150W Single Output Switching Power Supply — CLG-150 series



Features :

- Universal AC input / Full range (up to 280VAC)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in active PFC function
- Cooling by free air convection
- OCP point adjustable through output cable or internal potential meter
- Suitable for LED lighting and moving sign applications
- IP65 design for indoor or outdoor installations
- 3 years warranty

F 110 SELV EQUIVALENT **IP65** (for A,B type only)

CLG-150-12 [A] A : IP65 rated. Output voltage and constant current level can be adjusted through internal potential meter.
B : IP65 rated. Constant current level adjustable through output cable. (Optional)
C : Terminal block for I/O connection. Output voltage and constant current level can be adjusted through internal potential meter. (Optional)

SPECIFICATION

MODEL		CLG-150-12☐	CLG-150-15☐	CLG-150-20☐	CLG-150-24☐	CLG-150-30☐	CLG-150-36☐	CLG-150-48☐
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	48V
	CONSTANT CURRENT REGION Note.4	6 ~12V	7.5 ~ 15V	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	24 ~ 48V
	RATED CURRENT	11A	9.5A	7.5A	6.3A	5A	4.2A	3.2A
	RATED POWER	132W	142.5W	150W	151.2W	150W	151.2W	153.6W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE Note.6	9 ~ 13V	13 ~ 17V	17 ~ 22V	22 ~ 27V	26 ~ 32V	31 ~ 41V	40 ~ 56V
	CURRENT ADJ. RANGE	Can be adjusted by internal potential meter or through output cable						
		5.5 ~ 11A	4.75 ~ 9.5A	3.75 ~ 7.5A	3.15 ~ 6.3A	2.5 ~ 5A	2.1 ~ 4.2A	1.6 ~ 3.2A
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	3000ms, 80ms at full load 230VAC /115VAC						
	HOLD UP TIME (Typ.)	50ms / 230VAC 16ms / 115VAC at full load						
INPUT	VOLTAGE RANGE Note.5	90 ~ 280VAC 127 ~ 396VDC						
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR	PF≧0.95/230VAC PF≧0.98/115VAC at full load and rated output voltage						
	EFFICIENCY (Typ.)	88%	88%	90%	90%	90%	89%	90%
	AC CURRENT	2A / 115VAC 1A / 230VAC						
	INRUSH CURRENT(max.)	COLD START 65A/230VAC						
	LEAKAGE CURRENT	<2mA / 240VAC						
PROTECTION	OVER CURRENT Note.4	LED-Load : CC-mode max. 105% 、CV-mode max. 110% Electronic-Load : CC-mode max. 110% 、CV-mode max. 105%						
		Protection type : Constant current limiting, recovers automatically after fault condition is removed						
	SHORT CIRCUIT Note.8	Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE	13.5 ~ 16V	18 ~ 20V	23 ~ 27V	28 ~ 34V	33 ~ 36V	42 ~ 48V	57 ~ 65V
		Protection type : Shut down and latch off o/p voltage, re-power on to recover						
	OVER TEMPERATURE	100℃±10℃ (RTH2)						
		Protection type : Shut down o/p voltage, re-power on to recover						
ENVIRONMENT	WORKING TEMP. Note.7	-30 ~ +55℃@ full load ; +70℃@ 60% load						
	WORKING HUMIDITY	20 ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes						
SAFETY & EMC	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, EN61347-1, EN61347-2-13 approved, IP65 approved (for A,B type only)						
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:1.88KVAC O/P-FG:1.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH						
	EMI CONDUCTION & RADIATION	Compliance to EN55015, EN55022 (CISPR22) Class B						
	HARMONIC CURRENT	Compliance to EN61000-3-2 Class C (>50% load) ; EN61000-3-3						
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61547, EN55024, light industry level (surge 4KV), criteria A						
OTHERS	MTBF	303.7Khrs min. MIL-HDBK-217F (25℃)						
	DIMENSION	222*68*39mm (L*W*H)						
	PACKING	1.0Kg; 12pcs/13Kg/0.49CUFT(CLG-150-A/B) 1Kg; 12pcs/13Kg/0.96CUFT(CLG-150-C)						

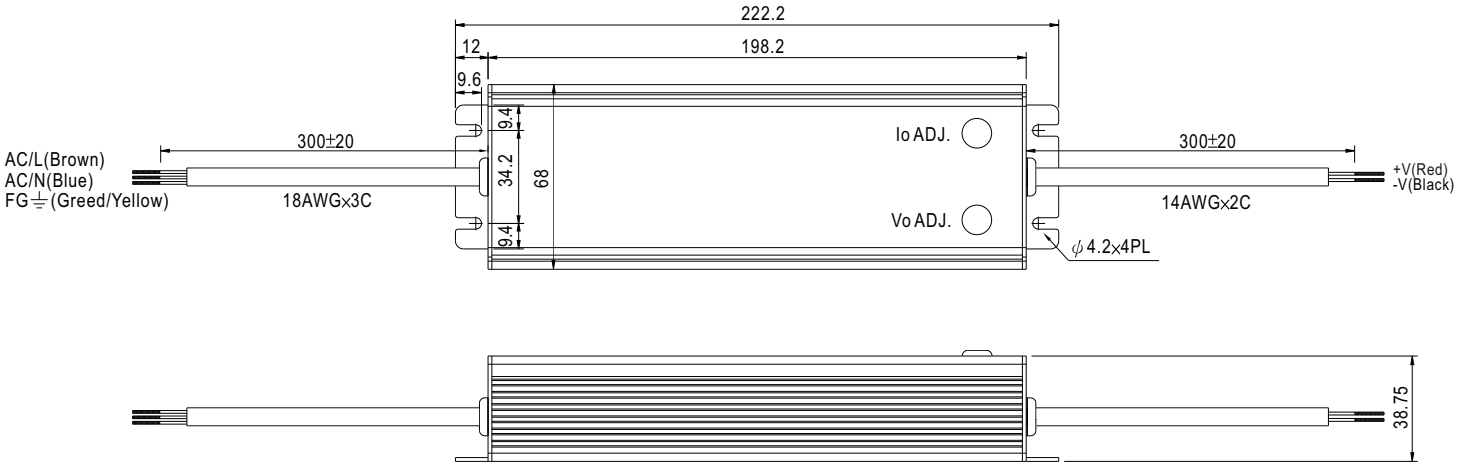
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Constant current operation region is within 50% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
5. Derating may be needed under low input voltages. Please check the derating curve for more details.
6. Type A and type C only.
7. Please refer to derating curve.
8. Please refer to OLP characteristics.

■ Mechanical Specification

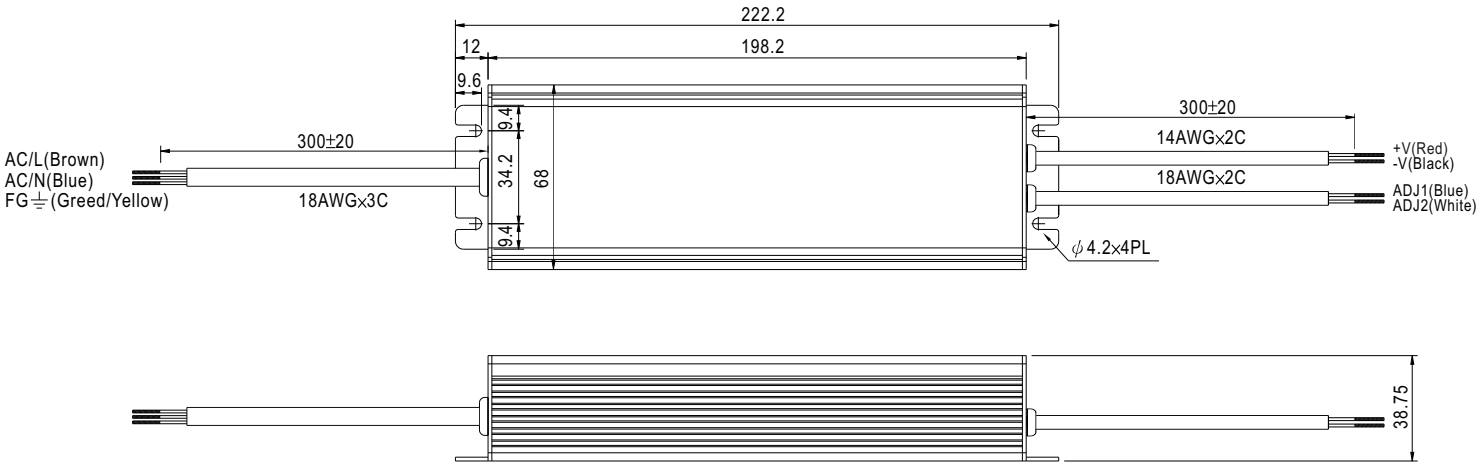
Case No. 954A Unit:mm

A Type:(CLG-150-_A)



※ IP65 rated. Output voltage and constant current level can be adjusted through internal potential meter.
(Can access by removing the rubber stopper on the case.)

B Type:(CLG-150-_B)

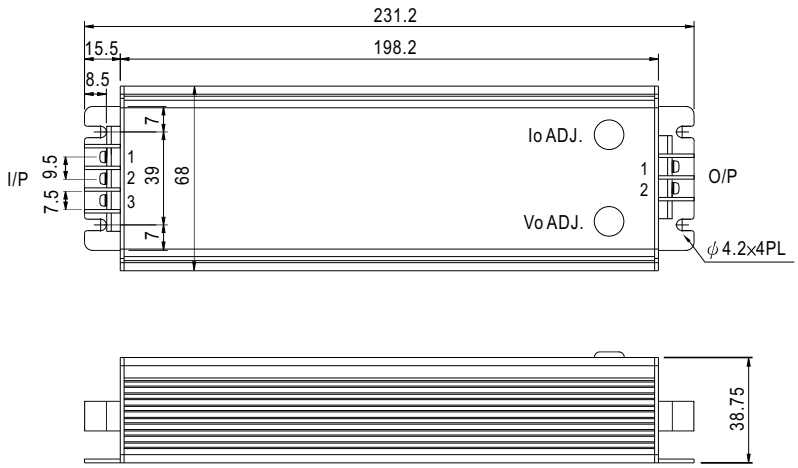


※ IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistor between ADJ1 and ADJ2.

※ Reference resistance value for output current adjustment (Typical)

Resistance	Percentage of rated current
Open	Slightly > 100%
4.7KΩ	100%
620Ω	75%
82Ω	50%
Short	Slightly < 50%

C Type:(CLG-150-_C)



AC Input Terminal Pin No. Assignment

Pin No.	Assignment
1	FG ⏚
2	AC/N
3	AC/L

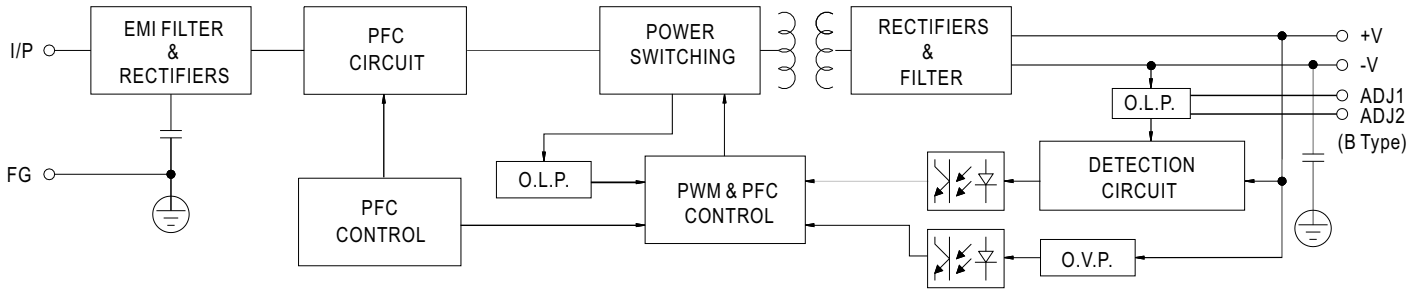
DC Output Terminal Pin No. Assignment

Pin No.	Assignment
1	+V
2	-V

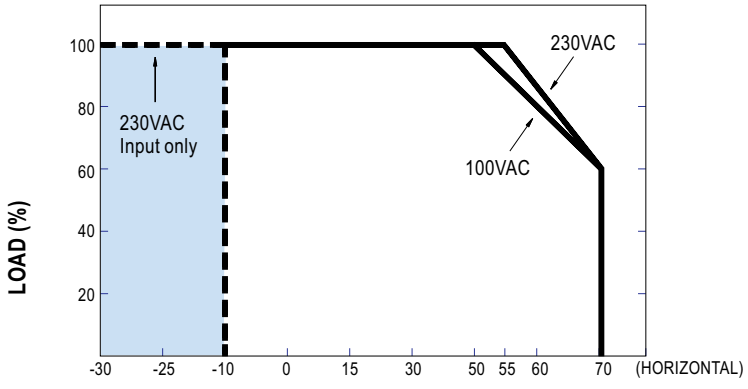
※ Output voltage and constant current level can be adjusted through internal potential meter.
(Can access by removing the rubber stopper on the case.)

■ Block Diagram

Fosc : 100KHz



■ Derating Curve

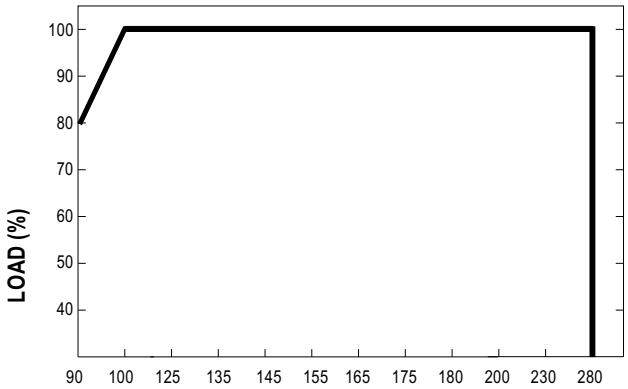


AMBIENT TEMPERATURE (℃)

※-30℃ start up possible for 230VAC input

■ Static Characteristics

fosc : 100KHz



INPUT VOLTAGE (V) 60Hz