

NODE Irrigation Controller Product Specification

Part 1 – General

1.1 The controller shall be a full-featured residential product for the purpose of battery-controlled irrigation management.

The automatic controller(s) shall be the NODE Series with 1, 2, 4, or 6 station outdoor models as manufactured by Hunter Industries Incorporated, San Marcos, California.

Part 2 – Controller & Mounting

2.1 The controller shall be available in a plastic outdoor configuration:

1. Pre-assembled controller dimensions shall be: Height 2.5"/6 cm, Diameter 3.5"/9 cm
2. The enclosure shall be plastic for outdoor use, mounted to a DC solenoid or inside a valve box
3. The optional solar panel dimensions shall be: Height 3.3"/8 cm, Width 3"/8 cm, Depth .63"/2 cm
4. The solar panel shall be mounted to a metal bracket secured to a wall or roof structure, wired to the charging cell and shall not exceed a distance greater than 200'/61 m away from the controller
5. The solar panel wire shall be UL rated 18 AWG/1 mm for outdoor sunlight exposure and placed in direct sunlight for at least 4 hours daily
6. Station outputs shall be 1, 2, 4, or 6 individual stations
7. Approvals shall be CE, IP68, FCC, C-tick

2.2 Warranty:

- A. The controller shall carry a conditional 2-year exchange warranty
- B. Solar panel accessory shall carry a conditional 2-year exchange warranty

Part 3 – Controller Hardware

3.1 Controller Display:

- A. Display shall be high resolution digital LCD

3.2 Control Panel:

- A. The controller shall have buttons to select values and functions
- B. The controller shall have a hard-reset feature returning existing settings to factory conditions

C. The controller shall have a sensor function to bypass a wired sensor

3.3 Controller Power:

A. The controller shall be powered by the following: 1 or 2 9V alkaline batteries, or solar panel with an 800 mAh charging cell

B. Each station output shall supply .05 mA 11 VDC for solenoid activation

C. Valves attached to the controller shall have only DC latching solenoids (P/N 458200)

3.4 Station Outputs:

A. The controller shall have 1, 2, 4 or 6-station wire output pairs

3.5 Sensor Inputs:

A. The controller shall have 1 sensor wire loop for a wired freeze sensor or rain sensor that interrupts power from the irrigation controller to the valves when rainfall or freeze exceeds a pre-selected amount

B. The controller shall provide power from the controller to the sensor

C. The controller shall work with normally-closed wired sensors

3.6 Pump/Master Valve Output:

A. The controller shall have 1 built-in pump/master valve (P/MV) terminal output on 2, 4, or 6 station models

B. The P/MV output shall supply .28 Amps for valve activation

Part 4 – Controller Programming and Operational Software

4.0 General:

A. Display settings shall read current day, month, year, and AM/PM or 24-hour clock

4.1 Programming:

A. The controller shall have 3 independent programs with unique day schedules, start times, and station run times

B. The controller shall have 4 start times per program per day

C. The controller shall operate 1 program at a time

D. Schedule:

1. The controller shall have a weekly 7-day schedule that allows user to choose day(s) of week for desired watering

2. Interval watering shall be between 1 and 31 days
 3. It shall also have a 365-day calendar clock to accommodate true odd and even watering
 4. Operation shall be available in automatic, semi-automatic and manual modes
 5. All programming shall be accomplished by use of buttons with user feedback provided by an LCD display
- E. Watering times shall be available from 0 minutes to 4 hours in 1-minute increments per station
- F. The controller shall provide the option to turn off specific watering days Monday through Sunday to comply with any state and local regulations
- G. Programmable Delay:
1. The controller shall have a programmable rain delay that turns off the controller for a predetermined period from 1 to 99 days
- H. The controller shall be equipped with a sensor bypass feature that allows the user to override a wired sensor that has suspended watering
- I. Backup:
1. The controller shall have a non-volatile memory circuit that holds program data indefinitely for easy retrieval

4.2 Additional Features:

- A. The controller shall have a battery life indicator displaying estimated remaining battery life
- B. The controller shall have seasonal adjust allowing for station run time adjustment from 10% to 150% in 10% increments to compensate for weather changes
- C. The controller shall have test programming to verify each station running successfully
- D. The controller shall have a diagnostic function to identify faulty solenoids or wire shorts