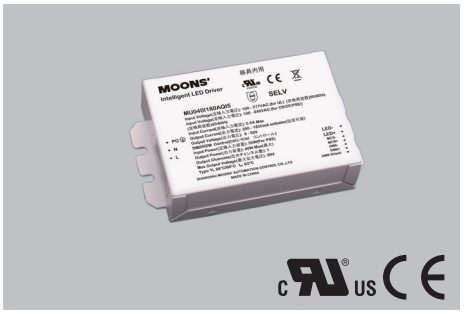
# MU040I180AQI5

## Features

- 1 LED channel,100% dimming Output Current can be set to from 200mA to 1800mA
- Soft light Dimming Range 0.1%~100%
  For linear dimming curve, the minimum dimming level is 0.1%
  For logarithmic dimming curve, the minimum dimming level is 0.1%
- Support DMX/RDM Dimming
- Dim-to-off with Standby Power<0.3 W
- Constant Power Maximum is 40W
- Protection: OTP, SCP, NLP,OPP
- Mode of wiring: From the side to wiring
- UL Class 2,IP20
- 5-year warranty



126 × 76 × 30mm

## Electrical Specifications

| | |
|---|---|
| Rated input voltage range | 90-305 VAC |
| Maximum input voltage range | 90 - 305 V |
| Input voltage frequency | 50 / 60 Hz |
| Leakage current | <750uA |
| Output voltage range | 8 - 50 V |
| Output current | 200-1800mA |
| Maxium input power | <50W |
| Effiency typical value（230V,50Hz,full loaded①） | 86 - 88 % |
| Power factor（230V,50Hz,full loaded①） | >0.95 |
| Stand-by power consumption② | <0.3W |
| THD(230V,50Hz,full loaded①） | <13% |
| Start-up time（230V,50Hz,full loaded） | <0.5S |
| Start-up time（120V,50Hz,full loaded） | <1S |
| The maximum setup current precision | ± 5% |
| Input inrush current | <15A |
| Dimming range | 0.1 -100% |
| Withstand Voltage I/P-O/P | 3750 V |
| Withstand Voltage I/P-FG | 1875 V |
| Withstand Voltage O/P-FG | 500V |
| Surge L/N-earth，L-N | 2KV,1KV |
| Operating Temp., Humidity | -25℃~+63℃,20%~95%RH |
| Storage Temp.,Humidity | -40℃~+85℃,10%~95%RH |
| Lifetime | ≥50000hours@Tc=75℃ at 120VAC input,100% load |
| Weight | 360g |
| Reference dimension | 126 × 76 × 30 mm |

## Model Specifications

| Type | Output Current | Output Voltage | Output Power | Input Power (230V,50Hz) | Efficiency | Case Temperature | Ambient Temperature |
|---|---|---|---|---|---|---|---|
| MU040I180AQI5 | 800 mA | 50 V | 40.0 | 45.5 | 87.9% | 86℃ | -25 - 63℃ |
| | 900 mA | 44 V | 39.6 | 45.1 | 87.8% | 86℃ | -25 - 63℃ |
| | 1000 mA | 40 V | 40.0 | 45.5 | 87.7% | 86℃ | -25 - 63℃ |
| | 1100 mA | 36 V | 39.6 | 45.2 | 87.6% | 86℃ | -25 - 63℃ |
| | 1200 mA | 33 V | 39.6 | 45.2 | 87.6% | 86℃ | -25 - 63℃ |
| | 1300 mA | 31 V | 40.3 | 45.9 | 87.8% | 86℃ | -25 - 63℃ |
| | 1400 mA | 29 V | 40.6 | 46.4 | 87.5% | 86℃ | -25 - 63℃ |
| | 1500 mA | 27 V | 40.5 | 46.4 | 87.3% | 86℃ | -25 - 63℃ |
| | 1600 mA | 25 V | 40.0 | 46.1 | 86.8% | 86℃ | -25 - 63℃ |
| | 1700 mA | 24 V | 40.8 | 47.2 | 86.4% | 86℃ | -25 - 63℃ |
| | 1800 mA | 22 V | 39.6 | 45.9 | 86.3% | 86℃ | -25 - 63℃ |

*1： Load:50V*800mA
*2： Stand-by power consumption 110V<50mW, 230V<200mW

## Safety & EMC Compliance

| | |
|---|---|
| CUL | UL8750,UL1310,CAN/CSA-C22.2 NO.223-M91 |
| CE | EN61347-1,EN61347-2-13 |
| Conducted Emissions | FCC Part15 Class B /EN55015 |
| Radiated Emissions | FCC Part15 Class B /EN55015 |
| Harmonic Current Emissions | EN 61000-3-2 |
| Voltage Fluctuations and Flicker | EN 61000-3-3 |
| Electrostatic Discharge | EN 61000-4-2 |
| RFE Field Susceptibility | EN 61000-4-3 |
| Electrical Fast Transient | EN 61000-4-4 |
| Conducted Radio Frequency | EN 61000-4-6 |
| Power Frequency Magnetic Field Test | EN 61000-4-8 |
| Voltage Dips | EN 61000-4-11 |
| Electromagnetic Immunity | EN61547 |

## Function Description

- DMX/RDM

DMX+ 、 DMX-、Shield are the interfaces of DMX/RDM.

- MCS technology

Connect Smartkey to the driver through MCS( Multifunctional Configuration Settings) ports. With MOONS' Configurator software, you can set the MAX current of the driver( each step is 1 mA),dimming curve type, DMX start address, etc. Please refer to specification of Smartkey to get specific information.

- Temperature Detection

In order to protect the LED, the temperature of LED is detected by a NTC. When the temperature exceeds the point which can be set by Smartkey, the output current can be decreased automatically, but not less than 25%.

- Constant Output Power

The driver can satisfy the curve of constant output power within a large range of output current and voltage.

- Protection

Thermal Protection

When the temperature of the inside PCB exceeds 110℃ , output current will be decreased to 50%. And it can not recover until the temperture drops to 70℃ .

Short-circuit Protection

Once the output short-circuits, the output will be cut off automatically. Then the driver will try to restart every 4s.

No-load Protection

The driver operating with no load will not be damaged, and it will try to restart every 4s. So the driver supports hot plug in.

Over-Power Protection

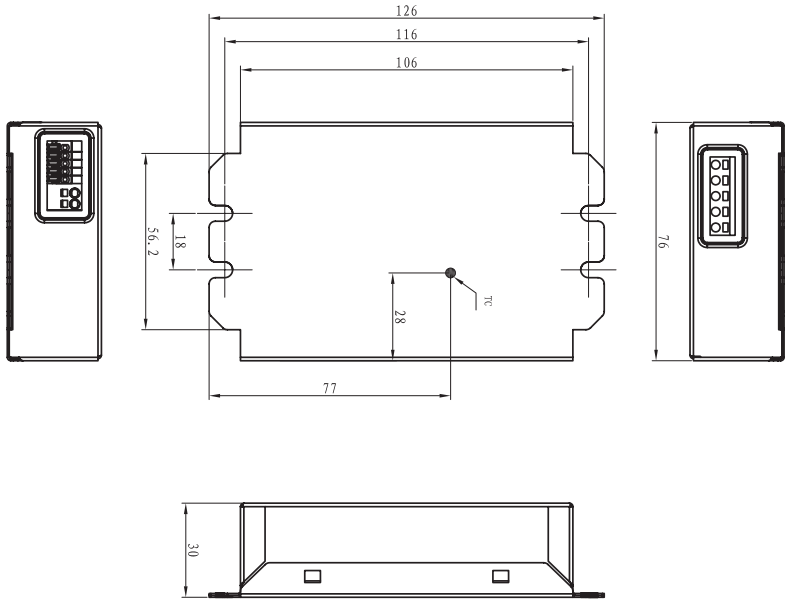
If the total power exceeds 50W, the output current of each channel will decrease to 50%， and then the maximum output power is increased to 40W gradually.

- Online Update

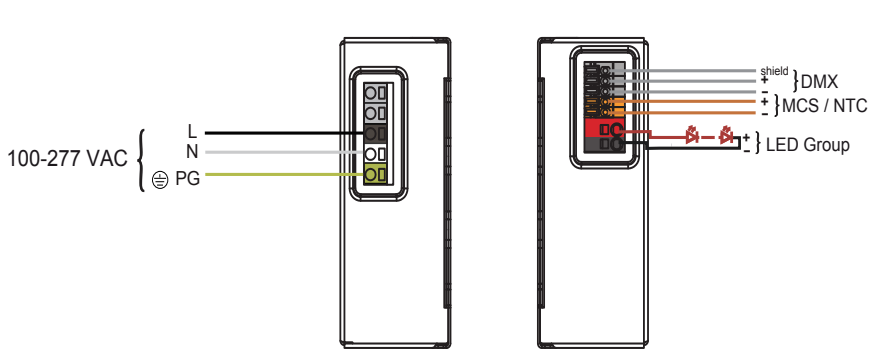
Connect Smartkey to PC through a USB port, then connect Smartkey to the driver correctly to update.
Please refer to the specification of Smartkey.

*1： Recommended manufacture and type of the NTC
Manufacture: Thinking TSM2A473J409ARZA(SMD) \ VISHAY NTCS0805e4473JXT \ MURATA NCP21WB473J03RA

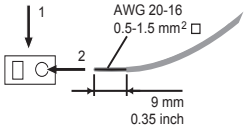
## Mechanical Outline (unit: mm)



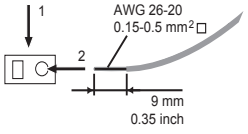

## Ports




**For input,output,ports:**

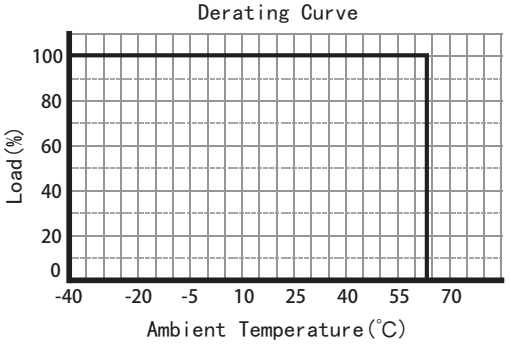


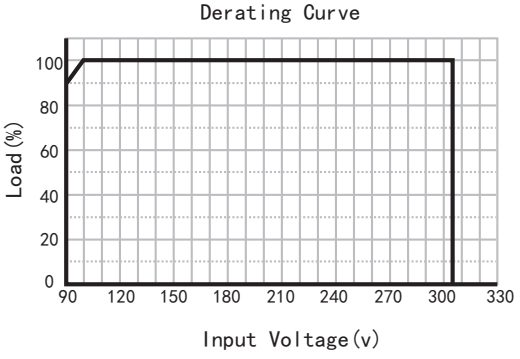

**For MCS,DMX ports:**



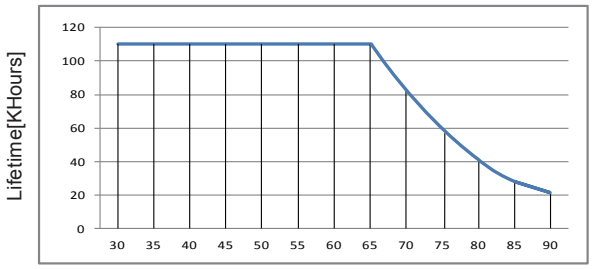

Solid or stranded copper wires only.

## Test curve

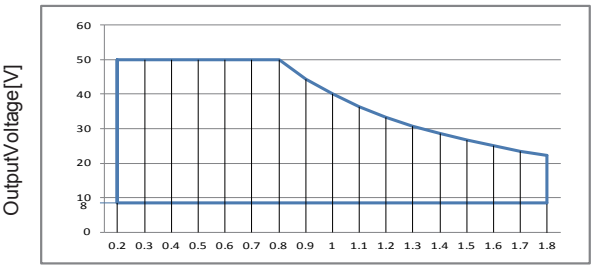


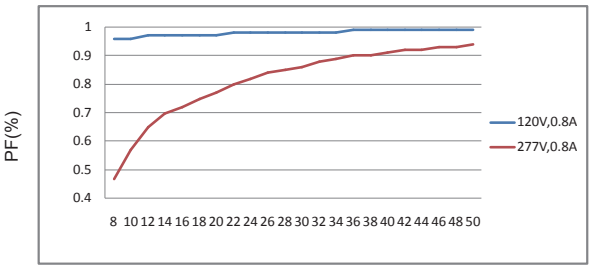
Lifetime VS.Tcase



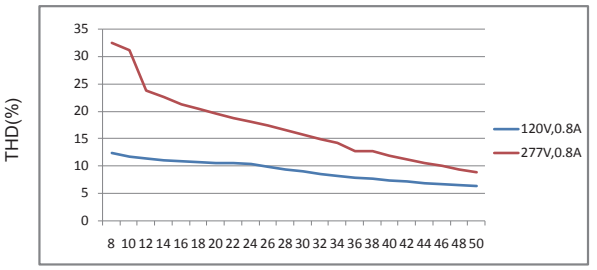

V/I OPERATING RANGE




Power Factor Curve




Current Total Harmonic Curve




Efficiency Curve