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SHANGHAI MOONS' AUTOMATION CONTROL CO.LTD
SPECIFICATIONS FOR APPROVAL

MODEL _____ MU050I105AQI5 _____

CUSTOMER : _____

CUSTOMER P/N : _____

DATE: _____ 2016.05.06 _____

CUSTOMER'S APPROVAL ITEMS		
ITEM 1	SPECIFICATIONS(MSSD-6195 A0)	4 Pages
CUSTOMER'S APPROVAL STAMP		

SHANGHAI MOONS'
R&D DEPARTMENT

APPD.	CHK.	DWG.

MU050I105AQI5

Features

- 1 LED channel, 100% dimming Output Current can be set to from 200mA to 1050mA
- 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 50W
- Protection: OTP, SCP, NLP,OPP
- Mode of wiring: Single-ended wiring
- UL Class 2,IP20
- 5-year warranty



130 × 76 × 30mm

Electrical Specifications

Rated input voltage range	100-277 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	200-1050mA
Maximum input power	<70W
Efficiency typical value (230V,50Hz,full loaded ^①)	88 - 90%
Power factor (230V,50Hz,full loaded ^①)	>0.95
Stand-by power consumption ^②	<0.3W
THD(230V,50Hz,full loaded ^①)	<10%
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℃~+50℃,20%~95%RH
Storage Temp.,Humidity	-40℃~+85℃,10%~95%RH
Lifetime	≥50000hours@Tc=72℃ at 120VAC input,100% load
Weight	360g
Reference dimension	130 × 76 × 30mm

Model Specifications

Type	Output Current	Output Voltage	Output Power	Input Power (230V,50Hz)	Efficiency	Case Temperature	Ambient Temperature
MU050I105AQI5	1000 mA	50 V	50.00 W	56.20 W	89.0%	85℃	-25 - 50℃
	1050 mA	48 V	50.40 W	56.80 W	88.7%	85℃	-25 - 50℃

*1: Load:50V*1A

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

■ Safety & EMC Compliance

CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 Class B / EN55015
Radiated Emissions	FCC Part15 Class B / EN55015
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

■ Function Description

- DMX/RDM

DMX in +、DMX in -、Shield ; DMX out +、DMX out -、Shield are the interfaces of DMX/RDM, support daisy-chain.

- 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, scene modes 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 60W, the output current of each channel will decrease to 50%. , and then the maximum output power is increased to 50W gradually.

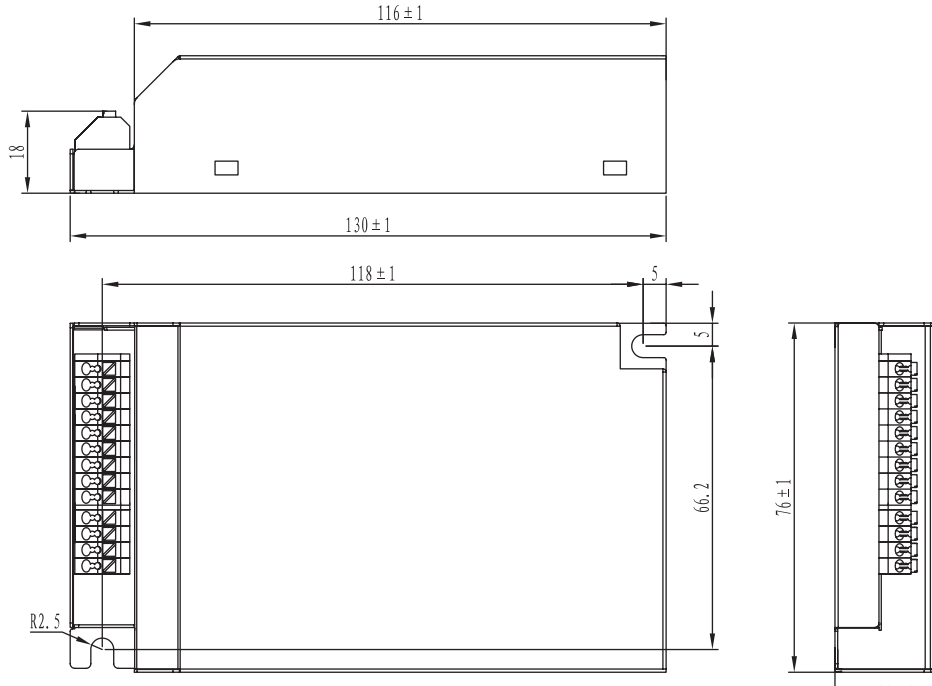
- Online Update

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

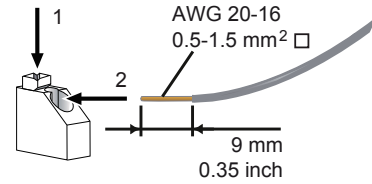
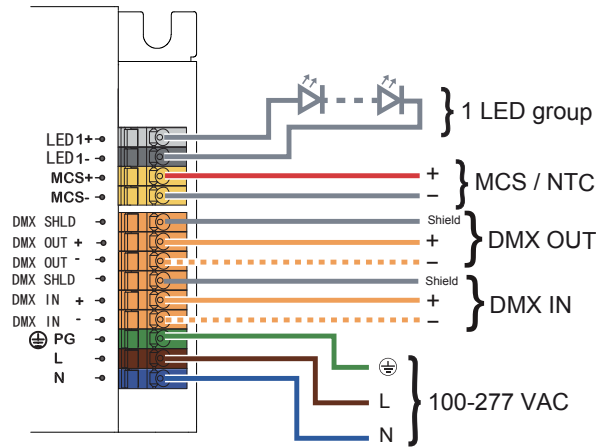
*1: Recommended manufacture and type of the NTC

Manufacture: Thinking TSM2A473J409ARZA(SMD) \ VISHAY NTCS0805e4473JXT \ MURATA NCP21WB473J03RA

Mechanical Outline (unit: mm)

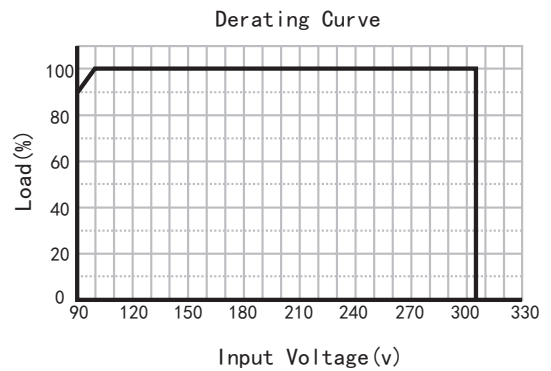
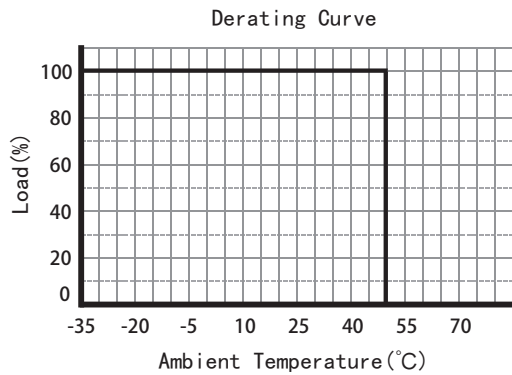


Ports

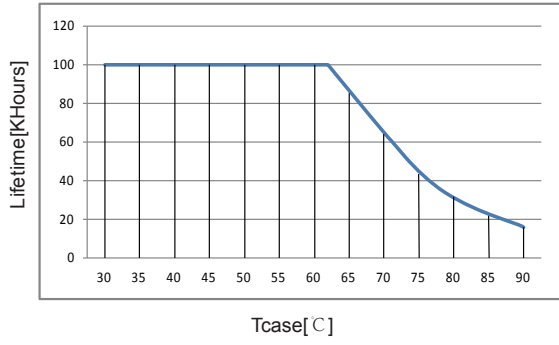


Solid or stranded copper wires only.

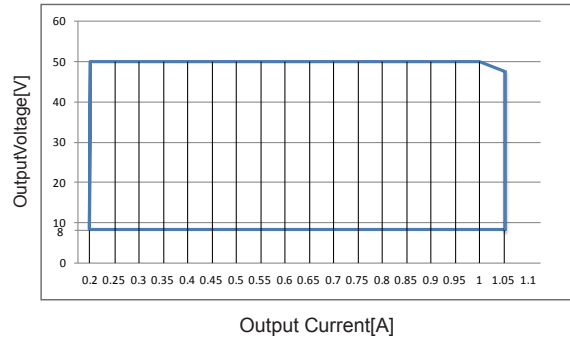
Test curve



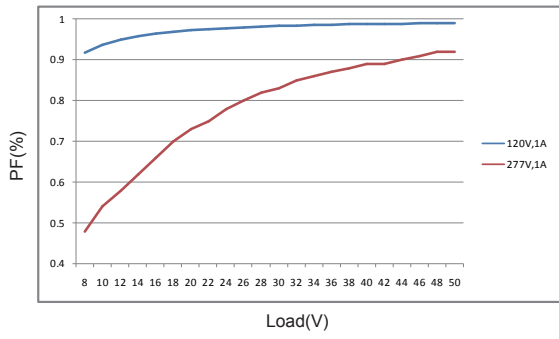
Lifetime VS.Tcase



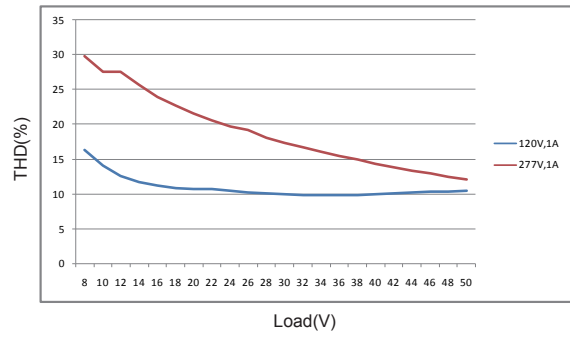
V/I OPERATING RANGE



Power Factor Curve



Current Total Harmonic Curve



Efficiency Curve

