



User's Manual
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IS 15885(Part 2/Sec13)
R-41027766
(for 700A, 1050A only)



Features

- Constant Current mode output
- Metal housing design with functional Ground
- Built-in active PFC function
- No load / Standby power consumption <0.5W
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming (dim-to-off); Smart timer dimming; DALI
- Typical lifetime>50000 hours
- 5 years warranty

Applications

- LED street lighting
- LED harbor lighting
- LED bay lighting
- LED greenhouse lighting
- LED flood lighting
- Type "HL" for use in Class I, Division 2 hazardous (Classified) location.

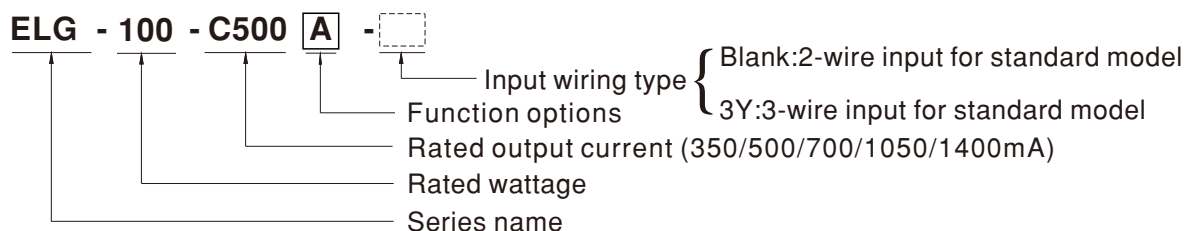
GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

Description

ELG-100-C series is a 100W LED AC/DC driver featuring the constant current mode and high voltage output. ELG-100-C operates from 100~360VAC and offers models with different rated current ranging between 350mA and 1400mA. Thanks to the high efficiency up to 92%, with the fanless design, the entire series is able to operate for -40℃~+90℃ case temperature under free air convection. The design of metal housing and IP67/IP65 ingress protection level allows this series to fit both indoor and outdoor applications. ELG-100-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding



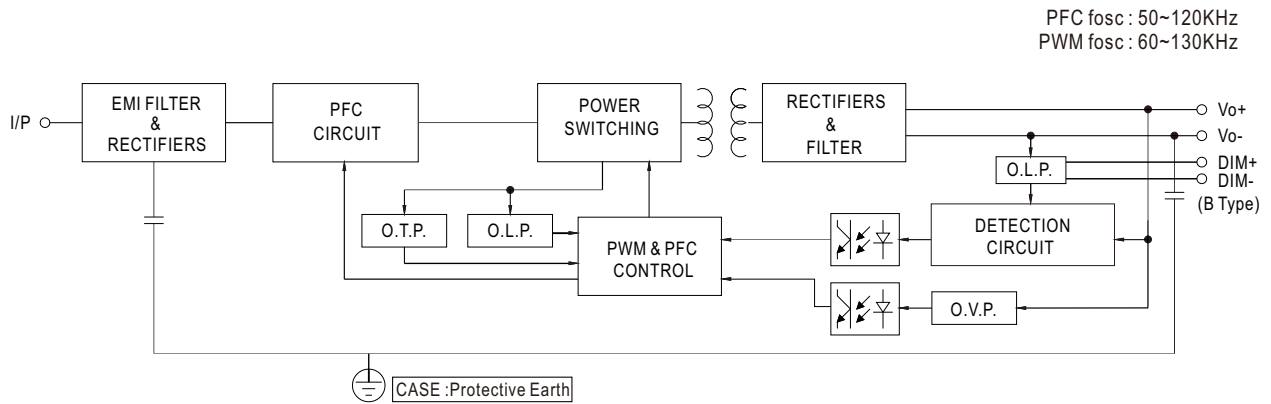
Type	IP Level	Function	Note
Blank	IP67	Io fixed.	In Stock
A	IP65	Io adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
DA	IP67	DALI control technology.	In Stock

SPECIFICATION

MODEL		ELG-100-C350 □	ELG-100-C500 □	ELG-100-C700 □	ELG-100-C1050 □	ELG-100-C1400 □
OUTPUT	RATED CURRENT	350mA	500mA	700mA	1050mA	1400mA
	RATED POWER	200VAC ~ 305VAC				
		100.1W	100W	100.1W	99.75W	100.8W
		100VAC ~ 180VAC				
	CONSTANT CURRENT REGION Note.2	143 ~ 286V	100 ~ 200V	71 ~ 143V	48 ~ 95V	35 ~ 72V
		297V	210V	149V	105V	75V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)				
	CURRENT RIPPLE	175 ~ 350mA 250 ~ 500mA 350 ~ 700mA 525 ~ 1050mA 700 ~ 1400mA				
	CURRENT TOLERANCE	5.0% max. @rated current				
INPUT	SET UP TIME Note.4	±5.0%				
	VOLTAGE RANGE Note.3	1000ms/115VAC 500ms/230VAC				
	FREQUENCY RANGE	100 ~ 305VAC 142 ~ 431VDC continue, 320VAC for 24Hrs; 360VAC for 1Hr (Please refer to "STATIC CHARACTERISTIC" section)				
	POWER FACTOR (Typ.)	47 ~ 63Hz				
	TOTAL HARMONIC DISTORTION	PF ≥ 0.97/115VAC, PF ≥ 0.95/230VAC, PF ≥ 0.92/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)				
	EFFICIENCY (Typ.)	THD < 20% (@load ≥ 50%/115VAC; @load ≥ 60%/230VAC; @load ≥ 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)				
	AC CURRENT (Typ.)	92% 91% 91% 90% 90%				
	INRUSH CURRENT(Typ.)	1.1A / 115VAC 0.6A / 230VAC 0.5A/277VAC				
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	COLD START 40A(twidth=760μs measured at 50% Ipeak)/230VAC; Per NEMA 410				
PROTECTION	LEAKAGE CURRENT	3 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 230VAC				
	NO LOAD / STANDBY POWER CONSUMPTION	<0.75mA / 277VAC				
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed				
ENVIRONMENT	OVER VOLTAGE	305 ~ 333V	222 ~ 242V	154 ~ 174V	110 ~ 130V	79 ~ 95V
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover				
	WORKING TEMP.	Shut down o/p voltage, re-power on to recover				
	MAX. CASE TEMP.	Tcase=-40 ~ +90°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)				
	WORKING HUMIDITY	Tcase=+90°C				
	STORAGE TEMP., HUMIDITY	20 ~ 95% RH non-condensing				
SAFETY & EMC	TEMP. COEFFICIENT	-40 ~ +80°C, 10 ~ 95% RH				
	VIBRATION	±0.03%/°C (0 ~ 60°C)				
	SAFETY STANDARDS	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes				
	DALI STANDARDS	UL8750(type"HL"), CSA C22.2 No. 250.13-12;BS EN/EN/AS/NZS 61347-1, BS EN/EN/AS/NZS 61347-2-13 independent, BS EN/EN62384; EAC TP TC 004;BIS IS15885(for 700A,1050A only);GB/T19510.1 , GB/T19510.213; IP65 or IP67; KC61347 - 1, KC61347 - 2 - 13 approved				
	WITHSTAND VOLTAGE	Compliance to IEC62386-101,102,(207 by request) for DA Type only				
	ISOLATION RESISTANCE	I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:1.5KVAC				
OTHERS	EMC EMISSION	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH				
	EMC IMMUNITY	Compliance to BS EN/EN55015,BS EN/EN61000-3-2 Class C (@ load ≥ 60%) ; BS EN/EN61000-3-3; GB/T 17743 , GB17625.1; EAC TP TC 020; KC KN15 ,KN61547				
	MTBF	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, light industry level (surge immunity Line-Earth 6KV, Line-Line 4KV); EAC TP TC 020; KC KN15 ,KN61547				
NOTE	DIMENSION	3070.8K hrs min. Telcordia SR-332 (Bellcore) 300.7Khrs min. MIL-HDBK-217F (25°C)				
	PACKING	199*63*35.5 mm (L*W*H)				

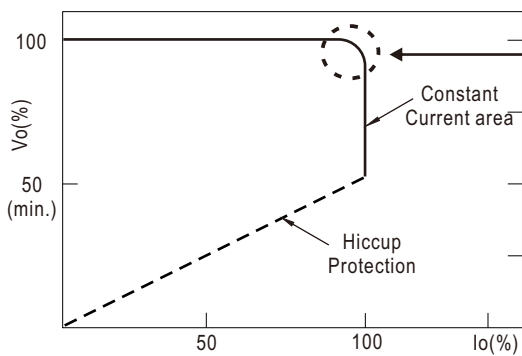
1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE". For DA-Type, Constant Current region is 60%~100% of maximum voltage under rated power delivery.
3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
4. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
5. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
(as available on https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf)
6. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly (Tc) point (or TMP, per DLC), is about 80°C or less.
7. Please refer to the warranty statement on MEAN WELL's website at <http://www.meanwell.com>
8. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
9. For any application note and IP water proof function installation caution, please refer our user manual before using.
https://www.meanwell.com/Upload/PDF/LED_EN.pdf
10. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains.
11. For A/AB type need to consider build in using to comply with Type HL application.
- ※ Product Liability Disclaimer : For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>

■ BLOCK DIAGRAM



■ DRIVING METHODS OF LED MODULE

※ This series works in constant current mode to directly drive the LEDs.



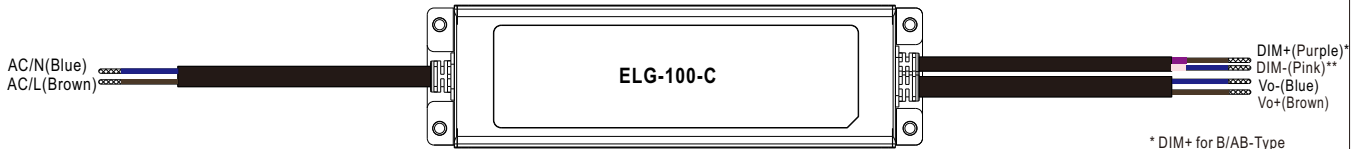
Typical output current normalized by rated current (%)

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact MEAN WELL.

© This characteristic applies to Blank/A/B/AB-Type,
For DA-Type, the Constant Current area is 60%~100% Vo.

DIMMING OPERATION

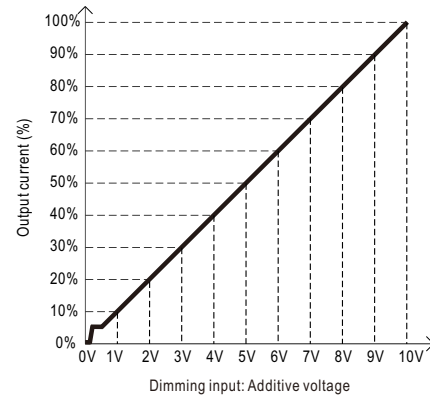
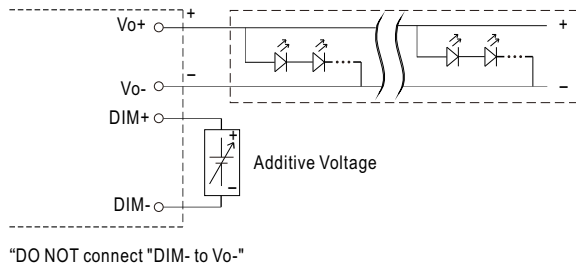


* DIM+ for B/AB-Type
DA+ for DA-Type
** DIM- for B/AB-Type
DA- for DA-Type

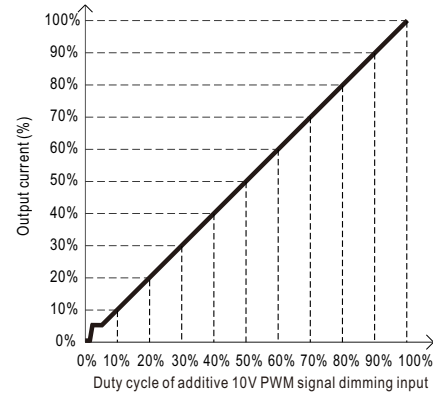
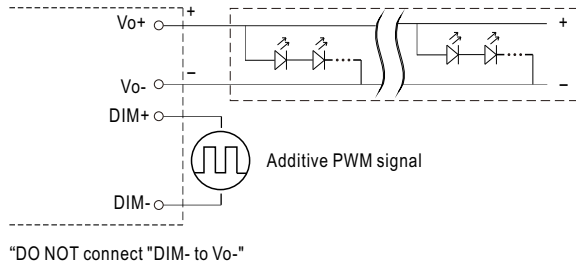
※ 3 in 1 dimming function (for B/AB-Type)

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:
0 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100 μ A (typ.)

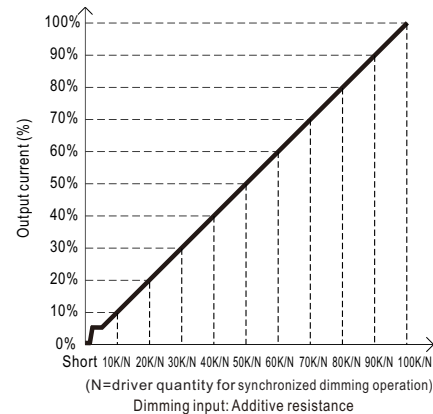
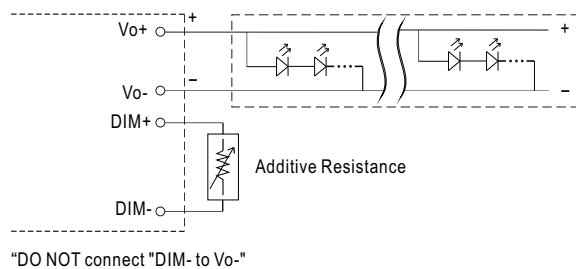
◎ Applying additive 0 ~ 10VDC



◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



◎ Applying additive resistance:



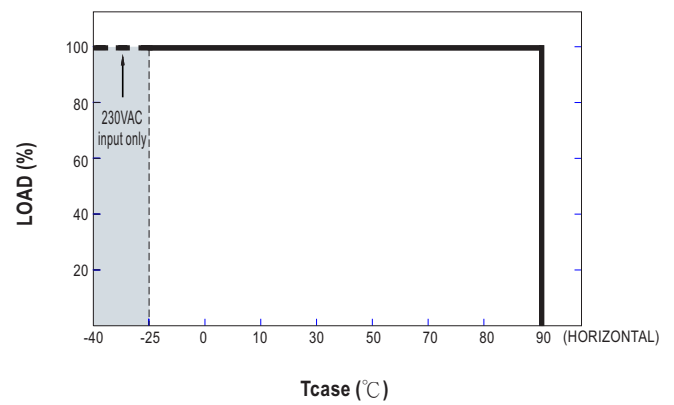
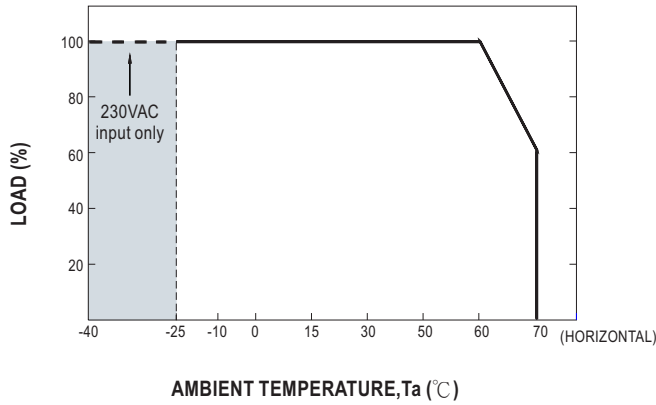
Note : 1. Min. dimming level is about 8% and the output current is not defined when $0\% < I_{out} < 8\%$.

2. The output current could drop down to 0% when dimming input is about 0k Ω or 0Vdc, or 10V PWM signal with 0% duty cycle.

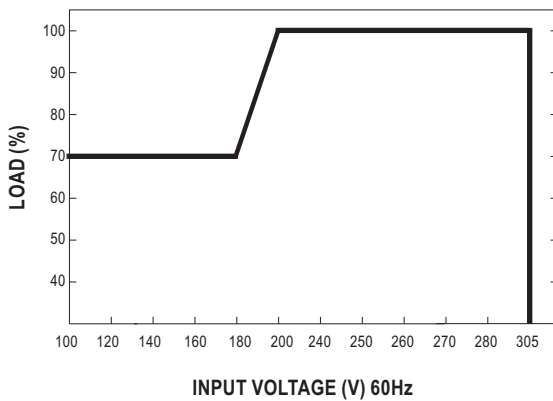
※ DALI Interface (primary side; for DA-Type)

- Apply DALI signal between DA+ and DA-.
- DALI protocol comprises 16 groups and 64 addresses.
- First step is fixed at 8% of output.

■ OUTPUT LOAD vs TEMPERATURE(Note.7)



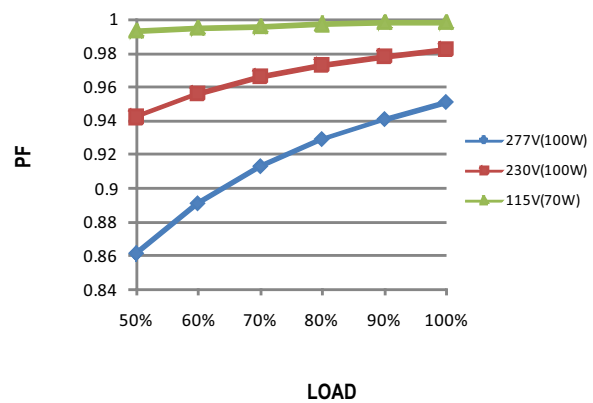
■ STATIC CHARACTERISTIC



※ De-rating is needed under low input voltage.

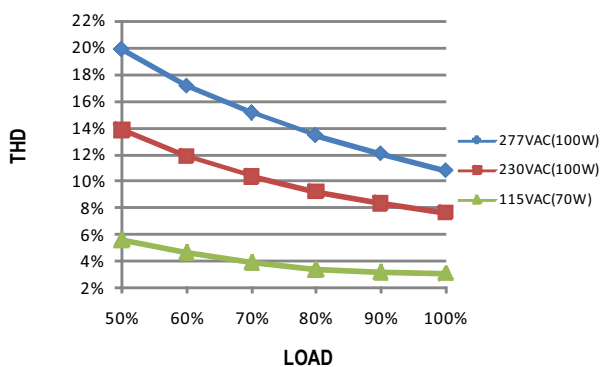
■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 80°C



■ TOTAL HARMONIC DISTORTION (THD)

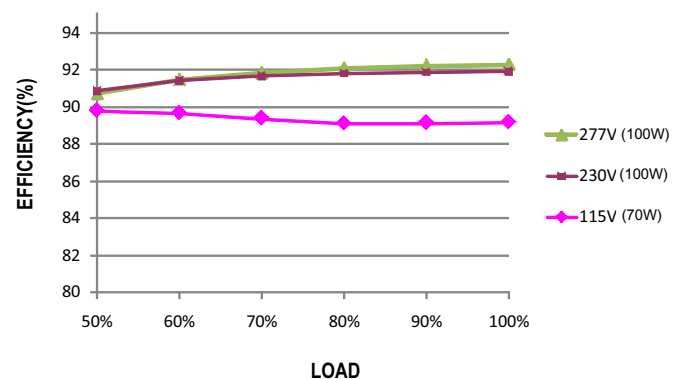
※ 350mA Model, Tcase at 80°C



■ EFFICIENCY vs LOAD

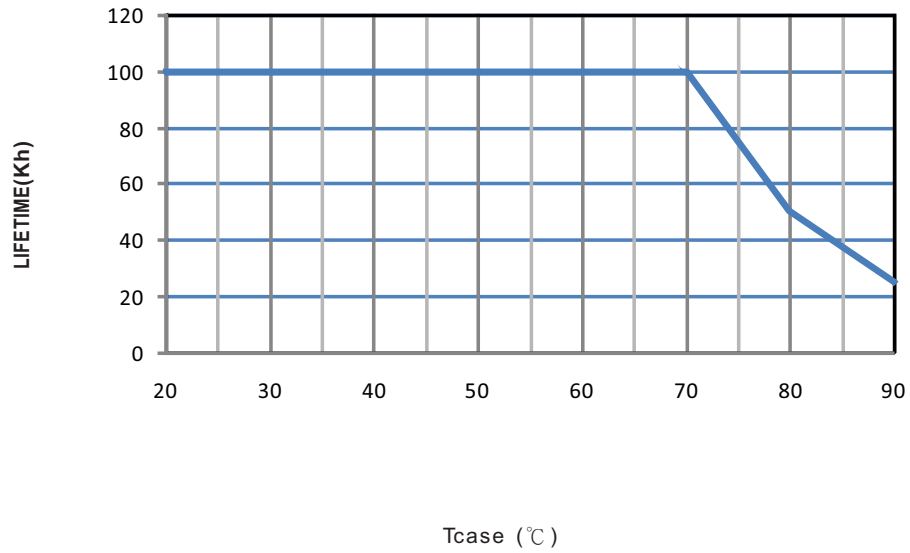
ELG-100-C series possess superior working efficiency that up to 92% can be reached in field applications.

※ 350mA Model, Tcase at 80°C





■ LIFE TIME



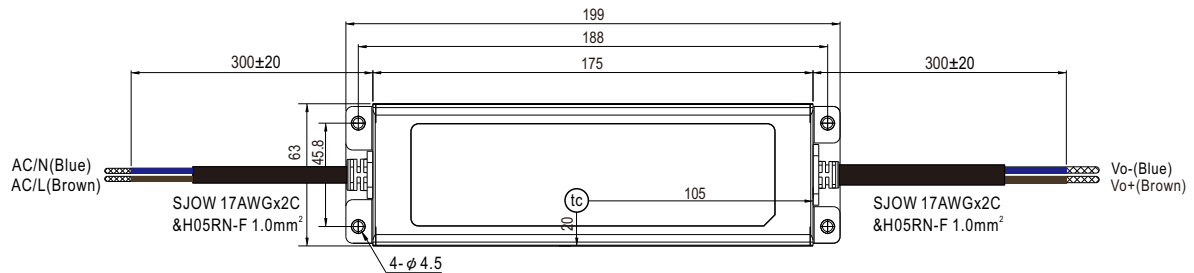
MECHANICAL SPECIFICATION

※ Blank-Type

CASE NO.: 244A

Unit:mm

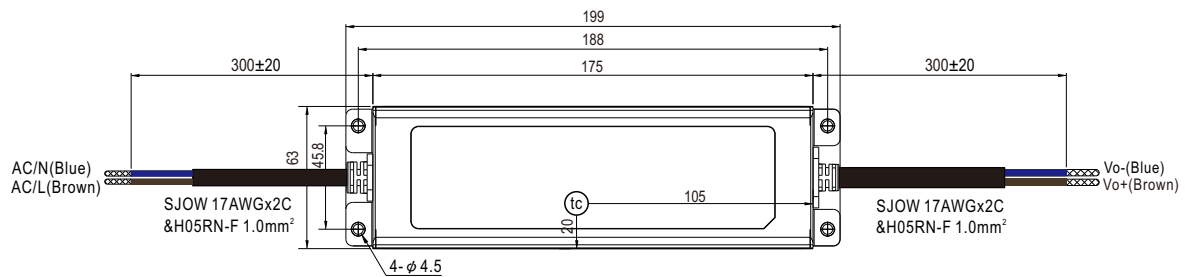
Tolerance:±1



• (tc) : Max. Case Temperature



※ A-Type

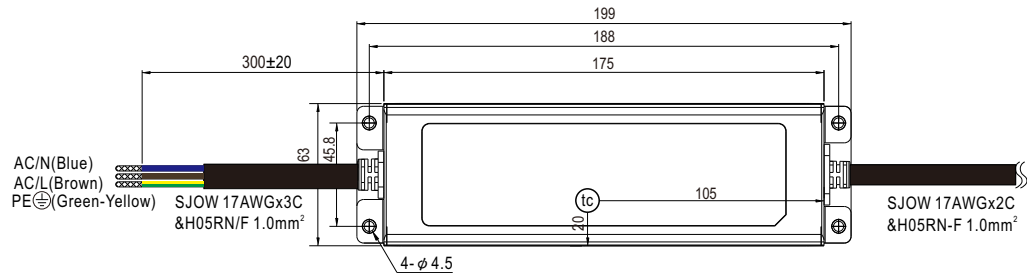


• (tc) : Max. Case Temperature



Technical drawing of a cable assembly. The drawing shows a cross-section of a cable with a central core and outer insulation. The dimensions 35 and 35.5 are indicated, likely representing the outer diameter of the cable.

※ 3Y Model (3-wire input)



• tc : Max. Case Temperature

◎ Note1: Please connect the case to PE for the complete EMC deliverance and safety use.

◎ Note2: Please contact MEAN WELL for input wiring option with PE.

■ Recommend Mounting Direction

