

## ICC 2 Irrigation Controller Product Specification

### Part 1 – General

- 1.1 The controller shall be a full-featured commercial-industrial product for the purpose of irrigation operation, management and monitoring of control valves and sensors. The controller shall be of a modular design that is provided with a standard 8 station output module. The controller shall be expandable with 4-stations, 8-stations, or a 22-station module up to 38 stations (plastic enclosure) or up to 54 stations (metal enclosures).

### Part 2 – Controller Enclosures

- 2.1 Controller Shall be available in following the options:

A. Plastic Wall Mount Enclosure

1. The controller shall be Hunter Industries model I2C-800-PL.
2. Pre-assembled controller shall have a height of 11.81 inches, width of 13.78 inches, and a depth of 5.12 inches.
3. The controller shall be furnished in an outdoor, weather resistant, wall mount plastic enclosure, pre-wired for remote control, with a key lock.
4. The controller shall provide modular expansion up to 38 stations.
5. All station outputs shall have MOV and copper induction coil surge suppression.
6. The enclosure shall be NEMA3R and IP-54 rated.
7. A 751CH key shall be mounted in the enclosure door for security.
  - a. Two (2) keys shall be provided per each controller.

B. Metal Wall Mount Enclosure / Powder-Coated Metal Pedestal

1. The controller shall be Hunter Industries model I2C-800-M. The metal wall mount may also be mounted on a matching gray powder-coated metal pedestal. The pedestal shall be Hunter Industries model ICC-PED.
2. Pre-assembled wall mount controller shall have a height of 16.14 inches, width of 12.99 inches, and depth of 5.12 inches
3. The controller shall be furnished in an outdoor, weather resistant, wall mount plastic enclosure, pre-wired for remote control, with a key lock.
4. The controller shall provide modular expansion up to 54 stations.
5. All station outputs shall have MOV and copper induction coil surge suppression.
6. The enclosure shall be NEMA3R and IP-54 rated.
7. A 751CH key shall be mounted in the enclosure door for security.

- a. Two (2) keys shall be provided per each controller.

C. Stainless Steel Wall Mount / Stainless Steel Pedestal

1. The controller shall be Hunter Industries model I2C-800-SS. The stainless wall mount may also be mounted on a matching type 316 stainless steel pedestal. The pedestal shall be Hunter Industries model ICC-PED-SS.
2. Pre-assembled wall mount controller shall have a height of 16.14 inches, width of 12.99 inches, and depth of 5.12 inches.
3. The controller shall be furnished in an outdoor, weather resistant, type 316 stainless steel wall mount metal enclosure, pre-wired for remote control, with a key lock.
4. The controller shall provide modular expansion up to 54 stations.
5. The enclosure shall be NEMA3R and IP-54 rated.
6. All station outputs shall have MOV and copper induction coil surge suppression.
7. A 751CH key shall be mounted in the enclosure door for security.

- a. Two (2) keys shall be provided per each controller.

D. Plastic Pedestal

1. The controller shall be Hunter Industries model I2C-800-PP.
2. Pre-assembled controller shall have a height of 39 inches, width of 24 inches, and depth of 17 inches.
3. The controller shall be furnished in an outdoor plastic pedestal with removable doors and a key lock, and prewired for wireless remote control.
4. The controller shall provide modular expansion up to 54 stations.
5. The enclosure shall be NEMA3R and IP-24 rated, and provided with a template and mounting hardware for setting the base in concrete.
6. All station outputs shall have MOV and copper induction coil surge suppression.
7. A 751CH key shall be mounted in the enclosure door for security.

- a. Two (2) keys shall be provided per each controller.

## 2.2 Warranty

- A. The controller shall be installed in accordance with the manufacturer's published instructions. The controller shall carry a conditional five-year exchange warranty. The automatic controller(s) shall be the ICC 2 series controller as manufactured for Hunter Industries Incorporated, San Marcos, California.

## Part 3 – Controller Hardware

### 3.1 Control Display

- A. Display shall be 2.5" diagonal monochrome, illuminated.
- B. All programming shall be accomplished by use of a programming dial and selection buttons with user feedback provided by a backlit LCD display.

### 3.2 Control Panel

- A. The front panel of the controller shall be removable to allow for programming without AC power, via a 9VDC battery.
- B. Front panel shall include a replaceable CR2032 battery for date/time backup during power outages.

### 3.3 Controller Power

- A. Transformer input shall be 120 VAC, 60Hz or 230 VAC 60Hz, depending on requirements.
- B. Transformer output shall be 24 VAC, 1.4A. Maximum output per station shall be 24 VAC, up to 0.56A.

### 3.4 Controller Surge Protection

- A. The controller transformer shall be equipped with an internal, self-resetting thermal circuit breaker to protect against overheating.

### 3.5 Station Modules

- A. Controller shall provide 4 (plastic enclosure) or 6 (metal enclosures) separate station module slots.
  - 1. Controller be expandable to 38 station (plastic) and 54 stations (metal).
  - 2. Controller shall use 4, 8, or 22-station output modules.
  - 3. Station modules shall be secured against field wiring tension by locking levers.
- B. Each station output shall supply up to .56 A 24VAC current for solenoid activation.
- C. Each station output shall have Metal Oxide Varistor (MOV) surge protection, supplemented by copper induction coils.
- D. The controller shall have self-diagnostic, electronic short circuit protection that detects a faulty circuit, continues watering the remainder of the program, and reports the faulty station on the display. The diagnostic function shall also be capable of being initiated manually by the user.
- E. The controller shall have a base model capacity of 8 stations, consisting of one 8-station output modules.
- F. Module Hardware
  - 1. The controller output modules shall have Metal Oxide Varistors (MOVs) and copper induction coils on each station output circuit to help protect the micro-circuitry from power surges.

### 3.6 Sensor Inputs

- A. The controller shall be compatible with an external weather sensor that can change seasonal adjustment automatically, based on local weather conditions, for maximum water savings. The external weather sensor shall include rain and freeze shutoff functions.
  - 1. The wireless external weather sensor shall be Hunter Industries model WSS-SEN.
  - 2. The hardwired wired external weather sensor shall be Hunter Industries model SOLARSYNCSEN.
  - 3. The sensor input shall also be compatible with standard normally-closed rain or other sensors for shutdown purposes.

### 3.7 Pump / Master Valve Outputs

- A. The controller shall have one built-in P/MV (24 VAC) output with a capacity of up to .0.56 A.

### 3.8 Common Wire

- A. A Common wire terminal is provided on the controller's power module, and additional commons are provided on each station output module.

### 3.9 SmartPort®

- A. The controller shall be pre-wired with a SmartPort® connector for easy connection of optional wireless remote controls.
- B. For international or short range uses, the wireless remote control shall be the Hunter model ROAM with a useful range of up to 1000 ft./330 m.
- C. For USA and longer range, where permitted, the wireless remote shall be Hunter model ROAM-XL with a useful range of up to 2 mi./3.5 km.

## **Part 4 – Programming and Operational Software**

### 4.0 General

- A. The controller shall have optional language customization kits that allow the front panel, display, and programming instructions inside the door to be changed to Spanish, French, Italian, German, Turkish and other languages.

### 4.1 Programming

- A. The controller shall have 4 independent programs with unique day schedules, start times, and station run times.
- B. Each program shall offer up to 8 start times.
- C. The controller shall be capable of running any two automatic programs simultaneously.
- D. The controller programs shall have 4 weekly schedule options to choose from:

1. 7-day calendar
  2. up to 31-day interval calendar
  3. odd day programming and even day programming
  4. It shall also have a 365-day calendar clock to accommodate true odd-even watering
- E. Each station shall be programmable in minutes of run time, from 1 minute to 12 hours.
- F. The controller shall be equipped with programmable Non Water Days to prevent watering on selected days of the week.
- G. Each program may be assigned a programmable delay between stations, to allow for slow-closing valves or pressure recharging.
1. Delays between stations shall be programmable in 1 second increments from 0 to 60 seconds and in 1-minute increments from 60 seconds up to 4 hours.
  2. A pump start/master valve circuit shall be included, and shall be programmable by station.
- H. The controller shall be equipped with a rain sensor bypass switch that allows the user to override a sensor that has suspended watering.
1. The controller shall allow the sensor input to be programmed by station, to exempt specified stations from sensor shutdowns.
  2. The controller shall allow the sensor input to be programmed by station, to exempt specified stations from sensor shutdowns.
- I. Program backup shall be provided by a non-volatile memory circuit that will hold the program data indefinitely.
1. The controller shall also track time of day and date during power outages by means of a replaceable, commonly available CR2032 lithium battery.

#### 4.2 Software

- A. The controller shall have manual Seasonal Adjust settings in 5% to 300% in 5% increments.
- B. The controller shall have automatic Seasonal Adjust settings when installed with a Solar Sync™ weather sensor.
- C. The controller shall be capable of determining and displaying the total run time input for each program.
1. It shall have the capability to store a program in backup memory for easy retrieval, and shall also have a test program for quick system checks.
- D. The controller shall allow Easy Retrieve™ backup of all programming and configuration to preserve the original configuration, which may be restored at any time.