

MESHLE flex FLOW I/II – Constant Current LED Driver with Bluetooth Mesh Connectivity

Model 311PBT-1/ 312PBT-1



MESHLE flex FLOW Smart Bluetooth LED Controller is a control module for LED lights of various types. The output current of MESHLE flex FLOW can be reprogrammed flexibly, depending on the type of light source. Configuration and operation is done via MESHLE app, where you can set brightness, scenes, animations, timers, groups and many other features. No Wi-Fi, hub or other hardware is required. The controller is ready for use immediately after it has been connected. Each MESHLE flex controller automatically connects to another controller via Bluetooth, creating a Bluetooth mesh network. In this network, the controllers can be operated individually or in a group via smartphone.



Features

























- designed for single color led downlights, spotlights and panels.
- Equipped with a AC 100-240VAC power socket input and constant current output that can be parametrized via DIP Switch.
- Over-heat / Over-load / Short circuit protection, recover automatically
- Compatible with MESHLE: Enables wireless connection with other devices in a Bluetooth Mesh Network and control via the MESHLE App.
- Supports automation features: Timers (Week/Sunset, Sunrise), If-Else Rules.
- Adjustable settings include Power Up State and Fade transition duration.
- Offers group control capability: can be operated individually or as part of a group.
- When paired with an optional Gateway, enables control via the Internet or voice-activated platforms such as Amazon Alexa or Google Assistant.
- Compatible with both Battery-Powered and Battery-Free Switches and Sensors (see <https://meshle.com/ecosystem> for more details).

Technical Parameters

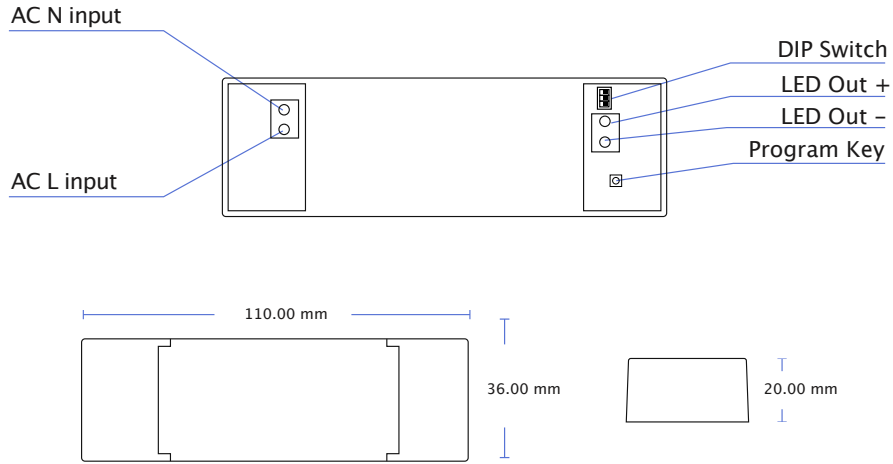
Model	flex FLOW II	flex FLOW I
Input		
Input voltage	100~240VAC	
Frequency Range	50/60Hz	
Efficiency	>79%/230VAC	>80%/230VAC
Alternating Current	0.3A/115VAC, 0.15A/230VAC	
Anti Surge	L-N:1KV	
Inrush Current	Cold start 27A at 230VAC	
Leakage Current	< 0.5mA/230VAC	
No Load Power	< 2W	
Output		
Output voltage	3-24VDC	9-45VDC
Max Output Voltage	33VDC	48VDC
Output Current	350-700mA	100-450mA
Output Power	Max. 12W	

Model	flex FLOW II	flex FLOW I
Dimming range	0 -100%	
Dimming curve	Logarithmic	
PWM Frequency	4000Hz (default)	
Current Accuracy	±5%	
Ripple & Noise	< 100mV	
Safety and EMC		
Security Specifications	IEC/EN61347-1, IEC/EN61347-2-13	
Withstand Voltage	I/P-O/P: 3750VAC	
Insulation Resistance	I/P-O/P: 100MΩ/500VDC/25□/70□RH	
EMC Emission	EN61000-3-2 Class C, IEC61000-3-2	
EMC Immunity	EN61000-4-2.3.4.5.6.8.11, EN61347	
Certification	CE	
Environment		
Operation temperature	-20°C~50°C	
T-case Max	80°C	
Working Humidity	20%~90%RH, non-condensing	
Storage Temp/Humidity	-40°C~80°C, 10%~95%RH	
Temperature Coefficient	±0.03%/°C (0-50%)	
Vibration Resistance	10-500Hz, 2G, 6min/cycle, X,Y,Z axes/2min	
IP Rating	IP20	
Warranty and Protection		
Warranty	5 years	
Protection		
Overload Power	Hiccup,recovers automatically after fault condition is removed	
Short Circuit	Hiccup,recovers automatically after fault condition is removed	
Over Temperature	Current decrease when PCB temp>100°C, recovers automatically after fault condition is removed	

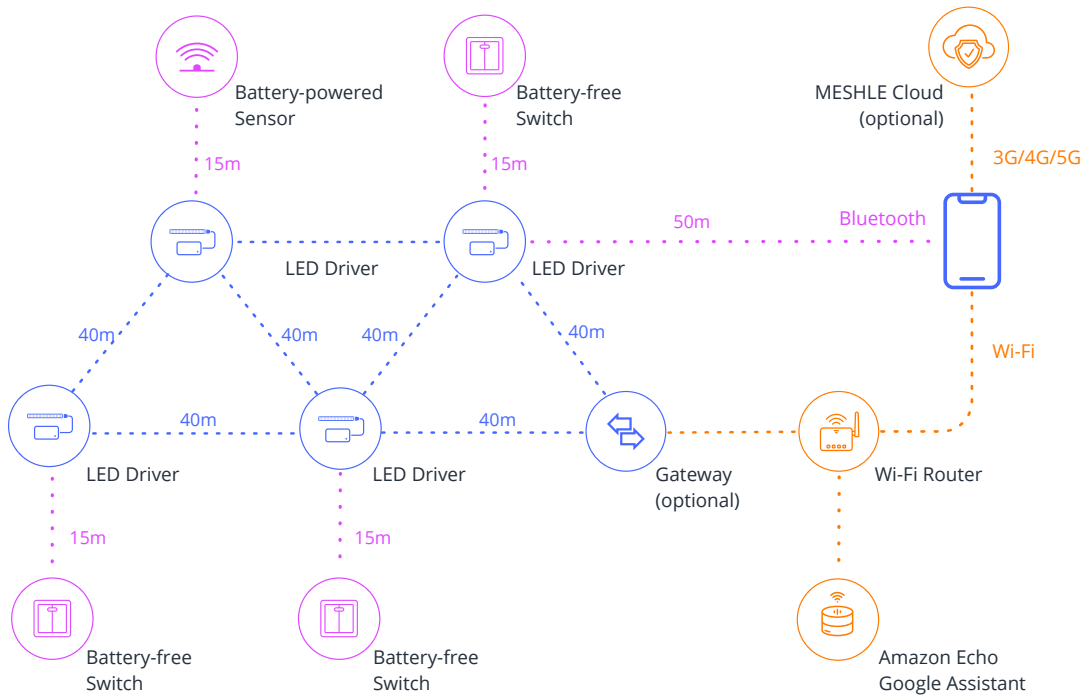
LED Current Selection

																											
flex FLOW I	Output Voltage	3-24V	3-24V	3-24V	3-24V	3-22V	3-20V	3-18V	3-17V																		
	Output Current	350mA	400mA	450mA	500mA	550mA	600mA	650mA	700mA																		
flex FLOW II	Output Voltage	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V	9-45V																		
	Output Current	100mA	150mA	200mA	250mA	300mA	350mA	400mA	450mA																		

Technical Specifications



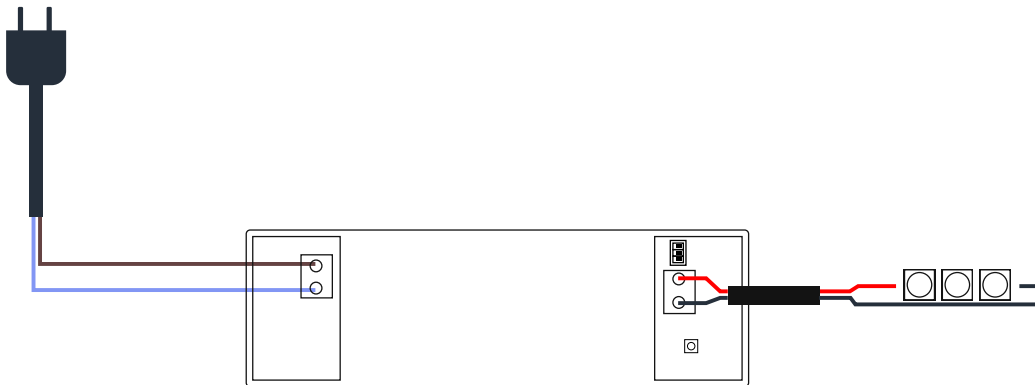
System Example



All MESHLE products and all devices labeled "Works with MESHLE" are compatible with each other and can be configured, managed and controlled via MESHLE App. Connection to the Cloud via MESHLE Gateway (optional). User can connect already existing Bluetooth mesh network to the MESHLE Cloud via MESHLE Gateway. This enables additional functions such as remote and voice control.

Wiring Diagram

Power Supply, LED Strip, Push Switch



Network Setup

New network

If this is the first device that is being setup follow the steps below:

1. Download MESHLE App and allow all required permissions and press "Start".
2. Power up the controller, now it should be listed in the search view of the app
3. Select the listed item and follow the instructions: create password for the new network and configure the controller
4. For every further device follow the steps described in "Add to existing network"



Video Tutorial

Existing network

If new device have to be added to existing network follow the steps below:

1. Download MESHLE App and allow all required permissions and press "Start".
2. Select existing network and enter the network password once requested
3. After joining the network press plus button in the bottom right corner of the app and select "Device"
4. Power up the controller, now it should be listed in the search view of the app
5. Select the listed item and follow the instructions to configure the controller



Video Tutorial

Factory Reset

Device

1. Hold the reset button for 4 seconds.

Network

In order to delete the network, all of the devices configured in this network must be reseted to factory settings.

App Screens

