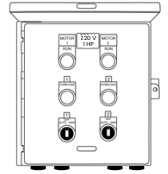




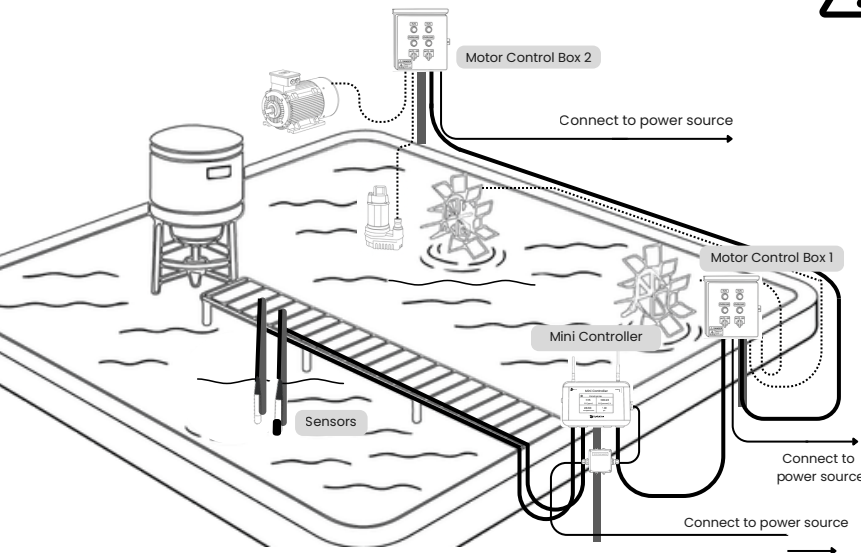
Quick Installation Guide MCB-M (1-Phase)



MCB-M 1-Phase

The HydroNeo Motor Control Box (MCB-M) is designed to control and automate farm equipment such as aerators and water pumps. It operates together with the HydroNeo Mini Controller to enable smart farm management through the HydroNeo system.

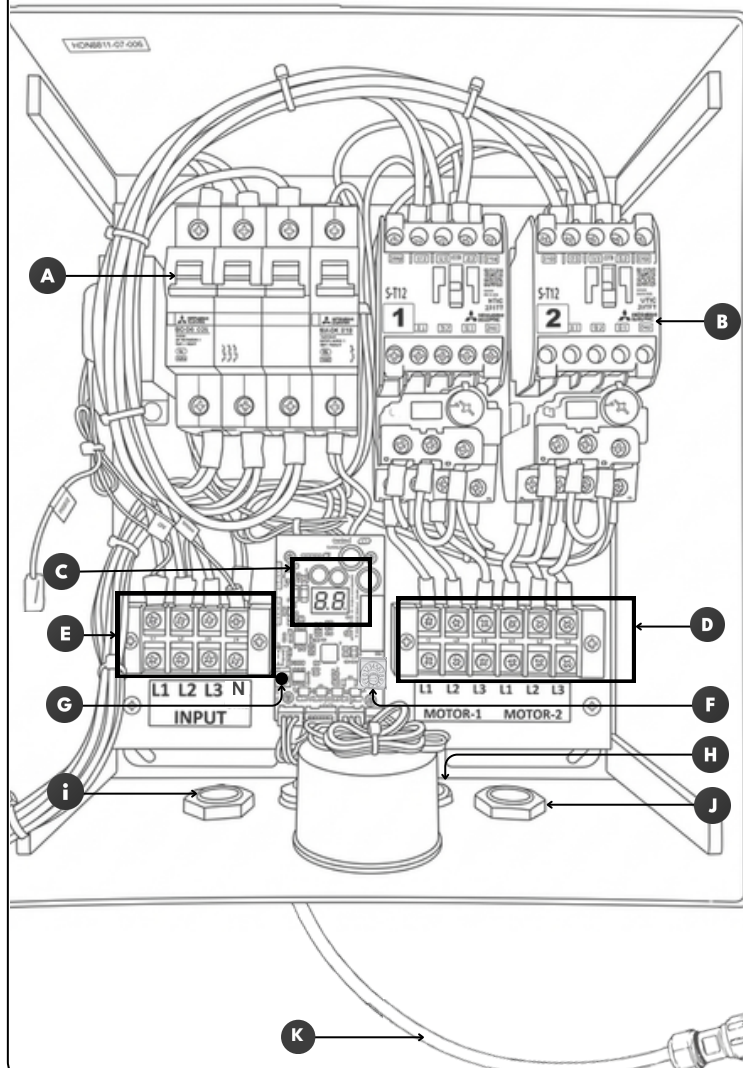
Exemplary installation



Safety Notes:

- All electrical installation and wiring must be performed by a qualified and certified electrician.
- Switch off all power at the source and verify with a voltage tester that cables are de-energized before beginning any work.
- Lock out or clearly mark the circuit breaker as "Do not switch on" during installation.
- Ensure the MCB-M and all connected motors are properly grounded.
- Complete all high-voltage wiring before connecting the Mini Controller.
- Use appropriately rated cables and ensure all terminals and cable glands are securely fastened.
- Never bypass protective devices such as circuit breakers or fuses.
- Route signal cables separately from high-voltage power cables.
- Do not modify or tamper with the device. Unauthorized modifications may void the warranty and compromise safety.
- Keep the enclosure sealed and protected from water contact, splashing, and excessive moisture at all times.
- Do not operate the system if any cable is damaged, loose, or has exposed conductors.
- All wiring must comply with local electrical regulations and safety standards.

Inside the MCB-M

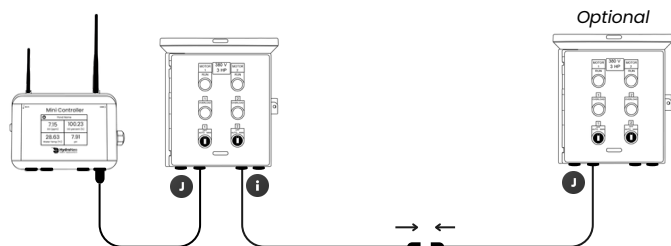


- A — Main Circuit Breaker**
Protects the system from overload and short circuits. Also used as the main power switch for the MCB-M
- B — Magnetic Contactors**
Controls the power supply to connected equipment (e.g., aerator or pump). Each contactor corresponds to one motor output.
- C — ID Display**
Shows the currently assigned MCB device ID. Every device connected to the Mini Controller needs a unique ID as an identifier.
- D — Output Terminal (Motor 1 & Motor 2)**
Connects to external equipment such as pumps or aerators.
- E — Power Input Terminal**
Connection point for incoming power supply.
- F — Device ID Switch**
Rotary switch for setting the MCB device ID (0–15).
- G — Reset Button**
Used to apply a new ID after adjusting the Device ID Switch.
- H — Data Output Port**
Used for daisy-chain connection to other MCB-M units using the HydroNeo data cable.
- I — Input Power Cable Gland**
Entry point for the incoming power supply cable to the power input terminal.
- J — Output Cable Gland**
Entry point for cables from external equipment (e.g. pumps or aerators) into the output terminal.
- K — Data Input Cable**
Data connection from MCB-M to Mini Controller.

Step 1: Install the MCB-M

Mount the MCB-M securely in a fixed position, close to the motor being controlled or near its power supply cables.

Note: If the distance between the Mini Controller and the MCB-M is too far, extend the line by using HydroNeo Data Cables.



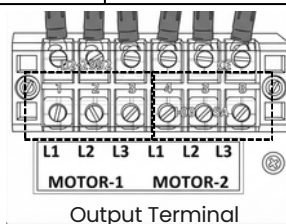
Optional: Daisy-Chain Additional Devices

If multiple devices are used, connect the data cable at the Data Output Port ① to Data Input Cable ② of the next device.

Step 3: Output to Target Motors

Connect the motor cables to the MCB-M output terminals ③.

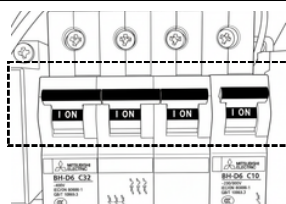
In the HydroNeo App, each connected motor is shown as a "Motor ID" (Motor ID : 1 or Motor ID : 2).



Step 4: Turn on the Breaker

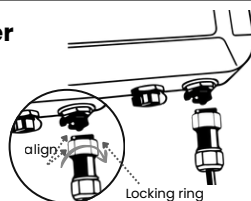
Switch on the main circuit breaker to supply power to the MCB-M.

The MCB-M will automatically switch on and ready to operate.



Step 6: Connect the MCB-M to the Mini Controller

- Connect the MCB-M to the Mini Controller by using the Data Input Cable ④ to the 4th socket.
- After the connection, restart the Mini Controller to detect and register the MCB-M units.



Step 7: Select Operation Mode

Choose the operation mode using the switch on the front panel of the MCB-M.

- AUTO Mode:** Motors operate based on settings configured in the HydroNeo app, including automation and remote control.
- MAN Mode:** Control the connected motors manually from the MCB-M. The automation or remote control via app will be disabled.
- OFF:** Power to the motors is cut. Motors cannot be operated via automation or remote control via the HydroNeo app.



Always switch the unit to OFF mode before performing any work on motors or entering the water. Do not rely on the app alone, as automation or remote users may start the equipment.

HydroNeo recommends starting automation on approximately 30% of your aeration motors, those dedicated purely to oxygenation, while keeping the remaining motors running continuously for baseline aeration and water circulation. Automation is a skill that develops over time, and we encourage all users to expand it gradually as they grow familiar with their pond's behavior. Think of automation as a tool that supports your decisions, not one that replaces them. Regular observation and your own judgment as a farmer remain essential.

Step 2: Connect the AC Power Supply

Connect the AC power supply cable to the Power Input Terminal ⑤ according to the illustrate below.



Safety Warning:

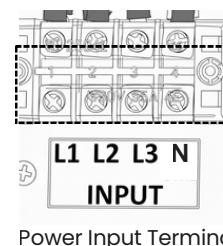
Ensure all power is switched off at the source before beginning any wiring. Never work on live cables.

How to connect the 1-Phase (220V) motor:

- Connect L to L1
- Connect N to N



Ensure that the MCB-M matches the motor's voltage and phase configuration before wiring.



How to connect the 1-Phase (220V) motor:

- Connect L to L1 (Output Terminal)
- Connect N to N on the Power Input Terminal shown in Step 2

Step 5: Set the MCB-M Device ID

- Adjust the Device ID Switch ⑥ to the desired ID (0-15).
- The ID is shown on the display ⑦.
- Press the Reset Button ⑧ to save the new ID.
- If you use multiple MCB-M boxes, ensure you set a unique device ID for each one.



Connect the Mini Controller only after all high-voltage wiring is completed to avoid risk of damage.



Ensure that cables and connectors are properly sealed before use to avoid water leakage.

Step 8: Set up the automation

Turn on the Mini Controller and open the app to configure the device by following these steps:

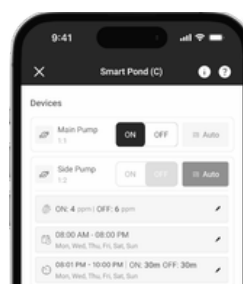
- Select the pond you want to set up automation, select from the bottom menu.
- The setup page will show up, click **+ Setup Motor**.
- The MCB Setup window will pop up. Input the necessary info, such as MCB Device ID, Motor ID, and Equipment type.
- Repeat this step to set up each motor individually.



MCB Device ID is the ID you set in step 5 for each MCB-M. Ensure all devices are assigned unique IDs.



Each MCB Device ID can connect up to 2 Motor ID (Motor ID : 1 and Motor ID : 2)
Example: Motor ID : 1 - Aerator 1
Motor ID : 2 - Sludge Pump



Users can select the device's operational mode here, whether to remote control (ON/OFF) or to automate.



For more information about the available automation modes, tap the ① icon in the top-right corner.



When Automation mode is activated, users can view and edit the details here.