



TMS LITE SDN. BHD. (Co. No. 671971V)
LED ILLUMINATION SOLUTION PARTNER



MODEL:

ANG-1000-CH1-5V-A1

ANG-2000-CH2-5V-A1

ANG-4000-CH4-5V-A1

ANG-1000-CH1-24V-A1

ANG-2000-CH2-24V-A1

ANG-4000-CH4-24V-A1

USER MANUAL

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Revision Notes

Rev	Date/Author	Comment
1.0	KW NG	First Release
1.1	KW NG	New Information
1.2	KW NG	Remove 12V and update new information
1.3	Jan25/KW	Update Photo

General Description

Introduction

The ANG-1000/2000/4000 24V controller provides analog intensity control of 24V LED lighting for machine vision applications. The Controller provides 1, 2 and 4 channel output, with current output selection.

The ANG-1000/2000/4000 5V controller provides analog intensity control of 5V LED lighting for machine vision applications. The ANG Controller provides 1, 2 and 4 channel output, with current output selection.

Front Panel



The front panel consists of VR KNOB (Control LED Intensity range from 1~10) and a Silver Color Push Button Switch (ON/OFF Power)
(Left = 1CH, Central = 2CH and Right = 4CH)

Power ON

The default current setting for the controller is 200mA. If other current settings are desired, please make sure LED Lighting Current can support before power on the unit.

Connect the lighting connectors to the lighting connection terminals.

Connect a power cord cable 110VAC (US) or 220VAC (EU) or 240VAC (UK) to the controller chassis plug for supply a voltage to controller. The BLUE LED inside the Silver Button will be "ON" when user have switch "ON" the Push Button.

Operating Modes

- Constant (Analog VR intensity control)

Constant

The unit has constant mode intensity from 1 to 10 (Analog).

Independent VR controls the lighting intensity of each channel.

The Lightings intensity is set by manually adjust the position of VR Knob (label 1-10) on the casing.

When VR Knob position at '1', it sets the lighting intensity at minimum.

When VR Knob position at '10', it sets the lighting intensity at maximum.

Current DIP Switch Settings

The DIP Switches sets the maximum output current to the Lighting Output for over current protection for each respective channel.

Factory default for each channel is 200mA.



Caution: Make sure the selected maximum current output is suitable for the lightings to prevent damage to both the lightings and the TMSLite ANG controller board.

Switch				Output Current (mA)
1 (50mA)	2 (150mA)	3 (350mA)	4 (450mA)	
OFF	OFF	OFF	OFF	INVALID
ON	OFF	OFF	OFF	50
OFF	ON	OFF	OFF	150
OFF	OFF	ON	OFF	350
OFF	OFF	OFF	ON	450
ON	ON	ON	OFF	550
ON	ON	OFF	ON	650
OFF	OFF	ON	ON	800
ON	ON	ON	ON	1000

Table1

ANG-1000-CH1-5V-A1 / ANG-1000-CH1-24V-A1 SPECIFICATIONS

Power	Power Input	110VAC – 240VAC
	Lighting Output	5VDC / 24VDC
	Output current	Max 1.0A / channel
Function	No. of Channel	1
	Intensity Control	VR Adjustable
	Intensity Range	1 ~ 10 steps
	Selectable Mode	Constant
	Current Output Selection	50mA – 1000mA
	Push Button	On/Off

Configuration

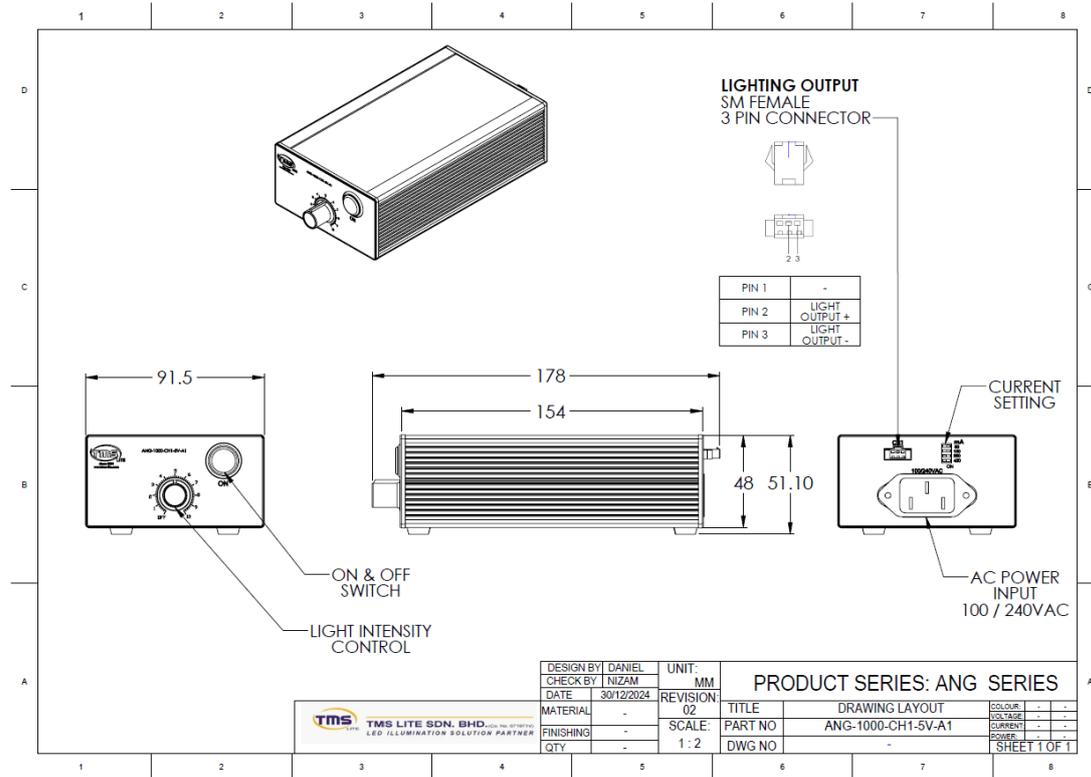
Connections:

For ANG-1000-CH1-5V-A1 / ANG-1000-CH1-24V-A1 to operate properly, the unit terminals must be connected correctly. The terminals voltage polarity must be followed accordingly to prevent damage to the unit.

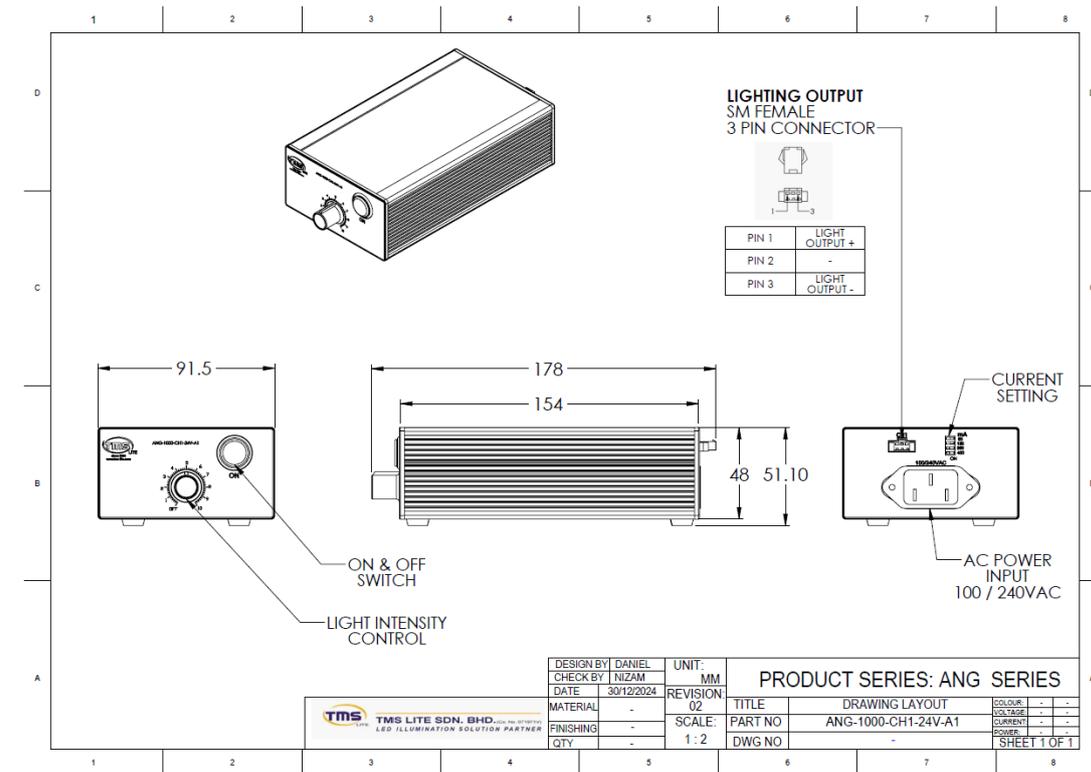
- **Power Input Terminals**
Connect the Power Cord Cable 110 - 240 VAC (UK, EU, US) to chassis plug controller.
- **Lightings Output Terminals Channel (CH1)**
These lighting connector are to be connected to 5V-Lightings for a 5V DC power supply Analog Controller (ANG-1000-CH1-5V-A1).

These lighting connector are to be connected to 24V-Lightings for a 24V DC power supply Analog Controller (ANG-1000-CH1-24V-A1).

ANG-1000-CH1-5V-A1 Dimension Layout



ANG-1000-CH1-24V-A1 Dimension Layout



Actual Label:



Figure 1 (Front View)

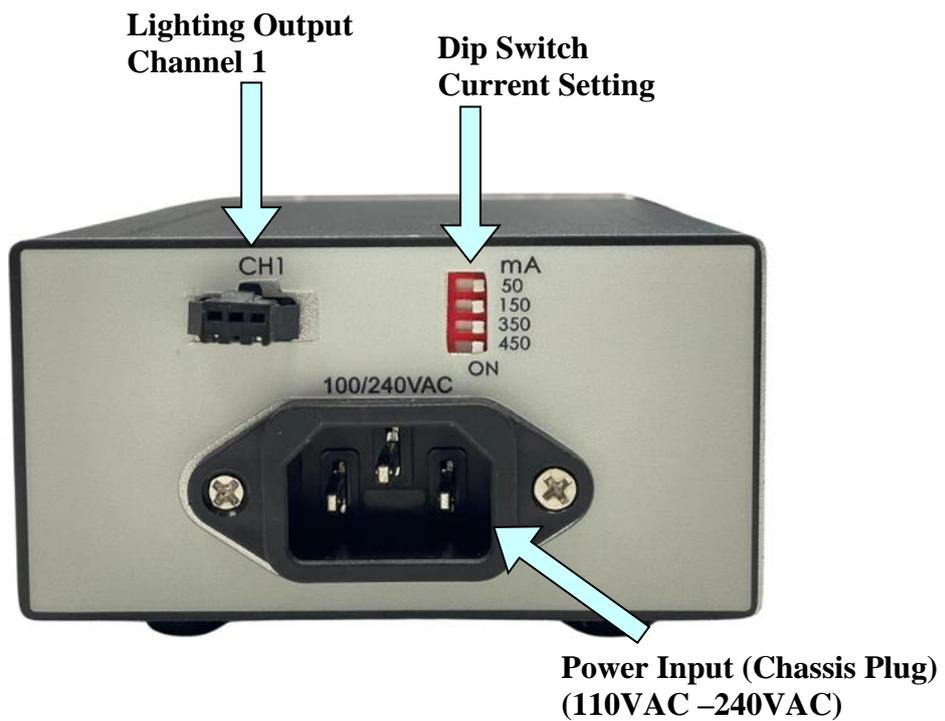


Figure 1.1 (Rear View)

ANG-2000-CH2-5V-A1 / ANG-2000-CH2-24V-A1 SPECIFICATIONS

Power	Power Input	110VAC – 240VAC
	Lighting Output	5VDC / 24VDC
	Output current	Max 1.0A / channel
Function	No. of Channel	2
	Intensity Control	VR Adjustable
	Intensity Range	1 ~ 10 steps
	Selectable Mode	Constant
	Current Output Selection	50mA – 1000mA
	Push Button	On/Off

Configuration

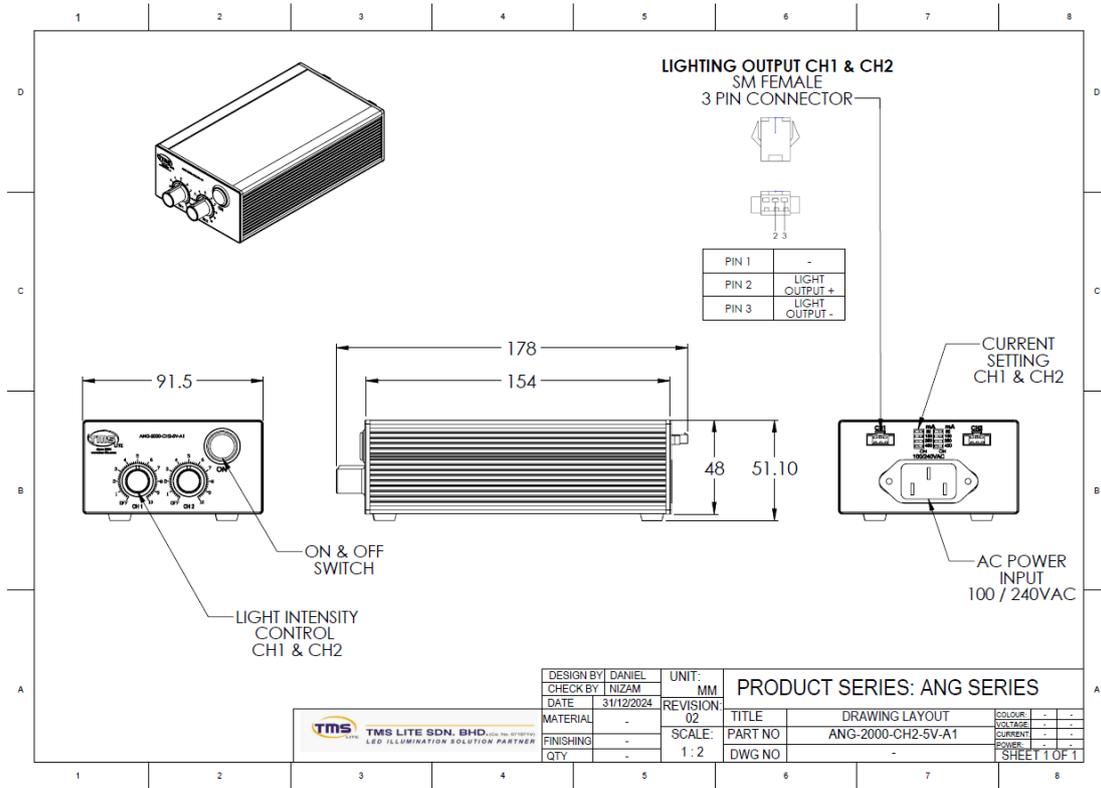
Connections:

For ANG-2000-CH2-5V-A1 / ANG-2000-CH2-24V-A1 to operate properly, the unit terminals must be connected correctly. The terminals voltage polarity must be followed accordingly to prevent damage to the unit.

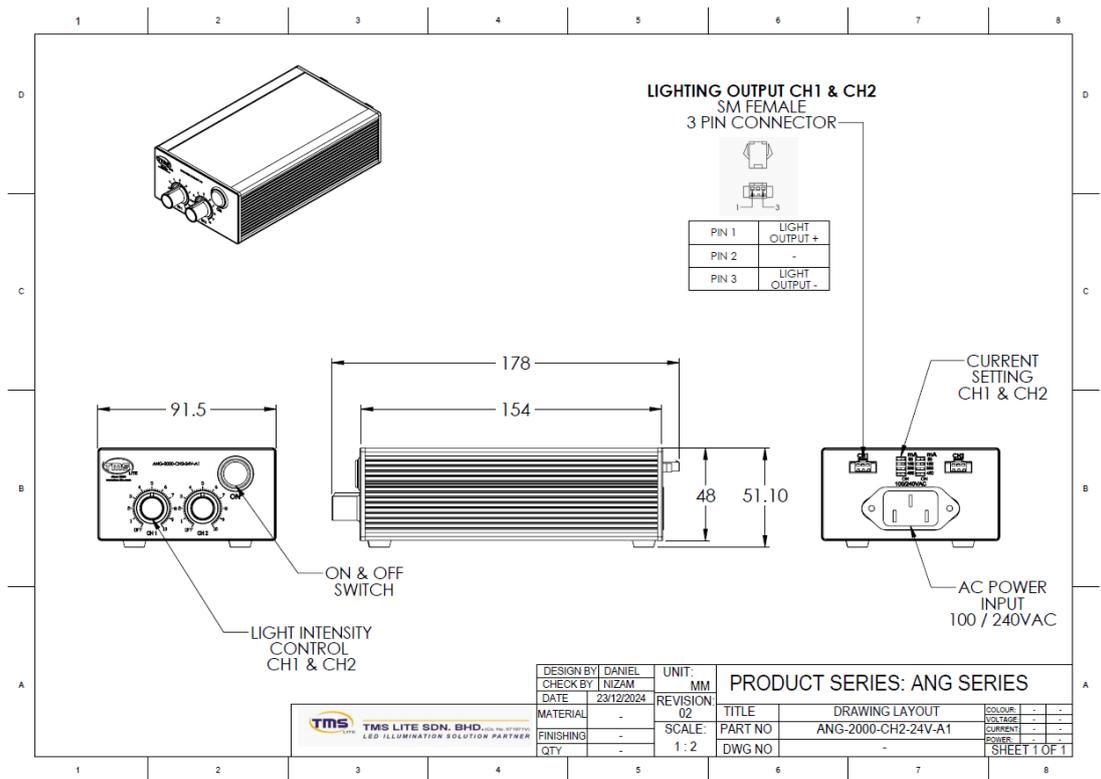
- **Power Input Terminals**
Connect the Power Cord Cable 110 - 240 VAC (UK, EU, US) to chassis plug controller.
- **Lightings Output Terminals Channel (CH1 & CH2)**
These lighting connector are to be connected to 5V-Lightings for a 5V DC power supply Analog Controller (ANG-2000-CH2-5V-A1).

These lighting connector are to be connected to 24V-Lightings for a 24V DC power supply Analog Controller (ANG-2000-CH2-24V-A1).

ANG-2000-CH2-5V-A1 Dimension Layout



ANG-2000-CH2-24V-A1 Dimension Layout



Actual Label:

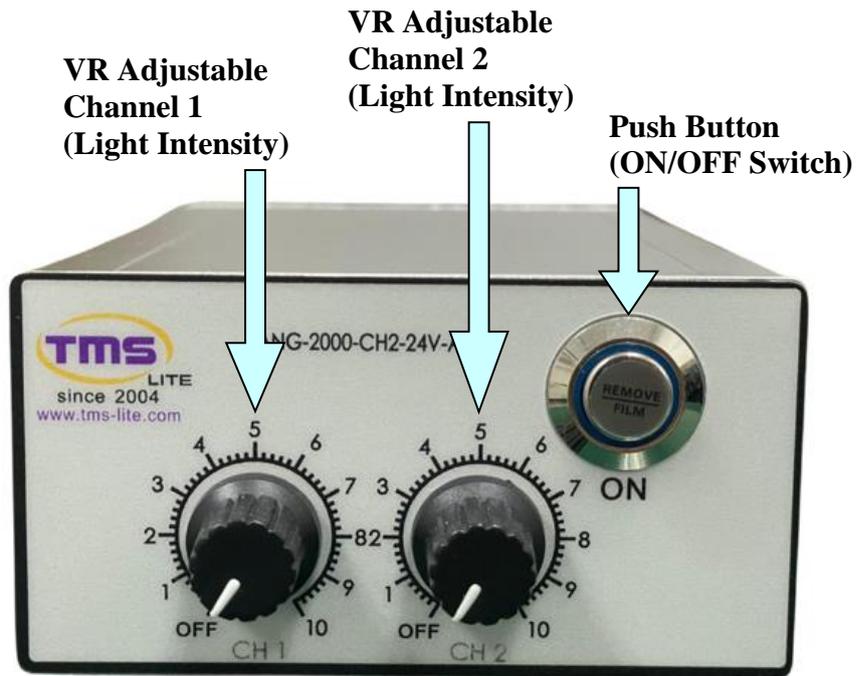


Figure 2 (Front View)

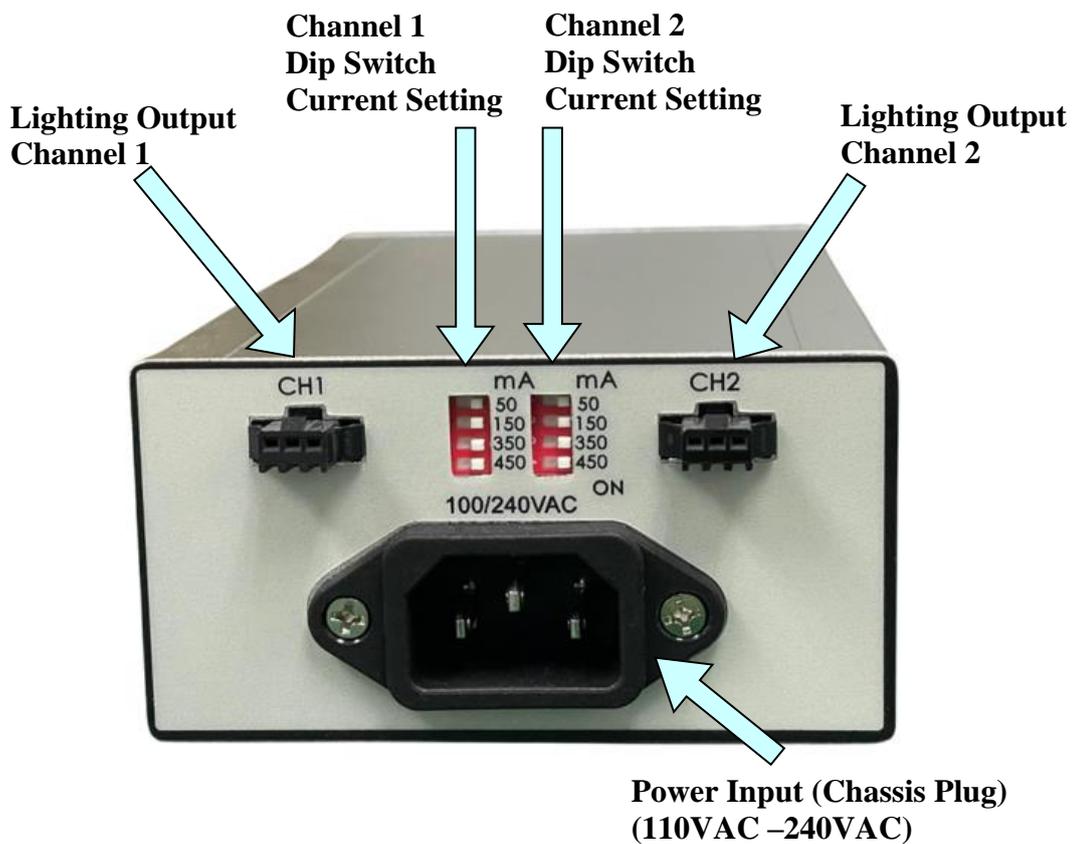


Figure 2.1 (Rear View)

ANG-4000-CH4-5V-A1 / ANG-4000-CH4-24V-A1 SPECIFICATIONS

Power	Power Input	110VAC – 240VAC
	Lighting Output	5VDC / 24VDC
	Output current	Max 1.0A / channel
Function	No. of Channel	4
	Intensity Control	VR Adjustable
	Intensity Range	1 ~ 10 steps
	Selectable Mode	Constant
	Current Output Selection	50mA – 1000mA
	Push Button	On/Off

Configuration

Connections:

For ANG-4000-CH4-5V-A1 / ANG-4000-CH4-24V-A1 to operate properly, the unit terminals must be connected correctly. The terminals voltage polarity must be followed accordingly to prevent damage to the unit.

– **Power Input Terminals**

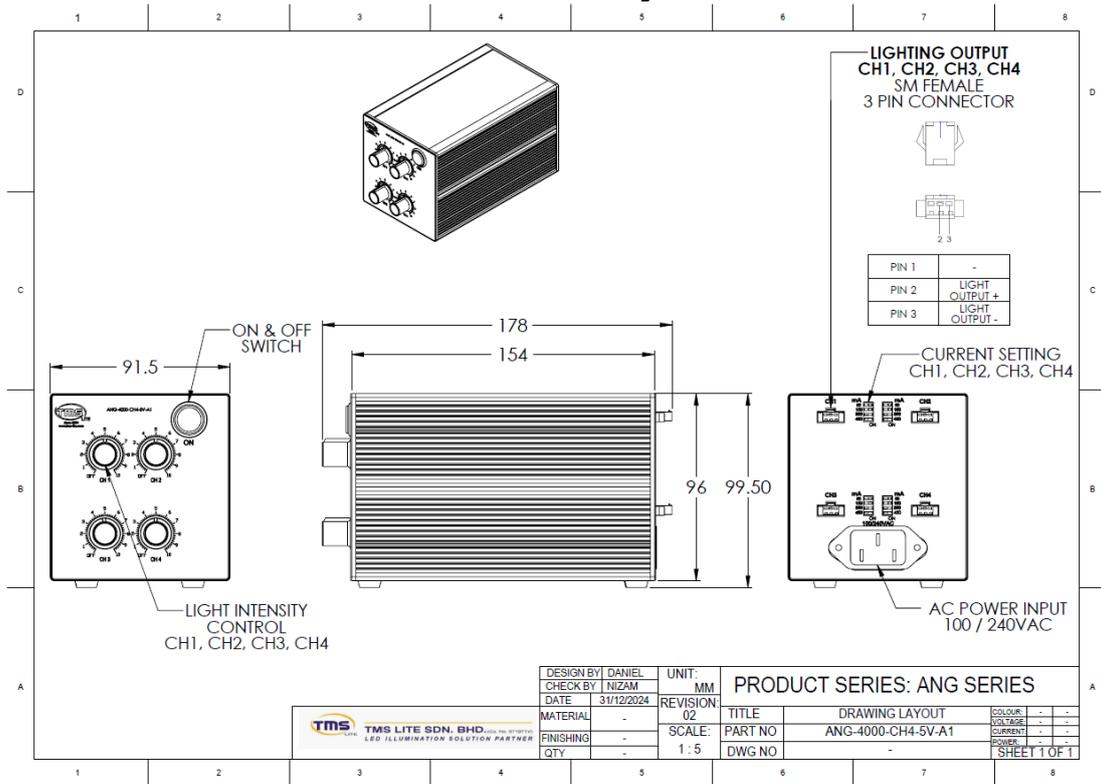
Connect the Power Cord Cable 110 - 240 VAC (UK, EU, US) to chassis plug controller.

– **Lightings Output Terminals Channel (CH1, CH2, CH3 and CH4)**

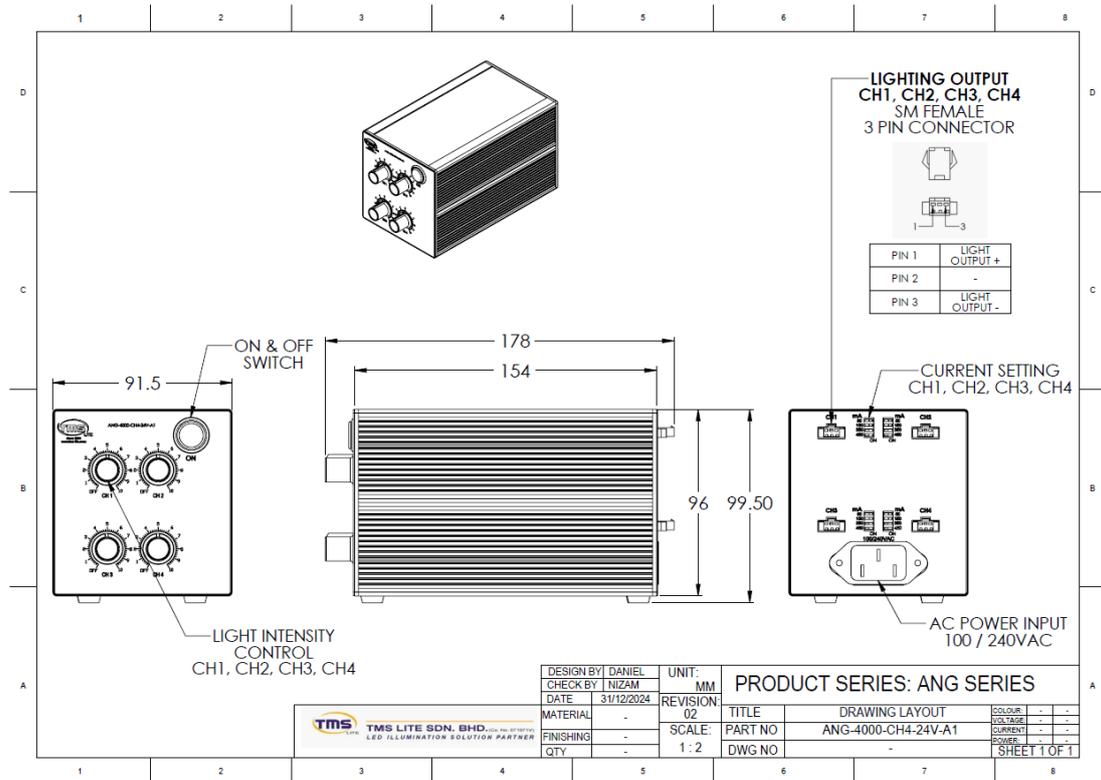
These lighting connector are to be connected to 5V-Lightings for a 5V DC power supply Analog Controller (ANG-4000-CH4-5V-A1).

 These lighting connector are to be connected to 24V-Lightings for a 24V DC power supply Analog Controller (ANG-4000-CH4-24V-A1).

ANG-4000-CH4-5V-A1 Dimension Layout



ANG-4000-CH4-24V-A1 Dimension Layout



Actual Label:

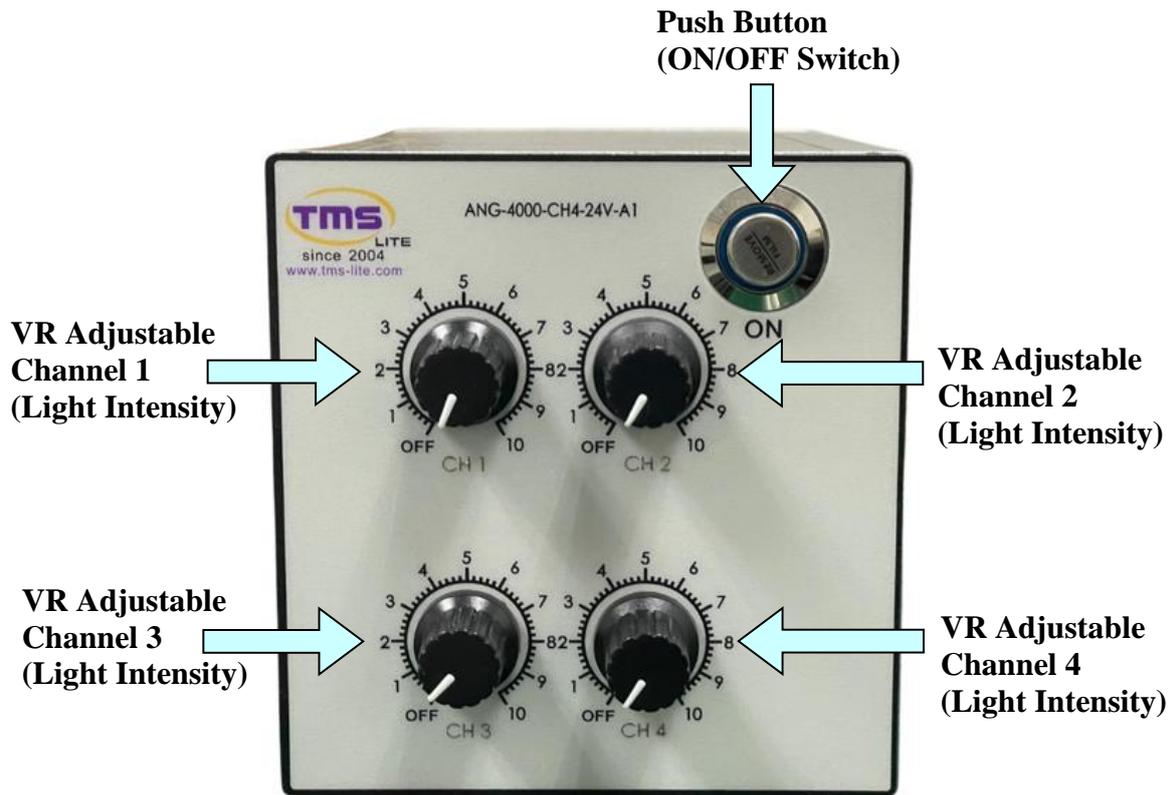


Figure 3 (Front View)

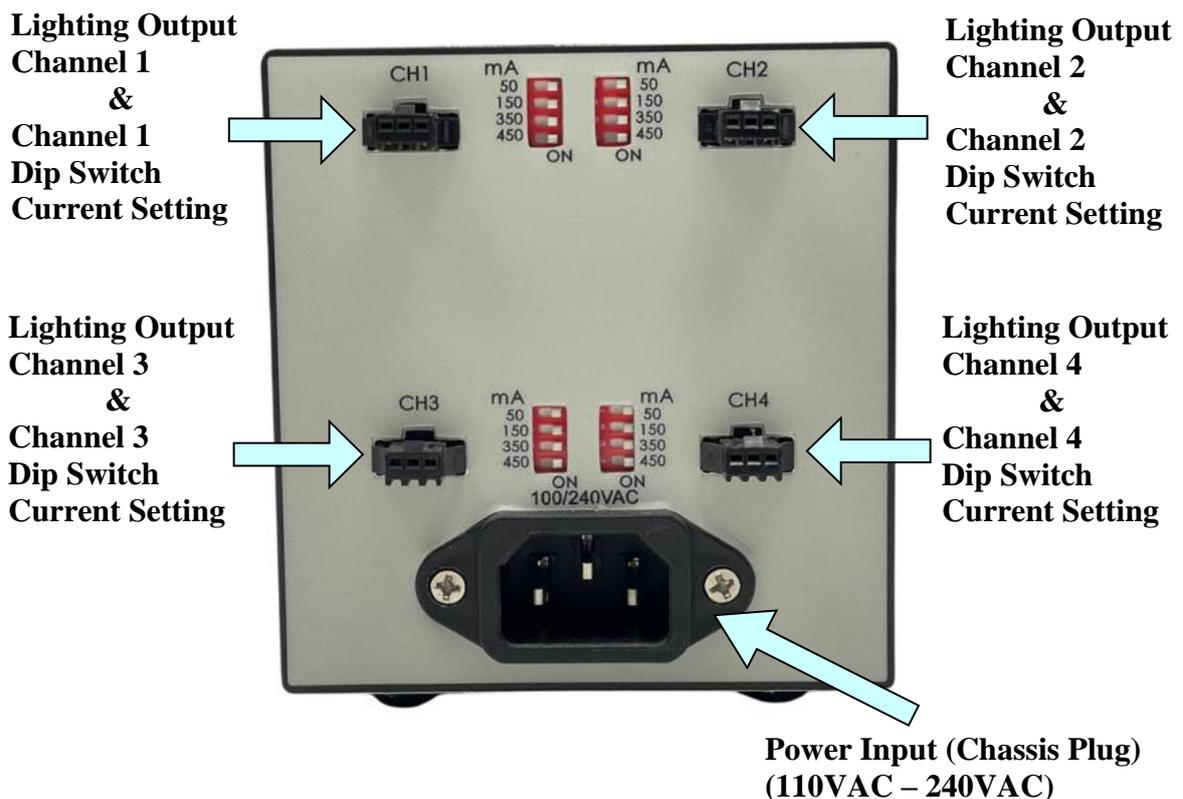


Figure 3.1 (Rear View)

Extension Cable (Optional)

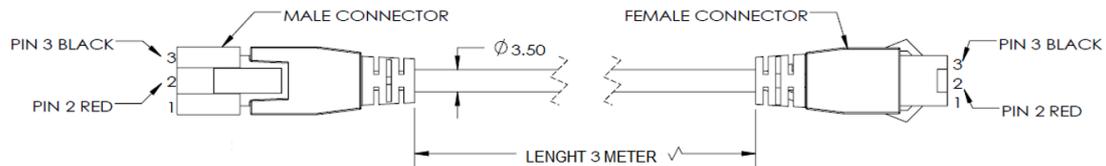
i) EXT-5V-5M

5V ANG Controller Extension Cable of 5 Meter with SM connector



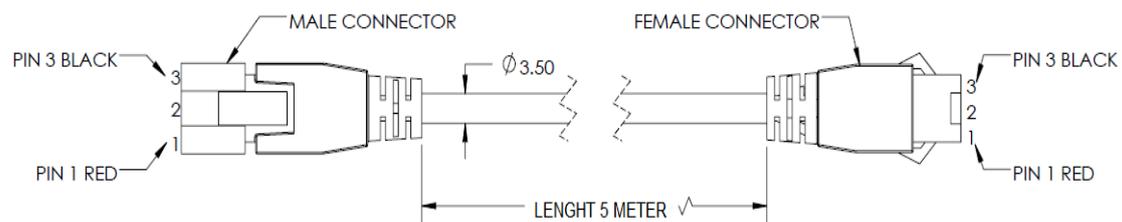
ii) EXT-24V-3M

5V ANG Controller Extension Cable of 3 Meter with SM connector



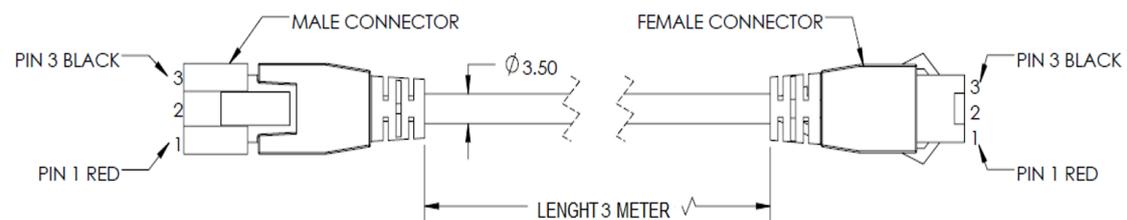
iii) EXT-24V-5M

24V ANG Controller Extension Cable of 5 Meter with SM connector



vi) EXT-24V-3M

24V ANG Controller Extension Cable of 3 Meter with SM connector



Power Cord Information

The cable length is 1.8 Meter length of power cord.

240VAC Power Cord (UK)



220VAC Power Cord (EU)



110VAC Power Cord (US)



Order Part Number

1 Channel - 24V Analogue Controller

				
ANG-1000-CH1-24V-A1 Controller	Power Cord - UK (1.8 Meter)	Power Cord - US (1.8 Meter)	Power Cord - EU (1.8 Meter)	EXT-24V-5M (1PC)
ANG-1000-CH1-24V-A1-UK-SM5	✓	N/A	N/A	✓
ANG-1000-CH1-24V-A1-US-SM5	N/A	✓	N/A	✓
ANG-1000-CH1-24V-A1-EU-SM5	N/A	N/A	✓	✓

2 Channel - 24V Analogue Controller

				
ANG-2000-CH2-24V-A1 Controller	Power Cord - UK (1.8 Meter)	Power Cord - US (1.8 Meter)	Power Cord - EU (1.8 Meter)	EXT-24V-5M (1PC)
ANG-2000-CH2-24V-A1-UK-SM5	✓	N/A	N/A	✓
ANG-2000-CH2-24V-A1-US-SM5	N/A	✓	N/A	✓
ANG-2000-CH2-24V-A1-EU-SM5	N/A	N/A	✓	✓

4 Channel - 24V Analogue Controller

				
ANG-4000-CH4-24V-A1 Controller	Power Cord - UK (1.8 Meter)	Power Cord - US (1.8 Meter)	Power Cord - EU (1.8 Meter)	EXT-24V-5M (4PC)
ANG-4000-CH4-24V-A1-UK-SM5	✓	N/A	N/A	✓
ANG-4000-CH4-24V-A1-US-SM5	N/A	✓	N/A	✓
ANG-4000-CH4-24V-A1-EU-SM5	N/A	N/A	✓	✓

Note – If want change the extension cable length from **5 meter (EXT-24V-5M)** to **3 meter (EXT-24V-3M)**, just change the part number last 3 digit **SM5** to **SM3**.

Example:

ANG-1000-CH1-24V-A1-UK-SM5 (Extension cable 5 meter)

ANG-1000-CH1-24V-A1-UK-SM3 (Extension cable 3 meter)

1 Channel - 5V Analogue Controller

				
ANG-1000-CH1-5V-A1 Controller	Power Cord - UK (1.8 Meter)	Power Cord - US (1.8 Meter)	Power Cord - EU (1.8 Meter)	EXT-24V-5M (1PC)
ANG-1000-CH1-5V-A1-UK-SM5	✓	N/A	N/A	✓
ANG-1000-CH1-5V-A1-US-SM5	N/A	✓	N/A	✓
ANG-1000-CH1-5V-A1-EU-SM5	N/A	N/A	✓	✓

2 Channel - 5V Analogue Controller

				
ANG-2000-CH2-5V-A1 Controller	Power Cord - UK (1.8 Meter)	Power Cord - US (1.8 Meter)	Power Cord - EU (1.8 Meter)	EXT-24V-5M (1PC)
ANG-2000-CH2-5V-A1-UK-SM5	✓	N/A	N/A	✓
ANG-2000-CH2-5V-A1-US-SM5	N/A	✓	N/A	✓
ANG-2000-CH2-5V-A1-EU-SM5	N/A	N/A	✓	✓

4 Channel - 5V Analogue Controller

				
ANG-4000-CH4-5V-A1 Controller	Power Cord - UK (1.8 Meter)	Power Cord - US (1.8 Meter)	Power Cord - EU (1.8 Meter)	EXT-24V-5M (4PC)
ANG-4000-CH4-5V-A1-UK-SM5	✓	N/A	N/A	✓
ANG-4000-CH4-5V-A1-US-SM5	N/A	✓	N/A	✓
ANG-4000-CH4-5V-A1-EU-SM5	N/A	N/A	✓	✓

Note – If want change the extension cable length from **5 meter (EXT-5V-5M)** to **3 meter (EXT-5V-3M)**, just change the part number last 3 digit **SM5** to **SM3**.

Example:

ANG-1000-CH1-5V-A1-UK-SM5 (Extension cable 5 meter)

ANG-1000-CH1-5V-A1-UK-SM3 (Extension cable 3 meter)



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