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A trusted leader in measurement and calibration solutions.

User Manual

The meriSuite[™] CG Application



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meriam*

General information

Notification Statements

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Glossary

Words and phrases with their definitions.

Button or key

- A **button** always refers to an area on the screen that you can click to select functionality.
- A **key** always refers to hardware push buttons on the keyboard that you can press.

Dashboard

The dashboard is the initial window that displays in **meriSuite CG** app. The dashboard gives you access to the different functions in the app.

Firmware

Firmware is a type of app that is stored on hardware. Both meriGauge plus and meriSense have firmware. The meriSuite app can communicate with the firmware on the gauge or sensor and change or update it as needed.

Meriam Calibration

Meriam calibration refers to any calibration completed at Meriam with *Meriam traceability*. Meriam calibration includes:

- Oven calibration.
- Multipoint Meriam adjustment.

User Calibration

User calibration refers to any calibration done outside of Meriam with *non-Meriam traceability*. User calibration includes:

• Multipoint user calibration or adjustment.



Features

General notes about meriSuite

How does meriSuite benefit you?

With meriSuite, you can configure your gauge or sensor to display information the way your company needs to use it.

The meriSuite app can configure data logging requirements and Data Log Pro.

USB cable and your computer



For use only in non-hazardous locations (safe locations)

Connect the USB cable to meriGauge plus and to your computer to configure meriGauge plus and meriSense using the meriSuite app.

Battery outline



Watch for the battery outline

Do not attempt to modify or update your meriGauge plus or meriSense when only the outline of the battery icon is visible.



Close meriSuite first, then turn off meriGauge

NOTICE

Do not turn off the power on the meriGauge plus while the gauge is communicating with meriSuite. The gauge displays dashes and the word **OFFLINE** while meriSuite is communicating with gauge or sensor.

- Close meriSuite first, disconnect the USB, and turn off the meriGauge plus.
- As long as **OFFLINE** remains visible, **Auto Off** is suspended.

Watch for a yellow dot on a tab

A yellow dot appears on a tab in meriSuite to indicate that you have made changes to settings but you have not saved them yet. See Figure 1 and Figure 2 below.

You may click the **Write** button to save the changes you made.



Figure 1: Yellow dot on an active tab.

¢		D	ata Log Pro		
Directory Prev	view Setup				
DataLog Type	Individual Sa	imples 🔹	Delete All Logs		
	√ Reco	rd temperature	Usage 200 of 100,000 points used		
Interval	1	Seconds 🔹	4 of 128 files used		
Duration	50	Points •			
Notes					
receive and send data log pro setup information from and to the meriGauge Read Write					



Figure 2: Yellow dot on an inactive tab.

Direct		iew Setup	D	ata Log	g Pro
Data	Log Informa	tion		Sensor Inform	ation
	Type:	Individual Samples		Name:	meriSense
_	p Condition:			Model:	MS700-CI0100
		2018-01-08 08:49		S/N:	
Coll	ection Stop:	2018-01-08 08:50		LSL:	-999.7 mBar
Inte	erval:	1 Seconds		USL:	7584.2 mBar
Dur	ation:	49 Seconds		Factory Cal:	
Sam	nples:	50		User Cal:	
No	otes: No notes				
	Legend: √ = 9 Time (24h)	ood measurement, ۱۱ = j Pressure (mBar)	iust outside cali Status	brated range, × = out o Temperature (°C)	f calibrated range Status
	08:49:13	4.3	√	19.5	· ✓
	08:49:14	4.2	\checkmark	19.5	\checkmark
	08:49:15	4.3	\checkmark	19.5	\checkmark
	08:49:16	4.3	\checkmark	19.5	\checkmark
	08:49:17	4.3	\checkmark	19.5	\checkmark
	08:49:18	4.3	\checkmark	19.6	\checkmark
	08:49:19	4.3	\checkmark	19.6	\checkmark
	08:49:20	4.3	\checkmark	19.6	\checkmark
	08:49:21	4.3	\checkmark	19.6	\checkmark
	08:49:22	4.3	\checkmark	19.6	\checkmark
	08:49:23	4.4	\checkmark	19.7	\checkmark
	08:49:24	4.4	\checkmark	19.6	\checkmark
H		1 / 4		₩	Save

Year-Month-Date format

The meriSuite app displays the date in year-month-day format.

For example: 2016-04-22 (YYYY-MM-DD).

Hours:Minutes:Seconds format

The meriSuite app displays the time in Universal Coordinated Time (UTC) 24-hour format.

For example: 15:05:45 UTC (hours:minutes:seconds).



Meriam.com

On the meriSuite CG dashboard, you can see a link at the bottom that will take you to Meriam website where you can find the latest product manuals and other useful information.

Connection status displayed on the dashboard

No attached devices

The meriSuite app displays no outlines of devices on the right side.

See the figure below.



Attached devices

The meriSuite app displays the outlines of *attached* devices on the right with descriptions appearing alongside. See the figure below.



User Manual for meriSuite



No sensor attached

Notice the bold outline of meriGauge plus contrasted with the dotted outline of an unattached meriSense. See the figure below.



Buttons on the dashboard

meriSuite buttons open windows

The buttons are described below.

Application button



The **Application** button displays a window with three sections:

- About.
- Available Update.
- Language Selection.

The **Application** button displays alert icons:

• It displays a green alert icon with an exclamation mark inside it to indicate an *Available Update*.



NOTICE

"PLEASE BE ADVISED! If you choose to install the update at this time, you will lose unsaved configuration information or data log setup changes. Be sure to save that information to a file or **Write** it to the connected device."

• It displays a red alert icon with an "x" inside it to indicate, "There is no connection to the update server. This is usually caused by the PC not having internet connectivity or the server may be temporarily unavailable."

Update button



The **Update button** displays a window with two sections:

- The meriGauge section alerts you to updates for the *gauge*.
- The meriSense section alerts you to updates for each *sensor* that you attach to the gauge.

The **Update button** displays an alert icon:

- It displays a green alert icon to indicate an update is available for the firmware in the gauge or the sensor.
- It displays a red alert icon to indicate, "There is no connection to the update server. This is usually caused by the PC not having internet connectivity or the server may be temporarily unavailable."

Configuration button



The **Configuration button** displays a window with two tabs:

- *meriGauge* or the name you assigned to it.
- *meriSense* or the name you assigned to it.

Note: These tabs offer you various settings to configure each device.



The **Configuration button** displays one alert icon:

• It displays a yellow alert icon to indicate you have changed a setting and you have not yet saved the setting to meriGauge, meriSense, or to your computer.

User Calibration button



The **User Calibration** button displays one options to calibrate the sensor.

The **User Calibration** button displays a yellow alert icon to indicate you have changed a setting and you have not yet saved the setting to meriSense.

Data Log buttons

Data logging displays three different buttons depending on what you order or on what you add-on at a later time.

The **Data Log** button is always unavailable when no gauge is attached to meriSuite.





The **Data Log Lite** button displays when you attach a gauge. Data Log Lite is the free version of data logging. It has *no* options.



The **Data Log Pro** button displays when Data Log Pro is activated on the gauge that is attached to meriSuite. The button displays a yellow alert icon to indicate you have changed a setting and you have not yet saved the setting to meriGauge, meriSense, or to your computer.



Passwords

Overview of passwords

Passwords are *never* required to use the meriGauge plus gauge or meriSense sensors.

- When we ship the meriGauge plus or meriSense sensors to you, the passwords are turned off.
- Each device (meriGauge plus or meriSense) can have its own unique 16-character password. You may use from 1-16 characters: letters, numbers, or symbols, and uppercase and lowercase.
- A gauge and a sensor have separate passwords.
- Each device can have its password turned on or turned off independently from any other device.
- meriSuite retrieves the passwords stored on the meriGauge plus and meriSense.



meriSuite uses the password on meriGauge

If you choose to select the **Password Required For Future**

Access, then meriSuite requests a password for the following actions:

• To modify a gauge's configuration.

Note: This action includes saving to or loading from a file.

- To update the firmware on a gauge.
- To access the **Setup** tab of Data Log Pro.

meriSuite uses the password on meriSense

If you choose to select the **Password Required For Future Access**, then meriSuite requests a password for the following actions:

• To modify the sensor's configuration.

Note: This action includes saving to or loading from file.

- To update the firmware on the sensor.
- To calibrate the sensor.

meriSuite requests a password

If you choose to select the **Password Required For Future Access**, then meriSuite requests a password whenever you modify a configuration, update the app or firmware, or calibrate a device.

- Once meriSuite accepts a password for one of those actions, the device remains unlocked until it is disconnected from meriSuite.
- If you enter the password on one window, meriSuite unlocks that gauge or sensor on its other windows as well.

Data Log Lite has no password

meriSuite does not use a password for **Data Log Lite** since it cannot make any changes to the gauge.



Request a recovery password

Forgot the password for a gauge or sensor?

- If you forget a password, contact Meriam to generate a recovery password for you to unlock the device.
- A recovery password disables the password until you create a new password.
- You must have the serial number of the gauge or sensor to request a recovery password.
- Call + 1 216 281 1100 or send an e-mail to sales@meriam.com.

Recovery password valid for one date

When you call Meriam to generate a recovery password, you may select a date that is convenient for you. If you do not specify a date, the request date is used.



User Calibration—For authorized personnel only

What does "Calibration Enabled" refer to?

- With a check in the box, **Calibration Enabled** displays the *Live Reading* with your current user calibration applied.
- Without a check in the box, it displays *Live Reading* without your user calibration.

Restore Factory Defaults

This button clears your user calibration from the meriSense sensor.

Choose Calibration Unit

- Select the calibration reference units.
- This does not affect or depend on the configuration units.

Begin button...Apply button

- 1. Click Begin.
- 2. Select the point.
- 3. Apply reference pressure within the range shown.
- 4. Enter the reference value.
- 5. Save the point.
- 6. Repeat steps 2-5 until you are done. (You have to change at *least one point.*)
- 7. Click the **Apply** button.



Configuration for meriGauge plus

The Names field

You can assign your own company designations to each meriGauge plus gauge.

Sync PC time to Gauge

- Click to update meriGauge time and date with your computer.
- The LCD display and data logging use this time and date.

Timeouts

- Backlight.
- Auto Off (Automatic Off).

Modes of display: Selected or Deselected

- Min/Max display.
- Accuracy display.
- Tare display.
- Average display.
- Rate of Change display.
- Time & Temp display.
- Allow zero adjust (ø)

As Left/As Found Configuration Report button

- This button creates a report with the previous configuration on the gauge and the new settings you saved.
- The **As Found/As Left Report** cannot report changes made on-screen unless you save those new configurations to the gauge.
- You can review a summary of the configuration of the gauge when it is first connected and the changes you made in the As Found/As Left Report for meriGauge plus.



Open and Save / Read and Write Configurations

- **Save** refers to saving new configuration data to an XML file format on your computer and **Open** refers to opening configuration data that you saved on your computer.
- **Read** and **Write** refer to reading configuration data from a meriGauge plus or writing to it.



Save your configuration changes before you click the **Read** button. After you click the **Read** button, all changes on-screen are replaced with the configuration that is on the gauge.

Configuration for meriSense

The Names field

You can assign your own company designations to each meriGauge, asset number, naming scheme, and so on.

Selected Units

Select or deselect the engineering units to view on the meriGauge plus display.

- The All button selects all engineering units.
- The None button deselects all engineering units.

Two User Defined Units

You can define the text and multiplier for two non-standard or unsupported display units.

Note: multiplier × PSI = the displayed value.

As Left/As Found Configuration Report

You can review a summary of the configuration of the sensor when it is first connected and the changes you made in the **As Found/As Left Report** for meriSense.



Open and Save / Read and Write Configurations

- **Save** refers to saving new configuration data to an XML file format on your computer and Open refers to opening configuration data that you saved on your computer.
- **Read** and **Write** refer to reading configuration data from a meriGauge plus or writing to it.

NOTICE Save your configuration changes before you click the **Read** button. After you click the **Read** button, all changes on-screen are replaced with the configuration that is on the sensor.



Data Log Lite

Preview tab

Preview the data log

The Preview tab displays the first 10 samples so you can confirm the data to save. If you have fewer than 10, it displays all of your samples.

Status, pressure, and temperature for logs

The Status symbols for pressure and temperature.

The \checkmark symbol corresponds to readings that are within the calibrated range.

- The $\uparrow \downarrow$ and \times symbols indicate an abnormal condition.
- The 11 symbol indicates readable data.
- The \times symbol I indicates dashes and no readable data.

The Pressure

The pressure indicates the reading at each 15-second interval in the data set.

The Temperature

The temperature indicates the measured temperature at the sensor for each 15-second interval in the data set.

Note: See the figure below as an example of the preview tab.





Save a data log file as a TSV file—only option

The **Save** button in **Data Log Lite** saves the data to a **Tab Separated Values (*.TSV)** file format.

Open a data log file as a TSV file

Double click a TSV file and if it opens in a spreadsheet application, then you do not need to do anything additional.

Examples of spreadsheet apps: Microsoft Excel, OpenOffice Calc, and Google Sheets.

Associate the file type "TSV" with an app

If double clicking a TSV file *failed* to open it in a spreadsheet app, then you have to follow these steps:

- 1. Open the Control Panel in Windows 10, 8, or 7.
- 2. In the Control Panel, open Default Programs.
- 3. Click the Associate a file type or protocol with a program option.
- 4. Scroll through the list of file extensions until you locate ".tsv" and select it.
- 5. Click the Change program button.
- 6. Select the program you want to associate with it and click OK.



Note: If the program you want to select is not listed, click the Browse button and find the program's executable (.exe) file on the computer. Select the file and click OK to select that program.

Drag and drop a TSV file into

Drag and drop TSV files to open them. The following steps are similar for these spreadsheet apps: Microsoft Excel, OpenOffice Calc, and Google Sheets.

1. Open **File Explorer** (Windows 8 and 10). Keep File Explorer small enough to see Excel in the background.

Note: Depending on which version of Windows you have, File Explorer may be known as Windows Explorer, File Manager, or My Computer.

- 2. Open **Excel**. It can have a blank spreadsheet or an existing spreadsheet. Drag and drop creates a new spreadsheet.
- 3. Switch to **File Explorer** and navigate to the location where you saved the TSV file.
- 4. Select the file and drag-and-drop it in the middle of the blank spreadsheet.
- 5. Save it as an **Excel** file.



Look for page breaks if you want to print

Excel has a feature called **Page Break Preview** to show you where the page breaks occur in the log file. Change the page breaks, rows to repeat at the top, and other settings as necessary so your printers do not waste paper.



Note: Other spreadsheet apps offer similar features.



Upgrade tab

Upgrade provides information and activation

The Upgrade tab has three areas to guide you through upgrading from Data Log Lite to Data Log Pro. It has:

- 1. A list of benefits that Data Log Pro offers you.
- 2. A contact.
- 3. An enter activation key edit box and an **Activate Device** button to replace Lite with Pro.

Note: The Activate Pro button remains unavailable until you enter an activation key number.





Data Log Pro

An optional purchase

List of benefits

You can:

- Log 100 000 data points.
- Set data logging intervals from 1 second to 24 hours.
- Set one of four data logging types.
- Select the duration: fixed time, fixed data points, or forever.

Note: Forever is limited by the remaining number of points on the gauge. Look for these numbers on the **Setup** tab by clicking the Data Log Pro button.

• Save logs to two file formats: TSV and PDF format.

How many licenses do I need to operate Data Log Pro?

Do I need a license for each gauge? (meriGauge plus)

- Yes. One license covers one meriGauge (gauge) and an unlimited number of sensors, copies of meriSuite, and computers.
- This license policy differs from some app licenses.

Do I need a license for each computer (meriSuite)

• No.

Do I need a license for each sensor? (meriSense)

• No.



Order Data Log Pro or add it later

Order it installed

You can order it so the meriGauge comes loaded and ready to use when you receive it. The **Data Log Pro** button appears on the meriSuite dashboard when the gauge is connected.

Add it later

You may add Data Log Pro at any time by calling your distributor or contact the Meriam Sales Team.

- You *must* have the **serial number** from the gauge.
- You can find it on the back of the gauge or you can view it in the meriSuite app.
- After you purchase Data Log Pro, your distributor or the Meriam Sales Team will give you an Activation Key.

Phone + 1 216 281 1100

E-mail sales@meriam.com

Enter the activation key

- Click the *Upgrade* tab in *Data Log Lite* to enter the activation key.
- After you click the *Activate Device* button, **Data Log Pro** automatically replaces Data Log Lite in meriSuite.



Directory tab

View the list of logs on the gauge in the Directory tab

The **Directory** tab displays all the logs in the memory of meriGauge. Two ways to open a log:

- First, double click a log to open it in the **Preview** tab.
- Second, you may click a log from the list to select it and click the **Preview** tab to view it.

G	Data Log Pro
Directory Preview Setup	
Choose Log —	
Log1 08:49:13 2018-01-08	50 pts 'meriSense'
Log2 08:50:19 2018-01-08	50 pts 'meriSense'
Log3 08:51:39 2018-01-08	50 pts 'meriSense'
Log4 08:53:55 2018-01-08	50 pts 'meriSense'



Preview tab

Overview of the Preview tab

When you double click a log, it switches to the Preview tab where the log opens.



The **Preview** tab contains seven areas of information:

- 1. Data Log Information list.
- 2. Sensor Information list.
- 3. Notes.
- 4. Legend.
- 5. Samples table.
- 6. Navigation bar.
- 7. Save button.



Details about the Preview tab

1. Data Log Information list

A description of items in this list:

- 1. **Log type** indicates the type that was selected in the Setup tab when the log was created.
- 2. **Stop condition** indicates why the log stopped.

List of stop conditions: Manual Stop, Data Complete, Time Limit, Point Limit, Storage Limit, Low Power, Sensor Removed, PC Connection, or Sensor Error

- 3. **Collection Start** indicates the day and time the log began.
- 4. **Collection Stop** indicates the day and time the log ended.
- 5. **Interval** is how often data is saved but it does not display with the **On Demand** option.
- 6. **Duration** displays how long the log actually recorded data. This may or may not be the Duration you selected in the *Setup* tab. Check the *Stop condition*.
- 7. **Samples** indicate the number of readings in the log. They reflect how many data points were saved.

2. Sensor Information list

• All information in this list was retrieved from the sensor that was attached to the gauge for this particular log.

3. Notes

The information that displays here comes from the text you enter in the **Notes** box in Data Log Pro **Setup** tab.



4. Legend for the status columns

The samples table has two columns for Status. The legend provides three symbols to indicate the level of confidence for pressure and temperature measurements.

Note: Temperature is included only if you selected **Record temperature** in the **Setup** tab.

- The ✓ symbol corresponds to readings that are within the calibrated range.
- 2. The 11 and \times symbols indicate an abnormal condition.
- 3. The 11 symbol indicates readable data but it is out of range.
- 4. The \times symbol indicates dashes on the meriGauge plus and no readable data.

5. Samples table: pressure and temperature

- The **Pressure** column indicates the reading at each interval in the data set.
- The **Temperature** column indicates temperature at each interval in the log. Temperature is only available as an option for these two data log types: *Individual Samples* and *On Demand*.

6. Navigation bar

- The bar provides you with buttons to jump to the first log or to the last log.
- The bar also provides you with buttons to navigate to the previous log or next log.
- The numbers in the bar indicate which log out of the total number of logs on the meriGauge plus that you are currently viewing.

7. Save button

Click the Save button on the right side and the Save As box appears. You can save the file in a PDF and TSV file format.



Setup tab

Overview of the Setup tab

The Setup tab lists parameters you may change. It gives you usage statistics and it displays three action buttons.

A yellow dot appears on this tab to remind you that you changed a setting and have not saved it.

Parameter Choices

Four data logging types

- 1. **Individual Samples** refers to actual measurements taken at fixed intervals.
- 2. **Average only** refers to average measurements over the intervals you selected. It takes measurements every 200 ms.
- 3. **Average with peaks** refers to average measurements over the intervals you selected. It also saves the maximum and minimum measured values during the interval you saved. It takes measurements every 200 ms.
- 4. **On Demand** refers to manually recording actual measurements rather than at fixed intervals.

Record temperature

You decide if you want to include temperature in the logs only for these two data log types: *Individual Samples* and *On Demand*.

Interval types

You select Seconds, Minutes, or Hours from a drop-down menu and enter a number.

Duration types

- You select Minutes, Hours, Days, or Points and enter a number.
- Selecting Forever, makes the number box disappear.

Note: Forever is limited by the remaining number of points on the gauge. Look for these numbers on the **Setup** tab in Data Log Pro.



Notes edit box

Notes you enter in this edit box appear in the Preview tab, the TSV file, and the PDF file. This field can hold up to 64 characters.

Usage statistics

Usage presents the amount of memory available on the gauge for data logging in two ways:

- 1. The number of data points used out of a maximum of 100 000.
- 2. The number of logs used out of a maximum of 128.

Delete All Logs

This button deletes all the logs on the meriGauge plus. This does not affect the files you saved to the computer in the **Preview** tab.

Note: If the gauge has a password, then clicking this button requires you to enter a password. This password was created in the **Configuration** tab for meriGauge.

Read

After pressing this button, Data Log Pro reads the parameters from the gauge and displays them in the **Setup** tab.

NOTICE

Save your configuration changes before you click the **Read** button. After you click this button, all changes on-screen are replaced with the configuration that is on the gauge.

Note: If the gauge has a password, then clicking this button requires you to enter a password. This password was created in the **Configuration** tab for meriGauge.

Write

This button remains unavailable until you make a change in the **Setup** tab. It saves the new setup parameters to the meriGauge. It overwrites whatever was on the gauge.

Note: If the gauge has a password, then clicking this button requires you to enter a password. This password was created in the **Configuration** tab for meriGauge.



Help

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Find a local Meriam representative

Use this map to help you find a Meriam representative.

http://www.meriam.com/representatives-map/