# WiFi Service Utility

# User's Manual

**Date**:          27 September 2017

**Issue:**          2

**Applies to:**     WiFi Service Utility

# Contents

## Overview

The WiFi Service Utility (WSU) allows qualified installers and service technicians to view the operating data of temperzone's Modbus accessible electronic controls using a WiFi connection and a web browser.

The WSU connects to the control's Modbus slave port and reads the available data. The WSU incorporates a WiFi access point. Any device connecting to the WSU's access point may read the controller data and perform a limited amount of control using a web browser such as Chrome, Safari or Firefox.



Status information from an operating UC8 controller

## Before Use

Fit the internal 9V alkaline battery if it is not already fitted.

Use with no battery or with a flat battery may result in damage to the WSU operating system.

## Connection

Connect the WSU Target (Modbus master) terminals A1 and B1 to the Modbus slave A and B terminals of the target controller. Any device disconnected from the targets Modbus slave A and B terminals may be re-connected to the WSU BMS A2 and B2 terminals.

The WSU requires a 12 to 30 V dc supply to operate. Connect the voltage supply to any of the WSU 0V and V+ terminals.

For the temperzone UC7/8 controllers, the 12 V supply output is available with the controllers Modbus master output CN8.  The WSU provides pass through sockets so that any device un-plugged from the target UC7/8 may be plugged into the WSU and the WSU connected to the UC7/8 target.



WSU connection to UC8 target

For the temperzone UC6 controller, connect the 4 wire connector between the specially designed UC6 Modbus adaptor CN1 socket and the WSU target socket. Plug CN2 of the UC6 Modbus adaptor into the UC6 BMS socket. The adaptor provides 21 V dc and RS485 Modbus slave terminals for the WSU.
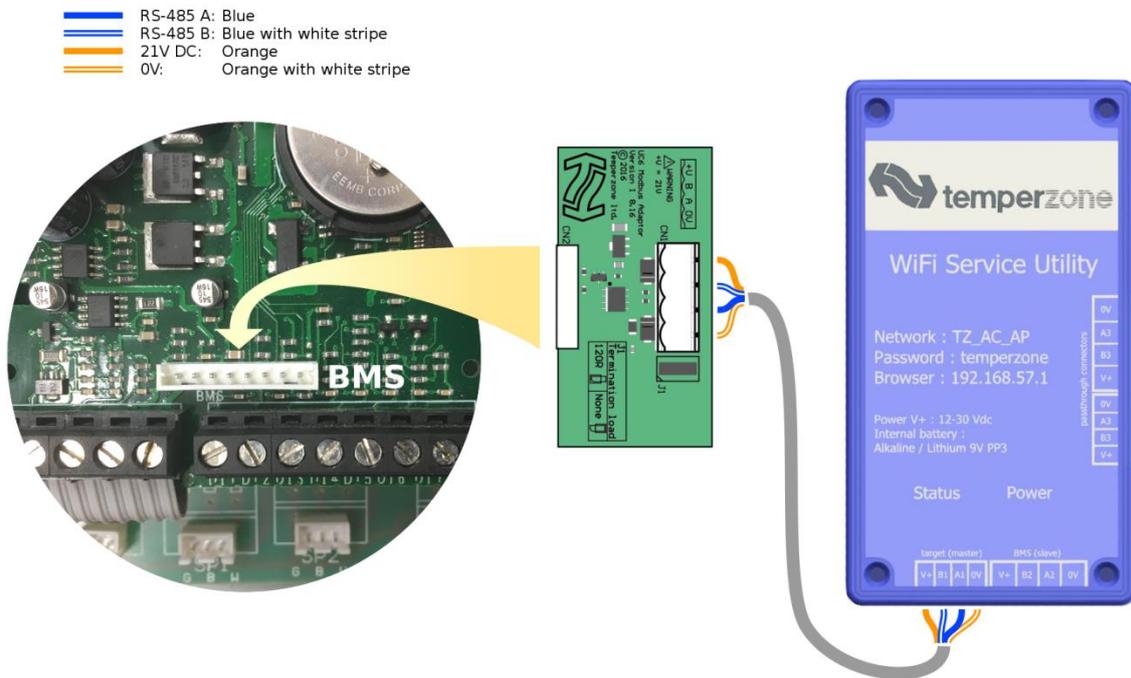


WSU connection to UC6 target using UC6 Modbus Adaptor

## Device Setup

Power the system. The Power LED should begin blinking immediately.

Wait approximately 40 seconds for the Status LED to begin blinking rapidly.

With your device (smartphone, tablet computer, laptop etc.), navigate to the Wi-Fi, WLAN or wireless network settings and connect to the access point named "TZ_AC_AP". The password is "temperzone" without the quotation marks.

Once you have connected your device to the WiFi access point, open your web browser and enter the address "192.168.57.1". The system screen of the WSU web page should appear.

## WSU Use

### Operation

Following application of power the WSU system begins to operate with the following stages:

| Operation | Approximate duration | Status LED Indication | Power LED Indication |
|---|---|---|---|
| preparing for operation | 40 seconds | off | On half a second, off half a second |
| Searching for controllers | 3 minutes | Flashing rapidly | |
| Normal operation | | On briefly every second | |
| Shutdown | 30 seconds | off | On briefly every second |

The controllers found during the search are listed in the system page together with their communication parameters. Controllers connected after the search has begun may not be detected. If no controllers are detected the search re-starts.

During normal operation the Modbus parameters are read periodically from each of the connected target controllers.

Shutdown starts when power is disconnected.

**Page Overview**



1 System bar    2 Selected device    3 Internal clock date and time

4 Page list
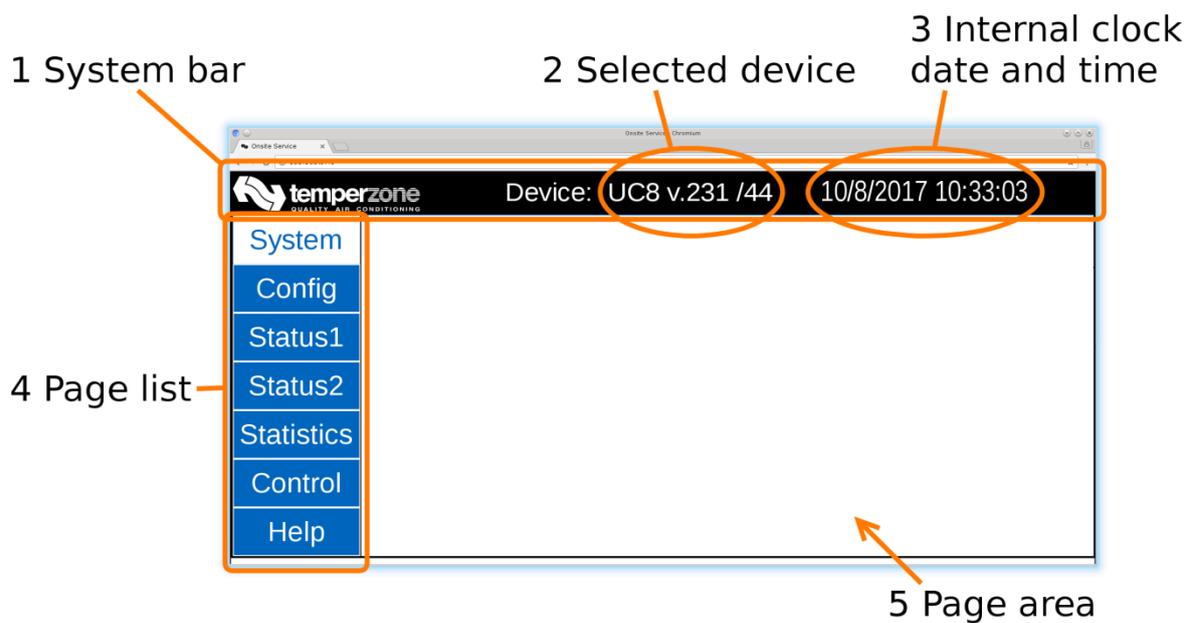
5 Page area

## 1) System bar

The system bar displays system information.

## 2) Selected device

Information from this device will be displayed in the page area. The selected device can be changed in the system page.

## 3) WSU internal clock time and date

The progress of the WSU internal clock reading is an indicator of the reliability of the WiFi communication link. If several WiFi communication attempts fail the time and date are replaced by the message **Check Wi-Fi!** It may be necessary to move closer to the WSU or check the wireless networks settings of your device.
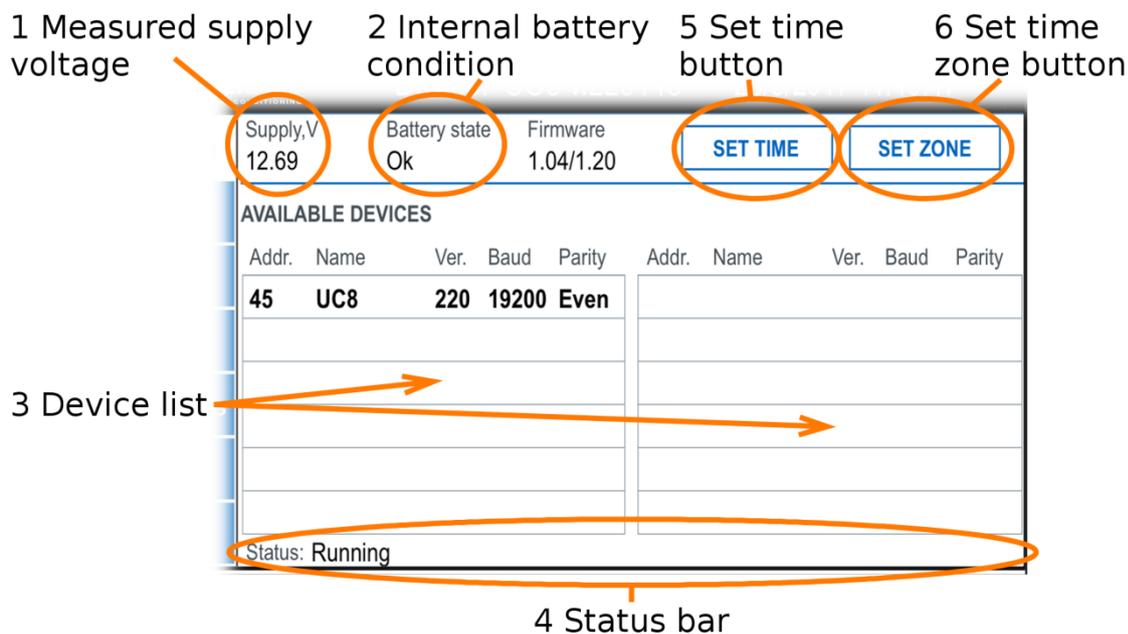
## 4) Page list

The page list is set by the device selected on the system page. Selecting the page name shows the corresponding page in the page area.

## 5) Page area

The page area displays the selected information page.

## System Page



1 Measured supply voltage    2 Internal battery condition    5 Set time button    6 Set time zone button

3 Device list

4 Status bar

### 1) Measured supply voltage

Indicates the supply voltage connected to the WSU.

### 2) Internal battery condition

Displays the state of the WSU's internal battery, refer to the Internal Battery section.

### 3) Device list

Devices connected to the WSU target connector are listed in the left and right panes with their Modbus address, communications settings and software version. Select the displayed device to show data from that device.

### 4) Status bar

The status bar shows the current activity of the WSU.

### 5) Set time button

Select the Set time button to synchronise the WSU internal time (displayed above) with your devices time.

### 6) Set time zone button

Select the Set time zone button to choose the time zone for the WSU time display.

### Data Pages

Each data page displays up to 26 data items read from the controller. Where a data item is not available it may be displayed greyed out.

### Control Page

Up to 18 controllable variables are listed on the control page. Depending on the controller there may be an enable box that must be activated before the control can be used. Action buttons are provided to adjust the control value and the current state of the control value is shown.

Following a change to a control value the value's colour changes to pink while it is being modified. After 1 second, without a further button press, the value changes to brown to indicate that it has been transferred to the controller. After a further 2 seconds the value read back from the controller is displayed in the normal colour. If the change was successful the updated value will be shown, if the change was not successful the value will revert to the initial controller value.

### Help Page

This manual and manuals for supported temperzone controllers are accessible through the help page. These manuals may be updated and the latest versions can be found at www.temperzone.biz.

### Internal Battery

The WSU uses a PP3 9V Alkaline or Lithium battery. The status of the battery is displayed on the System Page. When the battery state indication is "Low" the battery should be replaced. If the status indication is "Flat" the battery should be replaced immediately, as the WSU's operating system may be damaged.

**NOTE:** The battery state may indicate flat when the WSU is first used and on the first use after the battery has been replaced. After the first use the battery state will indicate correctly.
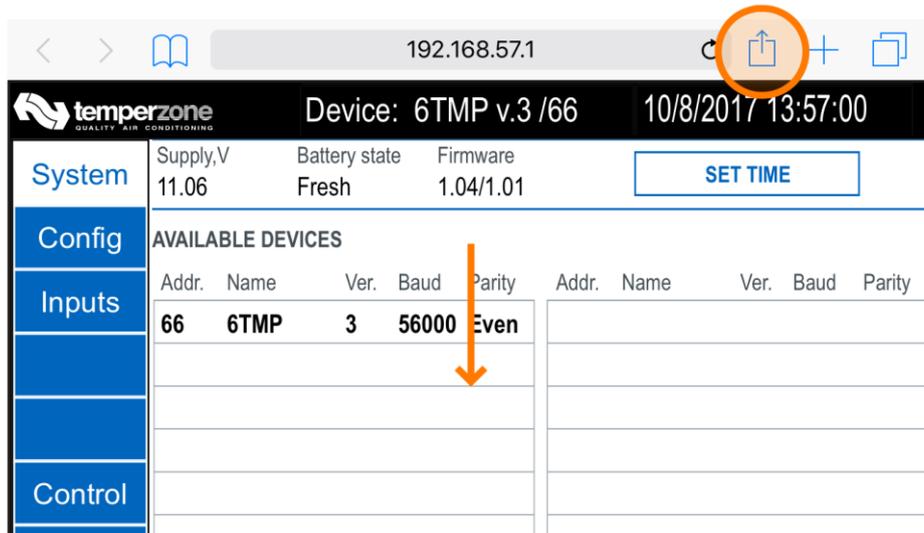
# Adding a Shortcut to your Desktop

## Apple iOS

Follow these instructions to add a shortcut to your iOS desktop.
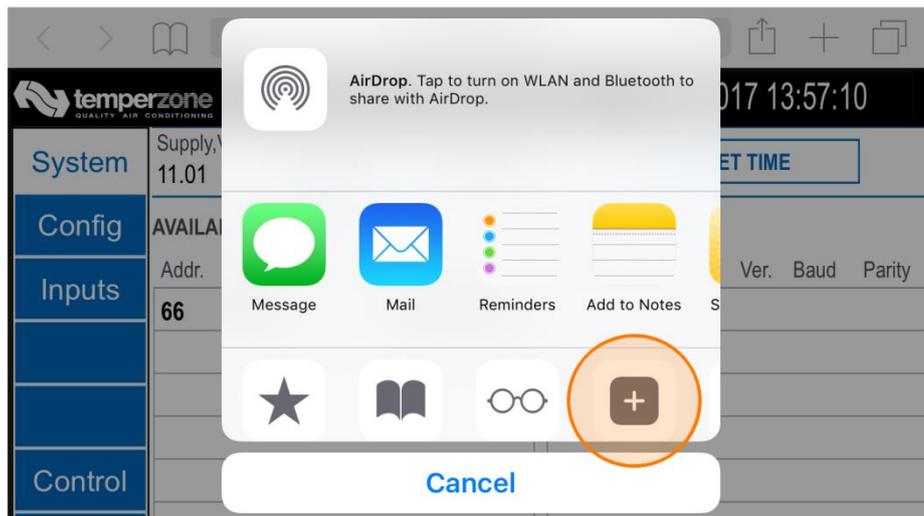
### Step 1

In Safari web browser, while viewing the WSU web pages select the action button at the top of the screen. If the menu is not visible swipe the web page downwards to show it.
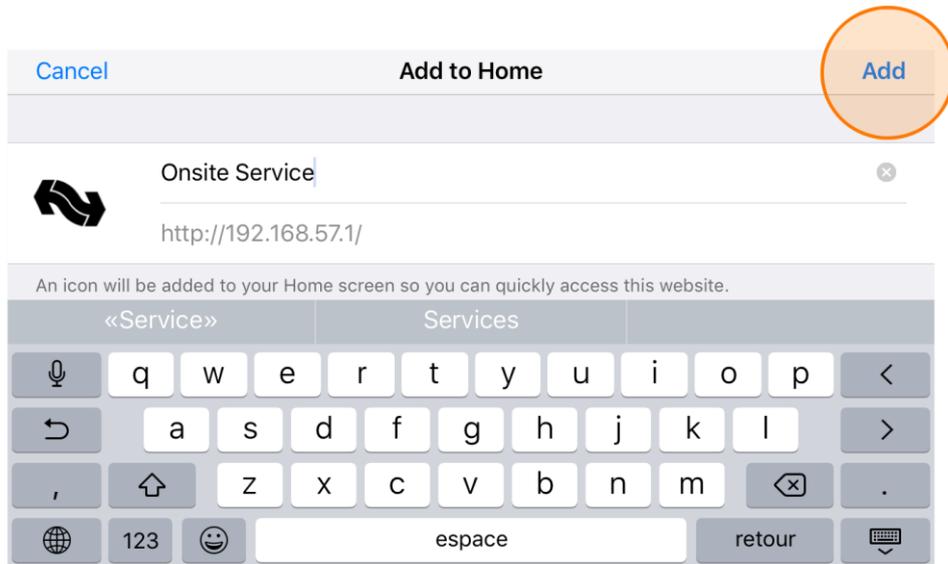


### Step 2

Select the **+** icon.

### Step 3
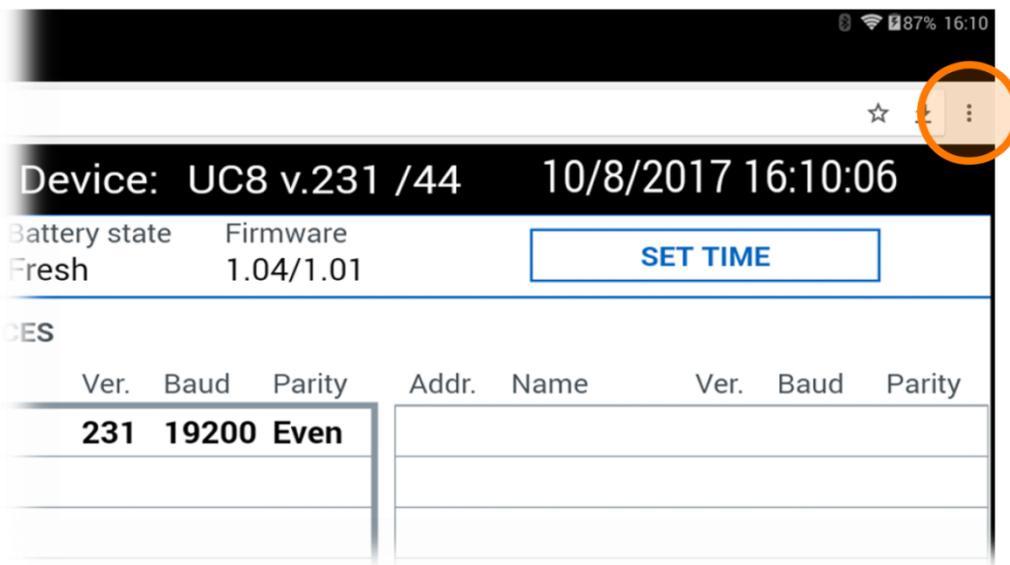
Select **Add** to add the icon to your desktop.



### Android

Follow these instructions to add a shortcut to your Android desktop. Operation may vary between Android devices, the following steps may not exactly match your device.
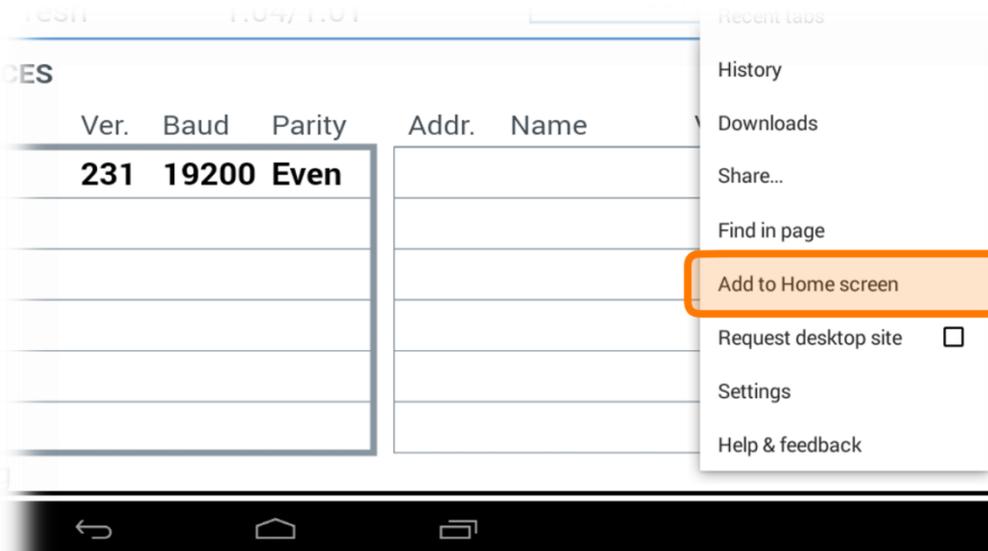
### Chrome Browser
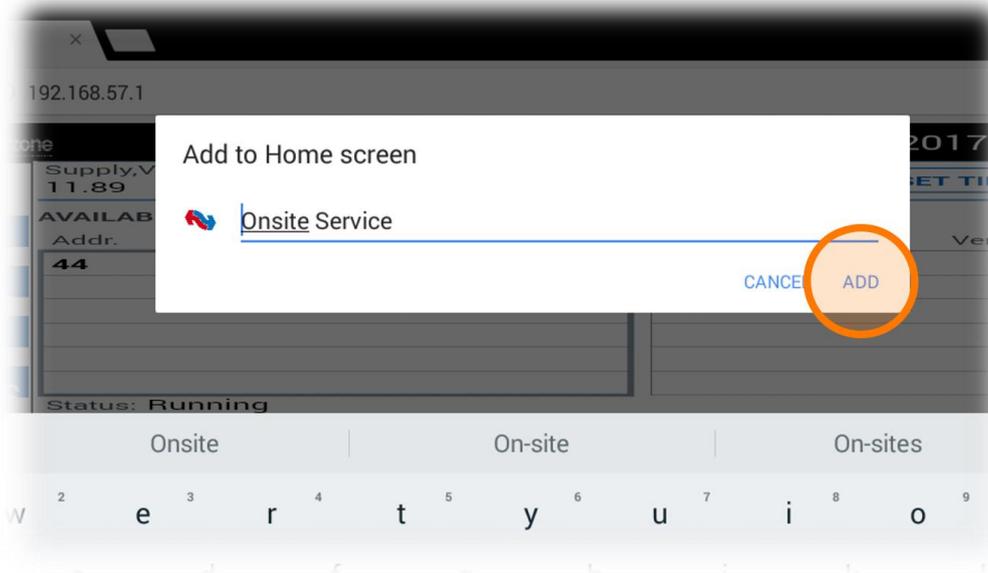
### Step 1

Select the menu button.

### Step 2

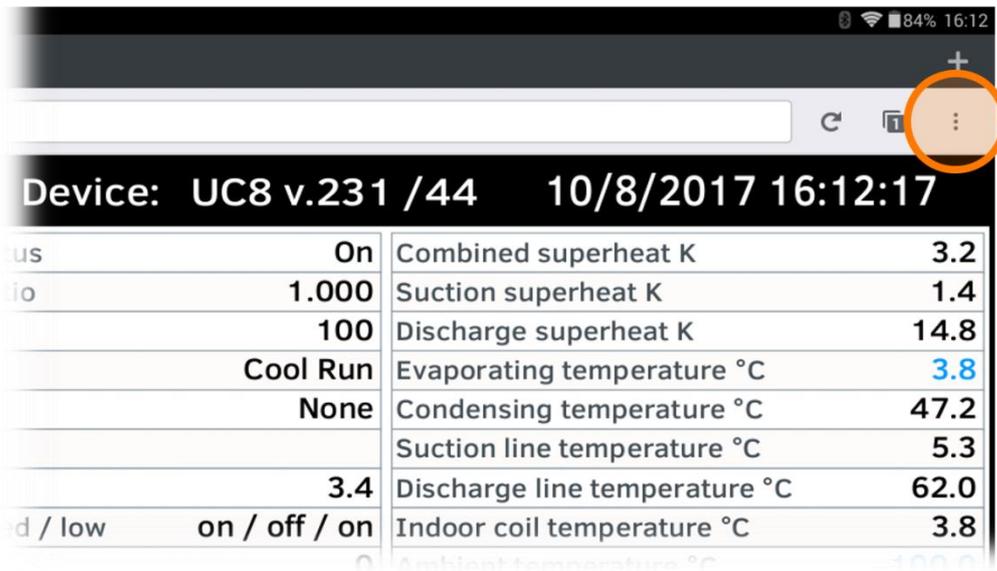Select **Add to Home screen** from the menu.

### Step 3

Select **Add** to add the icon to your desktop.

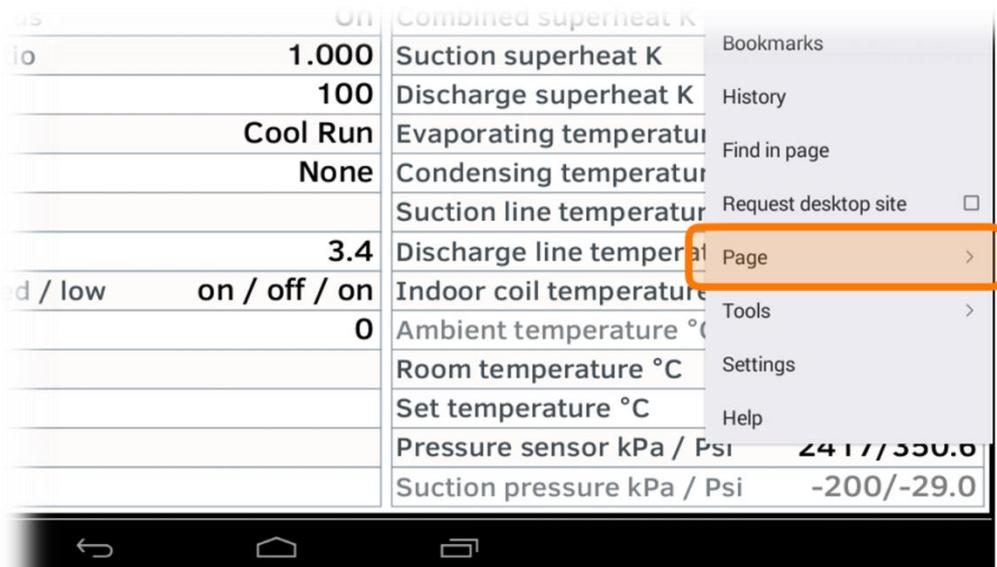### Firefox Browser

### Step 1
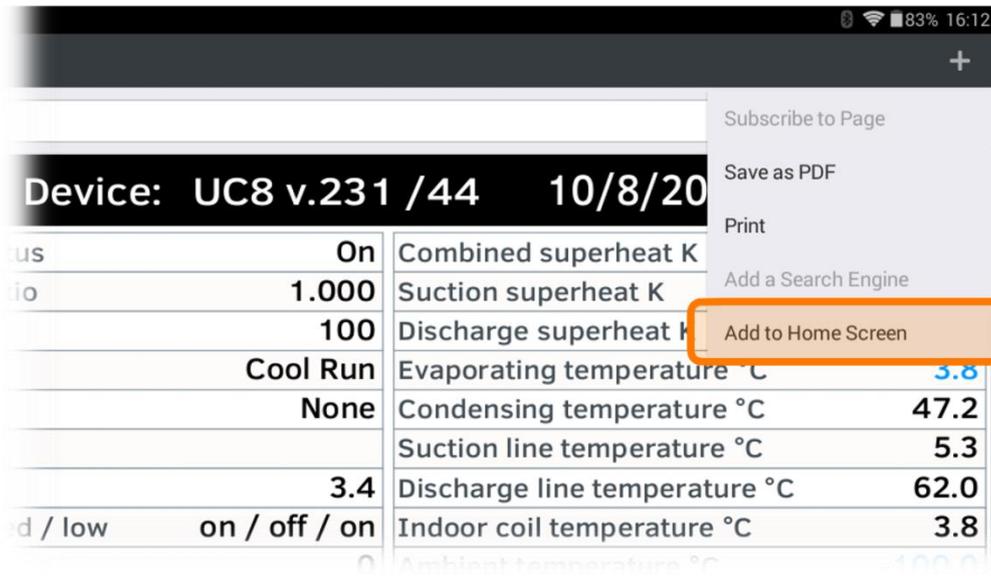Select the menu button.



### Step 2
Select **Page** from the menu.

### *Step 3*

Select **Add to Home Screen** from the menu.

## Appendix   Supported target controllers

| Controller | Software Versions | Modbus Address range | Baud rates | Parity |
|---|---|---|---|---|
| UC8 | 219, 215, 212, 205, 160, 159, 158, 157, 154, 153 | 1-99 | 4800, 9600, 19200, 38400 | even, odd, none |
| UC7 | 551, 550, 540, 530, 495 | 1-99 | 19200 | even |
| SAT3 | 100 | 1-99 | 4800, 9600, 14400, 19200 | even |
| 6ZC | 100, 110, 111 | 64-64 | 4800, 9600, 19200, 38400 | even, odd, none |
| TZT100 | All | 1-31 | 4800, 9600, 19200, 38400 | even, odd, none |
| IUC | 100, 150 | 60-63 | 4800, 9600, 19200, 38400 | even, odd, none |
| PSD1, 1 phase 10A | All | 1-247 | 9600, 19200 | even, odd, none |
| PSD1, 1 phase 12A | All | 1-247 | 9600, 19200 | even, odd, none |
| PSD1, 1 phase 16A | All | 1-247 | 9600, 19200 | even, odd, none |
| PSD1, 3 phase 18A | All | 1-247 | 9600, 19200 | even, odd, none |
| PSD1, 3 phase 24A | All | 1-247 | 9600, 19200 | even, odd, none |
| PSD1, 3 phase 35A | All | 1-247 | 9600, 19200 | even, odd, none |
| PSD0, 3 phase 14A | All | 1-247 | 9600, 19200 | even, odd, none |
| PSD0, 3 phase 22A | All | 1-247 | 9600, 19200 | even, odd, none |
| UC6 | 60(6.0), 62(6.2), 63(6.3), 64(6.4), 67(6.7), 68(6.8), 69(6.9), 697(6.9.7), 701(6.9.11), 702(6.9.12), 703(6.9.13), 704(6.9.14) | 1-247 | 19200 | even, odd, none |

The device described in this manual is subject to continual improvement, specifications and operation may change without notification.