



Smoke Detector SK00 User Manual



Help Version updated till firmware 404j / SP456
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Smoke Detector

This makes an important addition to security and safety. These smoke detectors are easy to install and configure. The smoke detector must be mounted on the ceiling for maximum smoke detection. These photoelectric type smoke detectors are generally more effective at detecting smoldering fires which smolder for hours before bursting into flame.

Smoke Detector OIDs

For normal state, return value = 2

For alarm state, return value = 4

The value of the Status for the OID for switch sensors can be Normal, No Status, Critical, or sensorError.

A popular OID for Smoke Detector Sensors is the status. For RJ45#1, it is **.1.3.6.1.4.1.3854.1.2.2.1.18.1.3.0**

Note: You can test the smoke detector by holding down the test button until the audible alarm occurs - about 5 sec. The smoke detector will then send an alarm signal to the unit.

Smoke Detector Details

The following technical details are sometimes required for certification purposes.

How the Smoke Detector Works

The smoke sensor detects partials of smoke in the air in its photoelectric chamber. Here are the specs for the sensor:

Features:

- On/Off alarm signal of Smoke Detected
- DC operated photoelectric type Smoke Detector
- Hush / Test feature
- Non-radioactive technology
- High and stable sensitivity
- Quick fix mounting bracket for easy installation
- Extra loud alarm sound over 85 dB
- Low-battery and battery missing warning indicator
- Auto-reset when smoke clears
- LED indicates the status of Smoke Detector
- Sensor type - open/closed contact switch
- Power source: powered by the unit. No additional power needed.

- The unit auto detects the presence of the Smoke Detector (as Dry Contact sensor)
- Disconnect alarm (Note that the smoke detector will be detected as a Dry Contact sensor. See more on this in the configuration of the sensor).

Specifications:

- Sensor type - open/closed contact switch
- Detection type: Photoelectric Chamber
- Power Source: 9 VDC
- Standby Current: 15 uA max
- Alarm Current: 30 mA max
- Alarm Sound Level: 85 dB at 3 m
- Operating Temp: 5° C - 45° C
- Ambient Humidity: 10% - 90%
- Sensitivity to Smoke: 3 - 6% Obs/m
- Size: 110 mm Ø
- Ambient Humidity: 10% to 90%
- Maximum CAT5/6 Extension Cable Run Length: 90 meters or 300 feet (1000 feet when connected to the X20 or X60 dry contact inputs).

Important Safety Information

Observe and follow all local and national electrical and building codes for installation.

This smoke detector is designed to be used inside a single room only. In multi-room buildings, each individual room should have its own smoke detector. This smoke detector is not a substitute for a complete fire alarm system.

Smoke may not reach the smoke detector for many reasons. For example, if a fire starts in a remote part of a building or home, on another level, wall, roof, or on the other side of a closed door, smoke may not reach the smoke detector in time to alert personnel. In other words the smoke detector will not promptly detect a fire except in the area or room in which it is installed.

The smoke detectors can only sound their alarms when they detect smoke. The smoke detectors detect combustion particles in the air. They do not sense heat, flame, or gas. This smoke detector is designed to give an audible warning of a developing fire. However, many fires are fast-burning, explosive, or intentional. Others are caused by carelessness or safety hazards. So always keep in mind that smoke may not reach the smoke detector alarm QUICKLY ENOUGH.

The smoke detectors have limitations. This smoke detector is not foolproof and is not warranted to protect lives or property from fire. Smoke alarms are not a substitute for insurance. Business owners are responsible for insuring their own lives and property. In addition it is possible for the smoke alarm to fail at any time. For this reason, you must test the smoke detectors weekly and replace them every 10 years.

Smoke Detector Placement

It is recommended that you install one detector in each room and in separate hallways. If the hallway is over 12 meters long, install a detector at each end. They should be located at the top levels of first-to-second floor stairwells.

Install the smoke detectors as close to the center of the ceiling as possible. If this is not possible, mount no closer than 4 inches from a wall or corner.

DO NOT install the smoke detectors;

Near appliances or areas where normal combustion regularly occurs (cooking areas, furnaces, hot water heaters, florescent lighting etc.).

Near air returns or heating and cooling supply vents. Install at least 3 feet away from these areas. The air could blow the smoke away from the detector, interrupting the alert.

In rooms where temperatures may fall below 5 degrees C or rise above 45 degrees C.

In extremely dusty, dirty, or insect-infested areas where loose particles interfere with the smoke detectors alarm operation

IMPORTANT!

Specific requirements for Smoke Alarm installation vary from country to country. Check with your local Fire Department for current requirements in your area.

Installing the Smoke Detector

1. From the back of the smoke detector, remove the mounting plate by turning it counterclockwise. (To later engage the tamper-resist feature, twist out and set aside one of the pins molded into the plate. Both pins are exactly the same.)
2. Secure the plate to the ceiling or wall with the mounting screws.
3. Lift open the battery pocket door.
4. Connect the new 9-Volt battery to the battery connector inside the battery pocket. Be sure the battery is securely connected. The red LED may blink briefly when the battery is installed.
5. Close the battery picket door, snapping it into place.
6. Position the smoke detector to the mounting plate and turn it clockwise to lock it into place. To engage the tamper-resist feature, insert the pin into the notch on the edge of the smoke detector after the detector is properly positioned in the base.
7. Push the test button to test the smoke detector. (see below).

Testing the Smoke Detector

1. Firmly push the TEST button, and the smoke detector alarm will sound a loud beep. The alarm will stop sounding after releasing the TEST button.
2. If the smoke detector does not sound, please retest the detector again.

HUSH Feature

This button on the smoke detector is a combined Test/Hush button to silence false alarms.

1. To cancel a false alarm, press the Test/Hush button located on the cover. The alarm will automatically switch to a reduced sensitivity condition. This reduced sensitivity will last for 10 minutes. The unit will flash the red light every 10 seconds (instead of the normal 40 seconds) to indicate the sensitivity has been reduced.
2. The unit will reset to normal sensitivity at the end of the silenced period. If additional silenced time is required, simply push the Test/Hush button again.

Configuring the Smoke Detector

- a) Plug the sensor into one of the RJ45 ports on the rear panel of the unit.
- b) Now point your browser to the IP address of the unit (default, 192.168.0.100). Next you need to login as the administrator using your administrator password (default is "public"). You will then be taken to the summary page.
- c) From the summary page you need to select the sensors tab. The layout of the next page will vary depending on your unit so please refer to your units manual.

Now we will cover the settings that are specific to your sensor.

Status: If the sensor is offline the status is No Status. If the sensor is online and there is no Smoke detected, the status is Normal. If Smoke is detected then the status is Critical. If at any time communications with the Smoke Detector are lost, the status of the Smoke Detector is changed to sensor Error.

Connecting the Smoke Sensor to your base unit

When a smoke detector is connected, the unit will sense it as dry-contact sensor. The user can change the description of the sensor to a Smoke Detector on the sensorProbe base units.



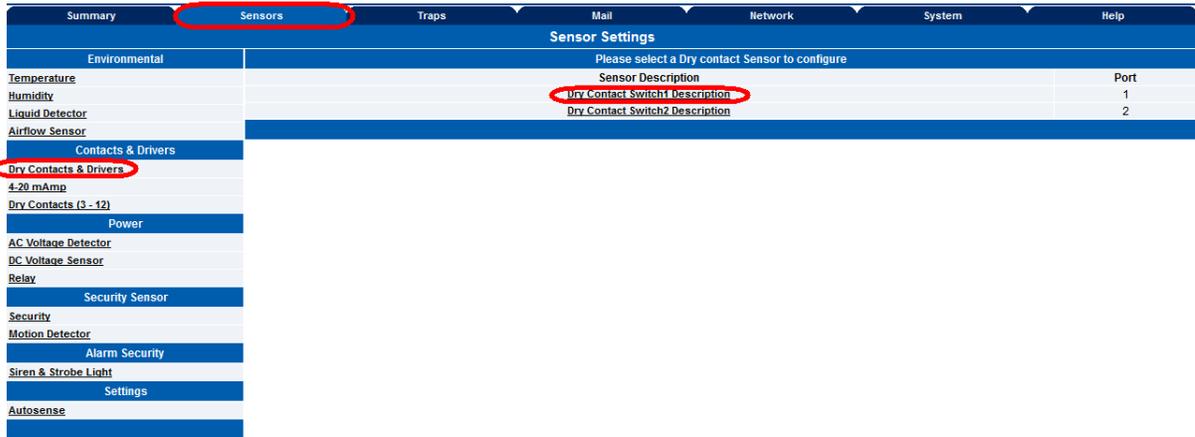
The Web interface settings for the smoke detector are:

Direction: Input

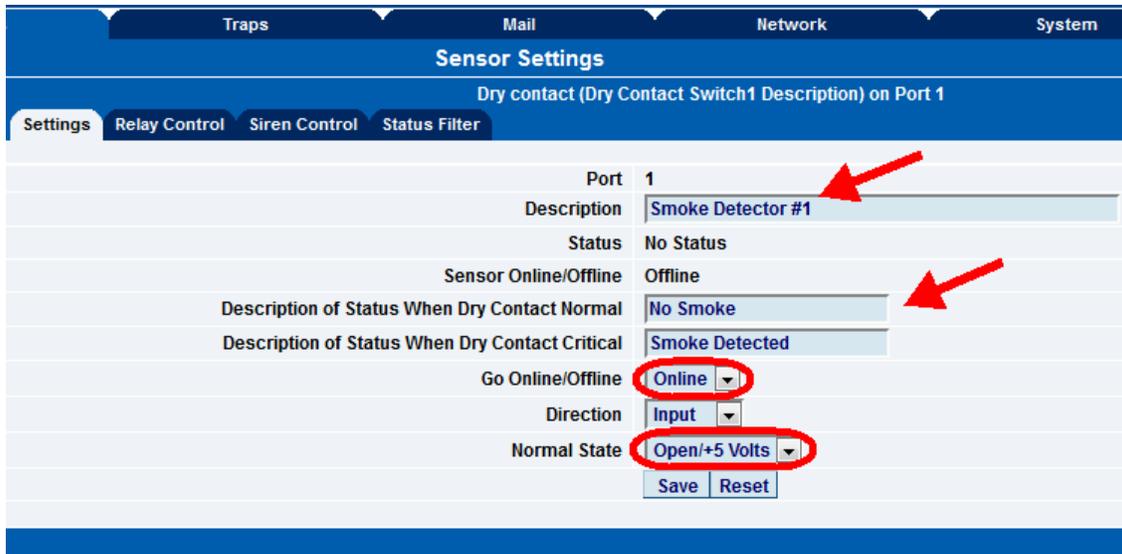
Normal State: Open/+5 Volts

Note: see below for exact steps for configuring the Smoke Sensors on your base unit.

Configuration of the Smoke Detector (sensorProbe)



The Smoke Detector when first connected to the sensorProbe's RJ-45 sensor port will be auto sensed as a Dry Contact Sensor. So you would first click on the Dry Contacts & Drivers link, then click on the port that it is connected to as shown in the screen shot above.



In the Smoke Sensors settings page you will rename your Smoke Sensor as you wish in the Description field. We can also rename our sensors descriptions in the Descriptions fields then turn the sensor Online by choosing the Online setting for the sensor in the Go Online/Offline field and also make sure that the Normal State for the sensor is set to Open/+5 Volts as shown in the screen shot above. You would then click the Save button to save the sensor settings into the web interface.

Now we can see that our Smoke Sensor is Online and shows the status of No Smoke.

Port	Type	Description	Reading	Status
1	Dry contact	Smoke Detector #1	-	No Smoke
2	-	-	-	-

Sys Log (240 messages)

1	09/07/12 09:44:02	Dry contact sensor on RJ45#1 status is now No Smoke
2	09/07/12 09:30:08	Airflow sensor on RJ45#1 status is now High Critical

Now if we navigate back to the Summary page we can see the sensor is present there showing the correct status.

Note: Please see the Siren / Strobe Sensor User Manual for the step-by-step instructions for using the Smoke Detector to trigger the Siren / Strobe Sensor.

Send Trap/Email when Status "Normal" Yes

Continuous time sensor is in a normal state to report (secs) 0 0 secs

Continuous time sensor is in a warning/error state to report (secs) 0 0 secs

Minimum time between each Trap/Email 0 minutes

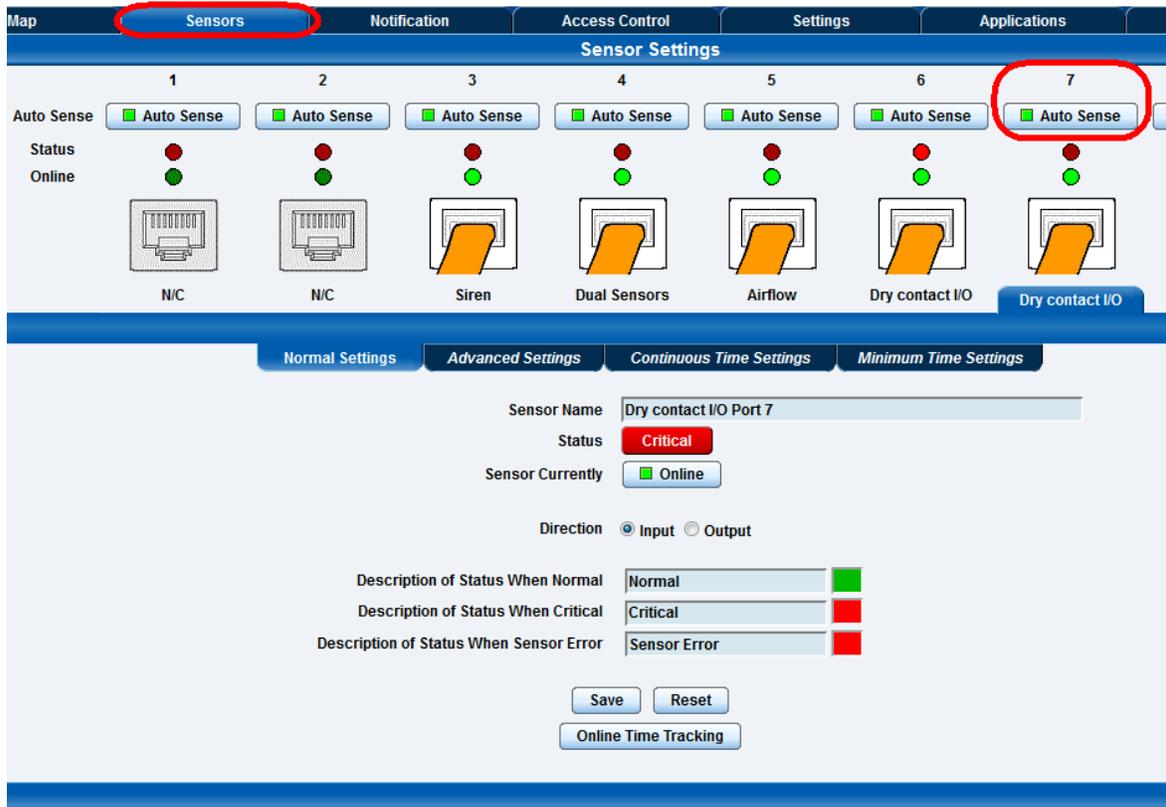
Helpful Suggestion: One way to eliminate false warnings in an unstable environment, is to add time in the continuous time sensor.

NO ALERT	DAY	TIME
<input type="checkbox"/>	Mon	00:00 - 00:00
<input type="checkbox"/>	Tue	00:00 - 00:00
<input type="checkbox"/>	Wed	00:00 - 00:00
<input type="checkbox"/>	Thu	00:00 - 00:00
<input type="checkbox"/>	Fri	00:00 - 00:00

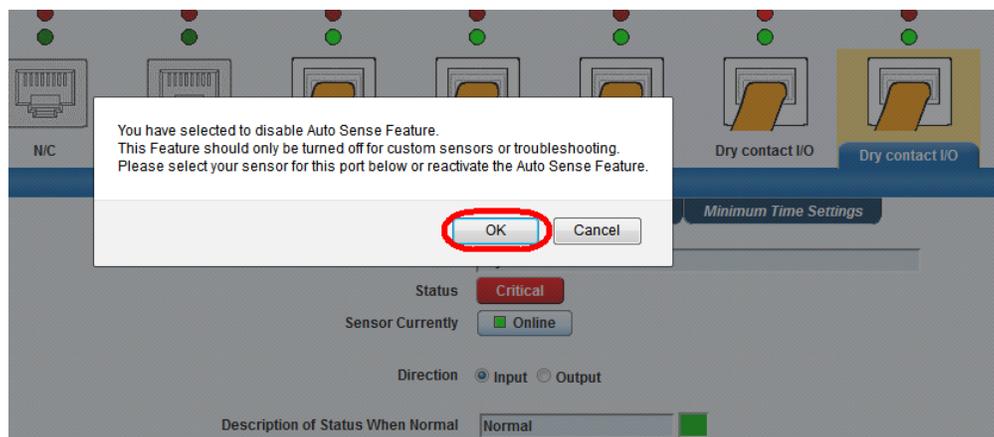
We found that in testing if the Smoke Detectors are installed near florescent lighting, these may have an effect on the sensors and cause false alerts. You can use the "Continuous Time" feature shown in the above screen shot to eliminate these false alerts.

These settings are found in the "Status Filter" tab in the sensor settings page.

Configuration of the Smoke Detector (securityProbe)



When you first connect the Smoke Detector to the RJ45 port it will be auto sensed online as a Dry contact I/O type sensor. Click the Auto Sense button as shown in the screen shot above.



Confirm the popup warning by clicking on the OK button as shown in the screen shot above.

The screenshot displays the 'Sensor Settings' page for a device with seven ports. Port 7 is selected, showing its configuration. The 'Auto Sense' button is disabled. The sensor name is 'Dry contact I/O Port 7', status is 'Critical', and it is currently 'Online'. The direction is set to 'Input'. Status descriptions are: Normal (green), Critical (red), and Sensor Error (red). A red circle highlights the link 'Manually change sensor type for this port.' at the bottom of the settings panel.

When the auto sense has been turned off, you will now see the link for manually configuring the sensor, so you will now click on this as shown in the screen shot above.

Sensors Notification Access Control Settings Applications

Sensor Settings

1 2 3 4 5 6 7

Auto Sense Auto Sense Auto Sense Auto Sense Auto Sense Auto Sense Auto Sense

N/C N/C Siren Dual Sensors Airflow Dry contact I/O Dry contact I/O

Normal Settings Advanced Settings Continuous Time Settings Minimum Time Settings

Sensor Name Dry contact I/O Port 7

Status Critical

Sensor Currently Online

Direction Input

Description of Status When Normal Normal

Description of Status When Critical Critical

Description of Status When Sensor Error Sensor Error

Save Reset

Online Time Tracking

Manually change sensor type

Select sensor for this port Dry contact I/O

4-20 mAmp
AC Voltage
Airflow
Digital Voltmeter
Dry contact I/O
Dual Sensors
Fuel Level Sensor
Liquid Rope
Motion
Power
Probe Switch
Relay
Security
Siren
Smoke Detector
temperature
Water

Now you will click on the down arrow button which will display the list of sensors to choose from. Choose the Smoke Detector as shown in the screen shot above.

Now click the Save button.

The screenshot displays the 'Sensor Settings' page for port 7. At the top, there are tabs for 'Sensors', 'Notification', 'Access Control', 'Settings', and 'Applications'. Below these, a row of seven sensor icons is shown, each with a status indicator (red and green dots) and a label: 1 N/C, 2 N/C, 3 Siren, 4 Dual Sensors, 5 Airflow, 6 Dry contact I/O, and 7 Smoke Detector (circled in red). Below the icons are four tabs: 'Normal Settings', 'Advanced Settings', 'Continuous Time Settings', and 'Minimum Time Settings'. The 'Advanced Settings' tab is active, showing: 'Sensor Name' as 'Smoke Detector Port 7', 'Status' as 'Normal', and 'Sensor Currently' as 'Online' (with a red arrow pointing to the 'Online' button). 'Save' and 'Reset' buttons are located below. At the bottom, a note reads: 'Manually change sensor type for this port.'

As we can now see the Smoke Sensor is Online and is in the Normal state.

If the Smoke Sensor still remains in a critical state please check the extension cable and check the LED on the sensor. If you continue having a problem with the sensor being connected contact AKCP Support a support@akcp.com for more assistance and please include the details of the problem and serial # of the sensor in your email.

Again, as we mentioned before at the end of the sensorProbe configuration, when we tested the smoke sensors, we found that if these are positioned too close to the florescent lighting, these lights can cause false alerts. You can add time to the “Continuous Time Settings” as shown in the screen shot above to eliminate these false alerts.

Additional Information on the Smoke Detectors

Test Button & Testing

As noted earlier do keep in mind that when testing the Smoke Detectors using real or canned smoke do not press the "Test/Hush" button at least 10 minutes prior to this testing or the detector will not be able to detect the smoke.

Connecting to the X20 and X60 dry contact inputs

You can connect the SK00 to the extra dry contacts inputs on the securityProbe 5ES-X20/X60, the 5ESV-X20 and X60 unit and the sensorProbe8-X20 and X60 base units. The green "phoenix" type two pin dry contact connector that is mounted on the Smoke Detectors converter box is used for this purpose.

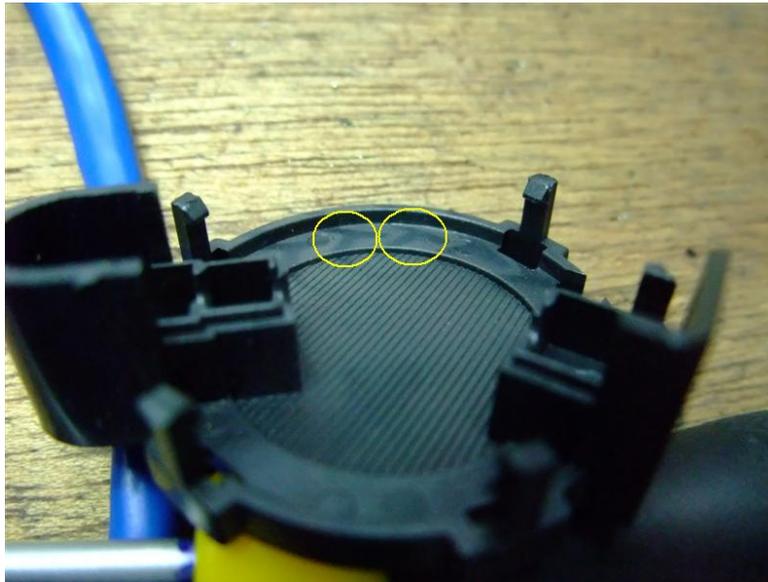
However you do have to keep in mind that when the sensors are connected to the extra dry contacts and not the RJ-45 sensors ports, if the 9Volt battery that powers the smoke detector runs out, then you will not get the alerts from the unit. The reason for this is when connected to the RJ-45 ports, the Smoke Detectors are powered by the unit and when connected to the dry contact inputs they are not and only powered by the 9V battery.

Cleaning and Problems with Smoke Detectors

As also mentioned earlier these sensors are not designed to be used in dusty or dirty environments. If they must be, then they will need to be cleaned regularly.

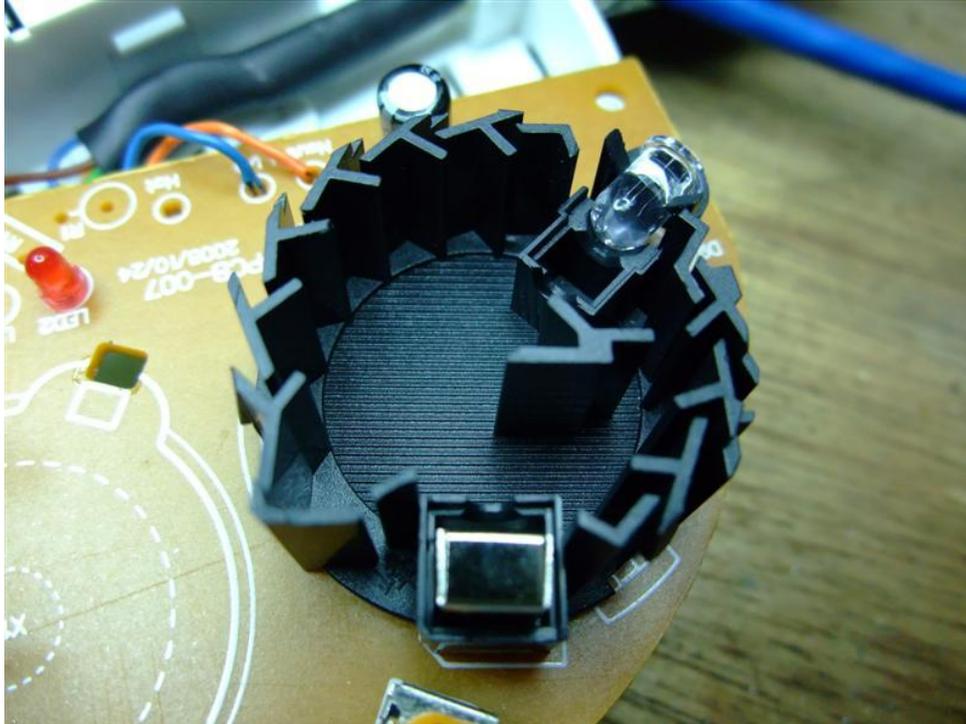


The picture above clearly shows the dust build up inside the detectors optical chamber. You can see the clear black plastic where we have wiped the dust off compared to the dusty surface.



This picture above also shows the dust inside the cover of the Smoke Detector.

You can open the Smoke Sensors up and clean them using some compressed air, you can blow the dust out of the optical chamber. You just need to open the optical chamber so the dust particles can be flushed out properly. If you don't have a compressor or canned compressed air, you can use a lint free cloth or tissue paper. Just make sure there are no fibers left behind.



This picture above shows the optical chamber of the Smoke Detector after cleaning

This concludes the Smoke Detector User manual.

Please contact support@akcp.com if you have any further technical questions or problems setting up your modem or your alerts.

Thanks for Choosing AKCess Pro!