Gavita ECM1 — Accessory for controller
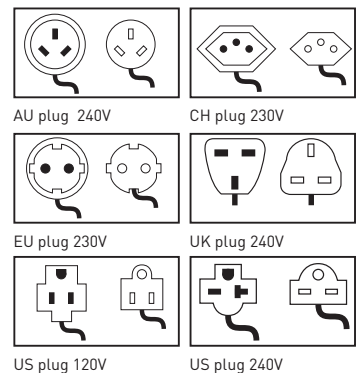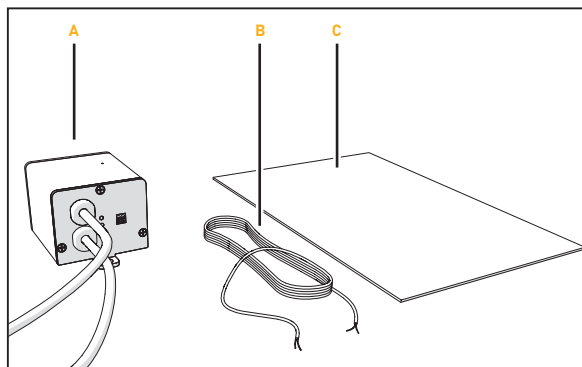
1. Read before use

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.

2. Product description

The Gavita ECM1 external contactor module is an add-on product to the Gavita EL2 Master Controller. When connected to the controller, the contactor will switch auxiliary equipment based on the output of the 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 controller's shut-off safety features.
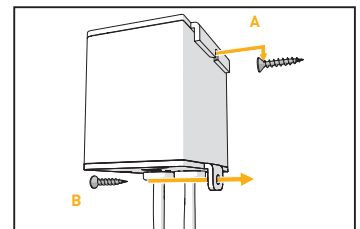
3. Contents

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

AU plug 240V

CH plug 230V

EU plug 230V

UK plug 240V

US plug 120V

US plug 240V

4. Installing the ECM

⚠ **Warning!** Keep the ECM away from water, extreme temperatures, moisture, dust and contamination.
⚠ **Caution!** Mount the ECM close to the wall outlet or ensure you have an extention cord present to connect the ECM to the mains.
⚠ **Caution!** Mount the ECM within signal cable length of the controller or use a suitable longer cable (<20 meters)
⚠ **Note:** Fasteners are not included.

- Screw one screw in the wall ①A. Use a screw anchor if necessary
- Hang the ECM on the screw
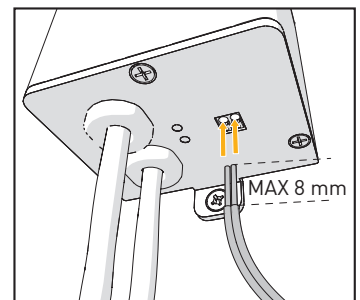- Secure the ECM with a second screw ①B

1) Installing the ECM

5. Connecting the ECM to the controller

⚠ **Warning!** Never connect the cage clamps of the ECM to any other device than the Gavita EL2 controller.
⚠ **Warning!** Never connect more then one ECM to each set of cage clamps of the controller.
⚠ **Warning!** Ensure all wire ends are fully inserted into the cage clamps. Exposed wire endings can be dangerous!

The ECM cable is connected to both the Controller and the ECM by means of cage clamps.
The controller has two sets of cage clamps named: "ECM1" and "ECM2". "ECM1" follows the output of the main channel of the controller. "ECM2" works alternatingly with "ECM1" and is inactive when the main channel is active (and the other way around). For more information on connecting ECMs to the controller, consult chapter 7 and 8.
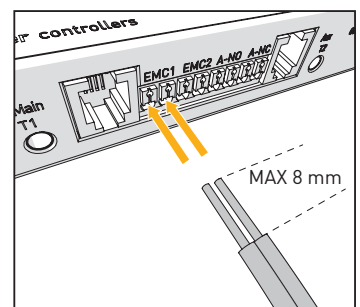
- Press the white buttons above the contact openings of the cage clamps to open them
- Plug the endings of the included signal cable into the cage clamps of the ECM ②. A cable of up to 20 meters may be used as long as its endings are hard/tinned and stripped to less then 8 mm
- Release the buttons to lock the wires in place
- Connect the wire to the desired cage clamps in the controller ③ in the same way

MAX 8 mm

2) Connect wire to cage clamps ECM

6. Connecting an ECM to auxiliary equipment

⚠ **Warning!** Ensure the voltage and current requirements of the auxiliary equipment do not exceed the capacity of the ECM and the local cabeling! (see chapter 8) 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 equipent auxiliary in the contra plug of the ECM
- Plug the power plug of the ECM in the mains

MAX 8 mm

3) Connect wire to cage clamps controller

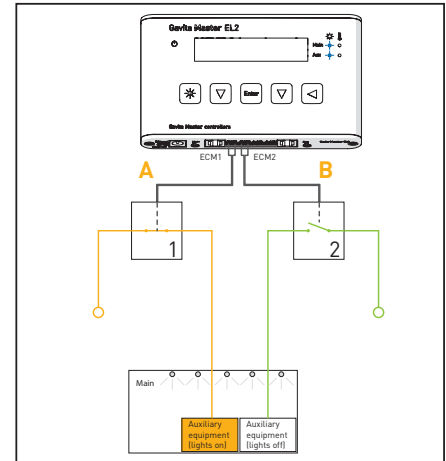## 7. Controlling auxiliary equipment in "Follow mode" (one room)

⚠ **Caution!** Gavita recommends you install and connect the ECM before plugging it into the mains.

⚠ **Note:** For more information on "Follow mode", consult the controller manual.

⚠ **Note:** When activated, the blue light on the ECM will burn.

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

⚠ **Example:** a CO_2 source, light or watering unit may be activated during lights-on periods

- Connect the ECM to the cage clamps marked "ECM1" (4A)
- Connect the auxiliary equipment which must be activated during lights-on periods to the ECM connected to clamps "ECM1"

7.2. 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" (4B)
- Connect the auxiliary equipment which must be activated during lights-off periods to the ECM connected to clamps "ECM2"

4) Use of the ECM in follow mode

8. 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 controller manual.

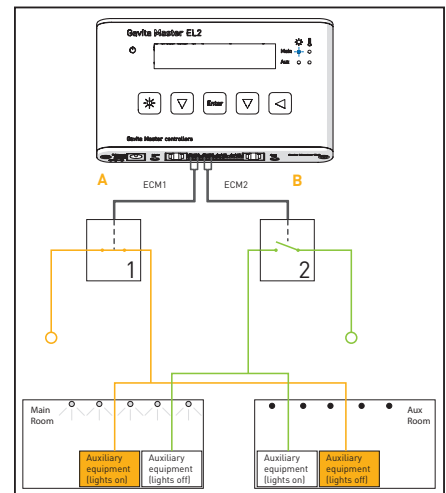⚠ **Note:** When activated, the blue light on the ECM will burn.

- Link one ECM to the controller cage clamps marked "ECM1" and a second ECM to the controller cage clamps marked "ECM2"

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

Example: a CO_2 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" (5A).
- Connect the auxiliary equipment in the "aux" room which must be activated during lights-on periods to the ECM connected to clamps "ECM2" (5B).

8.2. 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" (5B).
- Connect the auxiliary equipment in the "aux" room which must be activated during lights-off periods to the ECM connected to clamps "ECM1" (5A).

5) Use of the ECM in Inverse mode

9. Maintenance and repair

⚠ **Warning!** Do not open the product, it contains no servicable parts inside.

The product may be cleaned with a soft, dry cloth.

10. Disposal

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.

11. Product details 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	60.57.00.24.60	60.57.00.23.12	60.57.00.23.10	60.57.00.24.11	60.57.00.12.20	60.57.00.24.20
Warranty	3 year limited warranty (see www.gavita-holland.com)					
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	240V AC	230V AC	230V AC	240V AC	120V AC	240V 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
Package weight	5,1 Kg					
Package dimensions	170mm*150mm*80mm					
ECM weight	0,5 Kg					
ECM dimensions	88mm*75mm*70mm					
Operating temperature	0-35 ^{0}Celsius / 32-95 ^{0}Fahrenheit					
Relative humidity	25-70% (Non condensing)					
International Protection Rating	IP20					