

## MUP96(60)-1W24(12)V-ATR

### Product Features

- No flicker, smooth dimming
- High PF value
- Wide input voltage 120-277VAC
- Short circuit protection, overload protection, overcurrent protection
- Adjustable knob for voltage setting.
- Class 2 Output
- Safety according to UL8750 &UL 1310
- Suitable for Dry , Damp & Wet Locations
- 96Wmax for 24VDC & 60Wmax for 12VDC(Auto selectable)

### Application

For LED constant voltage strip light only



LED Strip Light



LED Tube



Flicker free



Short Circuit Protection



Over Load Protection



Over Current Protection



### Technical Parameters

| Model        | MUP96(60)-1W24(12)V-ATR | 96W 24V                                                                                                                                 | 60W 12V                                       |
|--------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Input        | Rated Voltage           | 120VAC-277VAC                                                                                                                           |                                               |
|              | Frequency Range(Hz)     | 50/60Hz                                                                                                                                 |                                               |
|              | Input Current           | 0.95A@120VAC, 0.55A@230VAC, 0.45A@277VAC, full load                                                                                     |                                               |
|              | Power Factor            | ≥0.95@120VAC, ≥0.90@277VAC, full load                                                                                                   |                                               |
|              | Efficiency              | ≥90%@120VAC, full load                                                                                                                  |                                               |
|              | THD(full load)          | <10%@120VAC, <20%@277VAC, full load                                                                                                     |                                               |
|              | No load power           | <1W@120VAC                                                                                                                              |                                               |
|              | Inrush Current          | Cold start, 30A@120VAC 250us,                                                                                                           |                                               |
|              | Turn on delay Time      | <0.75s max@120Vac (When the light begins to shine)                                                                                      |                                               |
| Output       | Output Voltage          | 24VDC                                                                                                                                   | 12VDC                                         |
|              | Voltage Accuracy        | 21-26VDC±5%                                                                                                                             | 12-13VDC±5%                                   |
|              | Output Current          | 4A Max                                                                                                                                  | 5A Max                                        |
|              | Output Power            | 96W Max                                                                                                                                 | 60W Max(Minimum load requirement: >20% load.) |
|              | Ripple Voltage          | ≤300mV                                                                                                                                  |                                               |
|              | PWM                     | 20K Hz                                                                                                                                  |                                               |
| Protection   | Short Circuit           | Shut down output, Auto-recovery after Fault Clearance                                                                                   |                                               |
|              | Over Load               | Current drops, Auto-recovery after Fault Clearance                                                                                      |                                               |
|              | Over Current            | Current drops, Auto-recovery after Fault Clearance                                                                                      |                                               |
| Safety & EMC | Surge                   | L-N: 2.5kV L-N-PE: 2.5kV (Ring wave & Combination Wave)                                                                                 |                                               |
|              | Withstand Voltage       | I/P-O/P: 3000Vac/1min/<5mA I/P-PE:1500Vac/1min/<5mA O/P-PE:500Vac/1min/<5mA                                                             |                                               |
|              | Safety standards        | UL8750:2015 Ed.2+R:07Dec2022, UL1310, CSA-C22.2 No. 250.13:2022 Ed.5                                                                    |                                               |
|              | EMC Eission             | EN55015 FCC Part Class B                                                                                                                |                                               |
|              | Insulation Resisance    | 5Mfi                                                                                                                                    |                                               |
| Others       | Working Temp.           | -20℃~+60℃ [-4°F~140°F]                                                                                                                  |                                               |
|              | Storage Temp., Humidity | -40℃~+90℃ [-40°F~194°F] 20%-90%RH                                                                                                       |                                               |
|              | TC                      | 80℃ [ 176°F ] for safety                                                                                                                |                                               |
|              | Material                | Metal                                                                                                                                   |                                               |
|              | IP Rating               | IP20                                                                                                                                    |                                               |
|              | Lifetime                | 50,000h@tc:80℃ [ 176°F ]                                                                                                                |                                               |
|              | Warranty Condition      | 5 years                                                                                                                                 |                                               |
|              | Switch Cycle            | 25,000 times                                                                                                                            |                                               |
|              | Packing(weight)         | Net weight: 937g(2.06 lb)±5%/PCS; 20 PCS/Carton;18.7kg(41.32 lb)±5%/Carton;<br>Carton Size: 293*261*168mm(11.54*10.28*6.62 Inch)(L*W*H) |                                               |
|              | Dimension               | 241.5*44*30mm (9.51*1.74*1.18 Inch)(L*W*H)                                                                                              |                                               |

## Dimension(mm)

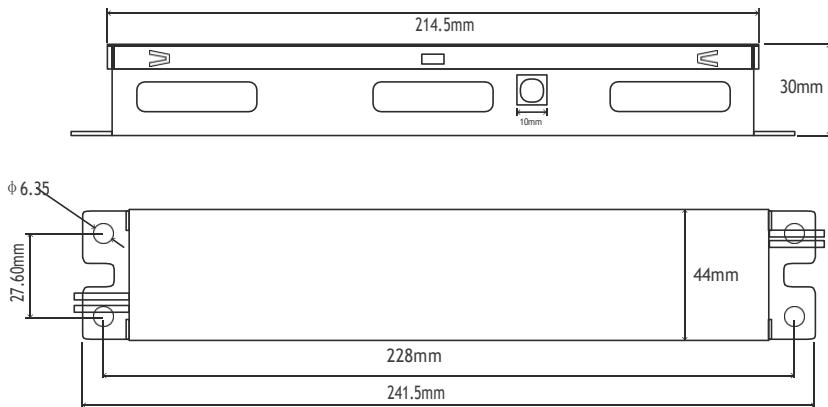
Metal case

All material to be ROHs compliant to Directive 2002/95/EC

Wires to be Stranded with UL approval

Input: Black & White: 740mm , 18AWG

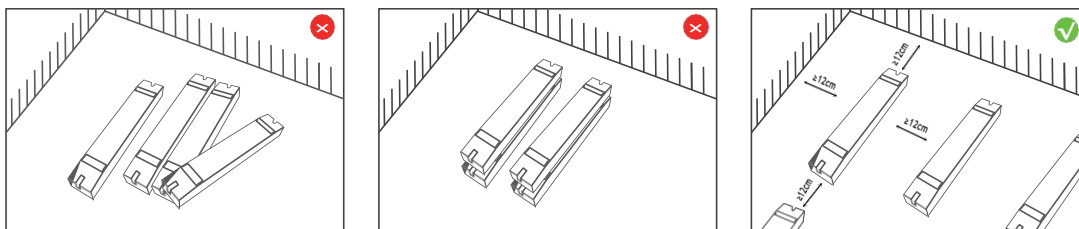
Output: Red & Black:630mm , 18AWG



## Wiring



## Installation Precautions



Please do not stack the products. The distance between two products should be  $\geq 12cm$  so as not to affect heat dissipation and the lifespan of the products.

## Max. quantity of drivers per miniature circuit breaker

| Specification item         | Value        | Condition                                      |
|----------------------------|--------------|------------------------------------------------|
| Inrush current $I_{peak}$  | 30A (120V)   | Input Voltage 120V                             |
| Inrush current $T_{width}$ | 250us (120V) | Input Voltage 120V, measured at 50% $I_{peak}$ |

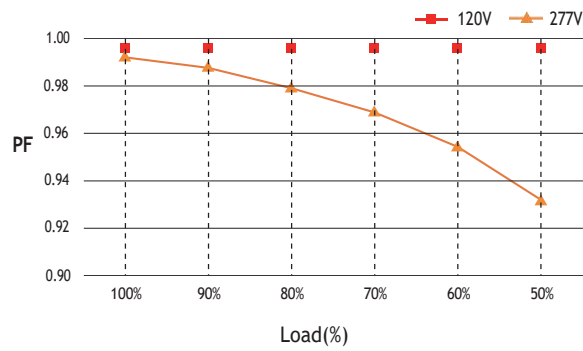
### 96W 24V

| MCB | Input Voltage 120V Drivers | MCB | Input Voltage 120V Drivers |
|-----|----------------------------|-----|----------------------------|
| B10 | 10pcs                      | C10 | 10pcs                      |
| B13 | 13pcs                      | C13 | 13pcs                      |
| B16 | 16pcs                      | C16 | 16pcs                      |
| B20 | 21pcs                      | C20 | 21pcs                      |
|     |                            | D16 | 16pcs                      |

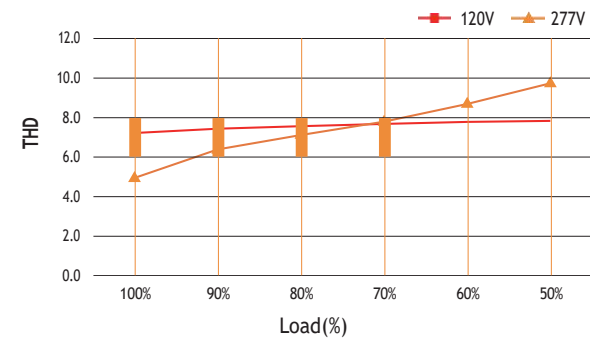
### 60W 12V

| MCB | Input Voltage 120V Drivers | MCB | Input Voltage 120V Drivers |
|-----|----------------------------|-----|----------------------------|
| B10 | 10pcs                      | C10 | 15pcs                      |
| B13 | 13pcs                      | C13 | 20pcs                      |
| B16 | 17pcs                      | C16 | 24pcs                      |
| B20 | 21pcs                      | C20 | 30pcs                      |
|     |                            | D16 | 24pcs                      |

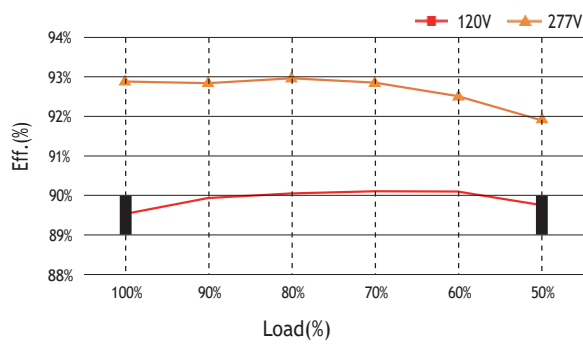
PF vs Load Curve



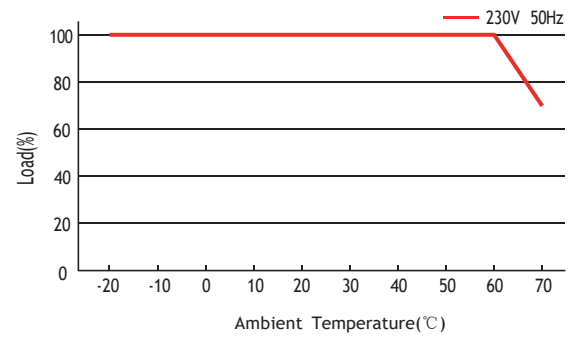
THD vs Load Curve



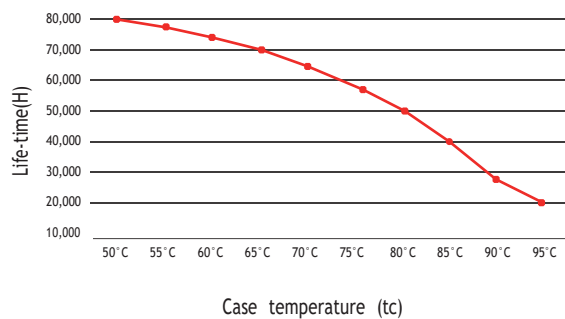
Efficiency vs Load Curve



Derating Curve



Life-time vs. case temperature



The lifetime of the LED driver is shown in the figure above (calculated based on 90% reliability).  
The relationship between tc and ta also depends on the luminaire design.

## Cautions

| This product must be installed and adjusted by a qualified professional. |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                                                        | Confirmation of installation conditions | <ul style="list-style-type: none"> <li>· <b>Waterproof and Protection:</b> 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.</li> <li>· <b>Heat dissipation requirements:</b> 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.</li> </ul> |
| 2                                                                        | Power check                             | <ul style="list-style-type: none"> <li>· Before use, check the product parameters and confirm that the output voltage and current of the LED power supply meet the requirements</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3                                                                        | Safe wiring                             | <ul style="list-style-type: none"> <li>· 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 mm<sup>2</sup>, (Please refer to the silk screen printing or wiring diagram in the instruction manual for specific wire diameter requirements).</li> <li>· If the power supply (metal casing) is installed on a grounded lighting component or equipment, the power supply needs to be grounded.</li> <li>· Avoid hot-plugging. Disconnect the power before connecting the LED load, then restart the driver.</li> </ul>                                                                                                                              |
| 4                                                                        | Wiring confirmation                     | <ul style="list-style-type: none"> <li>· Before power on debugging, ensure that the wiring is secure and avoid poor contact to prevent unstable current or equipment damage.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5                                                                        | Repair suggestions                      | <ul style="list-style-type: none"> <li>· 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.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

※ 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 |
|-------------|---------|---------------|------|----|
| 2026.06.02  | V1.0    | First release |      |    |
|             |         |               |      |    |
|             |         |               |      |    |
|             |         |               |      |    |