MXL Series LED Drivers

DL-200H/HK-A/P-MXL Specification V1.0



GUANGDONG DONE POWER TECHNOLOGY CO.,LTD

Features

- Suitable for luminaire with protection Class I and Class II (Specific model)
- Efficiency: 93.5%(Typ.)
- Function selection:

  A: Adjusted by external potentiometer

  P: Isolated 3-in-1 dimming 0-10V/PWM/Resistor, Timer dimming

  H：Class I

  HK：Class II
- Ingress protection rating: IP67
- Input surge protection: DM 6kV, CM 10kV
- All-Around protection: SCP/OTP/OVP
- Warranty: 5 years



Applications

Road lighting

Venue lighting

Floodlight lighting

Landscape lighting

Model list

Model NO.	Input Voltage	Output Power	Output Voltage	Output Current	Default Current	Eff. (Typ.)	THD	PF
DL-200H/HK-286A-MXL DL-200H/HK-286P-MXL	100-277Vac	200W	143-286Vdc	0.11-1.05A	0.7A	93.5%	≤10%	0.97

Note :

1. All parameters are measured at input voltage 230Vac and operation time 30 minutes, and the typical value tested at full load, unless otherwise specified.
2. The maximum output power is 200W ; please refer to the output power vs. input voltage curve.

Input Specifications

Parameter	Min	Typ.	Max	Notes
Input AC Voltage Range	90Vac	220-240Vac	305Vac	Refer to output power vs. input voltage curve
Input Frequency	47Hz	50/60Hz	63Hz	
Leakage Current	-	-	0.70 mA	IEC 60598-1; 240Vac/60Hz
Power Factor(PF)	0.95	0.97	-	230V 50Hz, 100% load
	0.90	-	-	200-277V 50Hz, 70%-100% load
THD	-	7%	10%	230Vac, 100% load
	-	-	20%	200-277Vac, 70%-100% load
Input Current	-	-	1.2A	200Vac , 100% load
Inrush Current	-	-	77A	At 230Vac and 25℃ cold start

Output Specifications

Parameter	Min	Typ.	Max	Note
Efficiency	92.5%	93.5%		@230Vac,100% load,Io=0.7A
Output Voltage Range	143V	-	286V	100% load output voltage range: 190-286V
Open Circuit Voltage	-	-	310V	
Output Current Range (A)	0.5A	-	1.05A	Default current: 0.7A
Output Current Range (P)	0.11A	-	1.05A	
Output Current Tolerance	-5%	-	+5%	100% load
Output Current Ripple(PK-AV)	-	5%	10%	100% load, 20 MHz BW
Startup Overshoot Current	-	-	10%	100% load
Line Regulation	-3%	-	+3%	100% load
Load Regulation	-3%	-	+3%	60%-100% load
Turn-on Delay Time	-	-	1.0S	@230Vac,100% load

Note: The output current range is limited by the input and output voltage, please refer to I-V operating window.

Dimming Specifications(P version only)

Parameter		Min	Typ.	Max	Notes
0/1-10V Dimming	Absolute Maximum Voltage on the Vdim (+) Pin	-	-	15V	
	Source Current on Vdim (+)Pin	-	90μA	100μA	
	Safe Operating Voltage	0V	-	12V	
	Dimming Range	10%	-	100%	
	Recommended Dimming Input Range	1V	-	10V	0V is turn-offable and can be set through the programming software.
	Turn-on Voltage	0.6V	0.8V	1.0V	Dimming off may result in afterglow, which needs to be verified through the whole luminaire test.
	Turn-off Voltage	0.4V	0.5V	0.6V	
PWM Dimming	PWM High Level	9.5V	-	10.5V	
	PWM Low Level	0V	-	0.3V	
	PWM Frequency Range	300Hz	-	2000Hz	
	PWM Duty Cycle	0%	-	99%	
	Turn-on Duty Cycle	6%	8%	10%	
	Turn-off Duty Cycle	4%	5%	6%	
Resistor Dimming	External Resistor Value	0Ω	-	100KΩ	
	Dimming Range	0%	-	100%	

Note:

1. Factory default: Three-in-one dimming, 0-10V, positive logic, with cut-off. (There may be residual light after cut-off. It needs to be tested on the entire lamp for confirmation.)

2. Other dimming (0-5V voltage, negative logic, no cut-off, etc.) can be programmed.

3. 230Vac overload protection is met, and 4KV lightning protection can be customized.

Protection

Protection	description
Output overload protection	recovers automatically after fault condition is removed
Output short circuit protection	recovers automatically after fault condition is removed
Over temperature protection	Self-recovery type , when the casing temperature is 90-105℃, the output power decreases , recovers automatically after fault condition is removed
Output over-voltage protection	recovers automatically after fault condition is removed

General Specifications

Parameter	Notes
Operating temperature Ta	-40℃ - +60℃@200-277Vac
Operating case temperature	-40℃ ~ 90℃
Operating case temperature for a 5 year warranty	-40℃ ~ +75℃
Storage temperature,humidity	-40℃ ~ +80℃, 10% ~ 95% RH
Resistant to vibration	10Hz ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	200,000 hours (MIL-HDBK-217F),Ta=25℃, 230Vac, 80% load
Lifetime	50,000 hours @Tc≤70℃, 230Vac

Safety

Safety Categories	Area	Standards	whether it meets
CCC	China	GB/T 19510.1, GB/T 19510.213	√
CE	Europe	EN 61347-1, EN 61347-2-13	√
ENEC		EN 62384	√
CB	CB member state	IEC 61347-1, IEC 61347-2-13	√
SAA	Australia	AS/NZS 61347.1, AS/NZS 61347.2.13	
UL	USA	UL 8750	
CUL	Canada	CSA C22.2 No.250.13	
EAC	Russia	ГОСТ IEC 61347-1-2019 ГОСТ IEC 61347-2-13-2013	
BIS	India	IS 15885(PART 2/SEC 13)	

EMC

EMI/EMS Categories	Area	Standards	Approved
CCC	China	GB/T 17743, GB 17625.1	√
CE	Europe	EN IEC 55015 EN 61547 EN IEC 61000-3-2;3-3;4-5	√
EAC	Russia	ГОСТ IEC 61547-2013 ГОСТ CISPR 15-2014 ГОСТ IEC 6100-3-2-2017 ГОСТ IEC 6100-3-3-2015	
FCC	USA	FCC Part 15 Subpart B	

1.Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

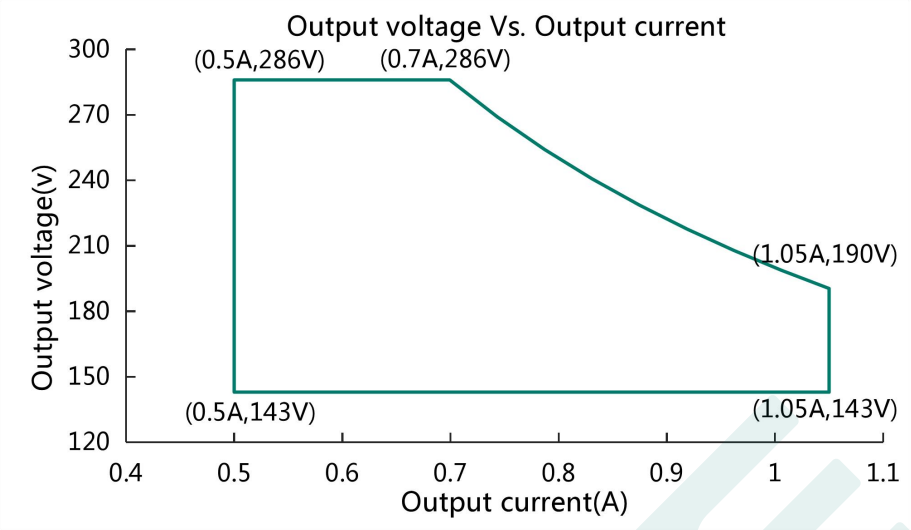
2.The driver is considered as a component that will be operated in combination with the final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

Safety Test Items

Regarding Class Ⅰ products	Input	Output	Dim	Case
Input	/	Reinforced insulation	Reinforced insulation	Basic insulation
Output	Reinforced insulation	/	Reinforced insulation	Basic insulation
Dim	Reinforced insulation	Reinforced insulation	/	Basic insulation
Case	Basic insulation	Basic insulation	Basic insulation	/
Insulation Resistance	≥10MΩ			
Ground Resistance	≤0.1Ω			

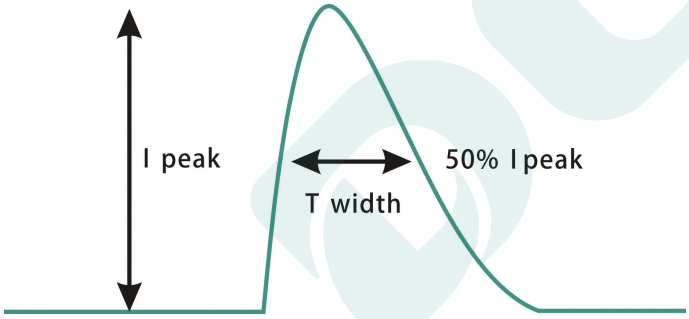
Regarding Class Ⅱ products	Input	Output	Dim	EQUI
Input	/	Reinforced insulation	Reinforced insulation	Reinforced insulation
Output	Reinforced insulation	/	Reinforced insulation	Reinforced insulation
Dim	Reinforced insulation	Reinforced insulation	/	Basic insulation
EQUI	Reinforced insulation	Reinforced insulation	Basic insulation	/
Insulation Resistance	≥10MΩ			
Ground Resistance	≤0.1Ω			

I-V Operating Window



Load	DL-200H/HK-286A/P-MXL Output								
Output Voltage	143V	160V	175V	190V	210V	235V	250V	268V	286V
Output Current Io_MAX	1.05A	1.05A	1.05A	1.05A	0.95A	0.85A	0.80A	0.75A	0.70A
Output Power Po_MAX	150W	168W	184W	200W	200W	200W	200W	200W	200W

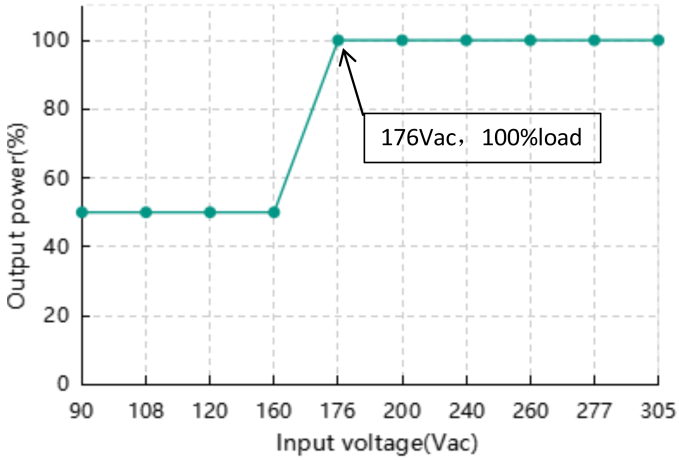
Inrush current



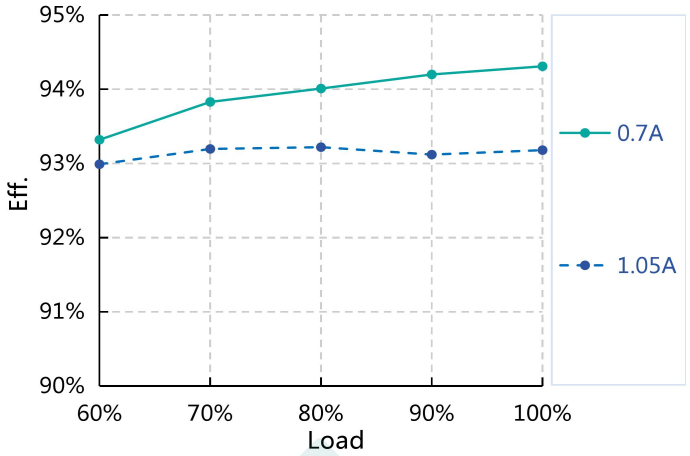
Input Voltage	Peak Vurrent	T(@50% Peak current)
230Vac	77A	198us

Typical values of each parameter at 25 °C, unless otherwise noted.

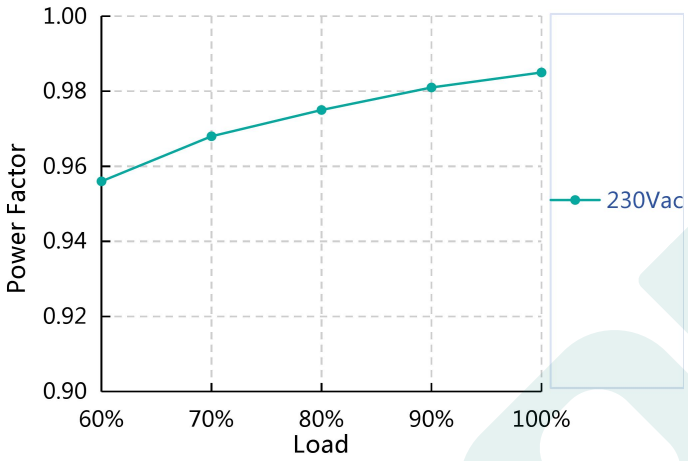
Output Power vs. Input Voltage



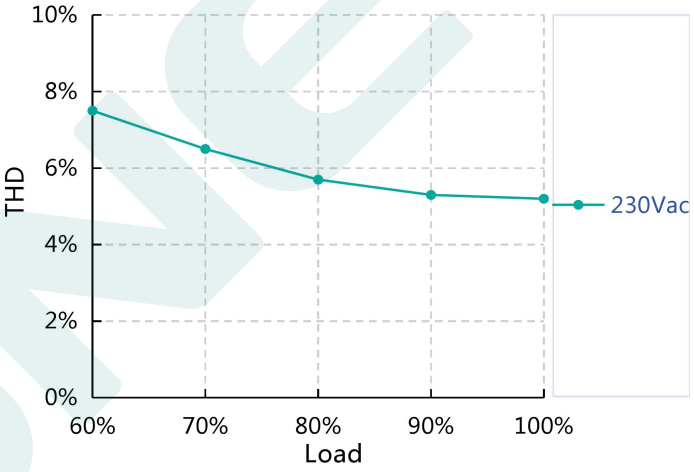
Eff. vs. Load



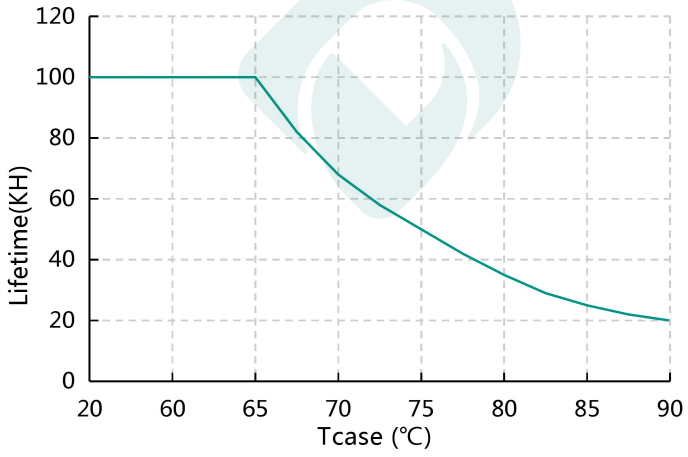
PF vs. Load



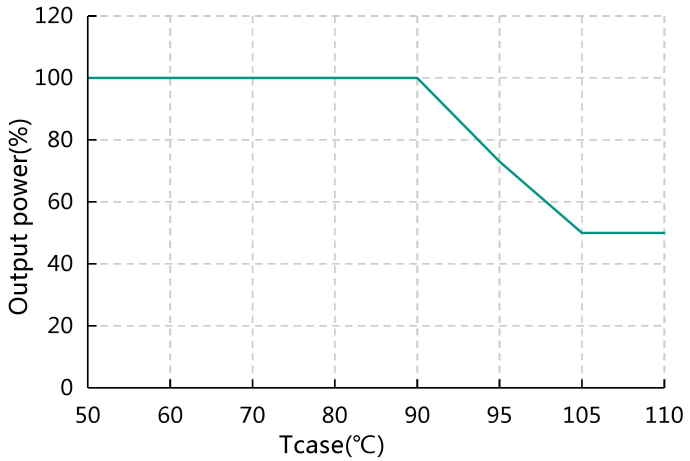
THD vs. Load



Lifetime vs. Tcase



Output Power vs. Tcase

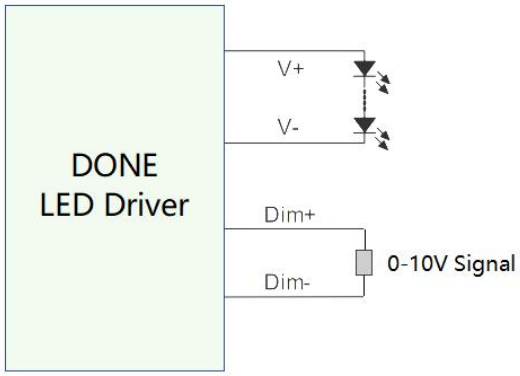


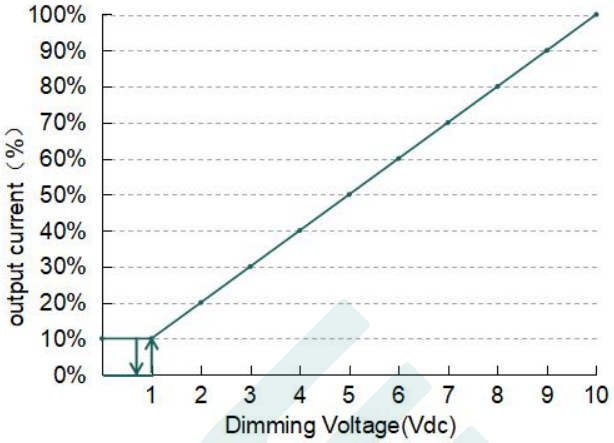
Typical values of each parameter at 25 °C, unless otherwise noted.

3-in-1 dimming function (P version only)

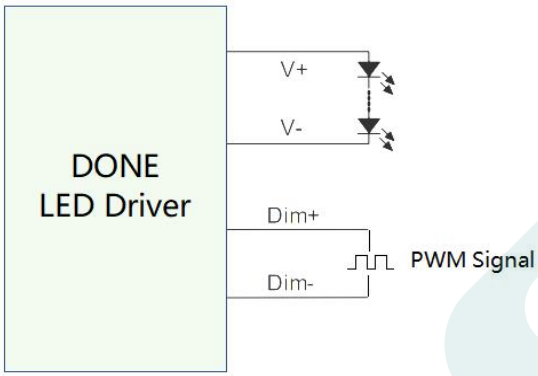
Connect a 0-10V Dimmer or 10V PWM signal or resistor between DIM+ and DIM-

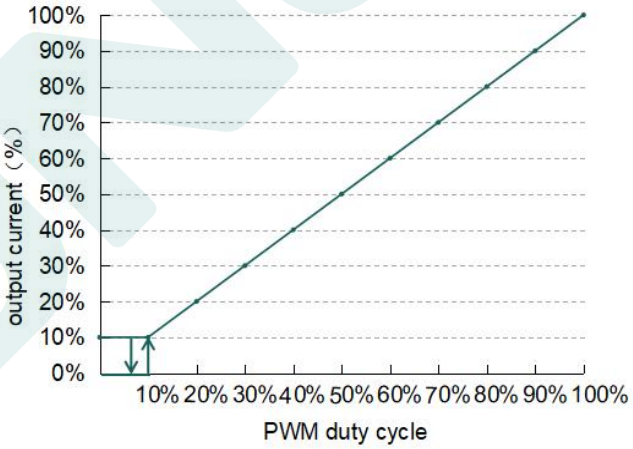
- **0-10V dimming:**



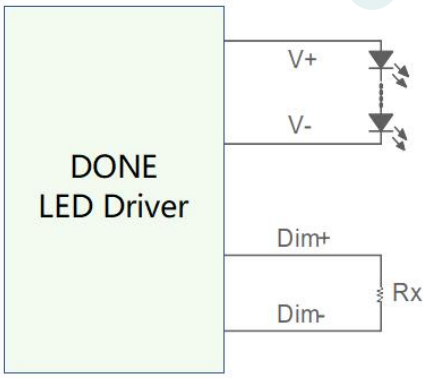


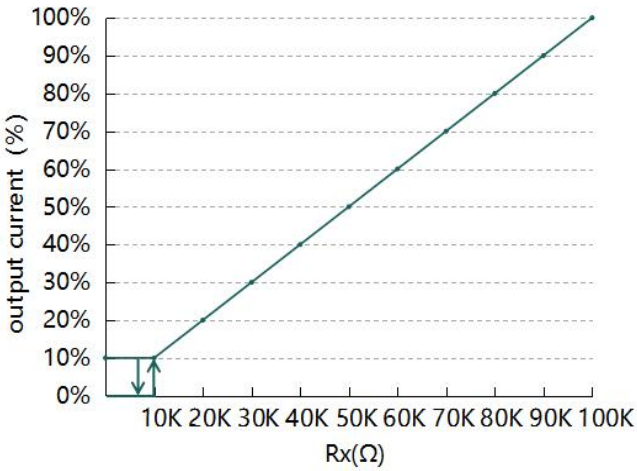
- **PWM dimming :**





- **Resistor Dimming:**





Typical values of each parameter at 25 °C, unless otherwise noted.

Programmable Connections

Mode 1



Visual Programming

1. Set the output current and dimming method parameters through the control signal linet;
2. Timer dimming(Traditional/Self-adaptive midnight/Self-adaptive percentage) are optional. They support up to 6 segments;

Mode 2



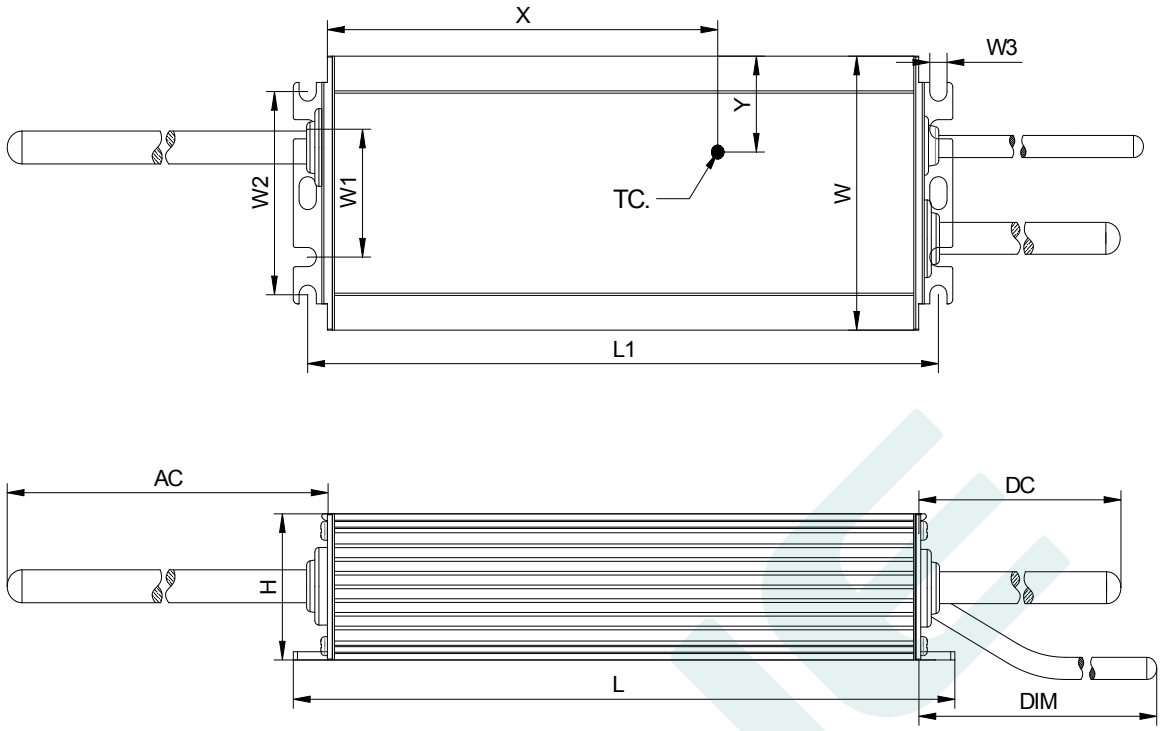
Off-line programmable :

1. Download the configuration file to the programmer;
2. Connect the dimming wire with the programmer, and press the programmer button. If completed successfully, the programmer will give a Beep sound and indicator light turns green to show the programming completed.

For more details, please refer to the “DONE POWER OFFLINE PROGRAMMING TOOL V2.0 “ file.

Typical values of each parameter at 25 °C, unless otherwise noted.

Mechanical Outline



Installation Size

Type	Symbol	Overall Size (mm)	Symbol	Mounting Hole Size (mm)	Symbol	Screw Hole Size (mm)	Symbol	Tc Point (mm)
Length	L	162±1	L1	155±1	-	-	X	95
Width	W	60±0.5	W1/W2	28/44.5±0.5	W3	4.2±0.2	Y	39
Height	H	32±0.5	-	-	-	-	-	-
Size	L162*W60*H32 (mm)							
Weight	630g							

Line Specification (Class Ⅰ)

Type	AC Line			DC Line		DIM Dimming Line		
Line Color	L	N	GND	V+	V-	DIM+	DIM-	Vaux+
	Brown	Blue	Yellow/Green	Brown	Blue	Purple	Pink	/
Exposed Length (mm)	400±15			250±15		270±15		
Strip Length (mm)	50±5			50±5		50±5		
Tinning Length (mm)	10±2			10±2		10±2		
Line Specification	H05RN-F 3x1.0mm² OD：7.2mm VDE / CCC / KC / SAA			H05RN-F 2x1.0mm² OD:6.8mm VDE / CCC / KC / SAA		UL21996 22AWG OD:5.0mm		

Line Specification (Class Ⅱ)

Type	AC Line			DC Line		DIM Dimming Line		
Line Color	L	N	⏚	V+	V-	DIM+	DIM-	Vaux+
	Brown	Blue	black	Brown	Blue	Purple	Pink	/
Exposed Length (mm)	400±15			250±15		270±15		
Strip Length (mm)	50±5			50±5		50±5		
Tinning Length (mm)	10±2			10±2		10±2		
Line Specification	H05RN-F 3x1.0mm² OD：7.2mm VDE / CCC / KC / SAA			H05RN-F 2x1.0mm² OD:6.8mm VDE / CCC / KC / SAA		UL21996 22AWG OD:5.0mm		

Packaging

Packaging Size	L475*W350*H160mm
Package Qty	24PCS/carton

Version

DATE	DESCRIPTION	REV.	CHECK
2026.7.9	initial version	V1.0	JH 2026.07.23 15:03:32 +08'00' LYF 2026.07.24 08:14:58 +08'00'

SIGNATURE		
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