



Control Specification: Rain Brain

1.0 General

1.1 The control system shall be comprised of a PC, 10.1" color touch screen, I/O Modbus interface, and/or Can bus interface, operating on a Linux operating platform. The controllers' primary function is to control the operation of pumps, solenoids, sound, lighting features, and monitoring the water quality of a water play facility. The master control shall have remote access and control capability with Ethernet or wireless communication.

2.0 Design

2.1 Construction: The controllers' enclosure shall be a NEMA 4 fiberglass enclosure for indoor and outdoor application. The enclosure shall have hinged door with latches that can be padlocked. Enclosure sizes vary depending on the number and type of outputs. The master control shall have a 10.1" touch screen to program and monitor the slave controls. All electrical ports entering and exiting the enclosure shall be water tight plug connectors, and have a screw cap when not in use. All electrical devices and components shall be compliant with one or more of the following; UL, CE, CSA, RoHS, and the FCC.

2.2 Power Requirements: 120 Volts, 20 Amps.

2.3 Interface: The user interface on the master control shall be a 10.1" color touch screen. The resolution shall be 1024x600.

2.4 Input and Output device: Control shall communicate with devices utilizing a Modbus and/or Can Bus to controlled device. There shall be no less than (32) I/O ports and shall operate on 24VDC. The control shall have no less than (2) RS-232 Serial ports, (2) USB ports, (1) PS/2 connections for external mouse and keyboard, (1) VGA.

2.5 Fail Safe: The CPU shall monitor and shut down the system in the event one or more pumps devices alarm or fail. The control shall send a trouble alert in an email or other specified method.

2.6 Environmental: Operating temperature range shall be between 0°C to 45°C, and 30% to 90% relative humidity (non condensing)

2.7 Memory: Shall have not less than 80GB HDD, 1GB DDR2, .

2.8 Other features: No fan design, Auto power on after power failure, wireless ready, Boot from LAN.

3.0 Packaging

3.1 Units shall be packaged to protect against damage during transit.

4.0 Installation:

4.1 Drawings and instructions shall be supplied by manufacturer for ease of installation.

5.0 Warranty

5.1 Limited Warranty shall be furnished by manufacturer against defects in workmanship and materials for a period of one year from date of commissioning by Rain Drop Products factory representative.

5.2 The following conditions are Warranty Exclusion:

- 5.2.1 Normal wear and tear
- 5.2.2 Abuse, unreasonable use, mistreatment, or neglect
- 5.2.3 Damage caused by other equipment ,systems , or supply power with which the device is used
- 5.2.4 Device Serial Number has been removed or defaced
- 5.2.5 Devices that are determined to be stolen
- 5.2.6 Devices that are not started and commissioned by a factory Rain Drop Products representative.

5.3 LIMITATIONS OF LIABILITY, Under no circumstances, whether as a result of breach of contract, breach of warranty, tort, strict liability or otherwise, will AC be liable for consequential, incidental, special or exemplary damages, including, but not limited to, loss of profits, loss of use or damage to any property or equipment, cost of capital, cost of substitute product, facilities or services, down time costs or claims of claimant's customers. AC 's liability for all claims of any kind or for any loss or damages arising out of, resulting from or concerning any aspect of this warranty or from the Lighting Products or services furnished hereunder shall not exceed the price of the specific Lighting Product which give right to the claim, except in accordance with AC's Technical Engineering Service Program.