.5x 42.5x 32 |
| | | | | | 190x 51x 35 | |

• LPL-18 Series (C.V. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|-------|-------|
| LPL-18-12 | 12V, 0~1.5A | ±3% | 120mV | 80% |
| LPL-18-24 | 24V, 0~0.75A | ±3% | 150mV | 83% |
| LPL-18-36 | 36V, 0~0.5A | ±3% | 200mV | 84% |

• LPH-18 Series (C.V. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|-------|-------|
| LPH-18-12 | 12V, 0~1.5A | ±3% | 120mV | 78% |
| LPH-18-24 | 24V, 0~0.75A | ±3% | 150mV | 82% |
| LPH-18-36 | 36V, 0~0.5A | ±3% | 200mV | 83% |

• LPV-20 Series (C.V. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|-------|-------|
| LPV-20-5 | 5V, 0~3.0A | ±5% | 80mV | 77% |
| LPV-20-12 | 12V, 0~1.67A | ±5% | 120mV | 81% |
| LPV-20-15 | 15V, 0~1.33A | ±5% | 120mV | 83% |
| LPV-20-24 | 24V, 0~0.84A | ±5% | 150mV | 83% |

• LPV-35 Series (C.V. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|----------------------|------|-------|-------|
| LPV-35-5 | 5V, 0~5.0A (peak 6A) | ±6% | 80mV | 77% |
| LPV-35-12 | 12V, 0~3.0A | ±5% | 120mV | 84% |
| LPV-35-15 | 15V, 0~2.4A | ±5% | 120mV | 84% |
| LPV-35-24 | 24V, 0~1.5A | ±5% | 150mV | 85% |
| LPV-35-36 | 36V, 0~1.0A | ±5% | 150mV | 85% |

• LPV-60 Series (C.V. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|-------|-------|
| LPV-60-5 | 5V, 0~8.0A | ±8% | 80mV | 76% |
| LPV-60-12 | 12V, 0~5.0A | ±5% | 120mV | 83% |
| LPV-60-15 | 15V, 0~4.0A | ±5% | 120mV | 83% |
| LPV-60-24 | 24V, 0~2.5A | ±5% | 150mV | 86% |
| LPV-60-36 | 36V, 0~1.67A | ±5% | 150mV | 86% |
| LPV-60-48 | 48V, 0~1.25A | ±5% | 150mV | 86% |

• LPV-100 Series (C.V. mode)

CE pending

| Model No. | Output | Tol. | R&N | Effi. |
|------------|-------------|------|-------|-------|
| LPV-100-5 | 5V, 0~12.0A | ±8% | 80mV | 78% |
| LPV-100-12 | 12V, 0~8.5A | ±5% | 120mV | 84% |
| LPV-100-15 | 15V, 0~6.7A | ±5% | 120mV | 85% |
| LPV-100-24 | 24V, 0~4.2A | ±5% | 150mV | 86% |
| LPV-100-36 | 36V, 0~2.8A | ±5% | 150mV | 87% |
| LPV-100-48 | 48V, 0~2.1A | ±5% | 150mV | 88% |

LP series

18~60W Single Output Class 2 Power Unit

Features

- Universal AC input / Full range (LPC)
- 180~264VAC input only (LPHC-18)
- 90~132VAC input only (LPLC-18)
- Fully encapsulated with IP67 level
- Protections: Short circuit / Overload / Over voltage / Over temp. (LPLC/LPHC-18 only)
- Constant current design
- Withstand 300VAC surge input for 5 seconds (except for LPHC/LPLC-18)
- Isolation class II, no F.G.
- Cooling by free air convection
- UL1310 Class 2 Power Unit
- Pass LPS
- 100% full load burn-in test
- Low cost, high reliability
- Suitable for LED-based decorative/architectural lighting, LED stage and theater lighting, and LED electronic displays
- 2 years warranty

| | | LPLC-18 | LPHC-18 | LPC-20 | LPC-35 | LPC-60 |
|--------------------------|--------|---|--|---|------------------------------|-----------------|
| INPUT | | | | | | |
| | | | | | | |
| AC input voltage range | | 90~132VAC | 180~264VAC | 90~264VAC | | |
| AC inrush current (max.) | | Cold start, 40A at 115VAC | Cold start, 50A at 230VAC | Cold start, 70A at 230VAC | Cold start, 60A at 230VAC | |
| Overload Protection | Range | ±5% rated output current | | | | |
| | Type | Constant current limiting, auto-recovery | | | | |
| Over voltage protection | | 105%~135% | | 115%~135% rated output voltage | | |
| Withstand voltage | | I/P-O/P: 3kVAC | | | | |
| Working temperature | | -30~+70°C | | -30~+70°C | -30~+75°C | -30~+70°C |
| Vibration | | 10~500Hz, 2G 10 minutes /1 cycle, period for 60 minutes each along X, Y, Z axes | | | | |
| Safety standards | | Design refer to UL1310 class 2, CAN/CSA-C22.2 No.223-M91, EN61347-2-13 | | UL1310 class 2, CAN/CSA-C22.2 NO. 223-M91(except for LPC-20-350, LPC-35-700, LPC-60-1050/1400), UL879 (LPC-20 only) approved; design refer to TUV EN60950-1, EN61347-2-13 | | |
| EMC standards | | FCC part 15 class A | EN55022 class A, NE61000-3-2,3, ENV50204, EN61000-4-2,3,4,5,6,8,11 | EN55022 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, ENV50204 | | |
| Connection | Input | UL rated, 18AWGx2C (30cm) | | UL rated, 18AWGx2C (60cm) | UL rated, 18AWGx2C (60cm) | |
| | Output | | | | UL rated, 16AWGx2C (60cm) | |
| Dimension (LxWxH)(mm) | | 140x 30x 22 | | 118x 35x 26 | 148x 40x 30 | 162.5x 42.5x 32 |

• LPLC-18 Series (C.C. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|-------------|--------------|------|-------|-------|
| LPLC-18-350 | 6~48V, 350mA | ±5% | 300mV | 82% |
| LPLC-18-700 | 6~25V, 700mA | ±5% | 250mV | 80% |

• LPHC-18 Series (C.C. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|-------------|--------------|------|-------|-------|
| LPHC-18-350 | 6~48V, 350mA | ±5% | 300mV | 80% |
| LPHC-18-700 | 6~25V, 700mA | ±5% | 250mV | 80% |

• LPC-20 Series (C.C. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|------------|--------------|------|-------|-------|
| LPC-20-350 | 9~48V, 350mA | ±5% | 200mV | 83% |
| LPC-20-700 | 9~30V, 700mA | ±5% | 200mV | 83% |

• LPC-35 Series (C.C. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|-------------|---------------|------|-------|-------|
| LPC-35-700 | 9~48V, 700mA | ±5% | 200mV | 85% |
| LPC-35-1050 | 9~30V, 1050mA | ±5% | 200mV | 85% |
| LPC-35-1400 | 9~24V, 1400mA | ±5% | 200mV | 85% |

• LPC-60 Series (C.C. mode)



| Model No. | Output | Tol. | R&N | Effi. |
|-------------|---------------|------|-------|-------|
| LPC-60-1050 | 9~48V, 1050mA | ±5% | 200mV | 87% |
| LPC-60-1400 | 9~42V, 1400mA | ±5% | 200mV | 85% |
| LPC-60-1750 | 9~34V, 1750mA | ±5% | 200mV | 87% |

► Special Symbols for EN61347-2-13

| | |
|----------------------|--|
| | Protection against overheating to prevent the lamp controlgear case temperature under any conditions of use from exceeding the indicated value (110°C) |
| | Suitable for direct mounting on normally flammable surfaces, such as wood (>2mm) |
| | Based on VDE0710-14, can be installed inside a wooden material like wooden cabinet. The minimum distance between the product enclosure to wooden material in each side is defined. |
| LPS | Limited Power Source |
| tc: 80°C ta: 40°C | Full load operation up to 40°C with surface temperature of case < 80°C |
| SELV | Vo< 50VDC can have this mark on the unit |

ELN series

30~60W Single Output Class 2 Power Unit

Features

- Universal AC input / Full range
- Fully isolated plastic case with IP64 level
- Built-in constant current limiting circuit with adjustable OCP level
- Protections: Short circuit / Overload / Over voltage
- Optional dimming function: 1.1~10VDC(D type) or PWM (P type) controlled
- UL1310 Class 2 power unit / Pass LPS
- Cooling by free air convection
- Suitable for economical LED indoor lighting and LED electronic displays
- 2 years warranty

| | |
|-------------------------------------|--|
| INPUT | |
| OUTPUT (standard) | |
| OUTPUT (Dimming Function) | |



| | | |
|--------------------------|--|---|
| AC input voltage range | 90~264VAC ; 127~370VDC | |
| AC inrush current (max.) | Cold start, 60A at 230VAC | |
| DC adjustment range | ±10% rated output voltage | |
| Current adjustment range | 75%~103% rated output current adjustable by internal potential meter | |
| Overload protection | 95%~110% constant current limiting, auto-recovery | 95%~130% constant current limiting, auto-recovery |
| Over voltage protection | Range | 110%~150% rated output voltage |
| | Type | Shut down o/p voltage, re-power on to restart |
| Withstand voltage | I/P-O/P: 3kVAC | |
| Working temperature | -20~+60°C (refer to output derating curve) | |
| Vibration | 10~500Hz, 2G 10min/1 cycle, period for 60 min each along X, Y, Z axes | |
| Safety standards | UL1310 class 2, CAN/CSA-C22.2 No. 223-M91(except for 48V) approved; Design refer to TUV EN60950-1, EN61347-2-13 | |
| EMC standards | EN55022 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, ENV50204 | |
| Connection | Input/Output: UL rated, 18AWGx2C (30cm); Output(with optional dimming function): 18AWGx4C (30cm) | |
| Dimension (LxWxH)(mm) | 145x 47x 30 | 181x 61.5x 35 |
| Packing | 0.26kg ; 60pcs / 16.6kg | 0.4kg ; 24pcs / 11.0kg |

• ELN-30 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|-------|-------|
| ELN-30-5 | 5V, 0~5.0A | ±5% | 80mV | 75% |
| ELN-30-9 | 9V, 0~3.4A | ±5% | 100mV | 80% |
| ELN-30-12 | 12V, 0~2.5A | ±5% | 120mV | 82% |
| ELN-30-15 | 15V, 0~2.0A | ±5% | 120mV | 82% |
| ELN-30-24 | 24V, 0~1.25A | ±5% | 150mV | 85% |
| ELN-30-27 | 27V, 0~1.12A | ±5% | 150mV | 85% |
| ELN-30-48 | 48V, 0~0.63A | ±5% | 250mV | 87% |

• ELN-60 Series



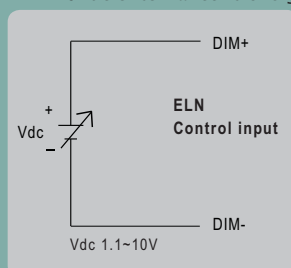
| Model No. | Output | Tol. | R&N | Effi. |
|-----------|-------------|------|-------|-------|
| ELN-60-9 | 9V, 0~5.0A | ±5% | 120mV | 82% |
| ELN-60-12 | 12V, 0~5.0A | ±5% | 120mV | 85% |
| ELN-60-15 | 15V, 0~4.0A | ±5% | 150mV | 86% |
| ELN-60-24 | 24V, 0~2.5A | ±5% | 150mV | 87% |
| ELN-60-27 | 27V, 0~2.3A | ±5% | 200mV | 87% |
| ELN-60-48 | 48V, 0~1.3A | ±5% | 250mV | 88% |

► Dimming Control (optional)

Through the dimming function, output current of ELN series can be adjusted to reduce the energy consumption or adjust the brightness of LEDs connecting to it. Two kinds of control signal are accepted: 1.1~10VDC (D-type option) or PWM signal (P-type option).

• D Type :

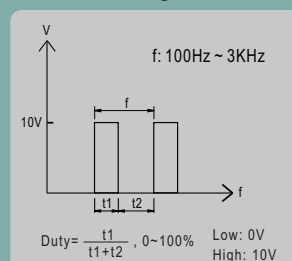
1.1~10Vdc external control signal



Order No.: ELN- 30 - 5 D

• P Type :

PWM control signal



Order No.: ELN- 30 - 5 P

PLN series

20~96W Single Output Class 2 with PFC

Features

- Universal AC input (up to 295VAC) / Full range
- Fully isolated plastic case with IP64 level
- Built-in active PFC function, PF>0.9 for 75% of load or higher
- Protections: Short circuit / Overload / Over voltage / Over temp.
- Built-in constant current limiting circuit
- UL1310 Class 2 power unit / Pass LPS
- User adjustable output voltage (except for PLN-20) and current protection level
- Cooling by free air convection
- 100% full load burn-in test
- Suitable for LED lighting and moving sign applications
- 2 years warranty

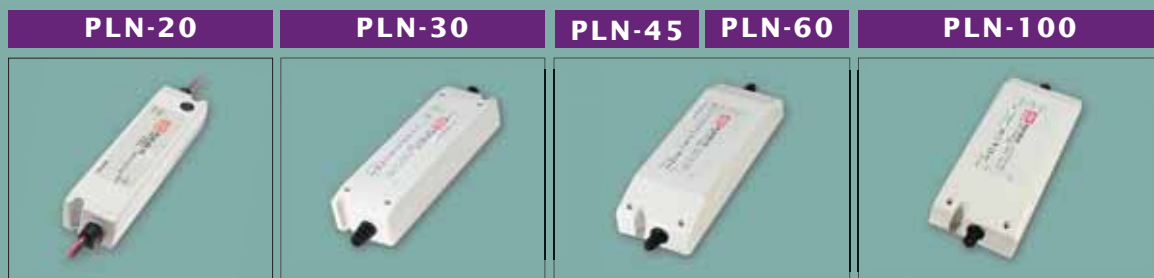
INPUT
(PLN-45/60/100)



INPUT
(PLN-20/30)



OUTPUT



| | | | | | | |
|---------------------------|--------|---|--|---|---|--|
| AC input voltage range | | 90~277VAC | 90~295VAC ; 127~417VDC | | | |
| AC inrush current (max.) | | Cold start, 40A at 230VAC | | | | |
| DC adjustment range | | None | 95%~108% rated output voltage adjustable by internal potential meter | | 85%~100% rated output voltage | |
| Current adjustment range | | 75% ~100% | 75%~103% rated output current adjustable by internal potential meter | | | |
| Overload protection | | 95%~110% constant current limiting, auto-recovery | 100%~110% constant current limiting, auto-recovery | 95%~110% constant current limiting, auto-recovery | 95%~102% constant current limiting, auto-recovery | |
| Over voltage protection | | 105%~142% rated output voltage | 110%~155% rated output voltage | 115%~140% rated output voltage | 107%~135% rated output voltage | |
| Setup, rise, hold up time | | 2300ms(set up time) at full load and 230VAC, no hold up time | 1500ms (setup time) at full load and 230VAC, no hold up time | | 1200ms, 80ms, 60ms at full load and 230VAC | |
| Withstand voltage | | I/P-O/P: 3.75kVAC | | | | |
| Working temperature | | -30~+60℃ | -30~+50℃ (refer to output derating curve) | | | |
| Safety standards | | UL1310 Class 2, CAN/CSA-C22.2 No.223-M91 (except for 48V & PLN-20), EN61347-1, EN61347-2-13, UL879 (except for PLN-20) approved ; UL8750 approved for PLN-20/60/100; UL60950-1, TUV EN60950-1 approved for PLN-100 only | | | | |
| EMC standards | | EN55015, EN55022 class B(PLN-60/100 only), EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547 | | | | |
| Connection | Input | UL rated, 18AWGx2C (32cm) | | UL rated, 18AWGx3C (30cm) | UL rated, 18AWGx3C (31cm) | |
| | Output | | | UL rated, 18AWGx2C (30cm) | UL rated, 18AWGx2C (31cm) | |
| Dimension (LxWxH) (mm) | | 147x 37x 28 | 145x 47x 30 | 181x 61.5x 35 | 200x 70.5x 35 | |
| Packing | | 0.18kg ; 60pcs / 12.8kg | 0.22kg ; 60pcs / 14.2kg | 0.5kg ; 24pcs / 13kg | 0.52kg ; 20pcs / 12.5kg | |

• PLN-20 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| PLN-20-12 | 12V, 0~1.6A | ±10% | 2.5V | 80.0% |
| PLN-20-18 | 18V, 0~1.1A | ±10% | 3.0V | 81.0% |
| PLN-20-24 | 24V, 0~0.8A | ±10% | 3.0V | 82.0% |
| PLN-20-36 | 36V, 0~0.55A | ±10% | 3.0V | 83.0% |
| PLN-20-48 | 48V, 0~0.42A | ±10% | 3.8V | 83.5% |

• PLN-30 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| PLN-30-9 | 9V, 0~3.3A | ±10% | 2.6V | 80.0% |
| PLN-30-12 | 12V, 0~2.5A | ±10% | 2.0V | 82.5% |
| PLN-30-15 | 15V, 0~2.0A | ±10% | 2.6V | 83.5% |
| PLN-30-20 | 20V, 0~1.5A | ±10% | 2.6V | 84.0% |
| PLN-30-24 | 24V, 0~1.25A | ±10% | 2.6V | 84.0% |
| PLN-30-27 | 27V, 0~1.12A | ±10% | 2.3V | 84.5% |
| PLN-30-36 | 36V, 0~0.84A | ±10% | 4.5V | 85.0% |
| PLN-30-48 | 48V, 0~0.63A | ±10% | 3.7V | 85.5% |

• PLN-45 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|-------------|------|------|-------|
| PLN-45-12 | 12V, 0~3.8A | ±10% | 2.0V | 83.5% |
| PLN-45-15 | 15V, 0~3.0A | ±10% | 2.4V | 85.0% |

| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| PLN-45-20 | 20V, 0~2.3A | ±10% | 1.8V | 86.5% |
| PLN-45-24 | 24V, 0~1.9A | ±10% | 2.7V | 86.5% |
| PLN-45-27 | 27V, 0~1.7A | ±10% | 2.7V | 86.5% |
| PLN-45-36 | 36V, 0~1.25A | ±10% | 3.6V | 87.5% |
| PLN-45-48 | 48V, 0~0.95A | ±10% | 4.6V | 87.5% |

• PLN-60 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|-------------|------|------|-------|
| PLN-60-12 | 12V, 0~5.0A | ±10% | 2.0V | 85.0% |
| PLN-60-15 | 15V, 0~4.0A | ±10% | 2.4V | 86.0% |
| PLN-60-20 | 20V, 0~3.0A | ±10% | 1.8V | 87.5% |
| PLN-60-24 | 24V, 0~2.5A | ±10% | 2.7V | 87.0% |
| PLN-60-27 | 27V, 0~2.3A | ±10% | 2.7V | 88.0% |
| PLN-60-36 | 36V, 0~1.7A | ±10% | 3.6V | 89.0% |
| PLN-60-48 | 48V, 0~1.3A | ±10% | 4.6V | 89.0% |

• PLN-100 Series



| Model No. | Output | Tol. | R&N | Effi. |
|------------|--------------|------|-------|-------|
| PLN-100-12 | 12V, 0~5.0A | ±3% | 150mV | 84.5% |
| PLN-100-15 | 15V, 0~5.0A | ±3% | 150mV | 86.5% |
| PLN-100-20 | 20V, 0~4.8A | ±3% | 150mV | 90.0% |
| PLN-100-24 | 24V, 0~4.0A | ±3% | 150mV | 90.0% |
| PLN-100-27 | 27V, 0~3.55A | ±3% | 150mV | 90.0% |
| PLN-100-36 | 36V, 0~2.65A | ±2% | 150mV | 90.0% |
| PLN-100-48 | 48V, 0~2.0A | ±2% | 200mV | 89.0% |

PLC series

30~96W Single Output Class 2 with PFC

Features

- Universal AC input / Full range
- Fully isolated plastic case with screw terminal style of I/O
- Built-in constant current limiting circuit
- Adjustable output voltage and current level
- Built-in active PFC function, PF>0.9 for 75% of load or higher
- High efficiency up to 90%
- UL1310 Class 2 power unit / Pass LPS
- Cooling by free air convection
- Protections: Short circuit / Overload / Over voltage / Over temp.
- 100% full load burn-in test
- Suitable for LED lighting and moving sign applications
- 2 years warranty



| | | | |
|-----------------------------|--|---|---|
| AC input voltage range | 90~264VAC; 127~370VDC | | |
| AC inrush current (max.) | Cold start, 40A at 230VAC | | |
| DC adjustment range | 95%~108% rated output voltage adjustable by internal potential meter | | 85%~100% rated output voltage |
| Current adjustment range | 75%~103% rated output current adjustable by internal potential meter | | 75%~100% rated output voltage |
| Overload protection | 100%~110% constant current limiting, auto-recovery | 95%~110% constant current limiting, auto-recovery | 95%~102% constant current limiting, auto-recovery |
| Over voltage protection | 110%~155% rated output voltage | 115%~140% rated output voltage | 107%~135% rated output voltage |
| Setup time | 1500ms at full load and 230VAC | | 1200ms |
| Withstand voltage | I/P-O/P: 3.75kVAC | | |
| Working temperature | -30~+50°C (refer to output derating curve) | | |
| Safety standards | UL1310 Class 2, CAN/CSA-C22.2 No.223-M91 (except for 48V), EN61347-1, EN61347-2-13 approved; UL60950-1, TUV EN60950-1 approved for PLC-100 | | |
| EMC standards | EN55015, EN55022 class B (PLC-45/60/100), EN61000-3-2 class C, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547 | | |
| Connection (Input / Output) | 2+2P screw terminal block | 3+2P screw terminal block | |
| Dimension (LxWxH)(mm) | 160x 46x 30 | 181.5x 62x 35 | 200.5x 70.5x 35 |
| Packing | 0.2kg ; 70pcs / 15kg | 0.41kg ; 30pcs / 13.3kg | 0.52kg ; 25pcs / 14kg |

• PLC-30 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| PLC-30-9 | 9V, 0~3.3A | ±10% | 2.6V | 80.0% |
| PLC-30-12 | 12V, 0~2.5A | ±10% | 2.0V | 82.5% |
| PLC-30-15 | 15V, 0~2.0A | ±10% | 2.6V | 83.5% |
| PLC-30-20 | 20V, 0~1.5A | ±10% | 2.6V | 84.0% |
| PLC-30-24 | 24V, 0~1.25A | ±10% | 2.4V | 84.0% |
| PLC-30-27 | 27V, 0~1.12A | ±10% | 2.3V | 84.5% |
| PLC-30-36 | 36V, 0~0.84A | ±10% | 3.6V | 85.0% |
| PLC-30-48 | 48V, 0~0.63A | ±10% | 3.7V | 85.5% |

• PLC-45 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| PLC-45-12 | 12V, 0~3.8A | ±10% | 2.0V | 83.5% |
| PLC-45-15 | 15V, 0~3.0A | ±10% | 2.4V | 85.0% |
| PLC-45-20 | 20V, 0~2.3A | ±10% | 1.8V | 86.5% |
| PLC-45-24 | 24V, 0~1.9A | ±10% | 2.7V | 86.5% |
| PLC-45-27 | 27V, 0~1.7A | ±10% | 2.7V | 86.5% |
| PLC-45-36 | 36V, 0~1.25A | ±10% | 3.6V | 87.5% |
| PLC-45-48 | 48V, 0~0.95A | ±10% | 4.6V | 87.5% |

• PLC-60 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|-------------|------|------|-------|
| PLC-60-12 | 12V, 0~5.0A | ±10% | 2.0V | 85.0% |
| PLC-60-15 | 15V, 0~4.0A | ±10% | 2.4V | 86.0% |
| PLC-60-20 | 20V, 0~3.0A | ±10% | 1.8V | 87.5% |
| PLC-60-24 | 24V, 0~2.5A | ±10% | 2.4V | 87.0% |
| PLC-60-27 | 27V, 0~2.3A | ±10% | 2.7V | 88.0% |
| PLC-60-36 | 36V, 0~1.7A | ±10% | 3.6V | 89.0% |
| PLC-60-48 | 48V, 0~1.3A | ±10% | 4.6V | 89.0% |

• PLC-100 Series



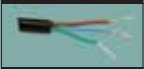



| Model No. | Output | Tol. | R&N | Effi. |
|------------|--------------|------|-------|-------|
| PLC-100-12 | 12V, 0~5.0A | ±3% | 150mV | 84.5% |
| PLC-100-15 | 15V, 0~5.0A | ±3% | 150mV | 86.5% |
| PLC-100-20 | 20V, 0~4.8A | ±3% | 150mV | 90.0% |
| PLC-100-24 | 24V, 0~4.0A | ±3% | 150mV | 90.0% |
| PLC-100-27 | 27V, 0~3.55A | ±3% | 150mV | 90.0% |
| PLC-100-36 | 36V, 0~2.65A | ±2% | 150mV | 90.0% |
| PLC-100-48 | 48V, 0~2.0A | ±2% | 200mV | 89.0% |

CEN series

60~96W Single Output Class 2 with PFC

Features

- Universal AC input (up to 295VAC) / Full range
- Protections:
 - Short circuit / Overload / Over voltage / Over temp.
- Built-in active PFC function, PF>0.9 for 75% of load of higher
- IP66 design
- Meet 4kV surge immunity level (IEC61000-4-5)
- UL1310 Class 2 power unit
- Cooling by free air convection
- Suitable for LED lighting and moving sign applications
- 3 years warranty

| | | CEN-60/75 | CEN-100 |
|--|--------|---|--|
| <div>INPUT</div>  <div>OUTPUT</div>  | |  | |
| | |  | |
| AC input voltage range | | 90~295VAC ; 127~417VDC | |
| AC inrush current (max.) | | Cold start, 45A at 230VAC | Cold start, 60A at 230VAC |
| DC adjustment range | | ±10% rated output voltage | |
| Current adjustment range | | 75%~100% rated output current | |
| Overload protection | | 95%~110% constant current limiting, auto-recovery | |
| Over voltage protection | | 110%~140% shut off, re-power on to restart | 110%~135% shut off, re-power on to restart |
| Over temp. protection | | 85°C ±10°C (RTH1) shut down O/P voltage, recovers automatically after fault condition goes down | |
| Setup time | | 1400ms at full load and 230VAC | 3000ms at full load and 230VAC |
| Withstand voltage | | I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC | |
| Working temperature | | -30~+70°C (refer to output derating curve) | |
| Safety standards | | UL8750, TUV EN61347-1, EN61347-2-13 approved | |
| EMC standards | | EN55015, EN61000-3-2 Class C, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547 | |
| Connection | Input | UL rated, 18AWGx3C (30cm) | |
| | Output | UL rated, 18AWGx2C (30cm) | |
| Dimension (LxWxH) (mm) | | 183x 62.5x 40.5 | 193x 62.5x 40.5 |

•CEN-60 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| CEN-60-12 | 12V, 0~5.0A | ±10% | 2.0V | 86% |
| CEN-60-15 | 15V, 0~4.0A | ±10% | 2.4V | 87% |
| CEN-60-20 | 20V, 0~3.0A | ±10% | 1.8V | 88% |
| CEN-60-24 | 24V, 0~2.5A | ±10% | 2.4V | 89% |
| CEN-60-30 | 30V, 0~2.0A | ±10% | 3.0V | 90% |
| CEN-60-36 | 36V, 0~1.7A | ±10% | 3.6V | 90% |
| CEN-60-42 | 42V, 0~1.45A | ±10% | 4.0V | 90% |
| CEN-60-48 | 48V, 0~1.3A | ±10% | 4.6V | 91% |
| CEN-60-54 | 54V, 0~1.15A | ±10% | 5.0V | 91% |

•CEN-75 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| CEN-75-15 | 15V, 0~5.00A | ±10% | 2.7V | 87% |
| CEN-75-20 | 20V, 0~3.75A | ±10% | 2.0V | 88% |
| CEN-75-24 | 24V, 0~3.15A | ±10% | 2.7V | 89% |
| CEN-75-30 | 30V, 0~2.50A | ±10% | 3.0V | 90% |
| CEN-75-36 | 36V, 0~2.10A | ±10% | 3.6V | 90% |
| CEN-75-42 | 42V, 0~1.80A | ±10% | 4.0V | 90% |

| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| CEN-75-48 | 48V, 0~1.57A | ±10% | 4.6V | 91% |
| CEN-75-54 | 54V, 0~1.40A | ±10% | 5.0V | 91% |

•CEN-100 Series



| Model No. | Output | Tol. | R&N | Effi. |
|------------|--------------|------|------|-------|
| CEN-100-20 | 20V, 0~4.80A | ±10% | 2.0V | 88% |
| CEN-100-24 | 24V, 0~4.00A | ±10% | 2.7V | 89% |
| CEN-100-30 | 30V, 0~3.20A | ±10% | 3.0V | 90% |
| CEN-100-36 | 36V, 0~2.65A | ±10% | 3.6V | 90% |
| CEN-100-42 | 42V, 0~2.28A | ±10% | 4.0V | 90% |
| CEN-100-48 | 48V, 0~2.00A | ±10% | 4.6V | 91% |
| CEN-100-54 | 54V, 0~1.77A | ±10% | 5.0V | 91% |

CLG series

60~150W Single Output with PFC

Features

- Universal AC input (up to 295VAC) / Full range
- Protections: Short circuit / Overload / Over voltage / Over temp.
- Built-in active PFC function, PF>0.9 for 75% of load or higher
- IP67/IP65 design for indoor or outdoor installations (except for C type)
- Output current adjustable through output cable or internal potential meter (CLG-150)
- UL1310 class 2 power unit / Pass LPS (CLG-60&100)
- Cooling by free air convection
- Suitable for LED lighting, street lighting and moving sign applications
- Built-in constant current limiting circuit
- Meet 4KV surge immunity level (IEC 61000-4-5)
- Multiple models for CLG-150 :
 - A-Type:** IP65 rated. Output voltage and constant current level can be adjusted through internal potential meter
 - B-Type:** IP67 rated and constant current level adjustable through output cable
 - C-Type:** Non IP. Terminal block for I/O connection
 - Blank-Type:** IP67 rated. Cable for I/O connection
- 3 years warranty

| | CLG-60 | CLG-100 | CLG-150 |
|---------------------------|--|---|---|
| INPUT |  |  |  |
| OUTPUT |  |  |  |
| AC input voltage range | 90~295VAC; 127~4170VDC | | |
| AC inrush current (max.) | Cold start, 40A at 230VAC | | Cold start, 65A at 230VAC |
| DC adjustment range | Fixed. Can be modified between 90%~110% (CLG-60) or 85%~100% (CLG-100) rated output voltage | | A and C type can be adjusted by internal potential meter |
| Current adjustment range | Fixed. Can be modified between 75%~103% rated output current | | Can be adjusted by internal potential meter (A and C type) or through output cable (B type) |
| Overload protection | 95%~110% constant current, auto-recovery | 95%~102% constant current, auto-recovery | 95%~108% constant current limiting, auto-recovery |
| Over voltage protection | 110%~140% | 107%~135% | 110%~142% rated output voltage |
| Setup, rise, hold up time | 3000ms(setup time), no hold up time | 1200ms, 80ms, 60ms at full load and 230VAC | 3000ms, 80ms, 50ms at full load and 230VAC |
| Withstand voltage | I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC | | |
| Working temperature | -30~+70°C (refer to output derating curve) | | |
| Safety standards | UL1310 Class 2, EN61347-1, EN61347-2-13, CAN/CSA-C22.2 No.223-M91 (except for 48V), UL879 (SAM list), UL8750 approved; TUV EN60950-1, UL60950-1 for CLG-100 only | | UL60950-1, UL1012, TUV EN60950-1, EN61347-1, EN61347-2-13 approved |
| EMC standards | EN55015, EN55022 class B, EN61000-3-2 class C, EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61547 | | |
| Connection | Input | UL rated, 18AWGx3C (30cm) | UL rated, 18AWGx3C (30cm); Terminal block for C type option |
| | Output | UL rated, 18AWGx2C (30cm) | □ = A & Blank type : 14AWGx2C (30cm) □ = B type: 14AWGx2C (30cm)+18AWGx2C (30cm) □ = C type: Terminal block |
| Dimension (LxWxH)(mm) | 195.6x 61.5x 38.8 | 222.2x 68x 38.8 | A/B/Blank-Type: 222.2x 68x 38.8; C-Type: 229x 68x 38.8 |
| Packing | 0.86kg ; 16pcs / 14.8kg | 1.0kg ; 12pcs / 13kg | 1.0kg ; 12pcs / 13kg |

CLG-60 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|-------------|------|------|-------|
| CLG-60-12 | 12V, 0~5.0A | ±10% | 2.0V | 85.0% |
| CLG-60-15 | 15V, 0~4.0A | ±10% | 2.4V | 86.0% |
| CLG-60-20 | 20V, 0~3.0A | ±10% | 1.8V | 87.5% |
| CLG-60-24 | 24V, 0~2.5A | ±10% | 2.7V | 87.0% |
| CLG-60-27 | 27V, 0~2.3A | ±10% | 2.7V | 88.0% |
| CLG-60-36 | 36V, 0~1.7A | ±10% | 3.6V | 89.0% |
| CLG-60-48 | 48V, 0~1.3A | ±10% | 4.6V | 89.0% |

CLG-100 Series



| Model No. | Output | Tol. | R&N | Effi. |
|------------|--------------|------|-------|-------|
| CLG-100-12 | 12V, 0~5.00A | ±3% | 150mV | 84.5% |
| CLG-100-15 | 15V, 0~5.00A | ±3% | 150mV | 86.5% |
| CLG-100-20 | 20V, 0~4.80A | ±3% | 150mV | 90.0% |

| Model No. | Output | Tol. | R&N | Effi. |
|------------|--------------|------|-------|-------|
| CLG-100-24 | 24V, 0~4.00A | ±3% | 150mV | 90% |
| CLG-100-27 | 27V, 0~3.55A | ±3% | 150mV | 90% |
| CLG-100-36 | 36V, 0~2.65A | ±2% | 150mV | 90% |
| CLG-100-48 | 48V, 0~2.00A | ±2% | 200mV | 89% |

CLG-150 Series



| Model No. | Output | Tol. | R&N | Effi. |
|---------------|--------------|------|-------|-------|
| CLG-150-12[A] | 12V, 0~11.0A | ±2% | 150mV | 88% |
| CLG-150-15[A] | 15V, 0~9.50A | ±2% | 150mV | 88% |
| CLG-150-20[A] | 20V, 0~7.50A | ±2% | 150mV | 90% |
| CLG-150-24[A] | 24V, 0~6.30A | ±1% | 150mV | 90% |
| CLG-150-30[A] | 30V, 0~5.00A | ±1% | 150mV | 91% |
| CLG-150-36[A] | 36V, 0~4.20A | ±1% | 150mV | 91% |
| CLG-150-48[A] | 48V, 0~3.20A | ±1% | 200mV | 92% |

□ = A, B, C or blank

HLG series

96~240W High Efficiency with PFC

Features

- Universal AC input (up to 305VAC) / Full range
- Protections: Short circuit / Overload / Over voltage / Over temp.
- Built-in active PFC, PF>0.9 for 50% of load or higher
- IP67 / IP65 design for indoor or outdoor installations (except for C type)
- Output current adjustable through output cable or internal potential meter
- Class 2 power unit (HLG-100□)
- Cooling by free air convection
- Suitable for LED lighting and street lighting applications

- Multiple models:

A-Type: IP65 rated. Output and constant current level can be adjusted through internal potential meter

B-Type: IP67 rated and equipped with 1~10VDC, PWM and resistance dimming function (HLG-240□ only have resistance dimming function)

C-Type: Terminal block for I/O connection (HLG-240□ only)

Blank-Type: IP67 rated, cable for I/O connection

- Available by request for HLG-100□ / HLG-150□
- 3 years warranty



| | | |
|---------------------------|---|--|
| AC input voltage range | □ = Blank or H type ; Blank: 90~264VAC, 127~370VDC ; H type: 90~305VAC, 127~431VDC | |
| AC inrush current (max.) | Cold start, 75A at 230VAC | |
| DC adjustment range | ±10% rated output voltage | ±6% rated output voltage |
| Current adjustment range | 50%~100% (60%~100% for HLG-100□ / HLG-150□) rated output current adjustable by internal potential meter or through output cable | |
| Overload protection | 95%~108% constant current limiting, auto-recovery | |
| Over voltage protection | 110%~140% rated output voltage | |
| Setup, rise, hold up time | 2500ms, 50ms, 16ms at full load and 230VAC | 2500ms, 80ms, 15ms at full load and 230VAC |
| Withstand voltage | I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC | |
| Working temperature | -30~+70°C (refer to output derating curve) | |
| Safety standards | Design refer to UL8750, UL60950-1, TUV EN60950-1, EN61347-1, EN61347-2-13 | UL60950-1, UL1012, TUV EN60950-1, EN61347-1, EN61347-2-13 approved; Design refer to UL8750 |
| EMC standards | EN55015, EN55022 class B, EN61000-3-2 class C, EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN61547 | |
| Connection | Input | UL rated, 18AWGx3C (30cm); Terminal block for C type (HLG-240□ only) |
| | Output | A & Blank type: 14AWGx2C (30cm), B type: 14AWGx2C (30cm)+18AWGx2C (30cm), C type: Terminal block (HLG-240□ only) |
| Dimension (LxWxH)(mm) | 212.2x 68x 38.8 | 222.2x 68x 38.8 Blank/A/B: 244.2x 68x 38.8; C: 251x 68x 38.8 |

• HLG-100□ Series UL / CUL / TUV / CB / CE pending

| Model No. | Output | Tol. | R&N | Effi. |
|----------------|--------------|-------|-------|-------|
| HLG-100□-20(A) | 20V, 0~4.8A | ±1.0% | 150mV | 93.5% |
| HLG-100□-24(A) | 24V, 0~4.0A | ±1.0% | 150mV | 93.5% |
| HLG-100□-30(A) | 30V, 0~3.2A | ±1.0% | 200mV | 93.5% |
| HLG-100□-36(A) | 36V, 0~2.65A | ±1.0% | 200mV | 93.5% |
| HLG-100□-42(A) | 42V, 0~2.23A | ±1.0% | 200mV | 93.5% |
| HLG-100□-48(A) | 48V, 0~2.0A | ±1.0% | 200mV | 94.0% |
| HLG-100□-54(A) | 54V, 0~1.77A | ±1.0% | 200mV | 94.0% |

• HLG-120□ Series UL / CUL / TUV / CB / CE pending

| Model No. | Output | Tol. | R&N | Effi. |
|----------------|-------------|-------|-------|-------|
| HLG-120□-12(A) | 12V, 0~10A | ±2.5% | 150mV | 92.0% |
| HLG-120□-15(A) | 15V, 0~8.0A | ±2.0% | 150mV | 92.0% |
| HLG-120□-20(A) | 20V, 0~6.0A | ±1.0% | 150mV | 93.5% |
| HLG-120□-24(A) | 24V, 0~5.0A | ±1.0% | 150mV | 94.0% |
| HLG-120□-30(A) | 30V, 0~4.0A | ±1.0% | 200mV | 94.0% |
| HLG-120□-36(A) | 36V, 0~3.4A | ±1.0% | 200mV | 94.0% |
| HLG-120□-42(A) | 42V, 0~2.9A | ±1.0% | 200mV | 94.0% |
| HLG-120□-48(A) | 48V, 0~2.5A | ±1.0% | 200mV | 94.0% |
| HLG-120□-54(A) | 54V, 0~2.3A | ±1.0% | 200mV | 94.0% |

• HLG-150□ Series UL / CUL / TUV / CB / CE pending

| Model No. | Output | Tol. | R&N | Effi. |
|----------------|--------------|-------|-------|-------|
| HLG-150□-12(A) | 12V, 0~12.5A | ±2.5% | 150mV | 92.0% |
| HLG-150□-15(A) | 15V, 0~10.0A | ±2.0% | 150mV | 92.5% |
| HLG-150□-20(A) | 20V, 0~7.50A | ±1.0% | 150mV | 93.0% |
| HLG-150□-24(A) | 24V, 0~6.30A | ±1.0% | 150mV | 93.5% |
| HLG-150□-30(A) | 30V, 0~5.00A | ±1.0% | 200mV | 93.5% |
| HLG-150□-36(A) | 36V, 0~4.20A | ±1.0% | 200mV | 93.5% |

| Model No. | Output | Tol. | R&N | Effi. |
|----------------|--------------|-------|-------|-------|
| HLG-150□-42(A) | 42V, 0~3.60A | ±1.0% | 200mV | 94.0% |
| HLG-150□-48(A) | 48V, 0~3.20A | ±1.0% | 200mV | 94.0% |
| HLG-150□-54(A) | 54V, 0~2.80A | ±1.0% | 200mV | 94.0% |

• HLG-185□ Series UL / CUL / TUV / CB / CE pending

| Model No. | Output | Tol. | R&N | Effi. |
|----------------|--------------|-------|-------|-------|
| HLG-185□-12(A) | 12V, 0~13.0A | ±2.5% | 150mV | 92.0% |
| HLG-185□-15(A) | 15V, 0~11.5A | ±2.0% | 150mV | 93.0% |
| HLG-185□-20(A) | 20V, 0~9.30A | ±1.0% | 150mV | 93.5% |
| HLG-185□-24(A) | 24V, 0~7.80A | ±1.0% | 150mV | 94.0% |
| HLG-185□-30(A) | 30V, 0~6.20A | ±1.0% | 200mV | 94.0% |
| HLG-185□-36(A) | 36V, 0~5.20A | ±1.0% | 200mV | 94.0% |
| HLG-185□-42(A) | 42V, 0~4.40A | ±1.0% | 200mV | 94.0% |
| HLG-185□-48(A) | 48V, 0~3.90A | ±1.0% | 200mV | 94.0% |
| HLG-185□-54(A) | 54V, 0~3.45A | ±1.0% | 200mV | 94.0% |

• HLG-240□ Series IFC c UL us CBCE

| Model No. | Output | Tol. | R&N | Effi. |
|----------------|--------------|-------|-------|-------|
| HLG-240□-12(A) | 12V, 0~16.0A | ±2.5% | 150mV | 90.0% |
| HLG-240□-15(A) | 15V, 0~15.0A | ±2.0% | 150mV | 90.0% |
| HLG-240□-20(A) | 20V, 0~12.0A | ±1.0% | 150mV | 92.0% |
| HLG-240□-24(A) | 24V, 0~10.0A | ±1.0% | 150mV | 93.0% |
| HLG-240□-30(A) | 30V, 0~8.00A | ±1.0% | 200mV | 93.0% |
| HLG-240□-36(A) | 36V, 0~6.70A | ±1.0% | 250mV | 93.5% |
| HLG-240□-42(A) | 42V, 0~5.72A | ±1.0% | 250mV | 94.0% |
| HLG-240□-48(A) | 48V, 0~5.00A | ±1.0% | 250mV | 94.0% |
| HLG-240□-54(A) | 54V, 0~4.45A | ±1.0% | 350mV | 94.0% |

□ = Blank or H type, ○ = A, B or Blank for HLG-100~185□




□ = Blank or H type, ○ = A, B, C or Blank for HLG-240□

PLP series

20~60W Single Output with PFC

Features

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temp. (PLP-20 only)
- Built-in active PFC function, PF>0.9 for 75% of load or higher
- Cooling by free air convection
- Built-in constant current limiting circuit
- 100% full load burn-in test
- Suitable for building in LED lighting systems
- 2 years warranty

| PLP-20 | | PLP-30 | PLP-45/60 |
|---|-------|--|---|
|  | |  |  |
| AC input voltage range | | 90~277VAC; 127~392VDC | |
| AC inrush current (max.) | | Cold start, 40A at 230VAC | Cold start, 42A at 230VAC |
| Current adjustable range | | 75%~100% rated output current | |
| Overload Protection | Range | 95%~110% | |
| | Type | Constant current limiting, auto-recovery | |
| Over voltage protection | | 115%~135% shut off, re-power on to recover | |
| Setup, rise, hold up time | | 2300ms, 200ms at full load and 230VAC, no hold up time | 1000ms(setup time) at full load and 230VAC, no hold up time |
| Withstand voltage | | I/P-O/P: 3.75kVAC | I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC |
| Working temperature | | -30~+60°C (refer to output derating curve) | -30~+70°C (refer to output derating curve) |
| Safety standards | | TUV EN61347-1, EN61347-2-13, UL8750 (PLP-20 only) approved | |
| EMC standards | | EN55015, EN61000-3-2 Class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547 | |
| Connection | | UL rated, 18AWGx2C (30cm) | 3+2P / 3.96mm pitch, JST P/N: B3P / B2P-VH |
| Dimension (LxWxH)(mm) | | 140x 32x 22 | 101.6x 50.8x 28 |

• PLP-20 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| PLP-20-12 | 12V, 0~1.6A | ±10% | 2.5V | 80.0% |
| PLP-20-18 | 18V, 0~1.1A | ±10% | 3.0V | 81.0% |
| PLP-20-24 | 24V, 0~0.8A | ±10% | 3.0V | 82.0% |
| PLP-20-36 | 36V, 0~0.55A | ±10% | 3.0V | 83.0% |
| PLP-20-48 | 48V, 0~0.42A | ±10% | 3.8V | 83.5% |

• PLP-30 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| PLP-30-12 | 12V, 0~2.5A | ±10% | 2.0V | 83.0% |
| PLP-30-24 | 24V, 0~1.3A | ±10% | 2.4V | 85.5% |
| PLP-30-48 | 48V, 0~0.63A | ±10% | 4.8V | 86.5% |

• PLP-45 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|--------------|------|------|-------|
| PLP-45-12 | 12V, 0~3.8A | ±10% | 4.2V | 86% |
| PLP-45-24 | 24V, 0~1.9A | ±10% | 3.8V | 89% |
| PLP-45-48 | 48V, 0~0.95A | ±10% | 4.8V | 89% |

• PLP-60 Series



| Model No. | Output | Tol. | R&N | Effi. |
|-----------|-------------|------|------|-------|
| PLP-60-12 | 12V, 0~5.0A | ±10% | 4.5V | 84% |
| PLP-60-24 | 24V, 0~2.5A | ±10% | 4.5V | 88% |
| PLP-60-48 | 48V, 0~1.3A | ±10% | 4.8V | 89% |

Comparison Chart

| Model Name | Case | | Potted | PFC | V / I Adj. | IP | Hold-up Time | Ripple & Noise | Optional Dimming | Application |
|--|-----------|---------|--------|-----|------------|-------|--------------|----------------|------------------|-------------|
| | Metal | Plastic | | | | | | | | |
| HLG-100 / 120 / 150 / 185 / 240 | • | | • | • | • | 65/67 | Normal | Normal | • | General |
| CLG-150 | • | | • | • | • | 65/67 | Normal | Normal | | General |
| CLG-100 | • | | • | • | | 67 | Normal | Normal | | General |
| CLG-60 | • | | • | • | | 67 | Non | High | | LED |
| CEN-60 / 75 / 100 | • | | | • | • | 66 | Non | High | | LED |
| PLN-100 | | • | | • | • | 64 | Normal | Normal | | General |
| PLN-30 / 45 / 60 | | • | | • | • | 64 | Non | High | | LED |
| PLN-20 | | • | | • | I only | 64 | Non | High | | LED |
| PLC-100 | | • | | • | • | Non | Normal | Normal | | General |
| PLC-30 / 60 | | • | | • | • | Non | Non | High | | LED |
| ELN-30 / 60 | | • | | | • | 64 | Normal | Normal | • | General |
| LPH / LPL-18, LPHC / LPLC-18 LPC-20 / 35 / 60 LPV-20 / 35 / 60 / 100 | | • | • | | | 67 | Normal | Normal | | General |
| PLP-20 / 30 / 45 / 60 | PCB type | | | • | I only | Non | Non | High | | LED |
| ULP-150 | •(U type) | | •(50%) | • | V only | Non | Normal | Normal | | General |

ULP series

150W U-Bracket Single Output with PFC Function

Features

- Universal AC input (up to 305VAC) / Full range
- Constant voltage design
- Built-in active PFC circuit compliance to EN61000-3-2 class C
- Protections:
 - Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- U-bracket low profile: 33mm
- 3 years warranty

ULP-150



| | |
|-----------------------------|--|
| AC input voltage range | 90~305VAC; 127~431VDC |
| AC inrush current (max.) | Cold start, 65A at 230VAC |
| Overload protection | 145%~180% constant current limiting, auto-recovery |
| Over voltage protection | 110%~135% hiccup mode, auto-recovery |
| Over temperature protection | Shut down output voltage, recovers automatically after fault condition is removed |
| Setup, rise, hold up time | 2000ms, 100ms, 16ms at full load and 230VAC |
| Withstand voltage | I/P-O/P: 3.75kVAC, I/P-FG: 1.88kVAC, O/P-FG: 0.5kVAC |
| Working temperature | -35~+70°C (refer to output derating curve) |
| Safety standards | Design refer to UL8750, EN61347-1, EN61347-2-13 |
| EMC standards | EN55015, EN55022 class B, EN61000-3-2 class C, EN61547, ENV50204, EN61000-4-2,3,4,5,6,8,11 |
| Dimension (LxWxH)(mm) | 210x 67.4x 33 |

ULP-150 Series

UL / CUL / TUV / CE pending

| Model No. | Output | Tol. | R&N | Effi. |
|------------|--------------|------|-------|-------|
| ULP-150-12 | 12V, 0~12.5A | ±2% | 100mV | 91.5% |
| ULP-150-15 | 15V, 0~10.0A | ±2% | 100mV | 91.5% |
| ULP-150-24 | 24V, 0~6.30A | ±2% | 150mV | 93.0% |
| ULP-150-36 | 36V, 0~4.20A | ±2% | 200mV | 93.0% |
| ULP-150-48 | 48V, 0~3.20A | ±2% | 200mV | 93.0% |

Product under development

► 16W/25W Single Output AC Dimmable LED Power Supply








- 115VAC(90~135VAC) or 230VAC(180~295VAC) input
- Built-in active PFC function
- Constant current design
- Fully isolated plastic case
- Class II design, without FG
- Work with leading edge and trailing edge dimmers
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Output models: 350mA / 700mA / 1050mA / 1400mA
- Dimension(LxWxH): 80x 58x 30mm
- 3 years warranty


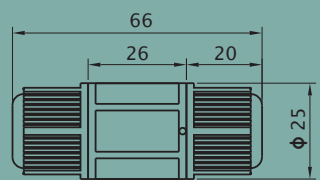
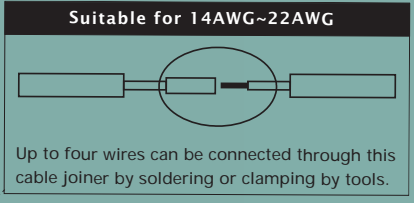
Note: Features above may be changed without further notice!

Waterproof connector & Waterproof earth leakage circuit breaker


Waterproof Connector List

| Waterproof Connector | Size | Pin Configuration (Female) | | |
|---|------------------|---|---|---|
|  | M12 |  |  |  |
| | | 2-pin | 4-pin | 5-pin |
| | | 5A/PIN | 5A/PIN | 5A/PIN |
| | Order No. | M12-02 | M12-04 | M12-05 |
| | Suitable Current | 5A max. | 10A max. | 10A max. |
| | M15 |  | | |
| | | 2-pin | | |
| | | 12A / PIN | | |
| | Order No. | M15-02 | | |
| | Suitable Current | 12A max. | | |

Cable Joiner

| | |
|---|---|
|  |   <p>Suitable for 14AWG~22AWG</p> <p>Up to four wires can be connected through this cable joiner by soldering or clamping by tools.</p> |
| Order No. | CJ04 |
| <p>► Mean Well offer multiple kinds of waterproof connectors as the optional part for users to choose from. Minimum order quantity may vary for different models.</p> | |

Waterproof Earth Leakage Circuit Breaker

| Model | Features | Specification | |
|--|---|--------------------------------|--|
|  | <ul style="list-style-type: none"> Suitable for outdoor appliances in island climate Applications: all humid environments, such as street lighting, tunnel, fish pond and machinery...etc Design refer to IEC60529 and CNS 5422 Selectable three stage leakage current sensitivity for environments with different humidity Industrial grade plastic material for main body with superior ability of waterproof, dust-proof and anti-high temperature Compact design and built-in leakage current indicator Easy inspection from transparent top cover made by anti-UV PC material | Frame Current | 50AF |
| | | Model | LS-50B |
| | | Phase/ Wire | 1 ϕ 2W |
| | | Pole | 2P |
| | | Rated Current (TA=40°C) | 15A, 20A, 30A, 40A, 50A |
| | | Rated Current Sensitivity (mA) | 100/ 300/ 500 (switch selectable) |
| | | Action Time (Sec.) | within 0.1 second |
| | | Rated Voltage (V) | 220 |
| | | Interrupt Current (kA) | 220V 5 10 |
| | | Protection Field | Leakage current, overload, short circuit |
| | | Weight (kg) | 0.25 |

How to choose a suitable LED power supply?

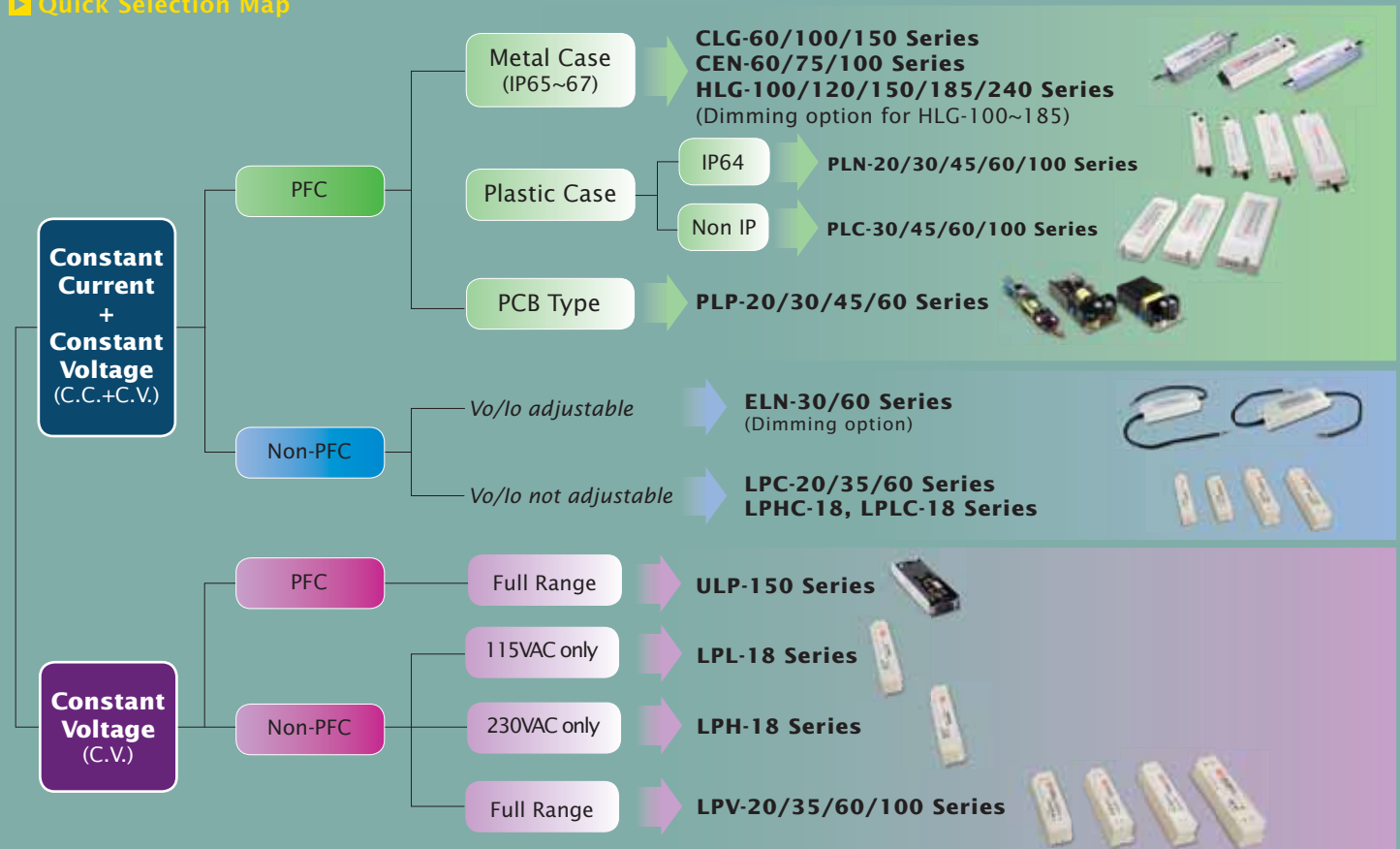
- Decide a suitable wattage level, including safety margin.
- Verify your design of LED driving circuit: direct drive by PSU [choose a constant current (C.C.) mode LED power supply] or add additional driving IC to get a more precise constant current level [choose a constant voltage (C.V.) or constant current (C.C.) mode LED power supply].
- Verify whether the application need PFC function.
- Verify location of assembly and the required level against dust and humidity for the LED power supply (enclosure style and IP level).
- Verify the required safety certificates.
- Need to adjust the output voltage and/or output current or need the dimming function ?

Suggested System Design

| Setting | Circuit diagram | Description | Advantage & Disadvantage |
|--|---|---|--|
| Use C.C. mode power supply No need ballast resistor and LED driver IC | <p>For 1W LED, $V_F=3.2V$, $I_F=0.35A$ Parallel connection: $6.3A / 0.35A=18$ 18 branches need to connect in parallel</p> <p>Constant current region of CLG-150-24: 18~24V, so the LED series connection should be 6 to 7.</p> | Using Mean Well power supply as the constant current source and feed the LED arrays directly. | Advantage: The cost and complexity are the lowest to LED manufacturers. Just need to consider about characteristics of the LED. Disadvantage: Driving current for each branch may be unbalance |
| Use C.V. or C.C. mode power supply Add ballast resistor to balance every branch | | $R=[V-(V_{F1}+V_{F2}+...+V_{Fn})]/I_F$ <p>Note: V: Rated output voltage of LED power supply V_F: LED's forward voltage I_F: LED's forward current</p> <p>Example: Using LPV-60-24(24V/2.5A) to drive a LED array which 6 LEDs connected in series in each branch and 4 branches connected in parallel $R=[24-(6 \times 3)]/(2.5/4)=10\Omega$</p> | Advantage: <ul style="list-style-type: none"> Low cost Simple Disadvantage: <ul style="list-style-type: none"> Brightness of LED is uneven Poor efficiency |
| Use C.V. or C.C. mode power supply Driver IC is used as a constant current source (without ballast resistor) | | PWM constant current source will regulate forward current to achieve even current at each branch | Advantage: <ul style="list-style-type: none"> High efficiency Perfect current balance to each branch Longer lifetime for LEDs Disadvantage: <ul style="list-style-type: none"> Highest cost High complexity EMC problem at lighting equipment side |



Quick Selection Map



Applications





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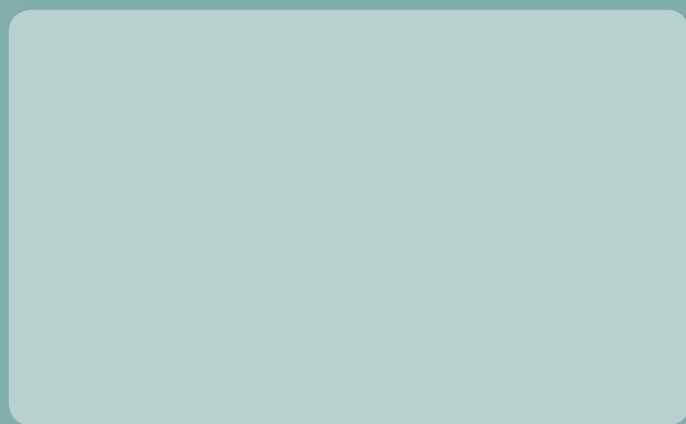
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