Manuals+ — User Manuals Simplified.

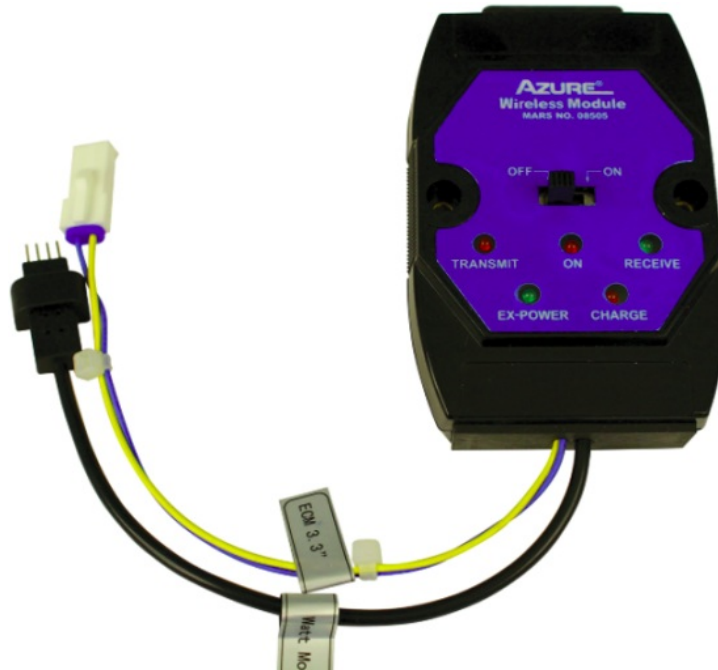# AZURE 08505 Wireless Programming Module Instruction Manual

AZURE 08505 Wireless Programming Module Instruction Manual

Contents

Installation Instructions

Compatibility: Azure® watt motor (MARS No. 10891)
– Azure® 3.3 motor (MARS No. 10852)
– Apple smart devices (Azure® Programmer app required)
– Android smart devices (Azure® Programmer app required)

Function: This module plugs into the motor and wirelessly communicates with a smart device (app required) allowing the motor speed (600 – 2000 RPM) and rotation to be set. In addition, the 3.3 motor can be converted to 2-speed operation (requires thermistor kit sold separately) for enhanced energy savings

Requirements: Motors must be powered and running in order to be programmed. A 115V cable is provided with this kit to allow benchtop programming. The module is powered by an internal rechargeable battery. The module can be operated while being recharged with the supplied USB cable. Scan the appropriate QR code on the back of this instruction page to download the free app.

Programming the 3.3 Motor and Watt Motor for Speed & Rotation

1. On a benchtop, connect the motor to the programmer. With the 10891 watt motor, take extra care to insert all pins into the socket on the rear of the motor. Turn on the module. If the battery is too low, the programmer can be powered using the supplied USB cable during programming.
   NOTE: Up to five 3.3 motors can be programmed simultaneously by first installing them into the evaporator and carefully daisy chaining them together using the yellow/blue communication leads (wire ties must be removed to release the yellow/blue wires).
   The fans (and guards) should be installed and one yellow/blue communication lead must be dropped through the box to allow external connection to the wireless module (make certain the drop mates with the plug on the wireless module). Follow the instructions below and up to five motors can be programmed in one step using the power from the refrigeration system. While it is not necessary, the motors can then be left daisy chained together for normal operation. This might be desirable if future adjustments are anticipated; but the motors do not need to be daisy chained in order to operate.
2. Using the supplied power cable, apply 115V to the motor (or 230V, cable not included). Take care to secure the motor when applying power.
   WARNING: DO NOT ATTACH A FAN BLADE TO THE MOTOR DURING BENCHTOP PROGRAMMING. SERIOUS INJURY COULD OCCUR.
3. Open the Azure® Programmer app on your smart device making certain the Bluetooth feature is active. **NOTE: ONLY 1 SMART DEVICE CAN COMMUNICATE WITH THE MODULE AT A TIME. THE USE OF MORE THAN ONE DEVICE WILL DISRUPT COMMUNICATION AND THE MOTOR MAY NOT ACCEPT INSTRUCTIONS.**
4. Select WATT MOTOR or 3.3 MOTOR and then select SCAN.
5. Select AZURE® MOTOR. The smart device is now connected wirelessly to the module.
6. Select CONNECT THE MOTOR to establish a communication path between the module to the motor. The display will now indicate the current motor settings. To refresh this screen, select READ. To enter into the programming mode, select PROGRAM.
7. Set the desired rotation by selecting CW or CCW. Set the desired motor speed by entering a value between 600 RPM and 2000 RPM and close the keypad by selecting NEXT until DONE appears; select DONE.
8. Select WRITE PARAMETERS. The motor will stop and then restart at the new setting(s).
9. **IMPORTANT: Select DISCONNECT THE MOTOR and then remove power to the motor to lock in the new settings. Turn off and disconnect the module. Select MOTOR DISCONNECT. Programming is complete.**

Programming the 3.3 Motor for 2-Speed Operation

The 3.3 motor can be converted to 2-speed operation for enhanced energy savings. An external 2-speed controller is not needed; only a thermistor kit is necessary (MARS No. 08515). When the thermistors determine the refrigeration cycle is on, the motor(s) will operate at high speed. When the refrigeration cycle is off/reduced, the motor(s) will slow to low speed. One motor with thermistors (master motor) can be connected to up to four additional motors without thermistors (slave motors) for a total of five motors to be controlled by a pair of thermistors. The slave motors will follow the programming of the master motor and therefore do not need to be programmed; they can be daisy chained together after the master motor is programmed. Benchtop programming of the master motor is recommended.

1. Connect a pair of thermistors to the black leads on the master motor.

   NOTE: Thermistors measure temperature while the motor logic looks at the temperature differential between the thermistors to determine refrigeration cycle. The thermistors are interchangeable; there is no warm/cool side.

2. Follow the set-up steps 1 through 6 on.

3. Set the desired rotation by selecting CW or CCW.

4. Set the HIGH SPEED RPM. This is the speed at which the motor will operate at during the refrigeration cycle. This is generally 1550 RPM.

5. Set the LOW SPEED RPM. This is the speed at which the motor will operate at during the refrigeration off cycle. This is generally 800 – 1000 RPM.

6. Select the TEMPERATURE DIFFERENTIAL. This is the difference in temperature that initiates motor speed change. The higher the differential, the longer it takes for the motor to change between high and low speeds. The lower the differential, the faster the motor will change speeds. 7° is a reasonable starting point.

7. Select WRITE PARAMETERS and DONE. The motor will stop and then restart at the new setting(s).

8. **IMPORTANT: Select DISCONNECT THE MOTOR and then remove power to the motor to lock in the new settings. Turn off and disconnect the module. Select MOTOR DISCONNECT. Programming is complete.**

Installing the Thermistors

1. Install the motors. Remove the wire ties and carefully daisy chain the motors together using the yellow/blue communication leads. It is recommended to push one end of the yellow/blue communication cable through the box for easy access to the wireless programmer for adjustments.

2. Attach the thermistors to refrigerant line. One thermistor should be attached to one side of the expansion valve; the other thermistor should be attached to the other side of the expansion valve. Either thermistor can be installed on either side of the valve. Silicone rubber self fusing tape (MARS No. 93299) and or low temp wire ties should be used to secure the thermistor to the surface of the refrigerant line.

3. Make certain all wires are secure and will not be drawn into the fan blades.

4. Test operation. Adjust the TEMPERATURE DIFFERENTIAL if the motors are not responding appropriately to changes in the refrigeration cycle.

Videos

Scan with your smartphone or see us on YouTube and marsdelivers.com under Resources.

- Azure® Wireless Programming Kit

- Programming the Azure® Watt Motor

- Programming the Azure® 3.3 Motor

- Apple

Azure ECM app

- Android

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Documents / Resources

	[AZURE 08505 Wireless Programming Module](#) [pdf] Instruction Manual 08505, 08505 Wireless Programming Module, Wireless Programming Module, Programming Module, Module

References

- 🌐 marsdelivers-contractors.com
- [User Manual](#)