



75W Constant Voltage + Constant Current LED Driver

**ELG-75 series**



**■ Features**

- Constant Voltage + Constant Current mode output
- Metal housing design
- Built-in active PFC function
- Class 2 power unit
- No load 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)
- Typical lifetime >50000 hours
- 5 years warranty

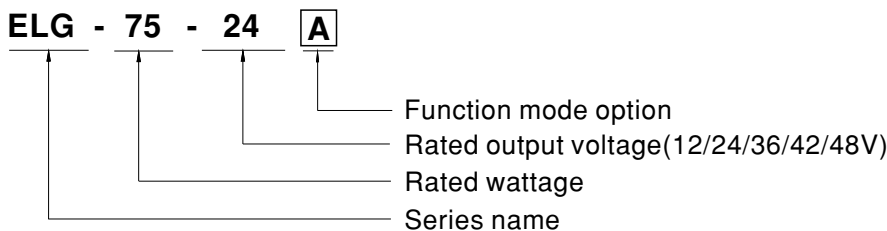
**■ Applications**

- LED street lighting
- LED architectural lighting
- LED bay lighting
- LED floodlighting
- Type “HL” for use in Class I, Division 2 hazardous (Classified) location.

**■ Description**

ELG-75 series is a 75W AC/DC LED power supply featuring the dual mode constant voltage and constant current output. ELG-75 operates from 180~305VAC and offers models with different rated voltage ranging between 12V and 48V. Thanks to the high efficiency up to 90%, with the fanless design, the entire series is able to operate for -40°C ~ +85°C 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-75 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 and Vo fixed.	In Stock
A	IP65	Io and Vo adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock



**SPECIFICATION**

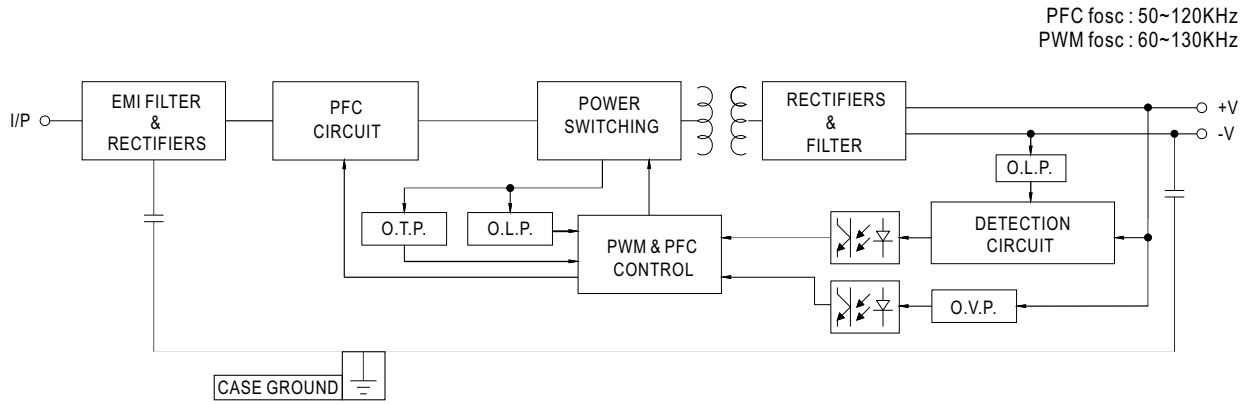
MODEL	ELG-75-12 □	ELG-75-24 □	ELG-75-36 □	ELG-75-42 □	ELG-75-48 □	
OUTPUT	DC VOLTAGE	12V	24V	36V	42V	48V
	CONSTANT CURRENT REGION Note.2	6 ~ 12V	12 ~ 24V	18 ~ 36V	21 ~ 42V	24 ~ 48V
	RATED CURRENT	5A	3.15A	2.1A	1.8A	1.6A
	RATED POWER	60W	75.6W	75.6W	75.6W	76.8W
	RIPPLE & NOISE (max.) Note.3	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p
	VOLTAGE ADJ. RANGE	Adjustable for A-Type only (via the built-in potentiometer)				
		10.8 ~ 13.2V	21.6 ~ 26.4V	32.4 ~ 39.6V	37.8 ~ 46.2V	43.2 ~ 52.8V
	CURRENT ADJ. RANGE	Adjustable for A-Type only (via the built-in potentiometer)				
		2.5 ~ 5A	1.57 ~ 3.15A	1.05 ~ 2.1A	0.9 ~ 1.8A	0.8 ~ 1.6A
	VOLTAGE TOLERANCE Note.4	±3.0%	±3.0%	±2.5%	±2.5%	±2.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
LOAD REGULATION	±2.0%	±1.0%	±1.0%	±0.5%	±0.5%	
SETUP, RISE TIME Note.6	500ms, 100ms/230VAC					
HOLD UP TIME (Typ.)	10ms/ 230VAC					
INPUT	VOLTAGE RANGE Note.5	180 ~ 305VAC 254 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR	PF ≥ 0.95/230VAC or PF ≥ 0.92/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)				
	TOTAL HARMONIC DISTORTION	THD < 20% @ ≥ 50% load / 230VAC, or @ ≥ 75% load / 277VAC (Please refer to "TOTAL HARMONIC DISTORTION" section)				
	EFFICIENCY (Typ.)	85%	88%	89%	90%	90%
	AC CURRENT	0.45A / 230VAC 0.38A/277VAC				
	INRUSH CURRENT(Typ.)	COLD START 50A(twidth=350µs measured at 50% Ipeak) at 230VAC; Per NEMA 410				
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	5 units (circuit breaker of type B) / 8 units (circuit breaker of type C) at 230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
	NO LOAD POWER CONSUMPTION	<0.5W				
PROTECTION	OVER CURRENT	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed				
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	14 ~ 18V	28 ~ 34V	41 ~ 48V	47 ~ 54V	54 ~ 62V
		Shut down output voltage, re-power on to recover				
	OVER TEMPERATURE	Shut down output voltage, re-power on to recover				
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +85°C (Refer to "Derating Curve")				
	MAX. CASE TEMP.	Tcase=+85°C				
	WORKING HUMIDITY	20 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)				
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes				
SAFETY & EMC	SAFETY STANDARDS	UL8750(type"HL"); CSA C22.2 No. 250.13-12; ENEC EN61347-1, EN61347-2-13 independent, EN62384; IP65 or IP67 approved				
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:1.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH				
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (≥ 50% load) ; EN61000-3-3				
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level (surge immunity Line-Earth 6KV, Line-Line 4KV)				
OTHERS	MTBF	331Khrs min. MIL-HDBK-217F (25°C)				
	DIMENSION	180*63*35.5mm (L*W*H)				
	PACKING	0.7Kg;16pcs/12.2Kg/0.67CUFT				
NOTE	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</li> <li>Please refer to "DRIVING METHODS OF LED MODULE".</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf &amp; 47µf parallel capacitor.</li> <li>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</li> <li>Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.</li> <li>The power supply 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.</li> <li>The model certified for CCC(GB19510.14, GB19510.1, GB17743 and GB17625.1) is an optional model . Please contact MEAN WELL for details.</li> <li>This series meets the typical life expectancy of &gt;50,000 hours of operation when Tcase, particularly (Ⓢ) point (or TMP, per DLC), is about 70°C or less.</li> <li>Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a></li> </ol>					



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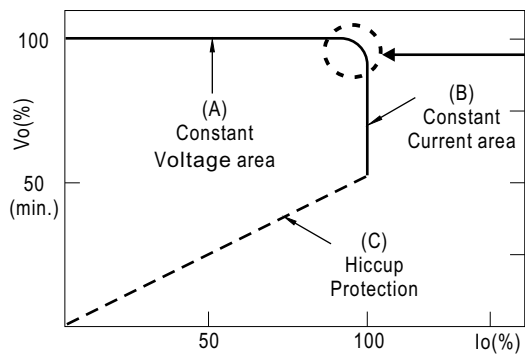
# ELG-75 series

### ■ Block Diagram



### ■ DRIVING METHODS OF LED MODULE

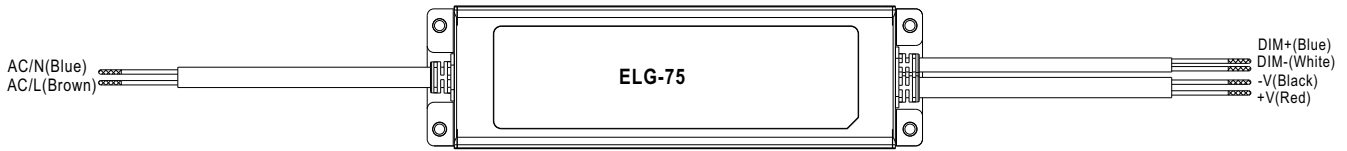
- ※ This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.



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.

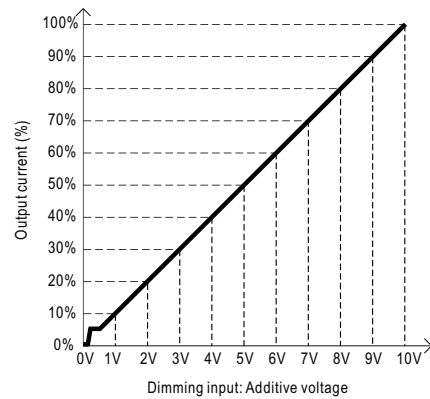
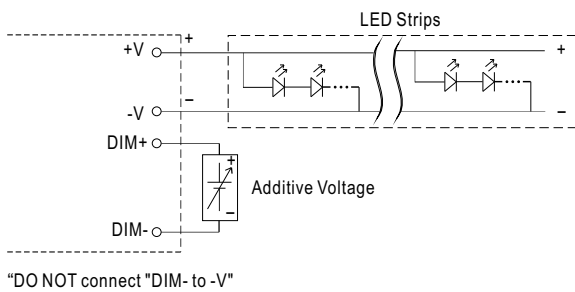
**■ DIMMING OPERATION**



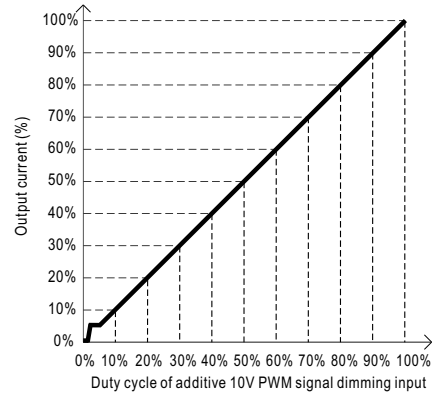
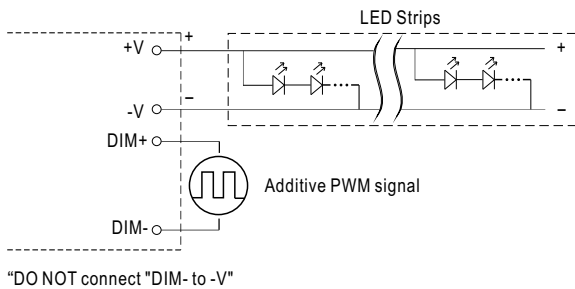
※ **3 in 1 dimming function (for B-Type)**

- 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 $\mu$ A (typ.)

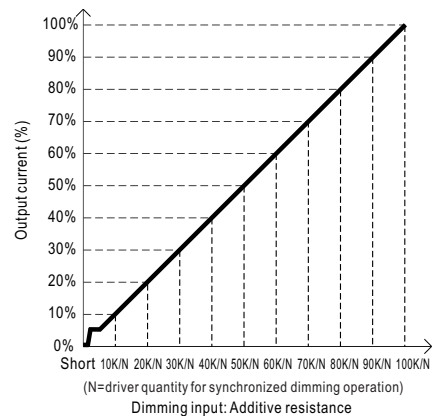
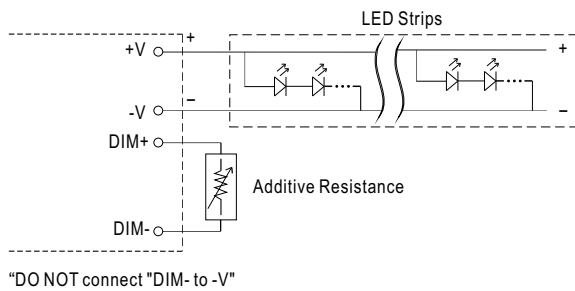
◎ Applying additive 0 ~ 10VDC



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



◎ Applying additive resistance:



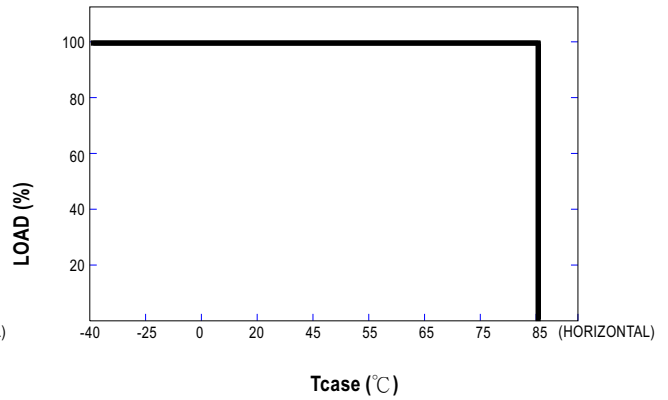
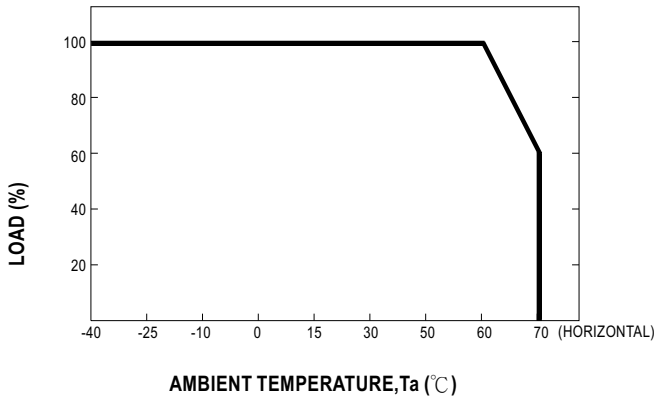
Note : 1. Min. dimming level is about 8% and the output current is not defined when 0% < I<sub>out</sub> < 8%.  
 2. The output current could drop down to 0% when dimming input is about 0k $\Omega$  or 0Vdc, or 10V PWM signal with 0% duty cycle.



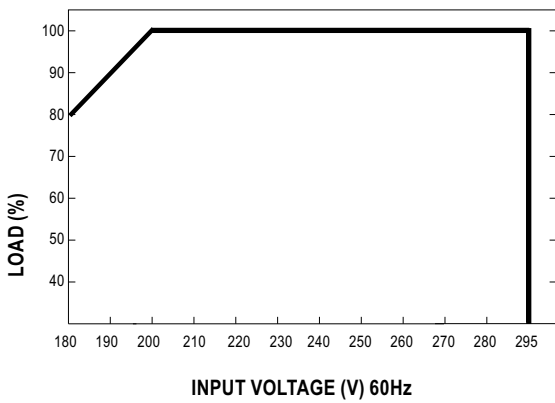
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■ **OUTPUT LOAD vs TEMPERATURE**

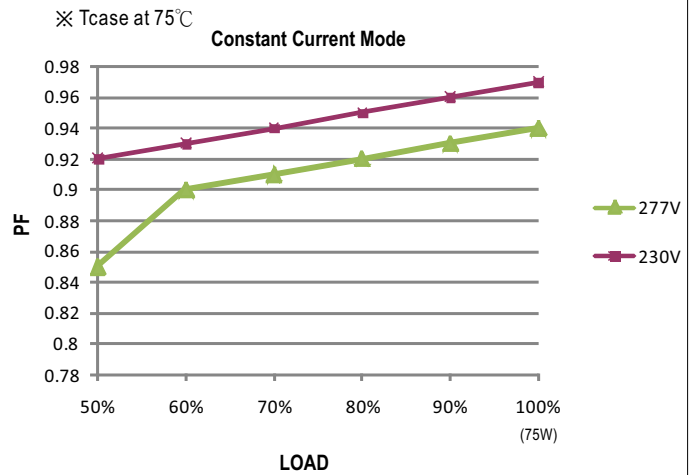


■ **STATIC CHARACTERISTIC**



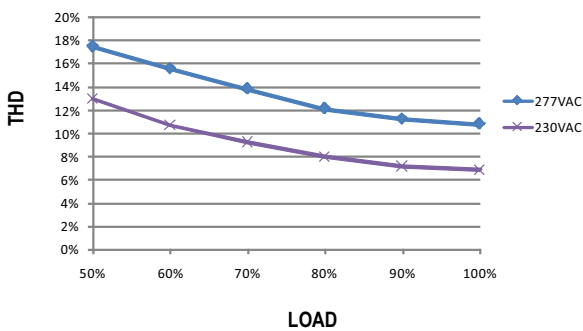
※ De-rating is needed under low input voltage.

■ **POWER FACTOR (PF) CHARACTERISTIC**



■ **TOTAL HARMONIC DISTORTION (THD)**

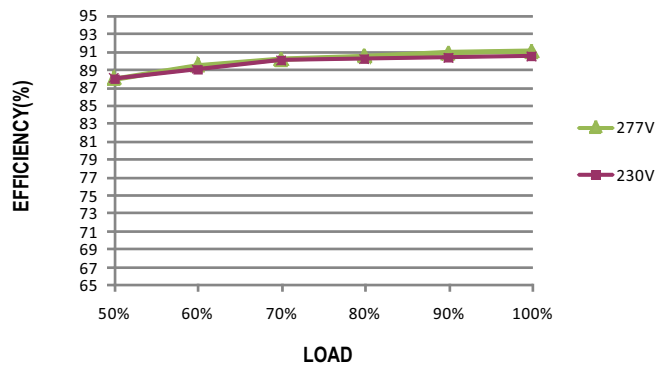
※ 48V Model, Tcase at 75°C



■ **EFFICIENCY vs LOAD**

ELG-75 series possess superior working efficiency that up to 90% can be reached in field applications.

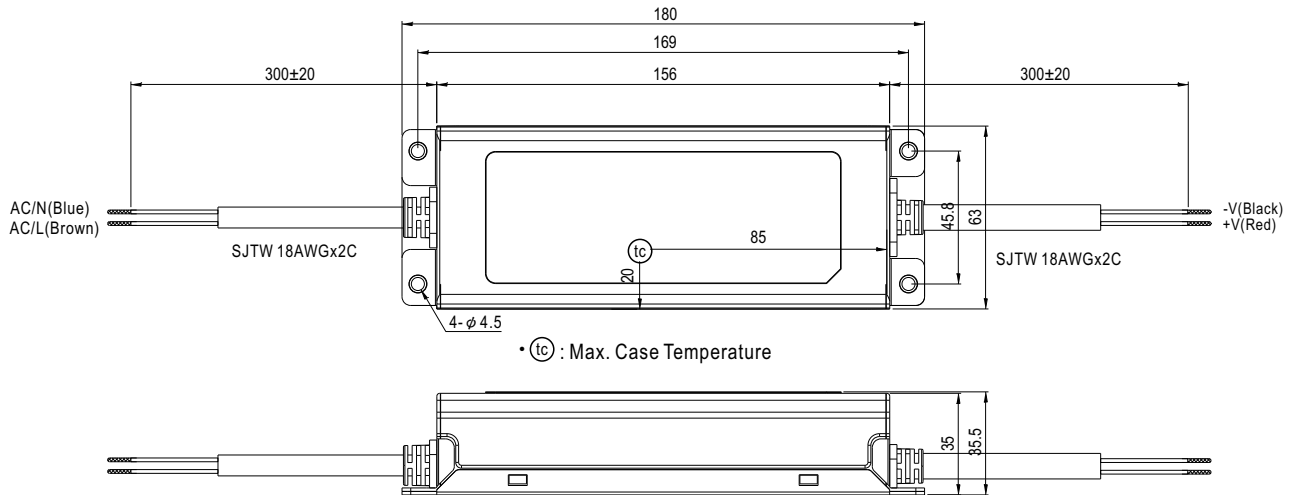
※ 48V Model, Tcase at 75°C



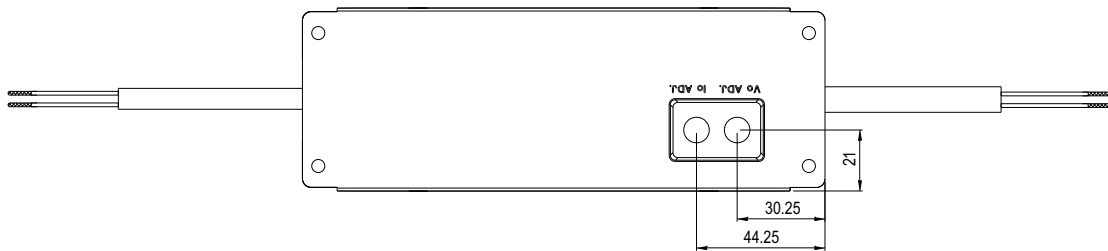
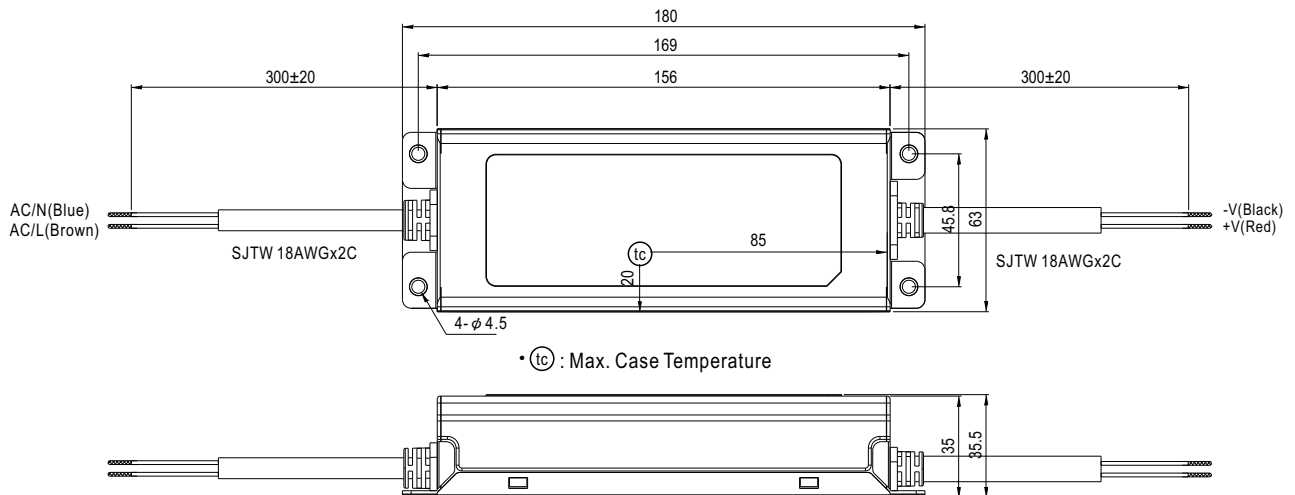
■ **Mechanical Specification**

※ **Blank-Type**

CASE NO.: 243A Unit:mm



※ **A-Type**

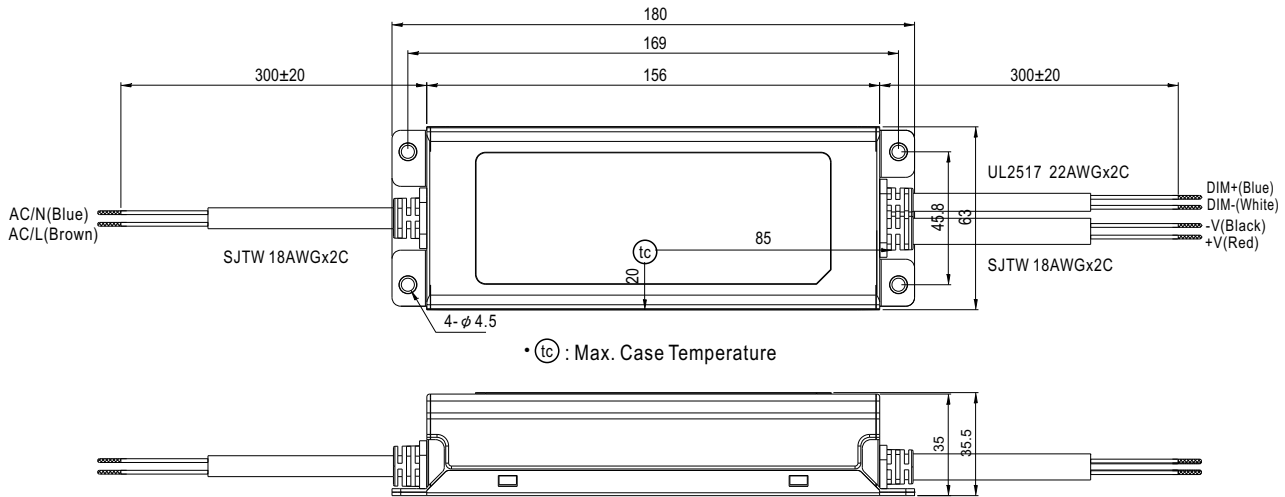




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※ B-Type



• tc : Max. Case Temperature

- ◎ Note1: Please connect the case to FG for the complete EMC deliverance.
- ◎ Note2: Please contact MEAN WELL for input wiring option with FG.

■ Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>