

Gavita ECM1 Accessory for Gavita Master Controller

1. Introduction

Thank you for purchasing the Gavita ECM1 External Contactor Module. 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.

 With this symbol Gavita declares that this product complies with European requirements.

 The symbol on the material, accessories or packaging indicates that this product may not be discarded as household waste. Dispose of the equipment through a recycling centre that handles electronics and electrical appliances within the EU and in other European countries which use separate collection systems for used electronics and electrical appliances. 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.

 This symbol is an internationally recognized symbol used to designate recyclable materials.

2. Product description

The Gavita ECM1 external contactor module is an add-on product to the Gavita EL2 Master Controller. When connected to the Master controller, the contactor will switch auxiliary equipment based on the output of the Master controller.

ECMs can be used to switch auxiliary equipment during lights-on and lights-off periods. The ECMs and all the auxiliary equipment connected to it are also governed by the Master controller's shut-off safety features.

3. Product information and specifications

Product name	ECM1 AU	ECM1 CH	ECM1 EU	ECM1 UK	ECM1 US 120	ECM1 US 240
EAN Product code	8718403051865	8718403051834	8718403051810	8718403051827	8718403051841	8718403051858
Product number	42.00.24.60	42.00.23.12	42.00.23.10	42.00.24.11	42.00.12.20	42.00.24.20
Plug type	(AU) AS 3112	(CH) SEV 1011	(EU) CEE 7	(UK) BS 1363	(US 120V) NEMA 5-15	(US 240V) NEMA 6-15
Maximum allowable voltage	240 V AC	230 V AC	230 V AC	240 V AC	120 V AC	240 V AC
Maximum allowable current [AC1]	16 Amps	10 Amps	16 Amps	13 Amps	15 Amps	15 Amps
Maximum allowable power [AC3]	1,5 kW	1,5 kW	1,5 kW	1,5 kW	0,75 kW	1,5 kW
Maximum signal cable length	<20 m / <65 ft					
Package dimensions	170x150x80 mm / 6.7x5.9x3.1 "					
ECM weight	0,5 kg / 1.1 lbs					
ECM dimensions	88x75x70 mm / 3.5x3x2.8 "					
Operating temperature	0 ~ 35 °Celsius / 32 ~ 95 °Fahrenheit					
Relative humidity	25 - 70 % (Non condensing)					
International Protection Rating	IP20					

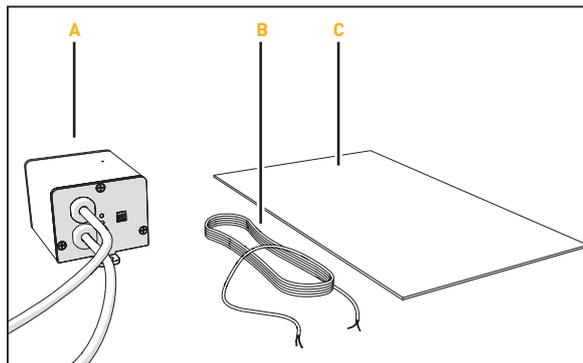
4. Safety recommendations and warnings

Warning! Carefully read the warnings below before using or working with the product!

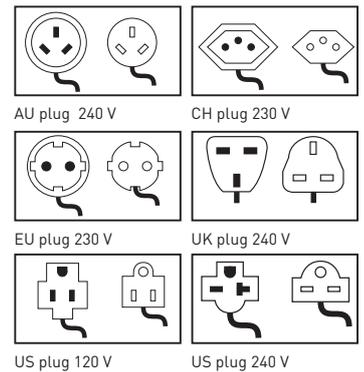
- Always adhere to the local rules and regulations when installing or using the product.
- Do not use the product when either its signal cable or its power cord is damaged.
- Modifications to the cords can be dangerous and will void the warranty, it also makes the product not comply with legal requirements.
- 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.

5. Contents (1)

- A. ECM1 with local power plug (plugs and contra plugs displayed separately)
- B. Signal cable
- C. Manual

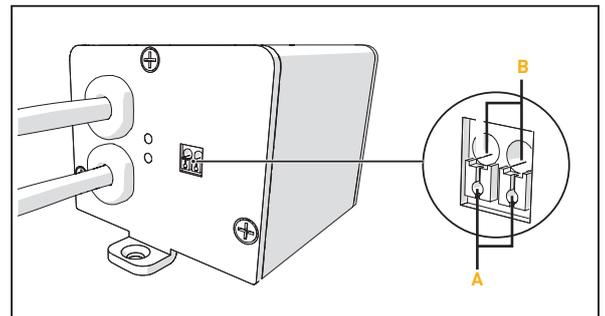


1. Contents



6. Controls, connections and indications (2)

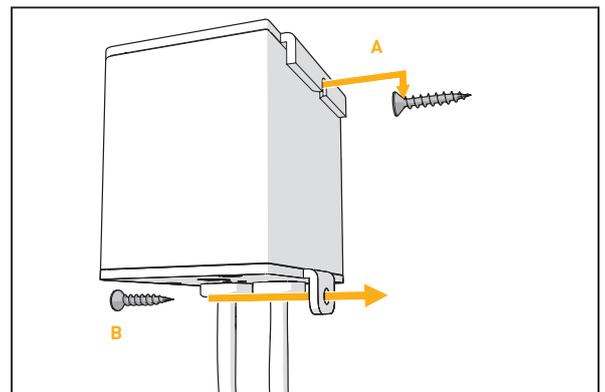
- A. Cage clamp buttons
- B. Cage clamps



2. Controls, connections and indications

7. Installing the ECM

- ▲ **Warning!** Keep the ECM away from water, extreme temperatures, moisture, dust and contamination.
- ▲ **Caution!** Mount the ECM within signal cable length of the Master controller or use a suitable longer cable (<20 meters / <65 ft).
- ⓘ **Note:** Cable fasteners are not included.
- Mount the ECM close to the wall outlet or ensure you have an extension cord present to connect the ECM to the mains.
- Screw one screw in the wall (3A). Use a screw anchor if necessary.
- Hang the ECM on the screw.
- Secure the ECM with a second screw (3B).



3. Installing the ECM

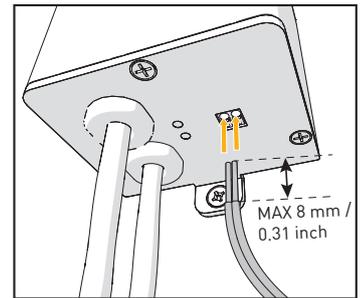
8. Connecting the ECM to the Master controller

- ⚠ **Warning!** Never connect the cage clamps of the ECM to any other device than the Gavita EL2 Master controller.
- ⚠ **Warning!** Never connect more than one ECM to each set of cage clamps of the Master controller.
- ⚠ **Warning!** Ensure all wire ends are fully inserted into the cage clamps. Exposed wire ends can cause shortcuts, which can damage the Master controller beyond repair.

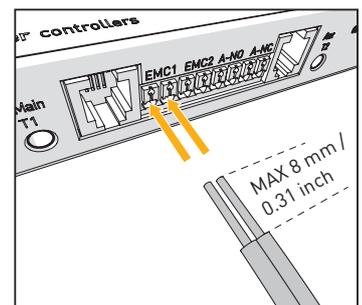
The ECM cable is connected to both the Master controller and the ECM by means of cage clamps.

The Master controller has two sets of cage clamps named: "ECM1" and "ECM2". "ECM1" follows the output of the main channel of the Master controller. "ECM2" works alternately with "ECM1" and is inactive when the main channel is active (and the other way around). For more information on connecting ECMs to the Master controller, consult chapter 10 and 11.

- Press the white buttons above the contact openings of the cage clamps to open them.
- Plug the endings of the included signal cable into the cage clamps of the ECM (4). The endings need to be hard/tinned and stripped to less than 8 mm / 0.31 inch.
- Release the buttons to lock the wires in place.
- Carefully pull the wires to check if they are locked in the clamp. If not, try to reinsert the wires as described above.
- Connect the wire to the desired cage clamps in the Master controller (5) in the same way.



4. Connect wire to cage clamps ECM



5. Connect wire to cage clamps controller

9. Connecting an ECM to auxiliary equipment

- ⚠ **Warning!** Ensure that the voltage and current requirements of the auxiliary equipment do not exceed the capacity of the ECM and the local cabling! (see chapter 3). Use the ECM to switch an additional, heavier contactor if your application requires a higher current.
- ⚠ **Caution!** Gavita recommends you install and connect the ECM before plugging it into the mains.
- Plug the power plug of the auxiliary equipment in the contra plug of the ECM.
- Plug the power plug of the ECM in the mains.

10. Controlling auxiliary equipment in "Follow mode" (one room)

- ⚠ **Caution!** Gavita recommends you install and connect the ECM before plugging it into the mains.
- ⓘ **Note:** For more information on "Follow mode", consult the Master controller manual.
- ⓘ **Note:** When activated, the blue light on the ECM will burn.

10.1. Connecting equipment which must be used during lights-on periods

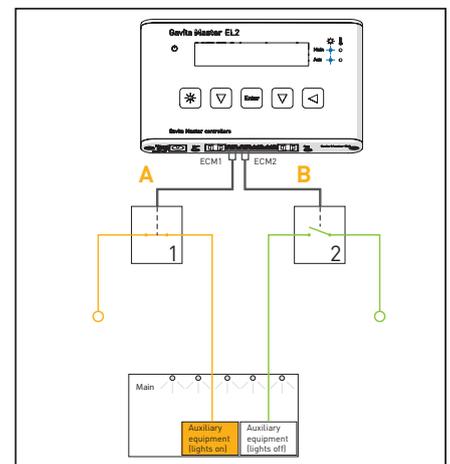
Example: a CO₂ source, light or watering unit may be activated during lights-on periods.

- Connect the ECM to the cage clamps marked "ECM1" (6A).
- Connect the auxiliary equipment which must be activated during lights-on periods to the ECM connected to clamps "ECM1".

10.2. Connecting equipment which must be used during lights-off periods

Example: a heater may be activated during lights-off periods.

- Connect the ECM to the cage clamps marked "ECM2" (6B).
- Connect the auxiliary equipment which must be activated during lights-off periods to the ECM connected to clamps "ECM2".



6. Use of the ECM in follow mode

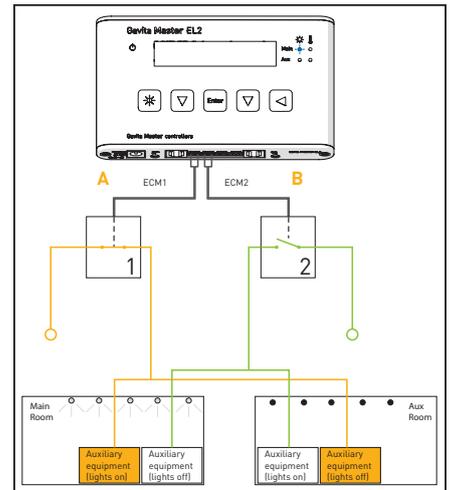
11. Controlling auxiliary equipment in “Inverse mode” (two rooms 12h/12h)

- ⚠ **Caution!** Gavita recommends you install and connect the ECM before plugging it into the mains.
- ⓘ **Note:** Two ECMs are needed for a two room setup.
- ⓘ **Note:** For more information on “Inverse mode”, consult the Master controller manual.
- ⓘ **Note:** When activated, the blue light on the ECM will burn.
- Link one ECM to the Master controller cage clamps marked “ECM1” and a second ECM to the Master controller cage clamps marked “ECM2”.

11.1. Connecting equipment which must be used during lights-on periods

Example: a CO₂ source, light or watering unit may be activated during lights-on periods.

- Connect the auxiliary equipment in the “main” room which must be activated during lights-on periods to the ECM connected to clamps “ECM1” (7A).
- Connect the auxiliary equipment in the “aux” room which must be activated during lights-on periods to the ECM connected to clamps “ECM2” (7B).



7. Use of the ECM in Inverse mode

11.2. Connecting equipment which must be used during lights-off periods

Example: a heater may be activated during lights-off periods.

- Connect the auxiliary equipment in the “main” room which must be activated during lights-off periods to the ECM connected to clamps “ECM2” (7B).
- Connect the auxiliary equipment in the “aux” room which must be activated during lights-off periods to the ECM connected to clamps “ECM1” (7A).

12. 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.

13. 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.

14. 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 two (2) 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. two (2) years from the date of purchase of the original product. For service return the fixture to your shop with the original sales receipt.

