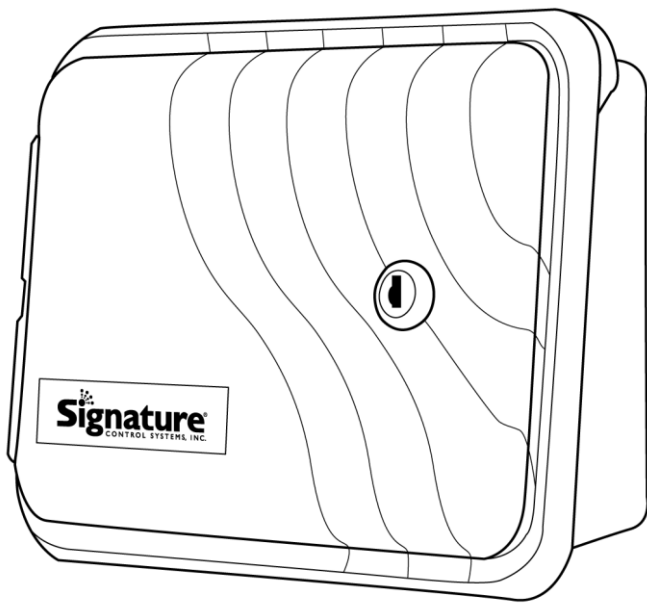# Signature
CONTROL SYSTEMS, INC.

Quick Start Guide

Share™
8700 Series
Irrigation Controllers

Models: 8700, 8700VM, 8700VM (Pedestal), 8700D

Quick Start Guide

For Programming and Setup Instructions Visit:
www.SCS-Share.com

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INSTALLATION INSTRUCTIONS

Mounting the Controller

The 8700 Series can be mounted indoors or outdoors. Find a location near a 120V wiring source (230/240V for European and Australian models). Install the 8700 near eye level (8700 and 8700D only) if possible. Use the supplied template to mark and pre-drill pilot holes in the wall, using anchors if necessary. Remove the two screws from the transformer cover and remove the cover. Drill out the corresponding mounting holes in the controller cabinet. Insert screws through the holes and mount the cabinet to the wall.

Wiring the Transformer

NOTE: Refer to and follow local codes if different from these instructions.

CAUTION: Disconnect the 120V (230/240V) power source before wiring the transformer. Complete all wiring and installation before connecting the transformer to the power source. This will avoid accidental shorting which could damage the controller.

Power supply wires and connections are to be a minimum of ordinary or greater duty. Remove the transformer cover to provide access to the internal transformer. Attach AC wires to the transformer wires using wire nuts. Ensure the earth ground wire is attached to the green wire with yellow stripes (ground wire). Please check local codes for the grounding requirements in your area. Bundle and tighten the excess wire with the attached cable tie loop to prevent loose wiring from touching any secondary circuits. Replace the transformer cover and tighten the two screws.

NOTE: Failure to ground the controller properly may cause severe damage to the controller and/or personal property and will void the warranty.
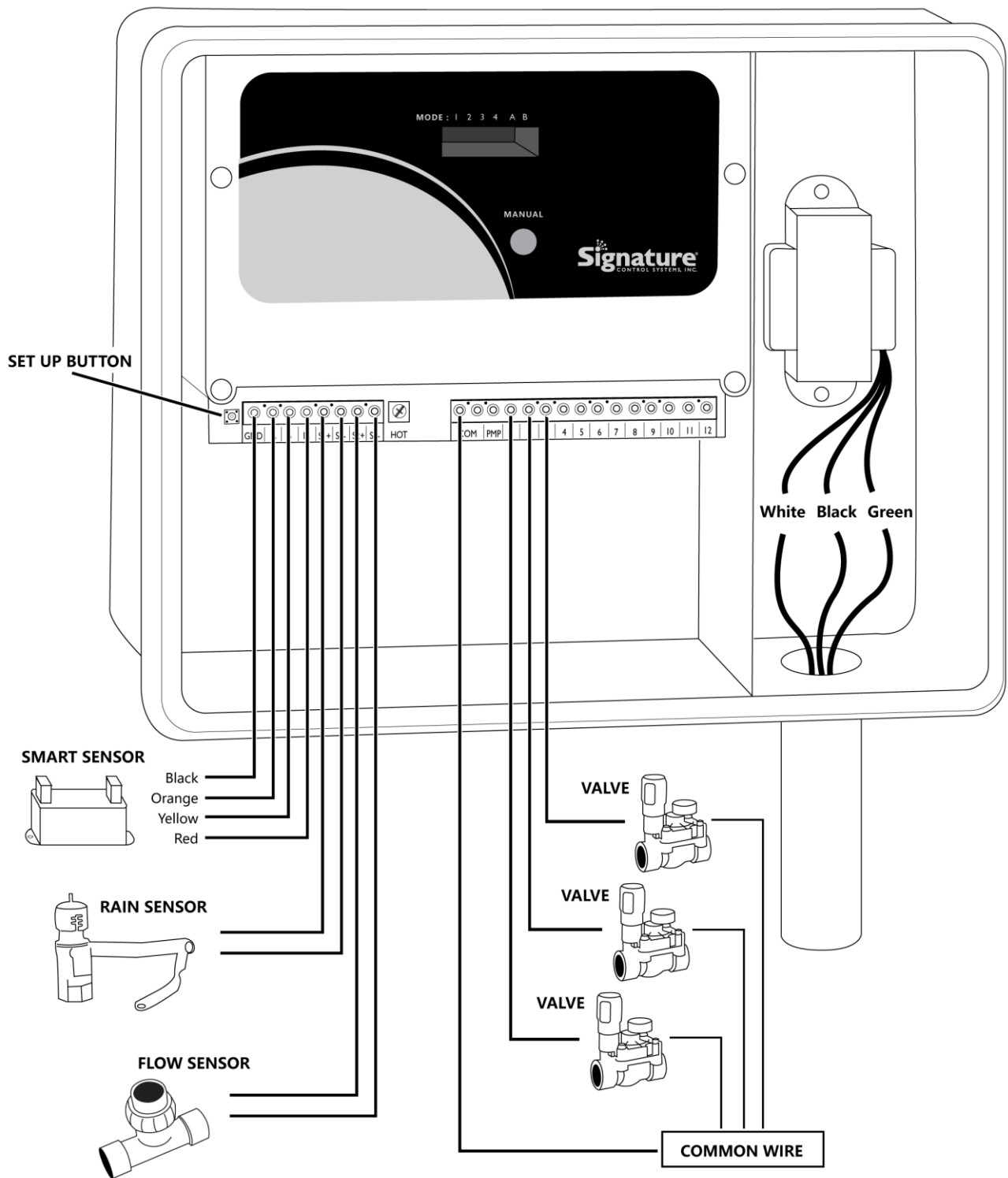
Figure 1

SET UP BUTTON

MODE : 1 2 3 4 A B

MANUAL

Signature
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GND   S+ S- S+ S-   HOT   COM PMP   4 5 6 7 8 9 10 11 12

White Black Green

SMART SENSOR
Black
Orange
Yellow
Red

VALVE

RAIN SENSOR

VALVE

VALVE

FLOW SENSOR

COMMON WIRE

Signature
CONTROL SYSTEMS, INC.

Figure 2 (8700D)

SET UP BUTTON

GND · · · S+ S- S+ S-   HOT N U SIG COM PMP 1 2 3 4 5 6 7 8 9 10 11 12

White Black Green

SMART SENSOR
Black
Orange
Yellow
Red

RAIN SENSOR

FLOW SENSOR

DECODER   DECODER   DECODER

VALVE   VALVE   VALVE
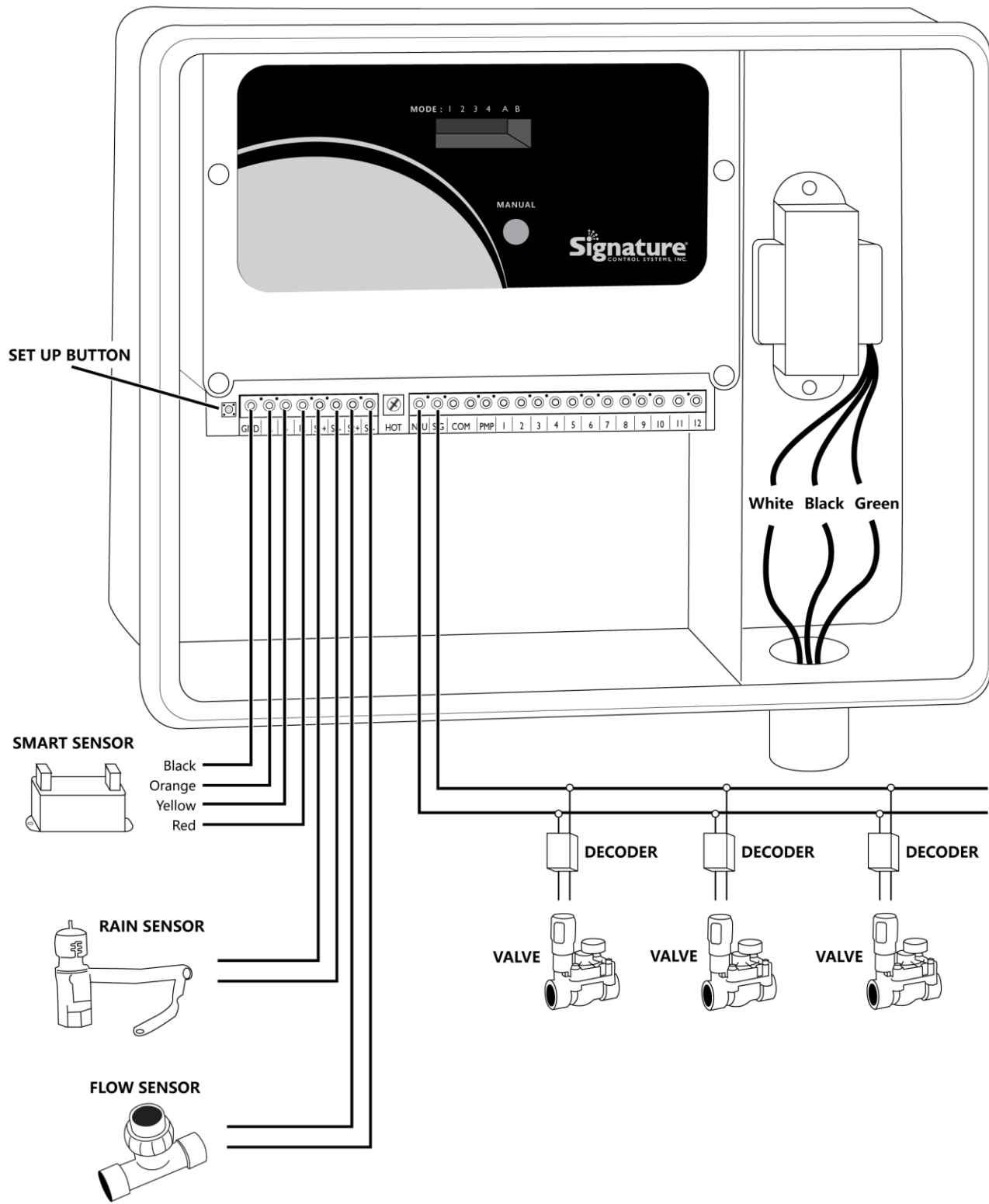
Terminal Strip

All zone, pump and sensor wire connections are made inside the 8700 controller. The terminal strip in the 8700 accepts 14 AWG (1.6mm) wire or smaller.

Connecting Master Valve or Pump-Start Relay

8700 Series controllers are equipped with a shared circuit to operate either a pump-start relay or a master valve. Connect one wire from the pump-start relay to COM (common) on the terminal strip and the other to PMP/MV (pump/master valve) on the terminal strip. Refer to the pump-start relay manufacturer's instructions for specific installation details.

Connecting Sensors

8700 Series controllers are equipped with two integrated sensor terminals and one additional Smart Sensor port: Any normally open or normally closed sensor and many "pulse" sensors may be used on the sensor terminals. To attach additional sensors purchase and install Signature's Smart Sensor Module to the Smart Sensor Port (see Figures 1 and 2).

CONNECTING TO THE INTERNET

8700 Series controllers connect to the internet using either a cellular or Wi-Fi connection. Check your model number to determine which is used.

Cellular Connection:

If your 8700 is equipped with a built in cellular modem, it will automatically connect to the internet upon powering up. You will know the controller is online when LED1 is flashing, LED 2 is solid and the remaining LEDs are off. This normally takes 2 to 3 minutes after power up.

Wi-Fi Connection:

If your 8700 is equipped with built in Wi-Fi, it will easily easy connect to the internet through a home or business' Wi-Fi system. There are two ways to pair your controller to your router: Method 1: by pushing the "WPS" button on your router or, Method 2: by using our mobile app to manually enter your router's name and password into the controller. Select the method that is easiest for you.

Method 1 (WPS METHOD): Pairing Your Controller to Your Router by Pushing the WPS (Wi-Fi Protected Setup) Button on Your Router

Step 1: Push the "WPS" button on your *router*. Refer to your router's owners' manual for information about where to find this button on your router. The button may have an icon that looks something like one of these:

Step 2: Within 1 minute of pressing the *router's* WPS button push and hold the "Set Up" and "Manual Start" buttons on your *8700 controller* simultaneously for approximately 5 seconds or until LED 1 remains flashing and all other LEDs are off (See Figure 3).

Figure 3
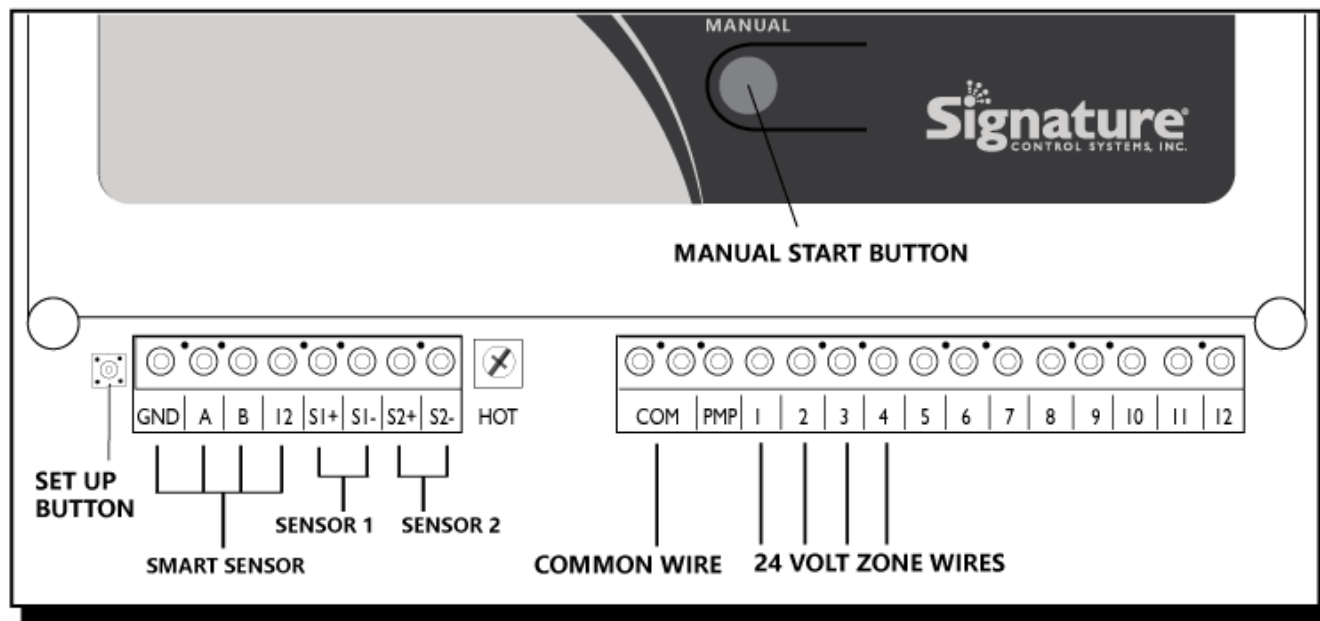
Step 3: Your controller will automatically establish connection to your router and connect to the internet. You will know the process is complete and the controller is connected online when LED 1 is flashing and LED 2 is solid. This process should take approximately 2 to 3 minutes.

Method 2 (MOBILE APP METHOD): Pairing Your Controller to Your Router Using Our Mobil App

What you will need:

1) SCS Mobile App downloaded onto your Apple or Android phone*
2) Your Router's SSID (Name)
3) Your Router's Password

*NOTE: THE SCS MOBILE APP IS AVAILABLE FOR FREE AT THE IPHONE AND ANDROID STORES. FROM THE APP STORE, SEARCH FOR "SCS SHARE" TO DOWNLOAD THE APP.

Step 1: Press the "Setup" button on the controller's circuit board for 5 seconds or until LED 1 is flashing and all other LEDs are off (See Figure 3). Release the button then wait approximately an additional 30 seconds more until LEDs 1, 3 and 4 are flashing and LED 2 is off before proceeding to the next step.

Step 2: Go to the "Settings" page of your mobile phone. Select "Wi-Fi" then, "CHOOSE A NETWORK."

Your controller should now be visible on the list of networks to connect to. Look for "SCS-ShareXXXX", where XXXX is a unique code specific to your controller. If there is no unique code in place of XXXX, continue the setup process anyway. This will not affect your controller's performance or ability to pair your controller to the router.
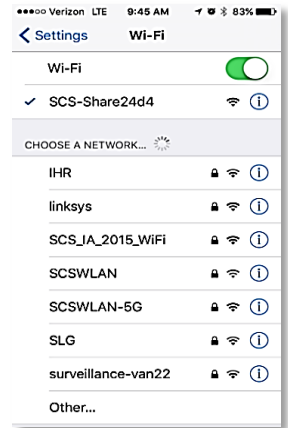
Step 3: Select your controller as the access point you want to connect to then exit out of the "Settings" page of your mobile phone.
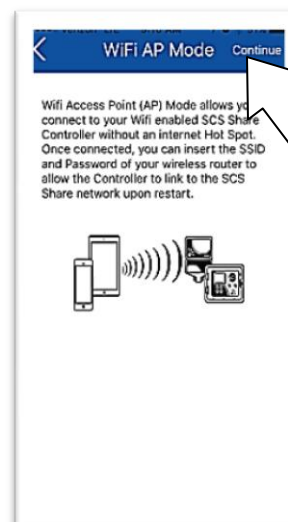
Step 4: Open the SCS SHARE app on your mobile phone. At the "log in" page you should now see "WiFi APMode" instead of "Log In."

Click on "WiFi APMode" to continue.

Step 5: A welcome screen will be displayed.

Click "Continue".

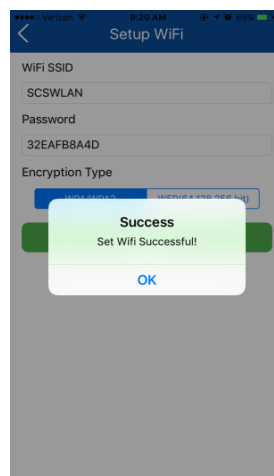**Step 6:** Click on "Set WiFi"

Step 7: Enter your router's SSID (name) and Password and select the Encryption type. Then press "Send."

(Note: If you do not know your SSID (Router Name) and Password, return to the previous screen and click "Read WiFi").

Step 8: You should receive the message, "Success. Set WiFi Successful."

Click OK

Step 9: Return to your controller and press the SET UP button one more time. Your controller's LEDs will begin flashing in what appears to be a random sequence, indicating your controller is now paired to your router and is attempting to connect to the internet. Once internet connection has been established, LED1 will remain flashing and LED2 will be solid. This process normally take approximately 2 to 3 minutes.

CREATING A USER ACCOUNT

Step 1: Go to www.SCS-Share.com.

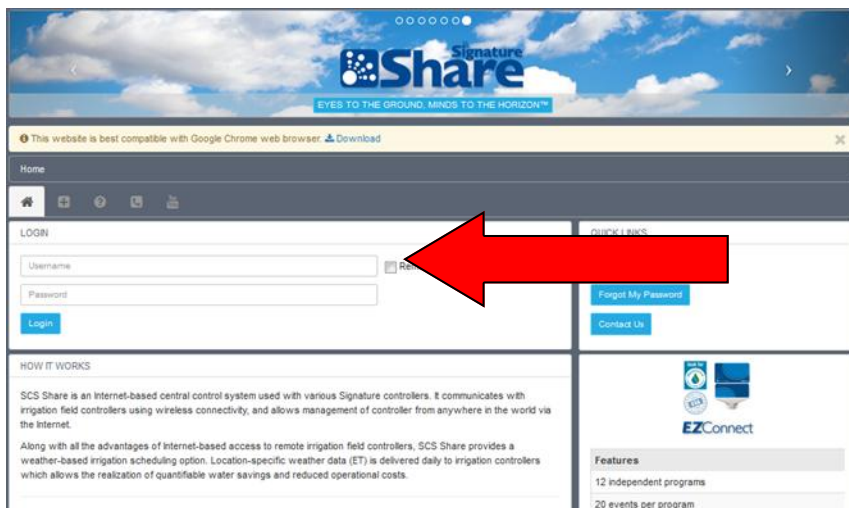**Step 2:** Click on "Create New Account."
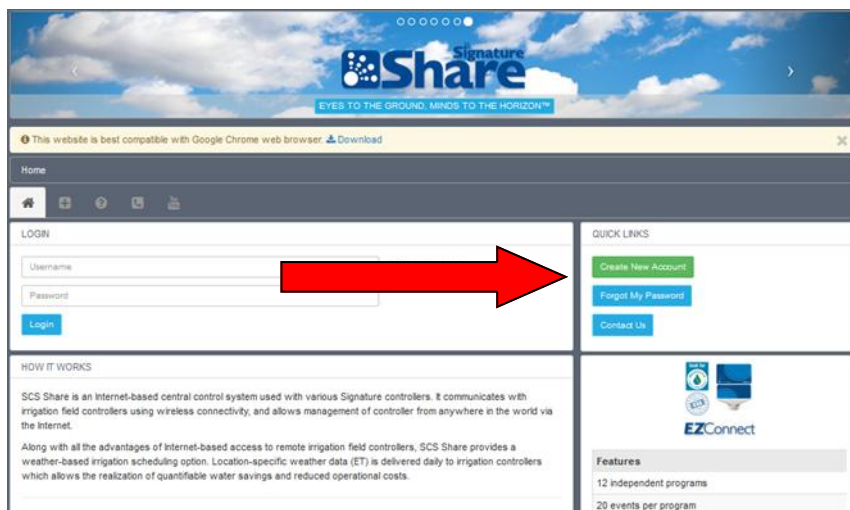
Step 3: Fill out the required information and click "Apply."

Note: Do not enter any spaces between the letters in the "Captcha" code.

Step 4: Log into the account you just created using your username and password.

DOWNLOADING THE MOBILE APP

The SCS Mobile App is available for free at the iPhone and Android App Stores. Search for "SCS Share" to find and download the app.

Versions Supported:
iOS: 8.4 or above (iPad and iPhone supported)
Android: 4.4 or above, V 5.0 recommended. (Tablet and smart phone supported)

TECHNICAL DATA

1. 24 VAC internal transformer; 30 VA, 1.25A for zones and logic. The transformer can run a pump or master valve and two zone valves, maximum.
2. *Surge Protection*: 600 watts TVS on zone outputs (See Circuit Breaker below).
3. *Sensor Operation*: The 8700 is equipped with two integrated normally open, normally closed, or pulse type flow sensor ports and an additional Smart Sensor Port. Each sensor port is user defined via the SCS-Share.com web site or the SCS-Share iPhone/Android App.
4. *Solenoid Capacity*: The 8700, 8700D and 8700VM will operate a maximum of three (3) solenoids concurrently, providing one is the pump/master valve. Each zone output can operate one or two solenoids.

> I inrush .52A max
> I hold .33A max

5. *Temperature Range*:
Operating: -5° to +55° C (23° to 131° Fahrenheit)
Storage: -30° to +85° C (-22° to 185° Fahrenheit)
6. An electronic poly-switch is incorporated on the interconnect PCB of the controller. This type of circuit breaker does not require resetting or replacement by the user.

LED TABLE

LED State	LED 1	LED 2	LED 3	LED 4
Online	Flashing	Solid	Off	Off
Active Station	Off	Off	Solid	Solid
Wi-Fi AP Mode	Flashing	Off	Flashing	Flashing
Firmware Updating	Flashing	Flashing	Flashing	Flashing
Poor Internet Connection	Slow Flash	Slow Flash	Slow Flash	Slow Flash

STATEMENT OF CONDITIONS

In the interest of improving internal design, operational function, and/or reliability, Signature Control Systems, Inc. reserves the right to make changes to the product described in this document without notice. Signature Control Systems, Inc. does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

Federal Communications Commission (FCC) Compliance Notice: Radio Frequency Notice
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canadian Department of Communications Radio Interference Regulations
This digital apparatus (SIGNATURE CONTROL SYSTEMS Model 8700 does not exceed the Class B limits for radio-noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

WARRANTY SIGNATURE CONTROL SYSTEMS, INC LIMITED WARRANTY AND DISCLAIMER: TURF PRODUCTS

1) Signature Control Systems, Inc. ["SCS"] warrants to the owner (the "Buyer") that all new products, as featured in the current Signature Turf Catalog at date of purchase will be free from original defects in materials and workmanship for the time periods described below, provided they are used for approved purposes under manufacturer's recommended specifications.

2) This warranty is given expressly and in place of all other expressed or implied warranties of merchantability and fitness for a particular purpose. This is the only warranty made by Signature Control Systems, Inc for Turf products. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

3) During the warranty period, SCS will repair or replace, at SCS's sole discretion, any part to be found defective with prior written authorization. Buyers remedy is limited solely to the replacement or repair of the defective parts.

4) This warranty does not apply (i) to Acts of God including without limitation, lightning and flooding; or (ii) to products not manufactured by SCS when used in conjunction with SCS products; or (iii) where equipment is used, or installation is performed in any manner contrary to SCS's specifications and instructions, nor where equipment is altered or modified.

5) Signature Control Systems, Inc. reserves the right to redesign, alter or modify its products at anytime and does not, and will not, assume any liability with respect to obsolete inventory arising there from.

6) Neither SCS nor its affiliates are liable for any indirect, incidental or consequential damages in connection with the use of equipment, including but not limited to: vegetation loss, the cost of substitute equipment or services required during periods of malfunction or resulting non-use, property damage or personal injury resulting from installer's actions, whether negligent or otherwise.

7) No agent or representative of SCS, nor of any distributor, retailer, lessor or installer of the system, has any express or implied authority to make any representation, promise, guarantee or warranty not stated here. SCS disclaims any warranty of merchantability or fitness for a particular purpose, or any other warranties that extend beyond those described here.

8) Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. All implied warranties, including those of merchantability and fitness for use, are limited to the duration of this express warranty.

9) Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

10) STANDARD PRODUCTS LIMITED 1-YEAR WARRANTY: All SCS products are covered by this warranty for a period of one year from the date of supply except as noted below:

   a) Signature Turf Gear Drive Rotors, Spray-Heads & Valves: Five (5) years; from original sale date.

   b) Signature Turf & Satellite Controllers: Two (2) years; from original sale date.

   c) Repairs & Refurbished Components: Balance of product warranty or three (3) months, from repair date, whichever occurs first, on materials and labor only.

   d) Brass Quick Coupler Valve Bodies: Five (5) years; from original sale date.

   e) Solenoid Coils: One (1) year; from original sale date.

11) TECHNICAL ADVICE: SCS warranties as hereinabove set forth shall not be enlarged, diminished or affected by, and no obligation or liability shall arise or grow out of, SCS rendering of technical advice or service in connection with Buyer's order or the products furnished.

12) QUESTIONS: If you have any questions concerning the warranty or its application, please email your question to info@scsmail.com or write to:

Signature Control Systems, Inc
Turf Division
8800 N. Allen Rd.
Peoria, Illinois 61615 U.S.A.
Attention: Customer Service

13) CLAIMED DEFECTIVE MERCHANDISE POLICY. Products returned to the retailer or distributor and claimed defective must be inspected by an authorized SCS representative to determine warranty compliance. If approval is granted, products will be repaired or replaced, or a credit memorandum covering the net purchase price will be issued.
14) In the event of a defect: If a defect arises in a Signature product or part within the warranty period, you should contact your Signature retailer, distributor, or Signature Control Systems, Inc. at www.signaturecontrolsystems.com

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