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# INSTALLATION / OPERATIONS MANUAL STEPS SERIES 2 CONTROL BOX



# NOTES

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# The Shelly Cloud Mobile Application

Shelly Cloud gives you opportunity to control and adjust all Shelly<sup>®</sup> devices from anywhere in the world. The only thing you need is connection to the Internet and our mobile application, installed on your smartphone or tablet. To install the application please visit Google Play or App Store.

#### Registration

The first time you open the Shelly Cloud mobile app, you have to create an account which can manage all your Shelly<sup>®</sup> devices. Forgotten Password In case you forget or lose your password, just enter the e-mail address you have used in your registration. You will then receive instructions on how to change your password.

#### WARNING!

Be careful when you type your e-mail address during the registration, as it will be used in case you forgot your password. After registering, create your first room (or rooms), where you are going to add and use your Shelly devices. Shelly Cloud allows easy control and monitoring using a mobile phone, tablet or PC.

# NOTES

# Pairing the Steps S2 WiFi operated Relay Switch to the network

## Step 1

Install Shelly to the power grid following the schemes described above and place it into the console. After turning the power on Shelly will create its own WiFi network (AP).

*WARNING:* If you do not see an active WiFi network with SSID like shelly1-35FA58, reset the Device. If the Device has been powered on, you have to restart by powering it off and on again. After turning the power on, you have one minute to press 5 consecutive times the button/switch (Use a jumper wire by hand between terminal L and SW to preform this operation) connected to SW. You have to hear the Relay trigger itself. After the trigger sound, Shelly should return to AP Mode. If not, please repeat.

## Step 2

When Shelly has created an own WiFi network (own AP), with name (SSID) such as shelly1-35FA58. Connect to it with your phone, tablet or PC.

# Pairing the Steps Sensor Bulb to the network

# Step 1

Install the battery in the Steps Sensor Bulb. Battery Type: 3V DC-CR123A Place your Steps Sensor Bulb in the wifi network where you want to use it. Press the Button - the LED should turn on and flash slowly. WARNING: If the LED does not flash slowly, press and hold the Button for at least 10 seconds. The LED should then flash quickly.

**Note**: Go to Setting/Network & Internet/wifi on your smart phone. Search for the device that you are trying to add. When you find it on the wifi list go to Step2 and 3.

# Pairing the Steps Sensor Bulb to the Network Continued

## Step 2

Choose "Add Device". In order to add more devices later, use the Menu at the top right corner of the main screen and click "Add Device". Type the name and password for the WiFi network, to which you want to add Shelly.

## Step 3

If using iOS: you will see the following screen On your iOS device open Settings > WiFi and connect to the WiFi network created by Shelly, e.g. ShellyHT-35FA58. - If using Android your phone will automatically scan and include all new Shelly devices in the WiFi network, that you defined. Upon successful Device Inclusion to the WiFi network you will see the following pop-up:

#### Step 4

Approximately 30 seconds after discovery of any new devices on the local WiFi network, a list will be displayed by default in the "Discovered Devices" room.

#### Step 5

Select Discovered Devices and choose the Shelly device you want to include in your account.

## Step 6

Enter a name for the Device. Choose a Room, in which the device has to be positioned. You can choose an icon or upload a picture to make it easier to recognize. Press "Save Device".

## Step 7

To enable connection to the Shelly Cloud service for remote control and monitoring of the Device, press "yes" on the following pop-up.

# NOTES

# Sorghum EMC (Equilibrium Moisture Content)

#### **Outside Air Relative Humidity**

Outside Air Temp	46%	52%	58%	65%	72%	78%	85%	92%	99%
30	11.8	12.5	13.2	14.1	15.1	16.1	17.6	19.8	26.2
35	11.7	12.4	13.1	14.0	15.0	16.0	17.5	19.8	26.1
40	11.6	12.3	13.0	13.9	14.9	15.9	17.4	19.7	26.1
45	11.5	12.2	12.9	13.8	14.8	15.8	17.3	19.6	26.0
50	11.4	12.1	12.8	13.7	14.7	15.7	17.2	19.5	25.9
55	11.3	12.0	12.7	13.6	14.6	15.7	17.2	19.4	25.9
60	11.2	11.9	12.6	13.5	14.5	15.6	17.1	19.3	25.8
65	11.1	11.8	12.5	13.4	14.5	15.5	17.0	19.3	25.7
70	11.0	11.7	12.4	13.3	14.4	15.4	16.9	19.2	25.7
75	10.9	11.6	12.4	13.3	14.3	15.3	16.8	19.1	25.6
80	10.9	11.5	12.3	13.2	14.2	15.2	16.8	19.1	25.5
85	10.8	11.5	12.2	13.1	14.1	15.2	16.7	19.0	25.5
90	10.7	11.4	12.1	13.0	14.0	15.1	16.6	18.9	25.4
95	10.6	11.3	12.0	12.9	14.0	15.0	16.5	18.8	25.4
100	10.5	11.2	11.9	12.9	13.9	14.9	16.5	18.8	25.3
110	10.4	11.1	11.8	12.7	13.7	14.8	16.3	18.6	25.2

# Pairing the Steps Sensor Bulb to the Network Continued

#### **Steps Sensor Bulb Settings**

After your Steps Sensor Bulb is included in the app, you can control it, change its settings and automate the way it works. To enter the details menu of the device, click on it's name. From there you may control the device, as well as edit its appearance and settings.

## Sensor settings

**Temperature Units**: Setting for change of the temperature units. • Celsius • Fahrenheit

**Send Status Period**: Define the period (in hours), in which Steps Sensor Bulb will report its' status. Possible range: 1 ~ 24 h.

**Temperature Threshold**: Define the temperature Threshold in which Steps Sensor Bulb will "wake up" and send status. The value can be from 1° up to 5° or you can disable it.

**Humidity Threshold**: Define the humidity Threshold in which Steps Sensor Bulb will "wake up" and send status. The value can be from 0.5 up to 50% or you can disable it.

# Pairing the Steps Sensor Bulb to the Network Continued

# Internet/Security

**WiFi Mode – Client**: Allows the Steps Sensor Bulb to connect to an available WiFi network. After typing the details in the respective fields, press Connect.

**WiFi Mode – Access Point**: Configure Steps Sensor Bulb to create a WiFi Access point. After typing the details in the respective fields, press Create Access Point.

**Restrict Login**: Restrict the web interface (IP in the Wi-Fi network) of Steps Sensor Bulb with a Username and Password. After typing the details in the respective fields, press Restrict Login.

#### Settings

#### **Firmware Update**

Update the firmware of Steps Sensor Bulb, when a new version is released.

#### **Time Zone and Geo-location**

Enable or Disable the automatic detection of Time Zone and Geolocation.

#### **Factory Reset**

Return Steps Sensor Bulb to its factory default settings.

#### **Device Information**

Here you can see the: • Device ID - Unique ID of Steps Sensor Bulb • Device IP - The IP of Steps Sensor Bulb in your Wi-Fi network

## **Edit Device**

From here you can edit: • Device Name • Device Room • Device Picture When you are done, press Save Device.

# Rice EMC (Equilibrium Moisture Content)

#### **Outside Air Relative Humidity**

Outside Air Temp	46%	52%	58%	65%	72%	78%	85%	92%	99%
30	12.5	13.1	13.7	14.5	15.4	16.3	17.7	19.7	25.5
35	12.2	12.8	13.4	14.2	15.1	16.1	17.4	19.5	25.3
40	11.9	12.6	13.2	14.0	14.9	15.8	17.2	19.2	25.1
45	11.7	12.3	13.0	13.8	14.7	15.6	17.0	19.0	25.0
50	11.5	12.1	12.7	13.6	14.5	15.4	16.8	18.9	24.8
55	11.3	11.9	12.5	13.4	14.3	15.2	16.6	18.7	24.6
60	11.1	11.7	12.3	13.2	14.1	15.0	16.4	18.5	24.5
65	10.9	11.5	12.2	13.0	13.9	14.9	16.2	18.3	24.4
70	10.7	11.3	12.0	12.8	13.7	14.7	16.1	18.2	24.2
75	10.5	11.1	11.8	12.6	13.6	14.5	15.9	18.0	24.1
80	10.3	11.0	11.6	12.5	13.4	14.4	15.8	17.9	24.0
85	10.2	10.8	11.5	12.3	13.3	14.2	15.6	17.8	23.9
90	10.0	10.7	11.3	12.2	13.1	14.1	15.5	17.6	23.8
95	9.9	10.5	11.2	12.0	13.0	13.9	15.4	17.5	23.6
100	9.7	10.4	11.0	11.9	12.8	13.8	15.2	17.4	23.5
110	9.5	10.1	10.8	11.6	12.6	13.6	15.0	17.2	23.3

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# Wheat EMC (Equilibrium Moisture Content)

#### **Outside Air Relative Humidity**

Outside Air Temp	46%	52%	58%	65%	72%	78%	85%	92%	99%
30	12.3	12.8	13.4	14.1	15.0	15.8	17.1	19.0	24.5
35	12.0	12.6	13.2	13.9	14.7	15.6	16.9	18.8	24.3
40	11.8	12.3	12.9	13.7	14.5	15.4	16.6	18.6	24.1
45	11.6	12.1	12.7	13.5	14.3	15.2	16.4	18.4	23.9
50	11.3	11.9	12.5	13.3	14.1	15.0	16.3	18.2	23.8
55	11.1	11.7	12.3	13.1	13.9	14.8	16.1	18.0	23.6
60	11.0	11.5	12.1	12.9	13.8	14.6	15.9	17.9	23.5
65	10.8	11.4	12.0	12.7	13.6	14.5	15.8	17.7	23.4
70	10.6	11.2	11.8	12.6	13.4	14.3	15.6	17.6	23.2
75	10.4	11.0	11.6	12.4	13.3	14.2	15.5	17.4	23.1
80	10.3	10.9	11.5	12.3	13.1	14.0	15.3	17.3	23.0
85	10.1	10.7	11.3	12.1	13.0	13.9	15.2	17.2	22.9
90	10.0	10.6	11.2	12.0	12.9	13.7	15.1	17.1	22.8
95	9.9	10.5	11.1	11.8	12.7	13.6	14.9	16.9	22.7
100	9.7	10.3	10.9	11.7	12.6	13.5	14.8	16.8	22.6
110	9.5	10.1	10.7	11.5	12.4	13.3	14.6	16.6	22.4

# Automatic Operation based on Humidity and Temperature.

## Set it up in Scenes



Fan will run when the humidity is between 80% and 20% and when the temperature is between 26.6 celuis (80 degree F) and -1.1 celuis ( 30 F).



The fan will turn off when the humidity is greater than 82% or less than 18% or the temperature is greater than 27.7 celeuis (82 F) or less than 3.3 celeuis (38 F).

# Installation Instructions for the Steps S2 Control Box



Mount the Steps S2 Control Box on the fan housing close to the controls on the fan.



Wiring Schematic hookup for Fan Switch

## Wires are from left to right

- N Neutral to power switch
- L Power to the switch, from the control circuit, 110 to 250 VAC
- L1 or L Control Circuit (power in) from motor starter
- 0 Control Circuit (power out) to motor starter

# **CORN EMC (Equilibrium Moisture Content)**

Outside Air Relative Humidity

Outside Air Temp	46%	52%	58%	65%	72%	78%	85%	92%	99%
30	13.4	14.2	15.0	15.9	17.1	18.2	19.8	22.3	29.1
35	13.0	13.8	14.6	15.6	16.7	17.8	19.5	21.9	28.9
40	12.6	13.4	14.2	15.2	16.3	17.5	19.1	21.6	28.6
45	12.3	13.1	13.9	14.9	16.0	17.2	18.8	21.4	28.4
50	12.0	12.7	13.5	14.6	15.7	16.9	18.6	21.1	28.2
55	11.6	12.4	13.3	14.3	15.4	16.6	18.3	20.9	28.0
60	11.4	12.1	13.0	14.0	15.2	16.3	18.1	20.6	27.8
65	11.1	11.9	12.7	13.8	14.9	16.1	17.8	20.4	27.6
70	10.8	11.6	12.5	13.5	14.7	15.9	17.6	20.2	27.4
75	10.6	11.4	12.2	13.3	14.5	15.6	17.4	20.0	27.3
80	10.3	11.1	12.0	13.1	14.2	15.4	17.2	19.8	27.1
85	10.1	10.9	11.8	12.8	14.0	15.2	17.0	19.6	26.9
90	9.9	10.7	11.6	12.6	13.8	15.0	16.8	19.4	26.8
95	9.7	10.5	11.4	12.4	13.6	14.9	16.6	19.3	26.7
100	9.5	10.3	11.2	12.2	13.5	14.7	16.5	19.1	26.5
110	9.1	9.9	10.8	11.9	13.1	14.3	16.1	18.8	26.3

# SOYBEAN EMC (Equilibrium Moisture Content)

#### **Outside Air Relative Humidity**

Outside Air Temp	46%	52%	58%	65%	72%	78%	85%	92%	99%
30	9.4	10.4	11.5	12.8	14.2	15.7	17.8	20.9	29.4
35	9.3	10.3	11.3	12.6	14.1	15.5	17.7	20.8	29.3
40	9.1	10.1	11.2	12.5	13.9	15.4	17.5	20.7	29.2
45	9.	10.	11.0	12.3	13.8	15.3	17.4	20.6	29.1
50	8.8	9.8	10.9	12.2	13.7	15.1	17.3	20.4	29.0
55	8.7	9.7	10.7	12.1	13.5	15.0	17.2	20.3	28.9
60	8.5	9.5	10.6	11.9	13.4	14.9	17.	20.2	28.8
65	8.4	9.4	10.5	11.8	13.3	14.8	16.9	20.1	28.8
70	8.2	9.3	10.3	11.7	13.2	14.6	16.8	20.0	28.7
75	8.1	9.1	10.2	11.5	13.0	14.5	16.7	19.9	28.6
80	8.	9.	10.1	11.4	12.9	14.4	16.6	19.8	28.5
85	7.8	8.9	9.9	11.3	12.8	14.3	16.5	19.7	28.4
90	7.7	8.7	9.8	11.2	12.7	14.2	16.4	19.6	28.4
95	7.6	8.6	9.7	11.0	12.6	14.1	16.3	19.5	28.3
100	7.4	8.5	9.6	10.9	12.5	14.0	16.2	19.4	28.2
110	7.2	8.3	9.3	10.7	12.2	13.8	16.0	19.2	28.1

# GUARDIAN GMS

The power wire to the switch attaches to the control circuit (Power In) on the motor starter. Power to the switch can be 90–250 VAC and neutral. Run ground wire from motor circuit to Steps Switch terminal.

There are 2 orange wires (stop wires) and 1 yellow wire (power out) going to the control circuit on the motor starter.



## Wiring Schematic—typical motor starter control circuit

The orange wires go to the stop button on the motor starter.

\* Disconnect the stop wire from the switch, attach one orange wire to the switch and the other orange wire to the disconnected stop wire.

The black wire goes to the contactor coil. The black wire attaches to the top of the DPDT switch in the Smart Switch box.

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# **OPERATING THE STEPS S2 Control Box**



# MANUAL MODE

When the switch is in the up position the Steps S2 Control Box is bypassed. To start the motor, push the start button at the motor. To stop the motor, push the stop button



# OFF MODE

When the toggle is in the middle position the motor cannot operate.



# AUTO MODE

When the switch is in the down position the Steps S2 Control Box has control of the motor.