



● Features

- ✓ Wide input range 90 ~ 305VAC(Class I)
- ✓ IP67 level
- ✓ -40~+70℃ working temperature(refer to derating curve)
- ✓ Lightning Protection: Line to Line 4KV, Line to Ground 6KV
- ✓ Short circuit/Over load/Over voltage/Over temperature
- ✓ Three in one dimming function (dimming can be turned off, isolation design)
- ✓ 5 years warranty

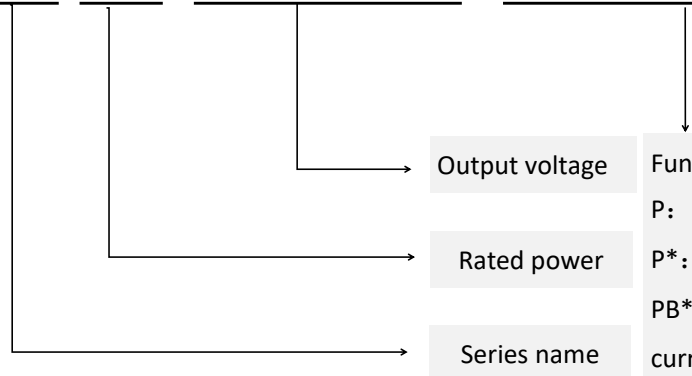


● Product description

CYX-240 series is 240W outside LED driver,the output modes are constant voltage and constant current,wide input range,super high power factor and super low THD.This series of products are designed for high temperature resistance,the working temperature of full load can reach as high as 70 ℃. It is specially designed for outdoor lighting, street lighting,tunnel lighting,high pole lamps,stadium lamps and other LED lighting etc. The adjustable function of output current is beneficial to the flexible design of LED lump, and the versatility is greatly enhanced. Super high efficiency, compact shell design, good heat dissipation, and all-round protection ensure the long-term stability of this series of products.

● Model code

CYX- 240 - 12/24/36/48/54 - P/P*/PB*



Function options:

P: With PFC function

P*: With PFC,Output current is adjustable

PB*: With PFC,three in one dimming function,Output current is adjustable

● Model list

Model	Function description	Remarks
CYX-240-12P	Output constant voltage	
CYX-240-24P	Output constant voltage	
CYX-240-36P	Output constant voltage	
CYX-240-48P	Output constant voltage	
CYX-240-36P*	Output constant current,output current is adjustable	
CYX-240-36PB*	Output constant current,three in one dimming,output current is adjustable	
CYX-240-48P*	Output constant current,output current is adjustable	
CYX-240-48PB*	Output constant current,three in one dimming,output current is adjustable	

● Electrical parameters——Constant voltage

Model		CYX-240-12P	CYX-240-24P	CYX-240-36P	CYX-240-48P
Input	Voltage/Frequency range	90~305VAC/47~63HZ			
	Efficiency	92%	94%	94%	94%
	Input current	115VAC/2.3A, 230VAC/1.3A, 277VAC/1.1A			
	Leakage current	<0.75mA/277VAC			
	Inrush current	50A/220VAC（input 230Vac/50Hz,under 50%I _{peak} testing twidth=300us,power supply start-up in cold state）			
	Max qty of Circuit Breakers	Use 16A breaker,input 230VAC on the same model power supply, 2 units(circuit breaker of type B)/ 4 units(circuit breaker of type C)			
	PF	PF≥0.98/110VAC full load,PF≥0.98/230VAC full load,or PF≥0.95/277VAC full load PF≥0.94(≥50% Load when 110VAC/230VAC; ≥75% Load when 277VAC) ,refer to PF curve			
	THD	THD<10% （≥50% Load when 110VAC/230VAC; ≥75% Load when 277VAC）			
	No-load/standby loss	<0.8W（Dimming models could dimming to turn off output）			
Output	DC voltage	12V	24V	36V	48V
	Rated current	18A	10.4A	6.93A	5.21A
	Ripple and noise	≤200mVp-p	≤250mVp-p	≤250mVp-p	≤250mVp-p
	Start up time	500ms/100ms （220VAC load 100%）,1000ms/100ms （110VAC load 80%）			
	Hold up time	8ms/（220VAC) load 100%			
	Linear adjustment rate	±0.5%	±0.5%	±0.5%	±0.5%
	Load adjustment rate	±2%	±2%	±2%	±2%
	Output Voltage Accuracy	±3%	±3%	±3%	±3%
EMI	Electromagnetic tolerance	EN61547;EN61000-4-2,3,4,5,6,8,11; (surge immunity Line-Earth 6KV, Line-Line 4KV)			
	Harmonic current	GB17625.1;EN61000-3-2 Class C,EN61000-3-3			
	EMI	EN55015,GB17743			
Safety	Safety specification	GB19510.1,14/EN61347-1,-2-13/EN62384 /UL8750/IP67			
	Withstand voltage	I/P-O/P:3.75KVac/10mA;I/P-CASE:2KVac/10mA; O/P-CASE:1.5KVac/10mA Each testing time:1min			
	Insulation impedance	I/P-O/P:100M ohms; I/P-Case:100M ohms; O/P-Case:100M ohms			
Protections	Over voltage	120~140% output voltage over limit,shut off output voltage,recovery after re-start			
	Over load	110~150% load hiccup mode,auto recovery after over load disappear			
	Over temperature	Shut off output voltage,recovery after re-start			
	Short circuit	Protection,auto recovery after short circuit disappear			
Environment	Working condition	Ta=-40~70℃/Tc=-40~90℃(refer to derating curve),20%~95%RH no condensing			
	Storage condition	-40℃~80℃; 10%~95%RH no condensing			
	Vibration	Frequency range 10 ~ 500Hz,acceleration 5G,Each sweep cycle 10min.6 sweep cycles along X, Y and Z axes			
	Shock	Acceleration 20G,Duration 11mS,3 shocks along X,Y and Z axes			
	Elevation	/			
	Warranty	5 years(refer to lifetime diagram)			
	IP level	IP67			
Reliability	MTBF	25℃:250000Hrs, MIL-217 Method			
Other requirements	Size	217*66*35.5mm（L*W*H）			
	Package	0.93kgs/pc,16pcs/ctn,16kgs/ctn			
Remarks	*As not specifically stated,all parameters were measured at input voltage 230 VAC ,rated current and environment temperature under 25 °C. *For longer service life,20% extra margin is recommended when configuring the load.For example: equipment requires 100W,then choose a power supply no less than 120W. *The ripple test method of switching power supply: 20 MHz oscilloscope is used to test the output terminal of power supply. The length of ground wire of oscilloscope probe is not more than 12 mm, and 47 uF electrolytic capacitor and 0.1 uF high frequency capacitor are input into the probe. *All electrical performance tests are performed at 25 °C.				

● Electrical parameters——Constant current

Model		CYX-240-36P*	CYX-240-36PB*	CYX-240-48P*	CYX-240-48PB*
Input	Voltage/Frequency range	90~305VAC / 47~63HZ			
	Input current	115VAC/2.3A, 230VAC/1.3A, 277VAC/1.1A			
	Input current	92%		93%≥93%/≥92.2%	
	Leakage current	<0.75mA/277VAC			
	Inrush current	50A/220VAC(Input 230Vac/50Hz,under 50% Ipeak testing,twidth=300us, power supply start-up in cold state)			
	Max qty of Circuit Breakers	Use 16A breaker,input 230VAC on the same model power supply, 4 units(circuit breaker of type B) / 7 units(circuit breaker of type C)			
	PF	PF≥0.98/110VAC full load, PF≥0.98/230VACfull load,or PF≥0.95/277VAC full load PF≥0.94(≥50% Loadwhen 110VAC/230VAC; ≥75% Load when277VAC) (refer to PF curve)			
	THD	THD<10% (≥50% Loadwhen 110VAC/230VAC; ≥75% Load when 277VAC)			
	No-load/standby loss	<0.5W (Dimming models could dimming to turn off output)			
Output	Output volt range	18-36V		24-48V	
	Rated current	6.67A		5.0A	
	Current adjustment range	4.00-6.67A		3.0-5.0A	
	Ripple&Noise	≤250mV			
	Start up time	500ms/100ms (220VAC load 100%) ,1000ms/100ms (110VAC load 80%)			
	Hold up time	8ms/ (220VAC) load 100%			
	Linear adjustment rate	±0.5%			
	Load adjustment rate	±2%			
	Current accuracy	±5%			
	Current ripple	3%			
EMI	Electromagnetic tolerance	EN61547;EN61000-4-2,3,4,5,6,8,11;(surgeimmunityLine-Earth6KV,Line-Line 4KV)			
	Harmonic current	GB17625.1;EN61000-3-2 Class C, EN61000-3-3			
	EMI	EN55015, GB17743			
Safety	Safety specification	GB19510.1, .14/EN61347-1, -2-13/EN62384 /UL8750/IP67			
	Withstand voltage	I/P-O/P:3.75KVac/10mA; I/P-CASE:2KVac/10mA; O/P-CASE:1.5KVac/10mA Each testing time:1min			
	Insulation impedance	I/P-O/P:100M ohms; I/P-Case:100M ohms; O/P-Case:100M ohms			
Protections	Over voltage	120~140% output voltage over limit,shut off output voltage,recovery after re-start			
	Over load	110~135% load hiccup mode,auto recovery after over load removed			
	Over temperature	Shut off output voltage,recovery after re-start			
	Short circuit	Hiccup mode, recovers automatically after fault condition removed			
Environment	Working temperature and humidity	Ta=-40~70°C/TC=-40~90°C (refer to derating curve) , 20%~95%RH no condensing			
	Storage temperature and humidity	-40°C~80°C; 10%~95%RH no condensing			
	Vibration	Frequency range 10 ~ 500Hz,acceleration 5G, Each sweep cycle 10min.6 sweep cycles along X, Y and Z axes			
	Shock	Acceleration 20G, Duration 11mS, 3 shocks along X, Y and Z axes			
	Warranty	5 years (refer to lifetime diagram)			
	IP Level	IP67			
Reliability	MTBF	25°C:250000Hrs, MIL-217 Method			
Other requirements	Size mm	227*66*35.5			
	Package	0.99kgs/pc,16pcs/ctn, 17kgs/ctn			
	Cooling method	☒ Free air ☐ Fan			

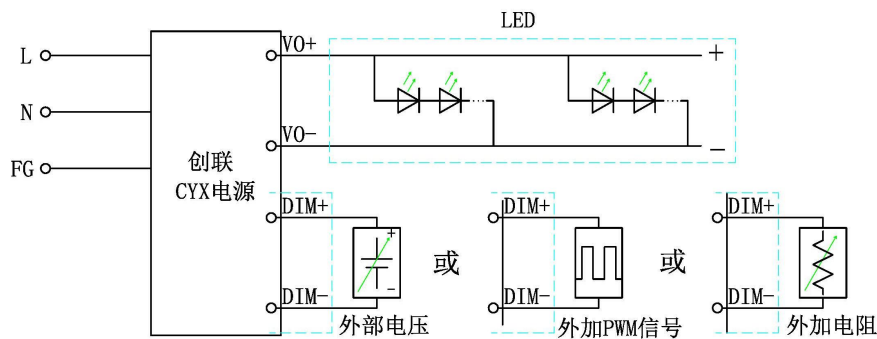
Remarks

*As not specifically stated, all parameters were measured at input voltage 230 VAC, rated current and environment temperature under 25 °C.
*For longer service life, 20% extra margin is recommended when configuring the load. For example: equipment requires 100W, then choose a power supply no less than 120W.
*The ripple test method of switching power supply: 20 MHz oscilloscope is used to test the output terminal of power supply. The length of ground wire of oscilloscope probe is not more than 12 mm, and 47 uF electrolytic capacitor and 0.1 uF high frequency capacitor are input into the probe.
*All electrical performance tests are performed at 25°C.

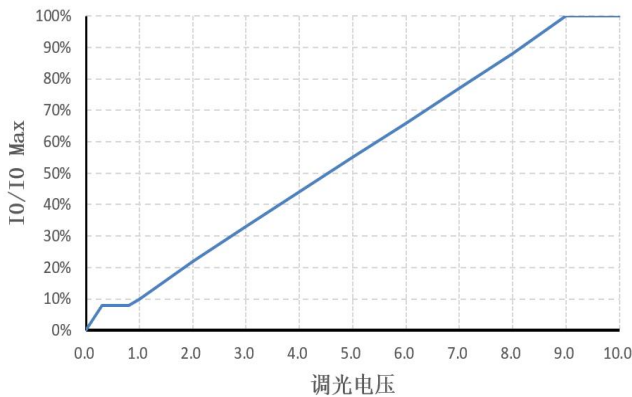
● **Dimming operation:**

1. Connecting 0-10VDC or 10VPWM (300HZ-3KHZ) signal or a resistor (0-100K) between DIM+ and DIM- can linearly adjust the value of output constant current.
2. The power supply with dimming function is recommended to connect directly to the LED, which is not suitable for external drivers.
3. When the dimming function is not used, the dimming light can be suspended.

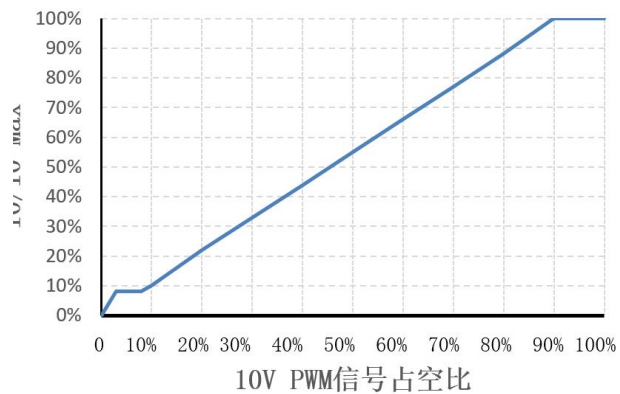
● **Below is Installation sketch and dimming curve**



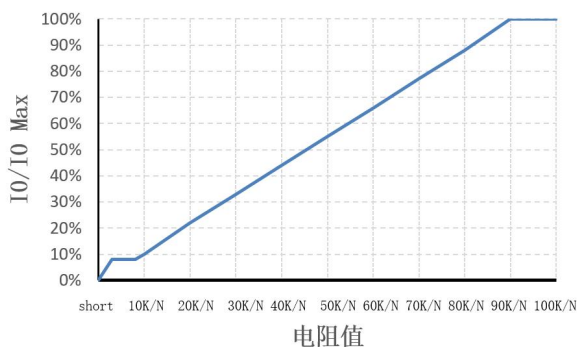
I_o/I_{oMax} VS 调光电压



I_o/I_{oMax} VS 10V PWM



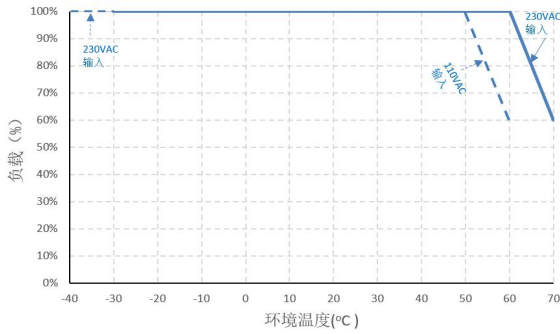
I_o/I_{oMax} VS 电阻值



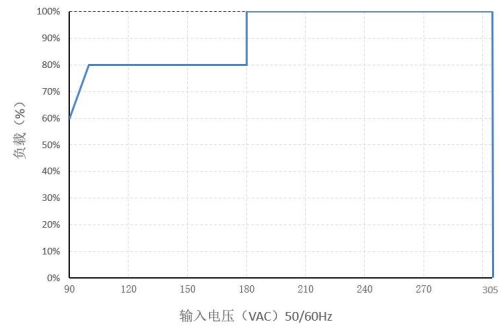
● **Remarks:**

When resistance dimming, if the dimming of N power supply needs to be used in parallel, the resistance value corresponding to the same brightness of a single power supply (output constant current value) should be divided by N.

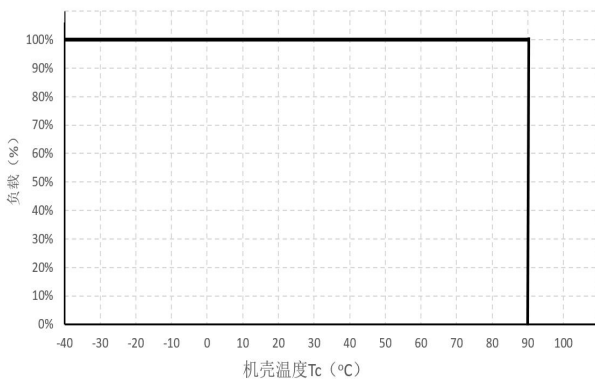
● **Output Load to Temperature Curve**
负载VS环境温度



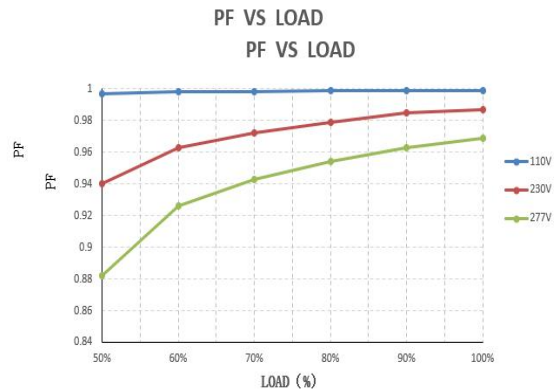
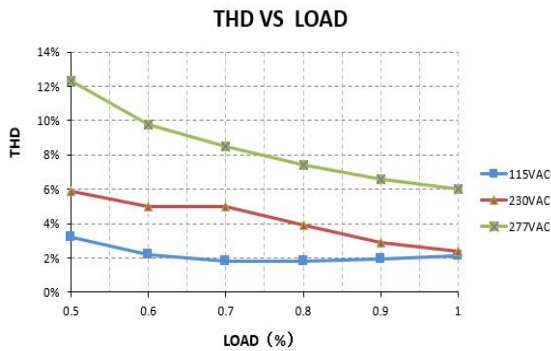
Output Load to Input Voltage
负载VS输入电压



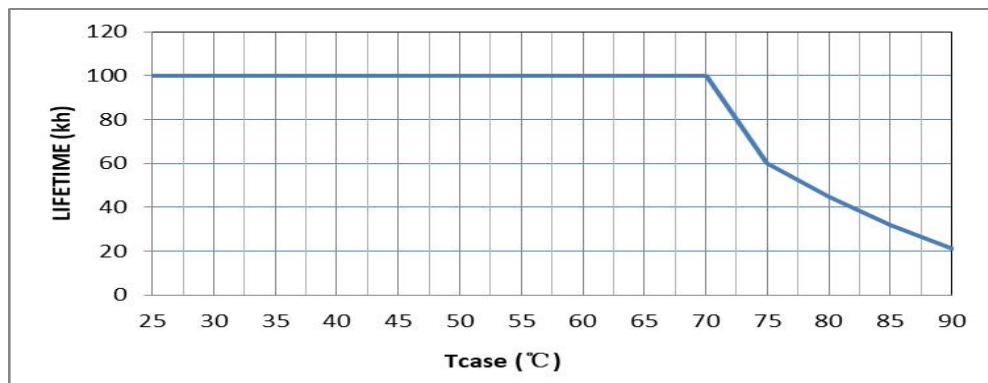
● **Output load to shell temperature**
输出负载 VS 机壳温度



● **Output load to Total Harmonic Distortion Curve (THD)** **Output load to PF value**



● **Lifetime**



Mechanism size and wire materials

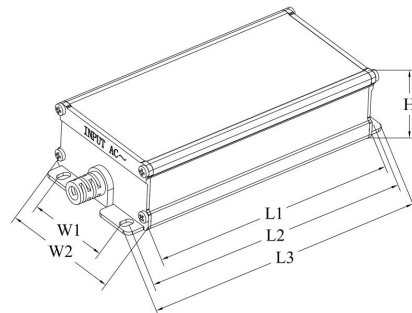
Remarks:

Overall size L3×W2×H:

Shell length L1

Installation hole width W1

Installation hole length L2



Model	3C/Global approvals		UL approval		Size（mm）
	Input	Output	Input	Output	Overall size
CYX-240-12P	H05RN-F 1.0mm²×3C Brown L/Blue N/Yellow green FG 500±20mm	H05RR-F 2.5mm²×2C Brown V+/Blue V- 300±20mm	SJTW 18AWG×3C Black L/White N/Green FG 500±20mm	SJTW 14AWG×2C Red V+/Black V- 300±20mm	L3×W2×H: 217×66×35.5 L1(Shell length): 200 Installation hole width W1: 45.8 Installation hole length L2: 207
CYX-240-24P		H05RR-F 1.5mm²×2C Brown V+/Blue V- 300±20mm			
CYX-240-36P		H05RN-F 1.0mm²×2C Brown V+/Blue V- 300±20mm			
CYX-240-48P					
CYX-240-36P*	SJOW、 H05RN-F 1.0mm² ×3C Brown L/Blue N/Yellow green FG 500±20mm	SJOW、H05RN-F 1.0mm² ×2C Brown V+/Blue V- 300±20mm	---	---	Overall size L3×W2×H: 227×66×35.5 L1(Shell length): 205 Installation hole width W1: 45.8 Installation hole length L2: 214.5
CYX-240-48P*		SJOW、H05RN-F 1.0mm² ×2C Brown V+/Blue V- 300±20mm	---	---	
CYX-240-36PB*		SJOW、H05RN-F 1.0mm² ×2C Brown V+/Blue V- 300±20mm 2517 22AWG×2C Purple DIM+/Gray DIM- 240±20mm	---	---	
CYX-240-48PB*			---	---	

● Product installation and Instructions:

1. When installing, please follow the mechanical size and installation method.
2. Before commissioning, please check and proofread the connections on the terminals to make sure that the input and output, AC and DC, positive and negative poles, voltage and current values are correct, to prevent the occurrence of reverse connection errors and to avoid damage to power supply and user equipment.
3. Please use the multimeter to measure whether the fire line, zero line and ground line are short-circuited and whether the output terminal is short-circuited before power is turned on.
4. Do not exceed the nominal value of the power supply in use, so as to avoid affecting the reliability of the product. If you need to change the output parameters of the power supply, please consult the technical department of our company before using the power supply to ensure the effectiveness and reliability of the use.
5. To ensure safety and reduce interference, ensure reliable grounding of grounding end (grounding wire > AWG18#).
6. Without using the dimming function, please seal the dimming joints separately with insulating sleeves so as not to string in disturbing signals causing damage to the dimming line, affect the power supply's normal working.
7. If the power supply fails, please do not repair it without authorization. Please contact our customer service department as soon as possible. Customer service line: 86-519-85210050.

● Transport and storage:**1. Transport:**

This packing is suitable for transportation of automobiles, ships, airplanes and trains. It should be rainproof and handled civilly during transportation.

2. Storage:

When the product is not in use, it should be placed in the packing box. The storage environment temperature and relative humidity should meet the requirements of the product. There should be no corrosive gas or products in the warehouse, and there should be no strong mechanical vibration, impact and strong magnetic field. Packing box should be at least 20 cm high from the ground, do not allow water immersion. If the storage time is too long (more than one year), it should be re-examined by professionals before it can be used.

Curriculum vitae

Version	Description	Change date	Remarks
V00	Initial release	2018.10.1	
V01	The input line was lengthened to 500 mm	2019.9.16	