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# SP+ LCD Sensor Manual



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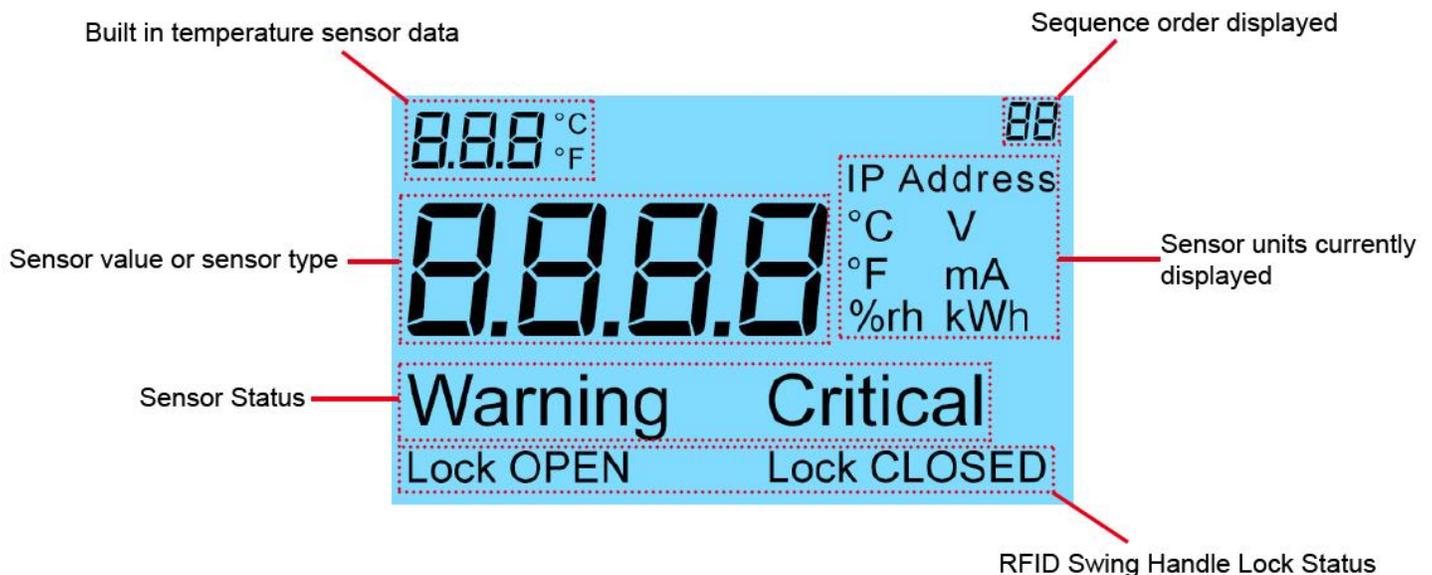
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## Introduction

The AKCP LCD Sensor Display plugs into any sensorProbe+ (SP2+, SPX+) base unit and can be programmed to display the data from any AKCP Intelligent or virtual sensor.

Mount a single display on the end of an aisle, on the door of every cabinet, or the wall of the room. LED indicators will alert if a sensor is in critical condition, as well as the on screen display of the critical or warning status.

**Please note:** this sensor is only supported on the sensorProbe+ series



## Features:

- Easy to read, high quality backlit LCD display
- Connects to available sensor port on sensorProbe+
- Program to display specific sensors
- Keyhole mounting
- LED Status indicator for Critical and Warning sensor statuses
- Built-in temperature sensor
- Displays the base unit's IP address (see below)

Watch our Youtube video about this new sensor: <https://youtu.be/klieKQJ52-U>

### *Displaying the IP address:*

When the LCD Sensor is plugged in to the unit the first time, or if the Reset button is pressed once (not holding it in) on the base unit, it will display the unit's IP address (by digits, one at a time).

## Sensor Configuration

Plug in the sensor to an available sensor port, then open the base unit's Web UI and navigate to the Sensors list.

The screenshot displays the AKCP SPX+ Web UI. The left sidebar contains navigation links: Summary, Boards, SPX+, Module 0 - 4x Sensor Ports, **Module 1 - 4x Sensor Ports**, Module 2 - 10x Dry Contacts IO, Virtual Sensors, and E-OPT016 1.3. The main content area is titled "Module 1 - 4x Sensor Ports (1C000028)" and shows a list of four sensor ports. Port 1 is Siren Strobe (Off), Port 2 is Temperature (Low Critical), Port 3 is Thermal Map (En Défaut), and Port 4 is LCD (Normal). The LCD sensor configuration form is open, showing "Sensor Name" as "LCD Screen", "Sensor Status" as "Normal", and "Sensor Currently" as "Online". There are "Save" and "Cancel" buttons at the bottom of the form.

### Please note:

This sensor is not configurable directly from AKCess Pro Server, the configuration option will redirect to the unit's Web UI where the sensor is connected to (similar to the older sensorProbe family).

LCD Primary LCD Rotation List Critical LCD Rotation List

88.8 °C 88  
88.8 °F  
88.88 °C V  
88.88 °F mA  
88.88 %rh kWh  
Warning Critical  
Lock OPEN Lock CLOSED

Primary LCD Rotation List

No Rotation List

UP DOWN DELETE ADD

Save Cancel

Now you can define the display rotation list that will be displayed on the LCD. The Primary Rotation List is what will be normally displayed on the screen.

LCD Primary LCD

None

Gateway

Module 0 - 4x Sensor Ports

- Digital Voltmeter Port 2
- HL Rack PID1
- Liquid Rope Detector Port 1
- SHL Reader 4
- Temperature Port 3

Module 1 - 4x Sensor Ports

- Buzzer
- Humidity Port 3
- LCD Screen
- Temperature Port 2
- Temperature Port 3
- Temperature Port 3.1
- Temperature Port 3.2

#

1

UP DOWN

Duration

for 5 seconds

DELETE ADD

\*Invalid Rotation List

Save Cancel

Click on the Add button, and one by one add the sensors that you'd like to have their statuses displayed on the LCD.

Note: You can only select the sensors which are already connected to the unit.

LCD Primary LCD Rotation List Critical LCD Rotation List

Primary LCD Rotation List

| <input type="checkbox"/> | # | Display Sensor                                   | Duration      |
|--------------------------|---|--|---------------|
| <input type="checkbox"/> | 1 | Module 1 - 4x Sensor Ports<br>Temperature Port 2 | for 5 seconds |

UP DOWN DELETE ADD

Save Cancel

For each sensor, you can define the duration of the display, before it will switch to the next sensor status display.

LCD
Primary LCD Rotation List
Critical LCD Rotation List

The preview shows an LCD screen with a small index counter 'E2' in the top right. The main display shows '8.8.8' with °C and °F units. Below that, '4.5' is shown with °C, °F, V, mA, %rh, and kWh units. At the bottom, 'Warning Lock OPEN' and 'Critical Lock CLOSED' are displayed.

Primary LCD Rotation List

| <input type="checkbox"/> | # | Display Sensor   | Duration      |
|--------------------------|---|--|---------------|
| <input type="checkbox"/> | 1 | Module 1 - 4x Sensor Ports<br>Temperature Port 2       | for 5 seconds |
| <input type="checkbox"/> | 2 | Module 0 - 4x Sensor Ports<br>Digital Voltmeter Port 2 | for 5 seconds |

UP
DOWN

DELETE
ADD

Save
Cancel

The preview screen will show you how the configured display will look like, with the actual sensor reading and status value.

The small index counter on the top right corner of the LCD screen shows the sensor's order number in the list. You can reorder the sensors by selecting them and clicking on the Up/Down buttons accordingly.

Save your configuration, then it will be uploaded to the sensor (this takes a few seconds).

LCD
Primary LCD Rotation List
Critical LCD Rotation List

Critical LCD Rotation List

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| <input type="checkbox"/> | # | Display Sensor                                   | Duration      | Blinking  |
|--------------------------|---|--|---------------|---|
| <input type="checkbox"/> | 1 | Module 1 - 4x Sensor Ports<br>Temperature Port 2 | for 5 seconds | <div style="border: 1px solid #ccc; padding: 5px; width: fit-content;">                         None<br/> <span style="color: orange;">Blink Slow</span><br/>                         Blink Fast                     </div> |

UP

DOWN

Save

Cancel

There's also a Critical Rotation List configuration, which will be used when one of the monitored sensor's status is in a warning or critical state.

**Important:** The Critical Rotation List will override the Primary Rotation List if a sensor's status is warning or critical and will only display those sensor statuses.

The display configuration is the same as for the Primary Rotation List, but you can also define a blinking rate value (slow or fast) to emphasize the value reading that is being displayed.

## Built-in Temperature Sensor

The screenshot displays the configuration page for the built-in Temperature Sensor. At the top, four sensor ports are listed: 1 (Siren Strobe, Off), 2 (Temperature, Low Warning), 3 (Thermal Map, En Défaut), and 4 (Temperature, Normal). Port 4 is selected, and a dropdown menu shows 'Temperature Port 4.1' as the active sensor. Below this, the sensor details are shown: Sensor Name (Temperature Port 4.1), Sensor Status (Normal), Sensor Reading (25.2 °C), and Sensor Currently (Online). A 'Scan' button is available for the Temperature Sensor Scan. At the bottom, a temperature scale is shown with thresholds: -55 (Low Critical), 10 (Low Warning), 20 (Normal), 30 (High Warning), 40 (High Critical), and 75.

The LCD Sensor's built-in Temperature Sensor is selectable from the same sensor port. Its configuration is the same as the standard Temperature Sensor's and can be used by notifications.

This sensor's reading will always be displayed on the top left corner of the LCD screen and can't be turned off.

## LCD Display Sensor Types

Switch type sensors that have no unit values are displayed as a sensor-type. The following list provides a definition of the sensor mapped to a specific sensor type. Examples can be seen on the following page.

- ST-01 - Airflow
- ST-02 - Dry Contact I/O
- ST-03 - Dry Contact Input
- ST-04 - Motion Detection
- ST-05 - Water Sensor
- ST-06 - Security Sensor
- ST-07 - Siren and Strobe
- ST-08 - Sensor Controlled Relay
- ST-09 - AC Voltage Sensor
- ST-10 - 8x Sensor Controlled Relay
- ST-11 - Smoke Detector
- ST-12 - 8 Dry Contact I/O
- ST-13 - Rope Water Sensor
- ST-14 - 5 Input Dry Contact
- ST-15 - Handle Lock Status
- ST-16 - Handle Lock Reader Status
- ST-17 - Virtual Sensor (Switch Type)
- ST-18 - LCD sensor status

## Examples of LCD Display program



Sensor 1 - Temperature (°C)



Sensor 2 - Power (Amps)



Sensor 3 - Cabinet door lock (sensor type 16)



Sensor 4 - Voltage Sensor (V)

Through the sensorProbe+ web interface the LCD display is programmed to display the sensors you wish to view and the sequence in which they are displayed. The above example shows a series of 4 sensors status being displayed.

## Global Status LEDs

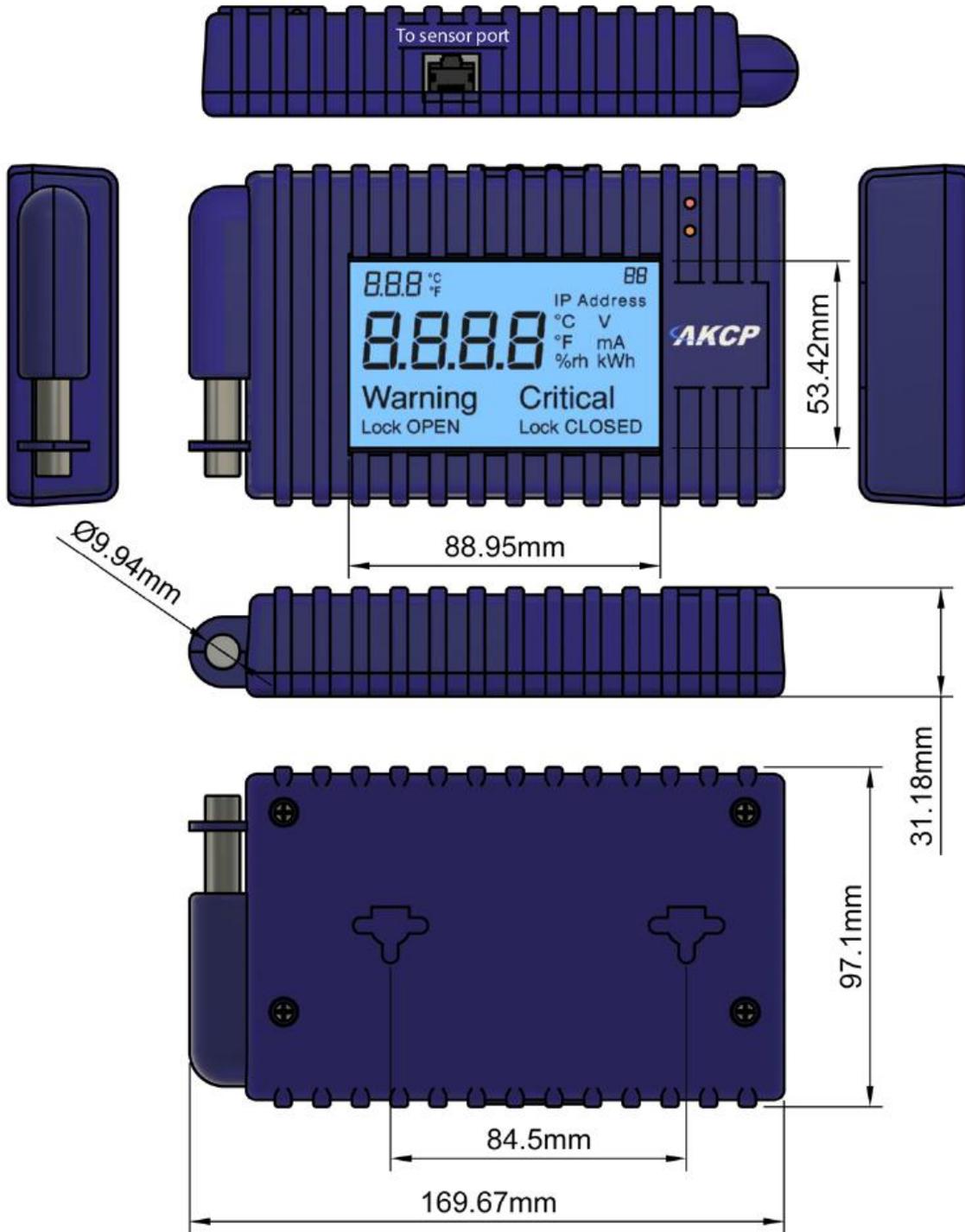


The LCD Sensor has 2 specific status LEDs (yellow and red) which will light up and be blinking if a monitored sensor's status is warning or critical, respectively (see below on the example pictures).





## Technical Drawing



## Technical Specifications

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**Power Input**                    5VDC powered by sensor port

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**Power Consumption**            Typically 45mA, 0.22W

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**Display**

- Continuous embedded temperature display
- Display up to 8 sensors in standard rotation list, configured via SP+ web interface with preview.
- 2 global status LEDs
- Display sensor status, Warning or Critical
- Display sensor units: °C, °F, %rh, %, V, (m)A, (k)W, (k)Wh
- Display the base unit's IP address when plugged in or Reset is pressed shortly
- Display swing handle lock status: Open, Closed



Please contact [support@akcp.com](mailto:support@akcp.com) if you have any further technical questions or problems.

**Thanks for Choosing AKCP!**