

RWP20AT-1WPC

Product Features

- Single-channel constant current output. Output current is programmable via software.
- Supports 0-10V, potentiometer, PWM, and Triac (leading & trailing edge) dimming.
- Triac (leading & trailing edge) dimming is only available at 120 Vac.
- Protection: overload, overvoltage, short and temperature circuit.
- UL Class P and Class 2 output.
- Complies with UL 8750 safety standards.
- Suitable for dry and damp locations.
- Suitable for indoor LED lighting applications.



Application



Down Light

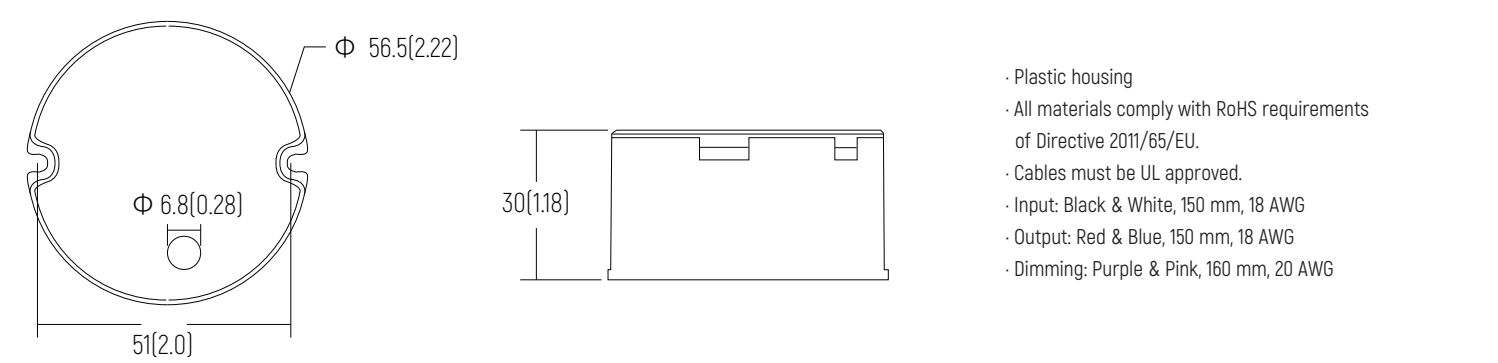


Technical Parameters

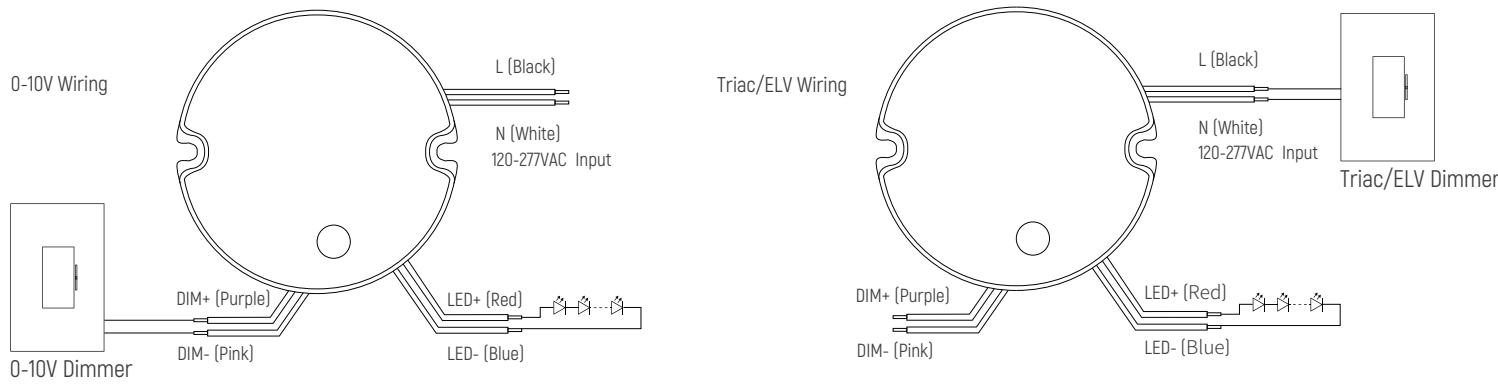
Model	RWP20AT-1WPC	
Input	Rated Voltage	120-277VAC
	Voltage Range	108-305VAC
	Voltage Range (DC)	120-280VDC
	Current	0.25Amax @120VAC, 0.12Amax @277VAC
	Frequency Range	50/60Hz
	Inrush Current	Cold start, 4A@120VAC 8us, 8A@277VAC 8us
	Efficiency	>82%@120VAC, >81%@277VAC, Full load
	THD	<10%@120VAC, <15%@277VAC, Full load
	Power Factor	>0.95@120VAC, >0.9@277VAC, Full load
	Standby power	<2W
	No load power	<2W
	Turn on time	<0.5s, @120Vac [time-to-first-light]
Output	Current	120-700 mA (default current: 350 mA)
	Voltage	9-42VDC
	Current Accuracy	±5%[*120mA ±7%]
	Power	20W Max
	Output Channel	1
	Load Regulation	±1%
	Line Regulation	±1%
	Output frequency	20 kHz variable frequency
	No load output voltage	59V Max
Protection	Short-Circuit	Shut down output, Auto-recovery after Fault Clearance
	Overload	Current reduction protection, auto-recovery after fault cleared.
	Over Voltage	Current reduction protection, auto-recovery after fault cleared.
	Over temperature	When Ta exceeds 70°C, output power derating is activated; it will automatically recover when the temperature drops.
Function	Dimming Type	0-10V ,Potentiometer,PWM,Triac/ELV[@120VAC 60Hz]
	Dimming Range	0.1%-100%(0-10V) , 0.5%-100% (Triac/ELV)
	Dimming Curve	0-10V: linear/Logarithmic curve programmable, Triac/ELV: Logarithmic
	Flicker	Flicker free
Safety& EMC	Surge	IEC61000-4-5 (Comb wave) L-N: ±1kV [differential mode]
		L-N: 2.5 kV [ANSI/IEEE C62.41.2-2002 & C62.41.2-2002, Class A, 2.5 kV ring wave]
	Withstand Voltage	I/P-O/P: 2000Vac/1min/<5mA I/P-DIM[Signal port]: 1500Vac/1min/<5mA O/P-DIM[Signal port]:500Vac/1min/<5mA
	Safety Standards	UL8750 , Classp
	EMI Emission	EN55015,EN61000-3-2 Class C,IEC61000-3-3
	EMC Immunity	FCC class B(120V)/class A(277V)

Others	RoHS	RoHS Directive 2011/65/EU, directives (EU)2015/863
	Working Temp.	-20 C [-4 F]~60 C (140 F)
	Storage Temp. Humidity	-40 C [-40 F]~85 C (185 F), 20-90%RH
	tc	90 C (194 F)for safety & 80 C (176 F) for lifetime
	Lifetime	50,000h@tc:80 C (176 F)
	Warranty Condition	5 years
	Switch Cycle	>25,000 times
	IP Rating	IP20
	Material	PC
	Dimension	Φ 56.5*30mm [2.22*1.18 Inch] [D*H]
	Packing(weight)	Net weight: 135g(0.30lb)±5%/PCS; 100PCS/Carton; 14.0kg(30.87lb)±5%/Carton; Carton Size: 431*323*323mm(16.97*12.72*12.72Inch)(L*W*H)

Dimension mm (Inch)



Wiring Diagram



Mode switching

- 1.Dimming Mode Switching Window: Operation is only allowed within 30 seconds after power-on, and the device must remain powered off for at least 5 seconds before re-powering.
- 2.Activation Condition: The target action must be continuously maintained for 5 seconds to take effect.
- 3.Device Limitation: Only one dimming mode can be used at a time (e.g., if 0-10V mode is selected, a TRIAC dimming knob cannot be connected simultaneously. If TRIAC mode is selected, the 0-10V signal must remain disconnected and insulated).
- 4.Mode Persistence: Once a dimming mode is activated, it remains in effect until the next mode switch.

Dimming Mode Operation Steps Reference Table		
Target mode	Action requirements	Effective verification
0-10V mode	Control voltage ≤ 5V (hold for 5 seconds)	0-10V Mode: Normal Dimming
TRIAC/ELV Mode	Adjust the knob to 80%-50% brightness (hold for 5 seconds)	Triac/ELV Mode: Normal Dimming

Phase-cut Dimmers Compatibility Table

Mfg.	Model	Dimming Depth	Max Brightness	Smoothness
Lutron	DVCL-153P	0.46%	yes	Good
	MACL-153MR	1.70%	yes	Good
	DVCL-153PR	0.46%	yes	Good
	SCL-153P	1.60%	yes	Good
	CTCL-153-PDH	0.46%	yes	Good
	DVLV-603P	0.47%	yes	Occasional flashback during dimming down.
	SELV-300P	2.05%	yes	Breathing effect after dim-down stabilization.
	DVSCCL-153P	0.46%	yes	Good
	STCL-153MW	34.88%	NO	Good
	MA-PRO	2.02%	yes	Good
	PD-6WCL	1.34%	yes	Good
	PD-5NE	2.91%	yes	Good
	TGCL-153PH	1.70%	yes	Good
	AYCL-253P	1.69%	yes	Good
Leviton	06674-POW	2.04%	yes	Good
	DSL06-1TW	1.44%	yes	Good
	IPL06-10Z	1.79%	yes	Good
	6161-A	3.10%	yes	Good
	6674-10W	1.88%	yes	Good
	DSE06-10Z	1.74%	yes	Good
	DSM10-1LZ	1.96%	yes	Good

Note: "The list above recommends dimmers for TRIAC testing. Unlisted TRIAC dimmers should only be used after verification through actual testing to ensure no abnormalities. 0-10V dimming has no compatibility issues."

Configurable functions

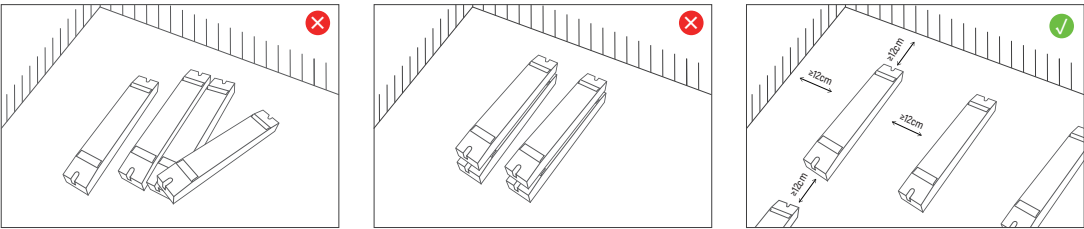
- Data log reading: SKU, serial number, batch number, FW revision version
- Output current regulation (factory default: 350)
- Dimming depth editing (factory default: see technical parameter table, editable range 10% Max)
- Dimming curve editing. Built in linear and logarithmic fixed curves, can be directly selected for use. At the same time, it has built-in custom curves and supports editing curves.
- Support parameter copying/replication and batch editing.

EU-PROG User Manual, Please click the link to view.
<https://v2.fangcloud.com/share/2549f7729789c1c5ad5be53728>



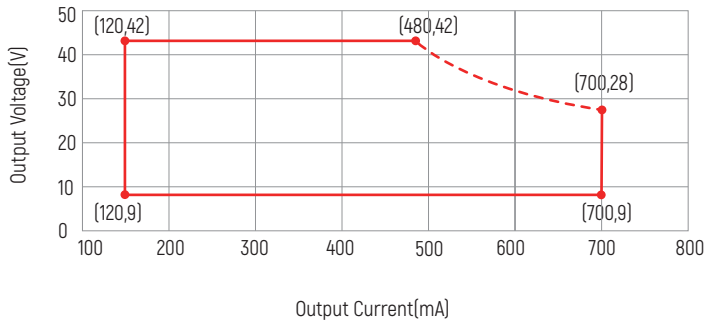
EU-PROG Programming connector Interface

Installation Precautions



Please do not stack the products. The distance between two products should be >12cm so as not to affect heat dissipation and the lifespan of the products.
 "To ensure efficient heat transfer, the bottom of the power supply / outer casing must be in close contact with the iron plate, with no gaps on the mating surfaces to prevent an air layer from affecting heat dissipation."
 Keep away from heat flammable materials, Install properly for better heat dissipation, Please do not touch during operation, Suitable for Dry or Damp Locations, For Connections Use Wire Rated for at Least 90°C(194°F)

Work Window



Adjustable output current

The current can be adjusted through a programmer, with a range of 120-700mA and a minimum adjustment current of 1mA. Example: 121mA、122mA、123mA.....700mA。

The table provides examples of partial currents:

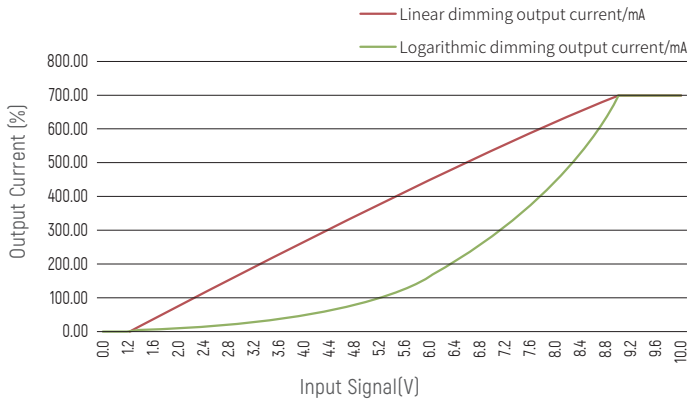
Output Current	120mA	200mA	300mA	400mA	500mA	600mA	700mA
Output Voltage	9-42VDC	9-42VDC	9-42VDC	9-42VDC	9-40VDC	9-33VDC	9-28VDC
Output Power	5.04W	8.4W	12.6W	16.8W	20W	19.8W	19.6W

Max. quantity of drivers per miniature circuit breaker

Specification item	Value	Value	Condition
Inrush current I _{peak}	4A (120V)	8A (277V)	Input Voltage 120V/277V
Inrush current T _{width}	8us(120V)	8us (277V)	Input Voltage 120V/277V, measured at 50% I _{peak}

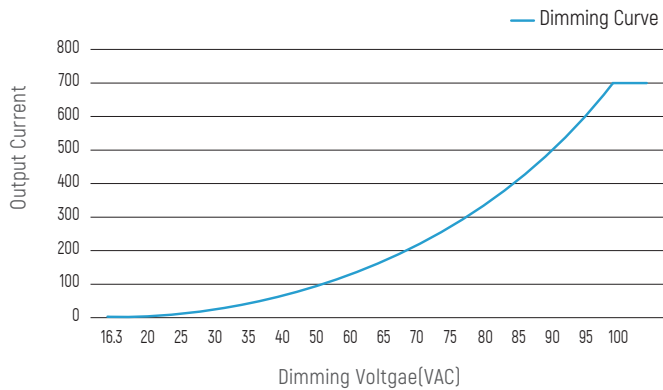
MCB	Input Voltage 120V Drivers	Input Voltage 277V Drivers	MCB	Input Voltage 120V Drivers	Input Voltage 277V Drivers
B10	40pcs	83pcs	C10	40pcs	83pcs
B13	52pcs	108pcs	C13	52pcs	108pcs
B16	64pcs	133pcs	C16	64pcs	133pcs
B20	80pcs	166pcs	C20	80pcs	166pcs
			D16	64pcs	133pcs

0-10V Dimming Curve

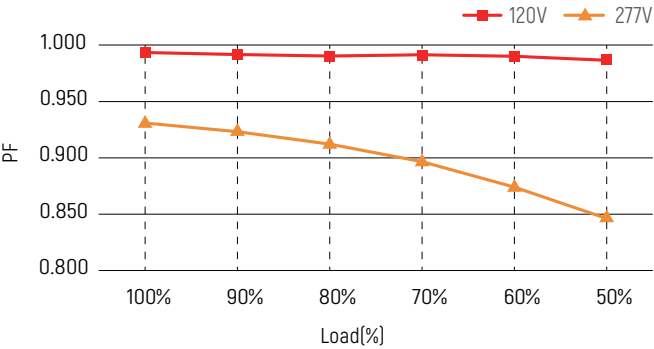


Dimming 0% (V_{dim}=0-1.0V)
Note: Full brightness value and curve programmable

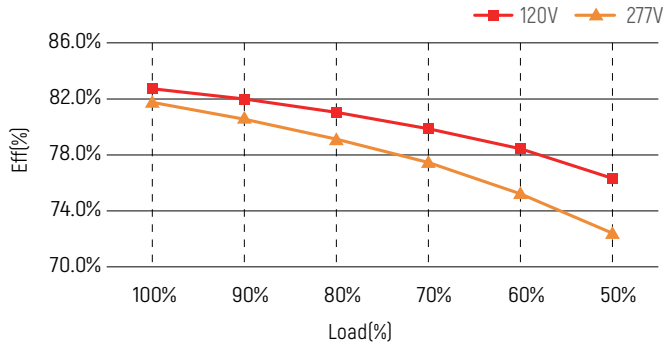
Triac Dimming Curve



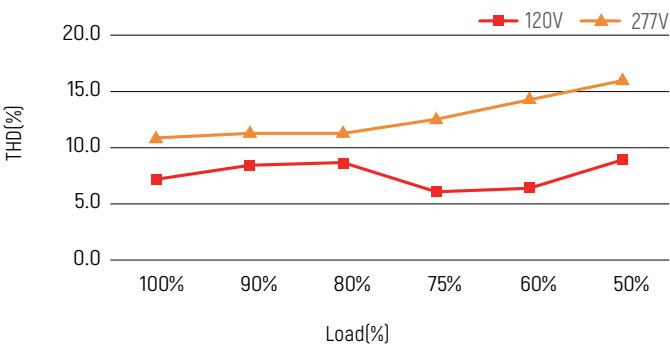
PF vs Load Curve



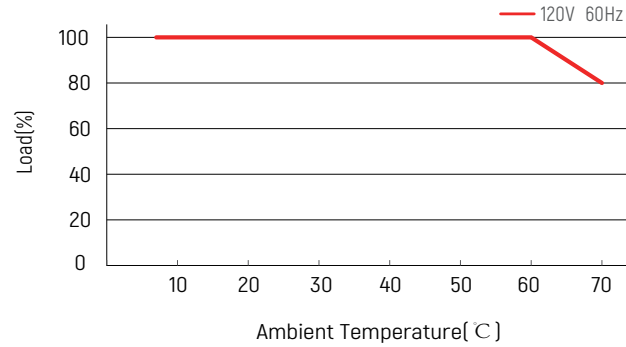
Efficiency vs Load Curve



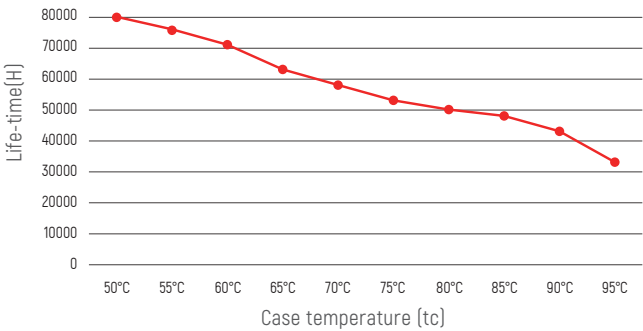
THD vs Load Curve



Derating Curve



Life curve



Cautions

This product must be installed and adjusted by a qualified professional.		
1	Confirmation of installation conditions	· Waterproof and Protection: Install in a suitable location according to the waterproof and protection requirements of the power supply. Products without waterproof function should be protected from direct sunlight and rain. When installing outdoors, please use a waterproof box for protection. · Heat dissipation requirements: The drive power supply should avoid exposure to high temperature environments. Please ensure that the working environment temperature is within the recommended range. To ensure proper heat dissipation of the drive power supply, a well ventilated area should be selected for installation. Good heat dissipation conditions can help extend product lifespan.
2	Power check	· Before use, check the product parameters and confirm that the output voltage and current of the LED power supply meet the requirements
3	Safe wiring	· Use cables that meet the specifications to ensure that the cross-section of the wire matches the requirements of the driving power supply. Solid cables typically measuring 0.75-2.5 mm², (Please refer to the silk screen printing or wiring diagram in the instruction manual for specific wire diameter requirements). · If the power supply (metal casing) is installed on a grounded lighting component or equipment, the power supply needs to be grounded.
4	Wiring confirmation	· Before power on debugging, ensure that the wiring is secure and avoid poor contact to prevent unstable current or equipment damage.
5	Repair suggestions	· If the product malfunctions, please do not repair it without authorization. If you have any questions, please contact the supplier or sales team for assistance.

※ The contents of this manual are updated without prior notice. If the function of the product you are using is inconsistent with the instructions,the function of the product shall prevail. Please contact us if you have any questions .

Warranty Agreement

1. Warranty periods from the date of delivery : 5 years.
2. Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

The following situations are not covered by the free warranty or replacement service:

1. Exceeding the warranty period.
2. Damage caused by human factors such as high voltage, overload, and improper operation.
3. The appearance of the product is severely damaged or deformed.
4. Normal wear and tear or aging during regular product use.
5. Damage caused by natural disasters or force majeure factors.
6. The quality inspection label of the product is damaged (QC PASS).
7. No contract or valid invoice proof signed with EUCHIPS has been provided.

※ Remedies: Repair or replacement is the only remedy provided by EUCHIPS to the customer, and EUCHIPS shall not be liable for incidental damages arising from repair or replacement, unless within the scope of applicable law.

※ Adjustment of Warranty Terms: EUCHIPS reserves the right to modify or adjust the warranty terms, which shall be published in writing.

Revision history

Change date	Version	Item	From	To
2026.08.29	V1.0	First release		