



**KOGANEI**

X904377

**Electrostatic Potential Sensor  
(DTY-EPS01-EA/DTY-EPS01-ES)  
Support Software**

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**Instruction Manual** (Ver. 1.1)



# Contents

1. Support Software Overview	
1-1 Overview.....	2
1-2 System Requirements.....	2
2. Before You Begin	
2-1 Installation .....	3
2-2 Connecting an Electrostatic Potential Sensor to a PC.....	4
3. Basic Operations for PC Software Startup	
3-1 Software Startup Procedure.....	5
3-2 Software Startup Flowchart.....	6
4. Basic Operations	
4-1 Terms and Functions on the Operation Window (Common Items).....	8
5. Basic Operation of Analog Output Type	
5-1 Terms and Functions on the Monitor Tab Operation Window .....	9
5-2 Terms and Functions on the Sensor Setting Tab Operation Window.....	10
5-3 Terms and Functions on the Output Setting Tab Operation Window .....	11
5-4 Error History.....	11
5-5 Operation Procedures.....	11
6. Basic Operations of Switch Output Type and Offline Mode	
6-1 Terms and Functions on the Monitor Tab Operation Window .....	13
6-2 Terms and Functions on the Sensor Setting Tab Operation Window .....	14
6-3 Terms and Functions on the Output Setting Tab Operation Window .....	15
6-4 Error History.....	18
6-5 Operation Procedures.....	19
7. Operations to Save and Read Setting Value.....	20
8. Operations to Display and Output Logs.....	21
9. Operations to Display Version Information.....	22

<p>* For details about the electrostatic potential sensor, refer to the Electrostatic Potential Sensor Instruction Manual (X904366).</p>
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# 1. Support Software Overview

## 1-1 Overview

This support software communicates with the electrostatic potential sensor (DTY-EPS01 series), displays the static charge potential and sets the various settings for the sensor.

- Monitor function

Acquire and display the static charge potential, input/output, and LED status. (display interval is 100 [ms])

- Sensor settings

Send and receive the settings required for measuring, such as the measurement distance and workpiece size.

- Output settings

Send and receive the threshold and judgment mode for the judgment output. \* Only supported for Switch output type and Offline mode

## 1-2 System Requirements

- Targeted device

**DTY-EPS01**-□-□-□

- Computer operating environment

- OS

Windows XP (Pro/SP3), Windows Vista Business, Windows 7 Pro, Windows 8.1 Pro, Windows 10 Pro

- Computer system

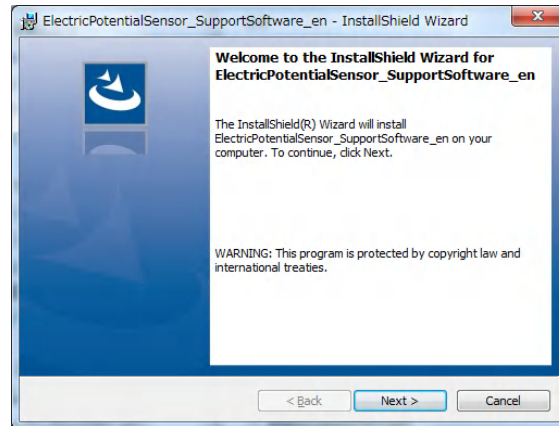
- Computer: Personal computer with processor recommended by Microsoft
- Memory: Memory capacity recommended by Microsoft
- Free space on hard disk: At least 500 MB
- Display: At least 900×600 resolution (at least 1024×768 recommended)
- Other: .NET Framework 4.0 installed

## 2. Before You Begin

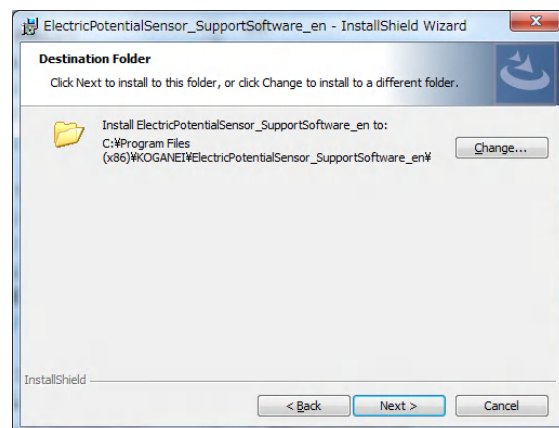
### 2-1 Installation

Use the following procedure to install the support software.

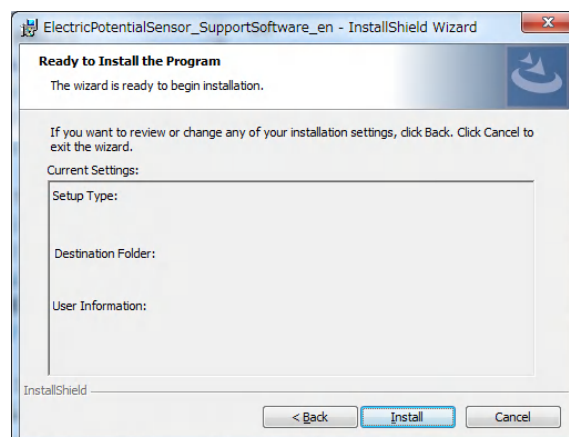
1) The following screen appears after executing the installer. Click "Next (N)".



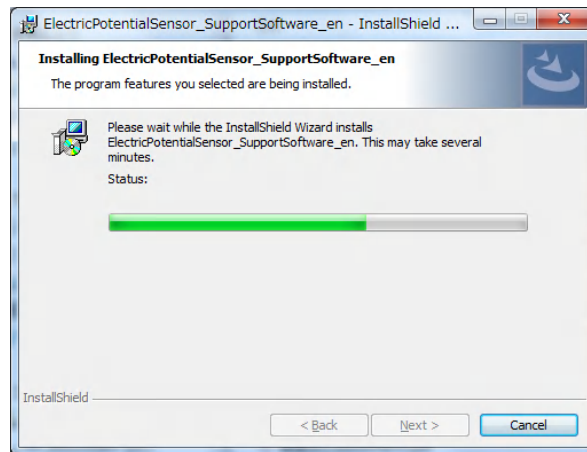
2) A screen for setting the installation location appears. To change the location of the installation, click "Change (C)", and then change the location of the installation.



3) The following screen appears. Click "Install (I)".

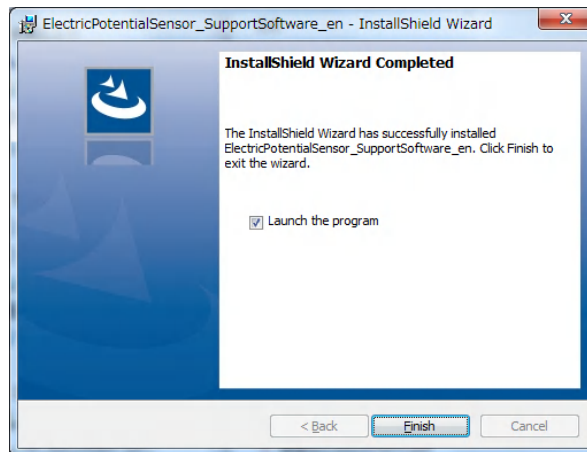


4) The installation status is shown.



5) The following screen appears when the installation is complete. If you want to start the support software, select "Boot program", and then click "Complete".

After the installation is complete, shortcuts are created on the desktop and in the "KOGANEI" folder in "All Programs" ("All apps" for Windows 8 and Windows 10).



## 2-2 Connecting an Electrostatic Potential Sensor to a PC

Use a USB-RS485 converter (IBM2A-H1-□) to connect the electrostatic potential sensor to the computer.

## 3. Basic Operations for PC Software Startup

### 3-1 Software Startup Procedure

This support software acquires a COM port when it is executed.

Select the COM port that you want to use.

■ For Online mode

- 1) After selecting a COM port, communication with the sensor starts automatically.
- 2) The software selects the type of sensor according to the response from the sensor and the monitor shows the screen for that type of sensor.

■ For Offline mode

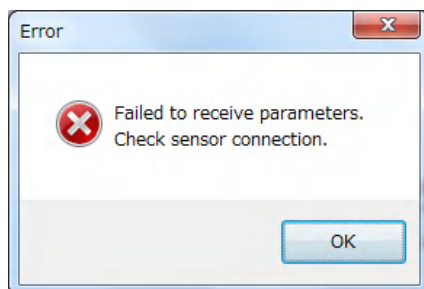
- 1) After booting the software, the monitor screen for the Switch output type appears.

(Communication with the sensor is not done.)

Switching between Online mode and Offline mode and reselecting the COM port can also be done after booting the software by selecting "Setting (S)" → "Boot setting (B)" in the menu bar.

Caution: When booting the software in Online mode, the warning shown in the following diagram appears because communications with the sensor have timed out (3 [s]).

Confirm that the computer and sensor are connected and that the sensor's power is turned on, and then reboot the software.

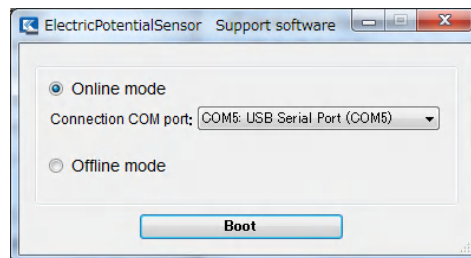


## 3-2 Software Startup Flowchart

The Boot setting screen appears when the software starts running.

Use Online mode to boot the software while connected to the electrostatic potential sensor. Use Offline mode to boot the software without connecting.

### ■ Opening screen of the software



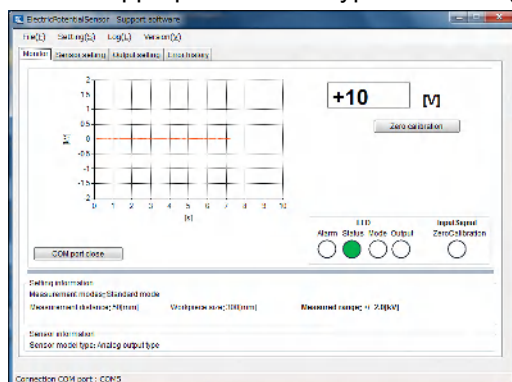
Boot setting screen

Select Online mode or Offline mode, and then select the connection COM port

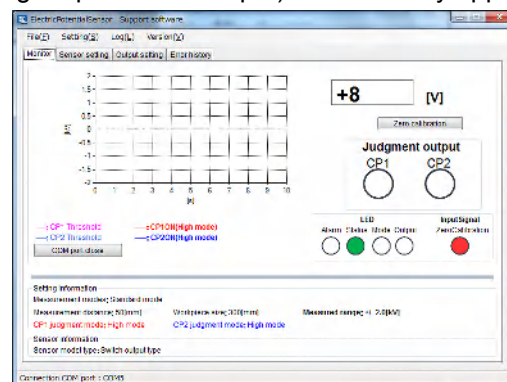
### ■ For Online mode

Select Online mode and select a communications port, and then click the Boot button.

If communication with the sensor is successful, then the operation screen for the software that is appropriate for the type of sensor (analog output/switch output) automatically appears.



Analog output type operation screen



Switch output type operation screen

(Caution) Note that if no electrostatic potential sensor is connected, a communication timeout error occurs when you boot the software in Online mode.

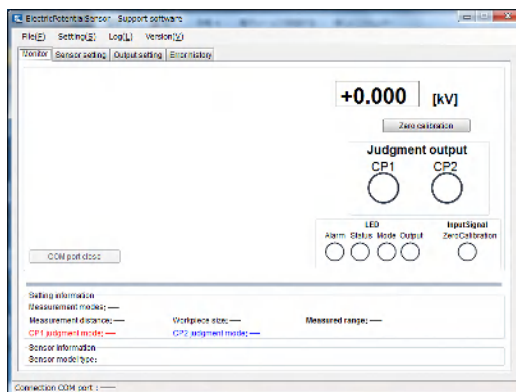
(Caution) Note that an error occurs if you select a COM port that is being used, such as by another application.

■ For Offline mode

Select Offline mode, and then click the Boot button.

The monitor screen and the settings screen for the Switch output type appear.

The graph for the static charge potential monitor, the input/output, and the LED status are not displayed.

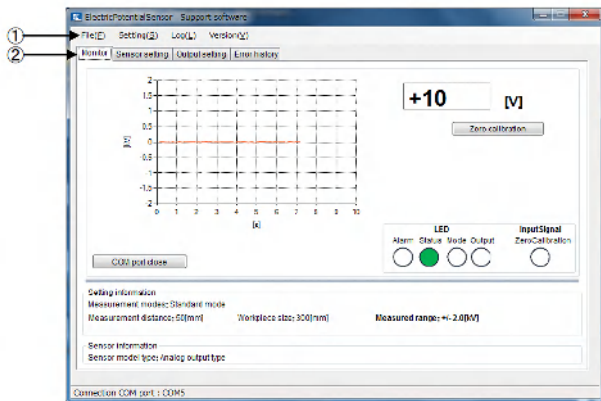


Offline mode operation screen



## 4. Basic Operations

### 4-1 Terms and Functions on the Operation Window (Common Items)



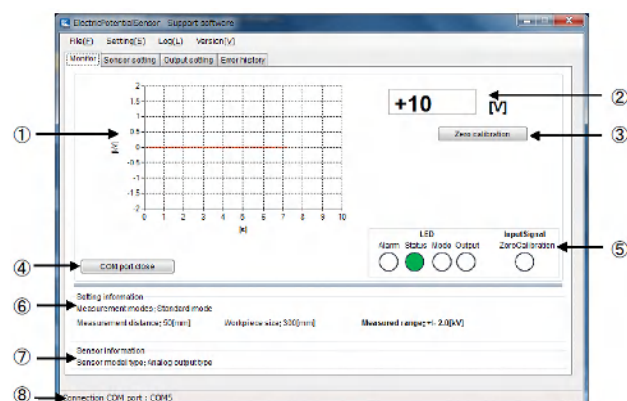
(1) Menu bar

(2) Tabs

No.	Name	Meaning
(1)	Menu bar	<p>Display pulldown menu layer 1. Four pulldown menus for different functions are shown on the menu bar.</p> <ul style="list-style-type: none"> <li>■ File <ul style="list-style-type: none"> <li>* Refer to chapter 7 in this manual for details. <ul style="list-style-type: none"> <li>• Save set values: Saves sensor settings and output settings to an external file.</li> <li>• Read set values: Reads a saved settings file and reflects it to the support software.</li> </ul> </li> <li>■ Setting <ul style="list-style-type: none"> <li>• Boot setting: Redisplays the boot setting form that was displayed when the software was booted. You can switch between Online mode and Offline mode and select a COM port.</li> </ul> </li> <li>■ Log <ul style="list-style-type: none"> <li>* Refer to chapter 8 in this manual for details. <ul style="list-style-type: none"> <li>• Log Display: Opens a log form that shows the communications with the sensor.</li> <li>• Log Output: Outputs information about the static charge potential that was received from the sensor. Select Stop Log Output or output the log continuously until the software is shutdown.</li> <li>• Stop Log Output: Stops output of the log.</li> </ul> </li> <li>■ Version <ul style="list-style-type: none"> <li>• Sensor: Receives and displays version information for the sensor.</li> <li>• Support software: Displays version information for the support software.</li> </ul> </li> </ul> </li> </ul> </li></ul>
(2)	Tabs	<ul style="list-style-type: none"> <li>• The display can be switched to the Monitor tab, Sensor setting tab, Output setting tab, or Error history tab.</li> </ul>

## 5. Basic Operation of Analog Output Type

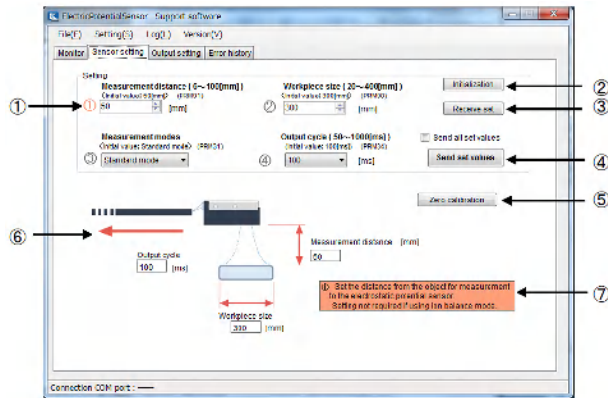
### 5-1 Terms and Functions on the Monitor Tab Operation Window



- (1) Graph for static charge potential display
- (2) Static charge potential display field
- (3) Zero calibration button
- (4) Connection COM port button
- (5) LED and I/O display field
- (6) Setting information field
- (7) Sensor information field
- (8) Status bar

No.	Name	Meaning
(1)	Graph for static charge potential display	<ul style="list-style-type: none"> <li>The transitions in the static charge potential that are received from the sensor in 10 [ms] cycles are displayed in a graph format.</li> <li>The transitions in the static charge potential are displayed in 10 [s] increments.</li> <li>* The graph's update cycle is fixed at 100 [ms], regardless of the output cycle of the sensor settings.</li> </ul>
(2)	Static charge potential display field	<ul style="list-style-type: none"> <li>Display the static charge potentials received from the sensor in 100 [ms] cycles.</li> <li>The static charge potential is shown in [V] units for Standard mode and Ion balance mode. It is shown in [kV] units for High voltage mode.</li> </ul>
(3)	Zero calibration button	<ul style="list-style-type: none"> <li>Send a zero calibration command to the sensor.</li> <li>The static charge potential is set to 0 V.</li> </ul>
(4)	Connection COM port button	<ul style="list-style-type: none"> <li>Clicking the COM port connection button while the button shows "COM port close" when a COM port is connected, disconnects the COM port.</li> <li>Clicking the COM port connection button while the button shows "COM port open" when a COM port is not connected, reconnects the COM port.</li> <li>* If you click the COM port connection button after disconnecting the COM port, it reconnects to the COM port that was selected when the boot settings were done. If you want to connect to a different COM port, select "Boot setting (B)" from "Setting (S)" on the menu bar, and then select the port you want to connect.</li> <li>* When disconnecting from a COM port, if the COM port that had been connected was being used, such as by an application, then if you try to reconnect in this state an error occurs.</li> </ul>
(5)	LED and I/O display field	<ul style="list-style-type: none"> <li>Acquire and displays the input/output status and the status of the LEDs on the sensor.</li> <li>(10 [ms] cycles)</li> </ul>
(6)	Setting information field	<ul style="list-style-type: none"> <li>Show the measurement mode, the measurement distance, measured range, and workpiece size that are currently set for the sensor.</li> <li>* If you reconnect to a sensor with different settings while a sensor is connected, the setting information is not updated automatically. Either do Receive set values on the Sensor setting tab or open Boot settings and restart the support software.</li> </ul>
(7)	Sensor information field	<ul style="list-style-type: none"> <li>Show the model type of the sensor that is connected.</li> <li>* If you reconnect to a different type of sensor model while a sensor is connected, then Sensor model type is not updated automatically. Open Boot settings and restart the support software.</li> </ul>
(8)	Status bar	<ul style="list-style-type: none"> <li>Show the COM port that is currently connected.</li> </ul>

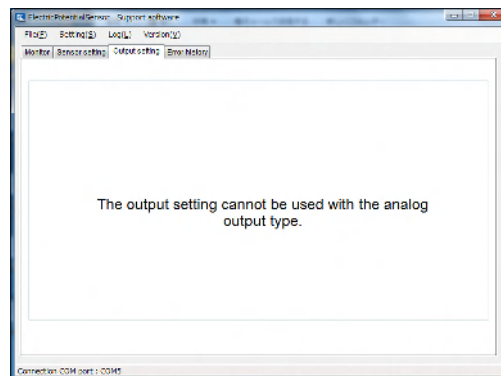
## 5-2 Terms and Functions on the Sensor Setting Tab Operation Window



- (1) Sensor setting items
- (2) Initialize button
- (3) Receive set values button
- (4) Send set values button
- (5) Zero calibration button
- (6) Sensor outline diagram
- (7) Remarks for sensor setting items

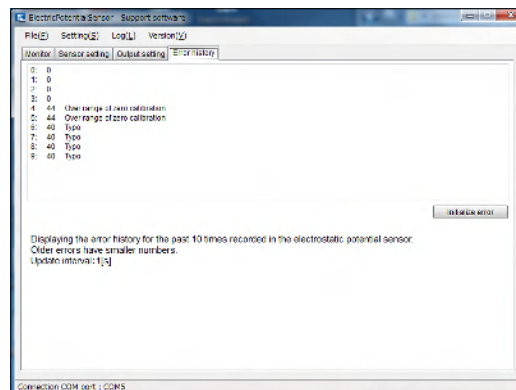
No.	Name	Meaning
(1)	Sensor setting items	<p>These are the various items for setting the sensor. A check mark appears if the value is changed from the current setting value. * For details about the settings, refer to the Electrostatic Potential Sensor Instruction Manual.</p> <ul style="list-style-type: none"> <li>■ Measurement distance Set the distance from the object for measurement to the electrostatic potential sensor from 6 mm [0.236 in.] to 100 mm [3.937 in.]. Setting not required if using ion balance mode.</li> <li>■ Workpiece size Set the diameter on a diagonal line to the object being measured from 20 mm [0.787 in.] to 400 mm [15.748 in.].</li> <li>■ Measurement modes Set the measurement mode (Standard mode/High voltage mode/Ion balance mode) according to the target measurement or the amount of charge on the object being measured.</li> <li>■ Output cycle Select a data output cycle from 10 ms (no smoothing), 50, 100, 200, 500, and 1000 [ms]. When Ion balance mode is selected, the data output cycle is fixed at 100 [ms].</li> </ul>
(2)	Initialize button	<ul style="list-style-type: none"> <li>Return the Sensor setting items to their initial values. Setting values that have been initialized can also be sent to the sensors.</li> </ul>
(3)	Receive set values button	<ul style="list-style-type: none"> <li>Receive the set values from the sensor that is currently connected, and reflects it in the Sensor setting items fields.</li> </ul>
(4)	Send set values button	<ul style="list-style-type: none"> <li>Send sensor settings to the sensor that is currently connected. As the default, only setting items that have been changed are sent. Select "Send all set values" to send all the setting items.</li> </ul>
(5)	Zero calibration button	<ul style="list-style-type: none"> <li>Send a zero calibration command to the sensor. The static charge potential is set to 0 V.</li> </ul>
(6)	Sensor outline diagram	<ul style="list-style-type: none"> <li>Outline diagram indicating types of settings for each setting item. When you change the value of a sensor setting item, that item is also changed on the outline diagram.</li> </ul>
(7)	Remarks for sensor setting items	<ul style="list-style-type: none"> <li>Remarks, in general, about the sensor setting item that is currently selected.</li> </ul>

## 5-3 Terms and Functions on the Output Setting Tab Operation Window



The output setting cannot be used with the analog output type because it does not have a Judgment output function.

## 5-4 Error History



The communication error history for the past 10 times it was recorded in the electrostatic potential sensor is displayed in the "Error history" tab.

The update cycle for the Error history is 1 [s].

The Error history also shows errors from before the support software was booted.

Every time you click "Initialize error history" button you can clear the error history.

## 5-5 Operation Procedures

The operation procedure is shown below.

1) If you need to set the sensor, start the support software and go to "Sensor setting" tab to set the necessary items, such as Measurement distance.

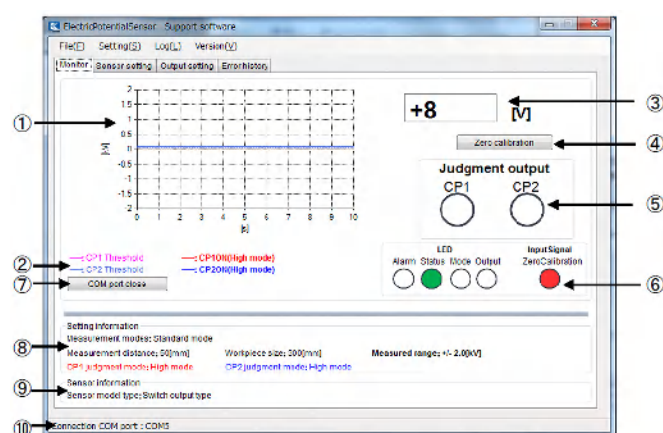
2) If Zero calibration is necessary before doing measurements, first go to "Monitor" tab or "Sensor setting" tab. Point the sensor at a grounded metal plate or at an empty space in which there is no charged body, and then click Zero calibration button. Confirm that the static charge potential that is displayed is 0 [V].

3) You can confirm the amount of charge in the static charge potential display and the graph for the static charge potential display on "Monitor" tab.

(In the graph for static charge potential, you can confirm transitions in static charge potential every 10 [ms].)

## 6. Basic Operations of Switch Output Type and Offline Mode

### 6-1 Terms and Functions on the Monitor Tab Operation Window

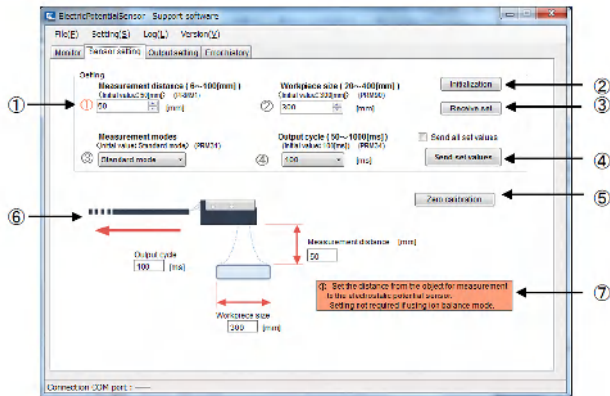


- (1) Graph for static charge potential display
- (2) Graph information
- (3) Static charge potential display field
- (4) Zero calibration button
- (5) Judgment output display
- (6) LED and I/O display fields
- (7) Connection COM port button
- (8) Setting information field
- (9) Sensor information field
- (10) Status bar

No.	Name	Meaning
(1)	Graph for static charge potential display	<ul style="list-style-type: none"> <li>The transitions in the static charge potential that are received from the sensor in 10 [ms] cycles are displayed in a graph format.</li> <li>The transitions in static charge potential are displayed in 10 [s] increments.</li> <li>* Only appears in online mode.</li> <li>* The graph's update cycle is fixed at 100 [ms], regardless of the output cycle of the sensor settings.</li> </ul>
(2)	Graph information	<ul style="list-style-type: none"> <li>Show the Judgment output information for CP1 and CP2 and the color of lines in the graph when judgment output CP1 or CP2 is on.</li> <li>* Only appears in online mode.</li> </ul>
(3)	Static charge potential display field	<ul style="list-style-type: none"> <li>Display static charge potentials received from the sensor in 100 [ms] cycles.</li> </ul>
(4)	Zero calibration button	<ul style="list-style-type: none"> <li>Send a zero calibration command to the sensor.</li> <li>The static charge potential is set to 0 V.</li> </ul>
(5)	Judgment output display	<ul style="list-style-type: none"> <li>Acquire and displays the judgment output conditions of the sensors in 100 [ms] cycles.</li> <li>When Judgment output is on, the display becomes yellow.</li> </ul>
(6)	LED and I/O display field	<ul style="list-style-type: none"> <li>Acquire and displays the input/output status and the status of the LEDs on the sensor.</li> <li>(100 [ms] cycles)</li> </ul>
(7)	Connection COM port button	<ul style="list-style-type: none"> <li>Clicking the COM port connection button while the button shows "COM port close" when a COM port is connected, disconnects the COM port.</li> <li>Clicking the COM port connection button while the button shows "COM port open" when a COM port is not connected, reconnects the COM port.</li> <li>* If you click the COM port connection button after disconnecting the COM port, it reconnects to the COM port that was selected when the boot setting was done. If you want to connect to a different COM port, select "Boot setting (B)" from "Setting (S)" on the menu bar, and then select the port you want to connect.</li> <li>* When disconnecting from a COM port, if the COM port that had been connected was being used, such as by an application, then if you try to reconnect in this state an error occurs.</li> </ul>
(8)	Setting information field	<ul style="list-style-type: none"> <li>Shows the measurement mode, the measurement distance, the measured range, and the workpiece size that are currently set for the sensor.</li> <li>* If you reconnect to a sensor with different setting while a sensor is connected, the setting information is not updated automatically. Either receive set values on the Sensor setting tab or open Boot setting and restart the support software.</li> </ul>

(9)	Sensor information field	<ul style="list-style-type: none"> <li>• Show the model type of the sensor that is connected.</li> <li>* If you reconnect to a different type of sensor model while a sensor is connected, then Sensor model type is not updated automatically. Open Boot setting and restart the support software.</li> </ul>
(10)	Status bar	<ul style="list-style-type: none"> <li>• Show the COM port that is currently connected.</li> </ul>

## 6-2 Terms and Functions on the Sensor Setting Tab Operation Window

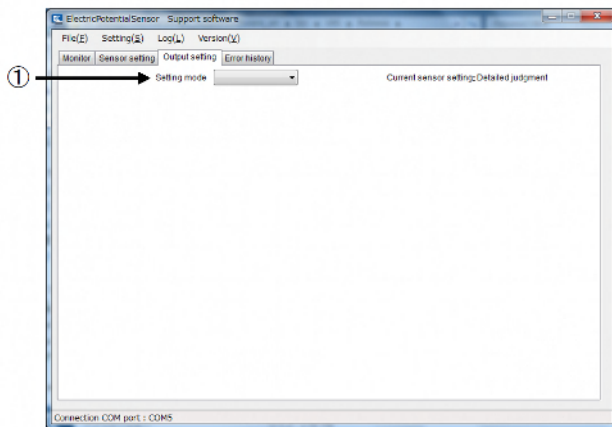


- (1) Sensor setting items
- (2) Initialize button
- (3) Receive set values button
- (4) Send set values button
- (5) Zero calibration button
- (6) Sensor outline diagram
- (7) Remarks for sensor setting items

No.	Name	Meaning
(1)	Sensor setting items	<p>These are the various items for setting the sensor. A check mark appears if the value is changed from the current setting value. * For details about the settings, refer to the Electrostatic Potential Sensor Instruction Manual.</p> <ul style="list-style-type: none"> <li>■ Measurement distance Set the distance from the object for measurement to the electrostatic potential sensor from 6 mm [0.236 in.] to 100 mm [3.937 in.]. Setting not required if using ion balance mode.</li> <li>■ Workpiece size Set the diameter on a diagonal line to the object being measured from 20 mm [0.787 in.] to 400 mm [15.748 in.].</li> <li>■ Measurement mode Set the measurement mode (Standard mode/High voltage mode/Ion balance mode) according to the target measurement or the amount of charge on the object being measured.</li> <li>■ Output cycle Select a data output cycle from 10 ms (no smoothing), 50, 100, 200, 500, and 1000 [ms]. When Ion balance mode is selected, the data output cycle is fixed at 100 [ms].</li> </ul>
(2)	Initialize button	<ul style="list-style-type: none"> <li>• Return Sensor setting items to their initial values.</li> </ul>
(3)	Receive set values button	<ul style="list-style-type: none"> <li>• Receive the set values from the sensor that is currently connected, and reflects it in Sensor setting items fields.</li> </ul>
(4)	Send set values button	<ul style="list-style-type: none"> <li>• Send sensor settings to the sensor that is currently connected. As the default, only setting items that have been changed are sent. Select "Send all set values" to send all the setting items.</li> </ul>
(5)	Zero calibration button	<ul style="list-style-type: none"> <li>• Send a zero calibration command to the sensor. The static charge potential is set to 0 V.</li> </ul>
(6)	Sensor outline diagram	<ul style="list-style-type: none"> <li>• Outline diagram indicating types of settings for each setting item. When you change the value of a sensor setting item, that item is also changed on the outline diagram.</li> </ul>
(7)	Remarks for sensor setting items	<ul style="list-style-type: none"> <li>• Remarks, in general, about the sensor setting item that is currently selected.</li> </ul>

### 6-3 Terms and Functions on the Output Setting Tab Operation Window

Judgment mode selection screen opens when you move to Output setting tab.

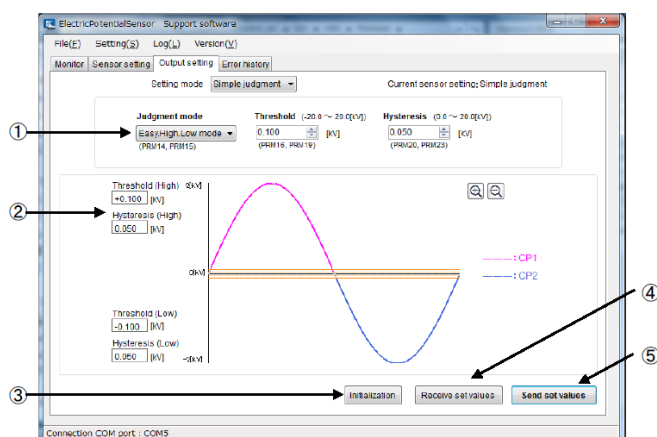


(1) Judgment mode selection

No.	Name	Meaning
(1)	Judgment mode selection	<ul style="list-style-type: none"><li>• Select Simple judgment or Detailed judgment for Judgment mode. After you select one, the setting screen for that Judgement mode opens.</li></ul>



## ■When you select Simple judgment

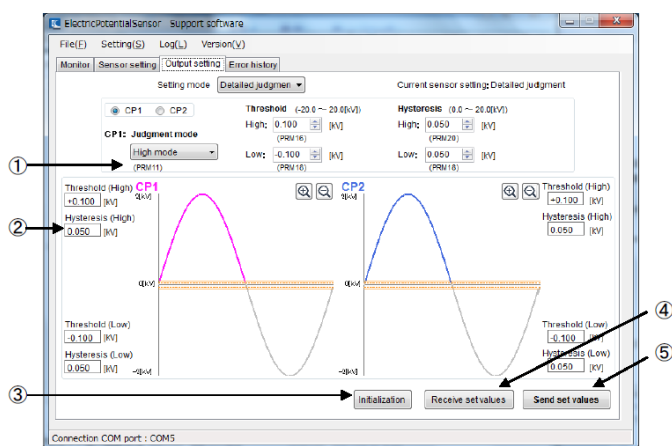


- (1) Output setting items
- (2) Setting value display field
- (3) Initialize button
- (4) Receive set values button
- (5) Send set values button

No.	Name	Meaning
(1)	Output setting items	<p>These are the various items for setting the output.</p> <p>* For details about settings, refer to Electrostatic Potential Sensor Instruction Manual.</p> <p>■ Judgment mode</p> <p>Select Judgment mode for Judgment output from the following.</p> <ul style="list-style-type: none"> <li>• High/Low mode</li> </ul> <p>If the measured potential goes over the high threshold, CP1 turns on. If it goes below the low threshold, CP2 turns on.</p> <ul style="list-style-type: none"> <li>• Inside mode</li> </ul> <p>CP1 turns on while the measured potential is inside the high and low thresholds. CP2 is in Off mode and is not output.</p> <ul style="list-style-type: none"> <li>• Outside mode</li> </ul> <p>CP1 turns on while the measured potential is outside the high and low thresholds. CP2 is in Off mode and is not output.</p> <p>■ Threshold</p> <p>The threshold used for the output of Judgment output is set between -20.0 [kV] and 20.0 [kV].</p> <p>With Simple judgment, you can input just one threshold value to set both high and low thresholds to the same value so the positive charge side and the negative charge side are the same value away from the base of 0 V.</p> <p>■ Hysteresis</p> <p>Set the threshold for hysteresis to a value from 0.0 [kV] to 20.0 [kV].</p> <p>With Simple judgment, you can input just one hysteresis value to set both the hysteresis for both the high and low thresholds.</p>
(2)	Setting value display field	<ul style="list-style-type: none"> <li>• The set values are displayed in Output setting items.</li> </ul> <p>In the graph for checking settings, you can check values as if judgement output is on for current values.</p> <p>You can change the range of the graph for checking settings with the zoom in and out buttons on the side of the graph.</p>
(3)	Initialize button	<ul style="list-style-type: none"> <li>• Return the Output setting items to their initial values.</li> </ul> <p>Setting values that have been initialized can also be sent to the sensor. (Online mode only)</p> <p>Clicking the Initialization button displays a dialog box to select what you want to initialize.</p> <p>If you want to initialize only the settings for Simple judgment, select "Initialize Simple judgement". If you want to initialize set values for Detailed judgment at the same time, select "All initialization".</p>
(4)	Receive set values button	<ul style="list-style-type: none"> <li>• Receive set values from the output that is currently connected, and reflects it in Sensor setting items.</li> </ul> <p>* Only function in online mode.</p>
(5)	Send set values button	<ul style="list-style-type: none"> <li>• Send output settings to the sensor that is currently connected.</li> </ul> <p>* Only function in online mode.</p>

## ■When Detailed judgment is selected



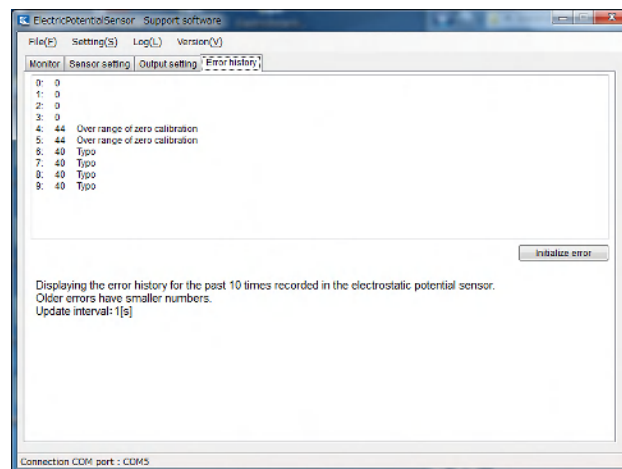


- (1) Output setting items
- (2) Setting value display field
- (3) Initialize button
- (4) Receive set values button
- (5) Send set values button

No.	Name	Meaning
(1)	Output setting items	<p>These are various items for setting the output. Switching the selection from CP1 to CP2 allows you to do various settings for each Judgment output.</p> <p>* For details about settings, refer to the Electrostatic Potential Sensor Instruction Manual.</p> <p>■ Judgment mode Select Judgment mode for Judgment output from the following.</p> <ul style="list-style-type: none"> <li>• High mode If the measured potential goes over the high threshold, Judgment output turns on.</li> <li>• Low mode If the measured potential goes below the low threshold, Judgment output turns on.</li> <li>• Inside mode Judgment output turns on while the measured potential is inside the high and low thresholds.</li> <li>• Outside mode Judgment output turns on while the measured potential is outside the high and low thresholds.</li> <li>• OFF mode Judgment output is not output.</li> </ul> <p>■ Threshold The threshold used for the output of the Judgment output is set between -20.0 [kV] and 20.0 [kV]. You can set both a high threshold and a low threshold, but the high threshold must be a higher value than the low threshold.</p> <p>■ Hysteresis Set the threshold for hysteresis to a value from 0.0 [kV] to 20.0 [kV].</p>
(2)	Setting value display field	<ul style="list-style-type: none"> <li>• Set values are displayed in Output setting items.</li> </ul> <p>In the graph for checking settings, you can check values as if Judgement output is on for current values. You can change the range of the graph for checking settings with the zoom in and out buttons on the side of the graph.</p>
(3)	Initialize button	<ul style="list-style-type: none"> <li>• Return Output setting items to their initial values.</li> </ul> <p>Setting values that have been initialized can also be sent to the sensors. (Online mode only)</p> <p>Clicking Initialization button displays a dialog box to select what you want to initialize. If you want to initialize only settings for Detailed judgment, select "Initialize Detailed judgement". If you want to initialize set values for Simple judgment at the same time, select "All initialization".</p> <p>If you select "Initialize Detailed Setting", you can further limit the setting you want to initialize.</p> <p>If you want to initialize only the setting for CP1, select "Initialize CP1". If you want to initialize only the settings for CP2, select "Initialize CP2". If you want to initialize settings for CP1 and CP2 at the same time, select "All initialization".</p>
(4)	Receive set values button	<ul style="list-style-type: none"> <li>• Receive set values from the output that is currently connected, and reflect it in Sensor setting items fields.</li> </ul>

		* Only functions in online mode.
(5)	Send set values button	<ul style="list-style-type: none"> <li>• Sends output settings to the sensor that is currently connected.</li> <li>* Only functions in online mode.</li> </ul>

## 6-4 Error History



The communication error history for the past 10 times that was recorded in the electrostatic potential sensor is displayed in the "Error history" tab.

The update cycle for the Error history is 1 [s].

The Error history also shows errors from before the support software is booted.

Every time you click "Initialize error history" button you can clear the Error history.

\* Error history only appears in online mode.

## 6-5 Operation Procedures

The operation procedure is shown below.

### ■ When switch output type is connected

- 1) If you need to set the sensor, start the support software and go to "Sensor setting" tab to set necessary items, such as Measurement distance.
- 2) If output settings are necessary, go to "Output setting" tab and set items that are necessary, such as the judgment modes.
- 3) If Zero calibration is necessary before doing measurements, first go to "Monitor" tab. Point the sensor at a grounded metal plate or at an empty space in which there is no charged body, and then click Zero calibration button.

Confirm that the displayed static charge potential is 0 [V].

- 3) You can confirm the amount of charge and whether Judgment output is on or off in the static charge potential display and the graph for the static charge potential display on the "Monitor" tab. (In the graph for the static charge potential, you can confirm transitions in static charge potential every 10 [ms].)

### ■ When Offline mode is booting

In Offline mode, various settings are saved and the saved setting files are read.

Display screen shows when a switch output type is connected.

## 7. Operations to Save and Read Setting Value

### ■ Save set values

In the menu bar, select "File (F)" → "Save set values" to open the window to save set values.

Give the file an appropriate name and select "Save" to create a CSV format file.

Values for sensor settings set in the current software and the output settings (only when Switch output type is connected or when Offline mode is selected) are recorded in the setting file.

### ■ Read set values

In the menu bar, select "File (F)" → "Read set values" to open the window to read set values.

When you open the setting file that was saved using Save set values, the content of the setting file is reflected in Sensor setting tab and Output setting tab.

\* Caution: If you directly edit the setting file, such as with an editor, it may become impossible to read settings.

An error occurs if a corrupted setting file is read.

\* Caution: An error occurs if a setting file that was used by other applications or users is read.

Close the setting file and take measures, such as closing the application that is using the setting file, and then read the setting file again.

\* Caution: Always save setting files with the ".csv" extension.

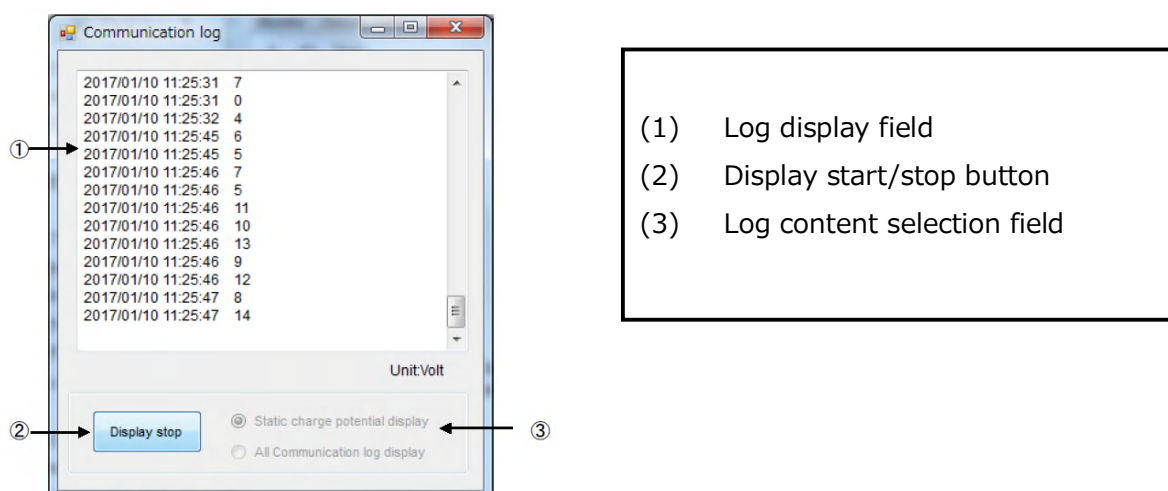
An error occurs if a setting file with a different extension is read.

## 8. Operations to Display and Output Logs

### ■ Displaying logs

In the menu bar, select "Log (L)" → "Log Display (D)" to open the following window.

(\* You can only select this in online mode.)



- (1) Log display field
- (2) Display start/stop button
- (3) Log content selection field

No.	Name	Meaning
(1)	Log display field	<ul style="list-style-type: none"> <li>After starting the log display, acquired logs are displayed here. The number of lines that can be displayed is limited to 100 lines.</li> </ul>
(2)	Display start/stop button	<ul style="list-style-type: none"> <li>Starts and stops the log display.</li> </ul>
(3)	Log content selection field	<ul style="list-style-type: none"> <li>You can select the content of the log that is displayed. Selecting "Static charge potential display" displays Log acquisition time and static charge potential [V] information. Selecting "All Communication log display" displays Log acquisition time. The content of the command that was sent is blue text and the response from the sensor is green text.</li> </ul>

### ■ Log Output

In the menu bar, select "Log (L)" → "Log Output (O)" to open the window for saving the log.

(\* You can only select this in online mode.)

Give the file an appropriate name and select "Save" to create a CSV format log file.

The static charge potential information that is acquired in a 100 [ms] cycle is output continuously to the log file.

In the menu bar, select "Log (L)" → "Log Output Stop (B)" to stop the log output and exit the software.

## 9. Operations to Display Version Information

- Sensor

In the menu bar, select "Version (V)" → "Sensor (E)" to acquire and display version information from the sensor.

(\* Only functions in online mode)

- Support Software

In the menu bar, select "Version (V)" → "Support software (S)" to display version information for the support software.

If parts of this document are unclear, or if you have technical questions, contact our overseas department as noted below.

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