








# Gavita EFM Accessory for Gavita Master Controller

## 1 Introduction

Thank you for purchasing the Gavita EFM. This manual describes the mounting and installing of the product and also describes how to use the product. Please read and understand this manual completely before using the product. Only use the product as specified in this manual.

### 1.1 Used symbols

-  **Warning!** A warning indicates severe damage to the user and/or product may occur when a procedure is not carried out as described.
-  **Caution!** A caution sign indicates problems may occur if a procedure is not carried out as described. It may also serve as a reminder to the user.
-  **Note:** A note gives additional information, e.g. for a procedure.
-  This symbol is an internationally recognized symbol used to designate recyclable materials.
-  This symbol is a certification mark employed on electronic products manufactured or sold in the United States which certifies that the electromagnetic interference from the device is under limits approved by the Federal Communications Commission.
-  This symbol shows that a product has been independently tested and certified to meet recognized standards for safety.
-  The symbol on the material, accessories or packaging indicates that this product may not be discarded as household waste. By disposing of the equipment in the proper way, you will be helping to prevent possible risks to the environment and public health, which might otherwise be caused by improper handling of the discarded equipment. Recycling of materials contributes to the conservation of natural resources. Therefore, please do not dispose of your old electronics and electrical appliances via household waste.

## 2 Product description

The Gavita EFM is an add-on product to the Gavita ELxF Master Controllers. When connected to the Master controller, the EFM will switch an AC fan based on the output of the Master controller.

## 3 Product information and specifications

### 3.1 General product information

Product name	EFM1 US 120	EFM1 US 240	EFM1 UK	EFM1 EU
Manufacturer	Gavita International bv			
EAN Code	8718403055818	8718403055825	8718403055849	8718403055832
Part number	10103-6042116	10103-6042216	10103-6042212	10103-6042211
Plug type	NEMA 5-15	NEMA 6-15	BS 1363	CEE 7

### 3.2 Technical specifications

Product weight	1kg / 2.2lbs
Dimensions (L*W*H)	155x88x70 mm / 6.1x3.5x2.8"
Temperature case	< 70 °Celsius / 158 °Fahrenheit

Temperature ambient	0 ~ 35 °Celsius / 32 ~ 95 °Fahrenheit			
Max voltage +/-10%	120V AC	240V AC	240V AC	230V AC
Max current	6A	6A	6A	6A
Max power	0.72kW	1.44kW	1,44kW	1,38kW
Min Power	20W	25W	25W	25W
Control port	0..10V 4P4C RJ9 connect to Gavita Fan port			
Output range	10-100%			
Max signal cable length	<20m / 65ft			
Relative humidity	25- 70% (not condensating)			
Frequency	50 - 60 Hz			
Certification	FCC Class B up to 700W			
Insulation	Class 1 - requires an earth connection			
IP rating	IP 20			
Fuse	User accessible, replace with similar fuse only			

### 3.3 Environment

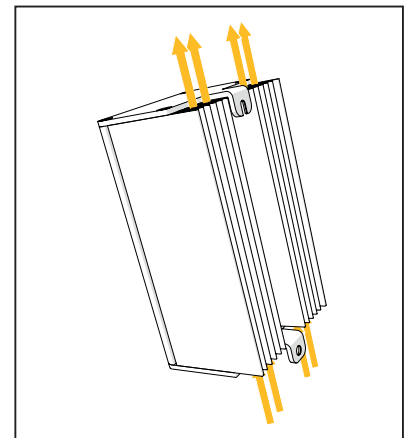
The product is intended to be used in greenhouses and climate rooms. The product can be used in damp environments. The product may not be used in wet environments or outdoors.

### 3.4 Legal

This device complies with Part 15 of the FCC Rules, designated as Class B. For household use.

## 4 Safety recommendations and warnings

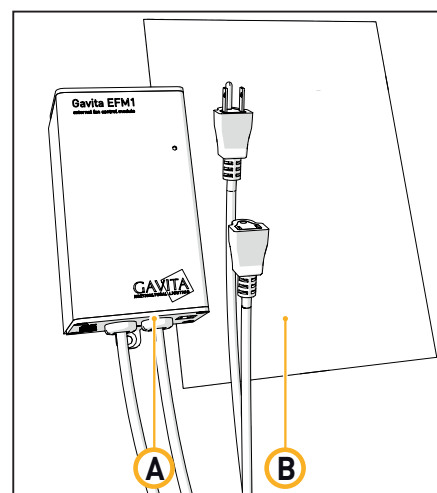
- ⚠ Warning!** Carefully read the warnings below before using or working with the product!
- Always adhere to the local rules and regulations when installing or using the product.
  - Do not use the product when either its signal cable or its power cord is damaged.
  - Modifications to the cords can be dangerous and will void the warranty, it also makes the product not comply with legal requirements.
  - Do not expose the product to:
    - condensing humidity, heavy mist, fog or direct spray;
    - temperatures outside the specified range;
    - dust and contamination.
  - Always disconnect the product from mains before performing any task on it.
  - The status LED blinks when it detects overtemperature in the housing.
  - Don't restrict airflow to the heatsink (1).
  - Keep the cooling fins clean.
  - Always use the same type of fuse. Using a different type will void the warranty.
  - The fan may sound differently due to the use of noise cancelling technology.



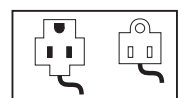
1. Do not block airflow

## 5 Contents (2)

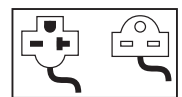
- A. EFM with local power plug (plugs and contra plugs displayed separately)
- B. Manual



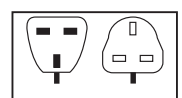
2. Contents



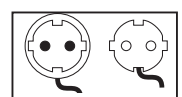
US plug 120 V



US plug 240 V



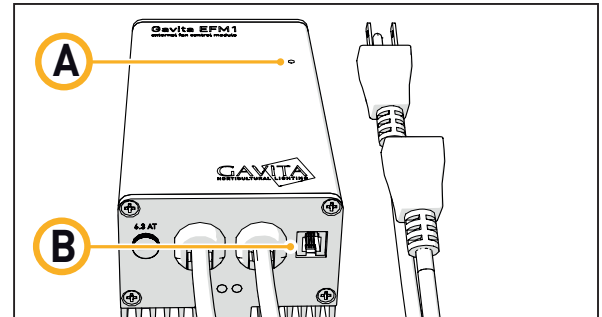
UK plug 240 V



EU plug 240 V

## 6 Controls, connections and indications (2)

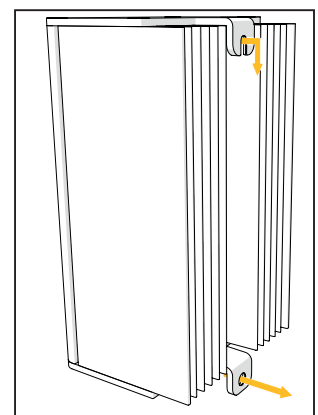
- A. Status LED  
 Off: product is not powered  
 On: product is powered  
 Blinking: overtemperature detected, power off\*  
 \* LED blinks during power up as well
- B. Fan port RJ



3. Controls, connections and indications

## 7 Installing the EFM

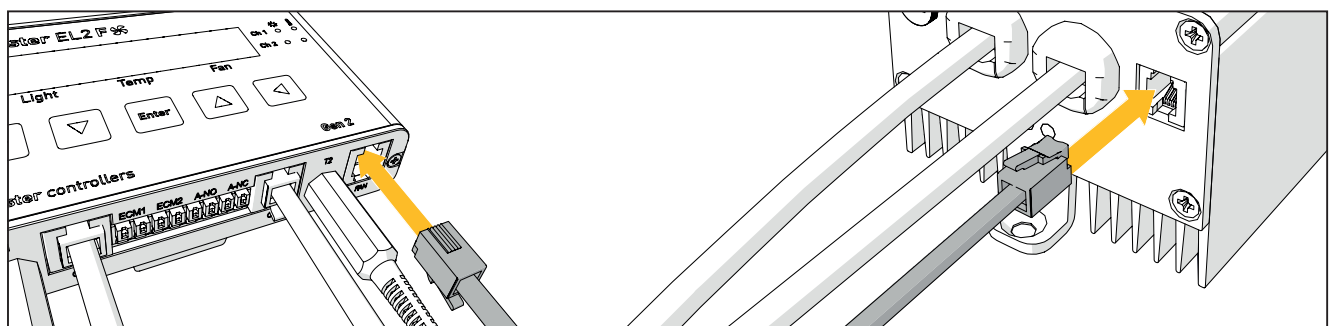
- ⚠ **Warning!** Keep the EFM away from water, extreme temperatures, moisture, dust and contamination.
  - ⚠ **Warning!** Do not block the cooling fins on either side of the housing.
  - ⚠ **Caution!** Mount the EFM within signal cable length of the Master controller or use a suitable longer cable (<20 meters / <65 ft).
  - ⓘ **Note:** Cable fasteners and screws are not included.
- Mount the EFM close to the wall outlet or ensure you have an extension cord present to connect the EFM to the mains.
  - Screw one screw in the wall. Use a screw anchor if necessary.
  - Hang the EFM on the screw.
  - Secure the EFM with a second screw.



4. Installation

## 8 Connecting the EFM to the Master controller

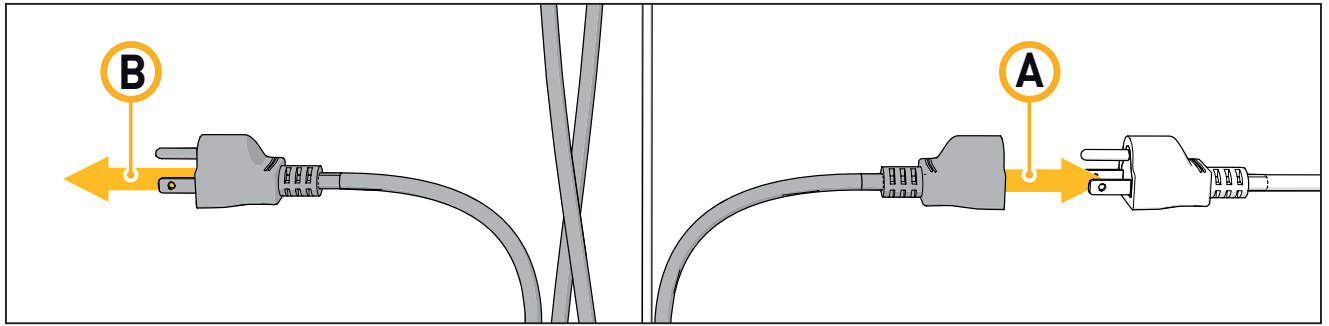
- ⚠ **Warning!** Never connect the EFM to any other device than the Gavita ELxF Master controller.
  - ⚠ **Warning!** Never connect more than one EFM to each fan port of the Master controller.
- Connect the RJ cable to the fan output port of the ELxF.
  - Connect the RJ cable to the fan input port of the EFM.



5. Connecting the EFM to the ELxF

## 9 Connecting an AC fan

- ⚠ **Warning!** Ensure that the voltage and current requirements of the AC fan does not exceed the capacity of the EFM and the local cabling! (see paragraph 3).
  - ⚠ **Caution!** Gavita recommends you install and connect the EFM before plugging it into the mains.
  - ⓘ **Note:** Power plugs are delivery dependent.
- Plug the power plug of the AC fan in the contra plug of the EFM (6A).

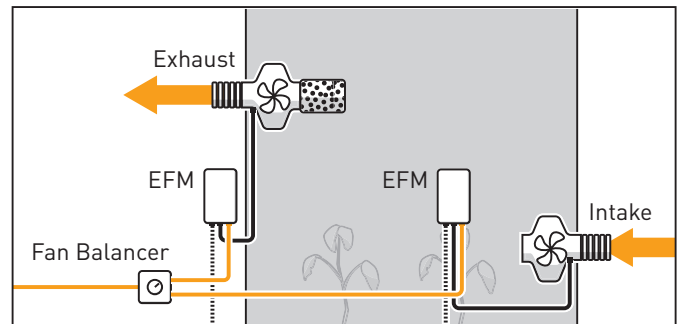


#### 6. Connecting the EFM to fan and mains

- Plug the power plug of the EFM in the mains (6B).

#### 9.1 Using an FB1 fan balancer

- Limit the airflow by using an FB1 Fan Balancer. This is typically used in a two fan setup. Consult your ELxF manual for more information.



#### 7. Using an FB1 fan balancer

## 10 Maintenance and repair

**⚠ Warning!** Disconnect the product from mains before performing any maintenance or repairs.

**⚠ Warning!** Do not open or disassemble the product, it contains no servicable parts inside. Opening the product can be dangerous and will void the warranty.

- Regularly check the product for dust or dirt buildup. Clean if necessary. Contamination may cause overheating and decreased performance.
- Clean the product only with a soft, dry cloth.
- Regularly check the wiring of the product to ensure it is undamaged.

## 11 Storage and disposal

- Store the product in a dry and clean environment, with an environmental temperature of -20 ~ 85 °Celsius / -4 ~ 185 °Fahrenheit.
- The product must not be discarded as unsorted municipal waste, but must be collected separately for the purpose of treatment, recovery and environmentally sound disposal.

## 12 Warranty

Gavita International bv warrants the mechanical and electronic components of their product to be free of defects in material and workmanship if used under normal operating conditions for a period of three (3) years from the original date of purchase. If the product shows any defects within this period and that defect is not due to user error or improper use Gavita International bv shall, at its discretion, either replace or repair the product using suitable new or reconditioned products or parts. In case Gavita International bv decides to replace the entire product, this limited warranty shall apply to the replacement product for the remaining initial warranty period, i.e. three (3) years from the date of purchase of the original product. For service return the fixture to your shop with the original sales receipt.

