

# Gas Flow Multi-Meter



5300 Series

Quick Start Guide

P/N 6011690, Revision D  
May 2023



# Instrument Kit Components

## 5300 Series High-Flow Gas Multi-Meter

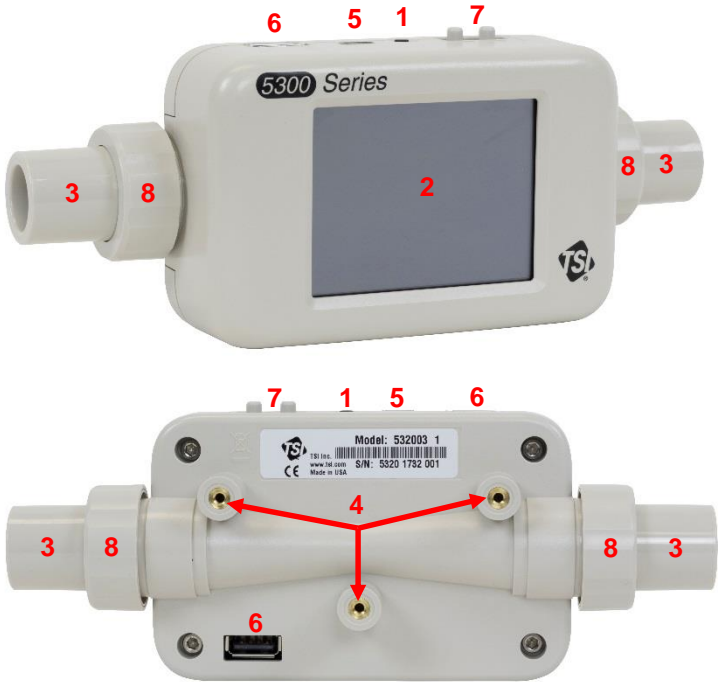
Qty	Item Description	Part/Model
1	High Flow Gas Flow Multi-Meter, 22-mm ISO tube ends Measures Flow, Temperature, Absolute Pressure	5300
	High Flow Gas Flow Multi-Meter, 22-mm ISO tube ends Measures Flow, Volume, Temperature, Absolute Pressure, Differential Pressure	5310
	High Flow Gas Flow Multi-Meter, 22-mm ISO tube ends Measures Flow, Volume, Temperature, Absolute Pressure, Differential Pressure, Relative Humidity	5320
	High Flow Gas Flow Multi-Meter (High Accuracy), 22-mm ISO tube ends, includes Tabletop Stand Measures Flow, Volume, Temperature, Absolute Pressure, Differential Pressure, Relative Humidity	5330
	High Flow Gas Flow Multi-Meter (Wide Accuracy Spec), 22-mm ISO tube ends Measures Flow, Temperature, Absolute Pressure	5303
1	Calibration Certificate	N/A
1	5300 Series Standard Accessory Kit	53000
1	Low Pressure Measurement Kit (5310/5320/5330 models only)	5300-LPMK
1	License key for FLO-Sight™ PC Software (Includes a free trial of the advanced version)	5000-PC

\*FLO-Sight software can be downloaded from [www.tsi.com](http://www.tsi.com).



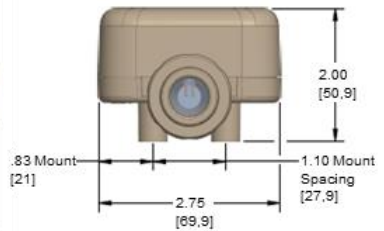
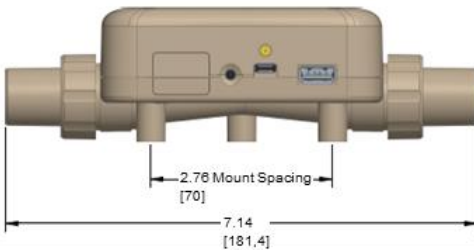
**Download Operator's Manual at TSI.com**

# Instrument Overview



1. Power Button (On/Off)	5. USB-C Power/ Communications Port
2. Color Touchscreen Display	6. USB-A Communications Ports (2)
3. Interchangeable Tube Ends	7. Low Differential Pressure Ports (5310/5320/5330 models only)
4. Mounting Inserts (M3 thread)	8. Collars

Dimensions shown in inches [mm]



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## Setup Basics

### Supplying Power

Connect the USB cable from the USB-C port on the meter to the USB-A port of: 1) the 5000 Series power supply, 2) a computer, or 3) other USB sources that can provide 5 VDC.



### USB Hub Cable

Some computer USB ports are not capable of sufficiently powering up the Meter. If you are unable to power your Meter from the computer, connect the USBC-A power cable to the provided USB hub cable and plug the hub cable into the computer.

### Turning Meter ON/OFF

The Meter may power itself on when connected to a power source. If not, press the power button to turn the Meter on. To turn the meter off, press and hold the power button for 5 seconds.

### Connect Inlet Filter

TSI® recommends an inlet filter be used at all times while operating the Flow Multi-Meter.



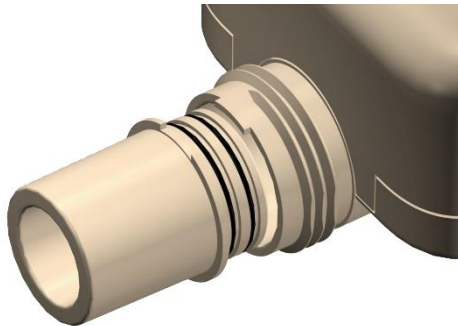
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## Changing Tube Ends

1. Unscrew collars and remove tube ends.



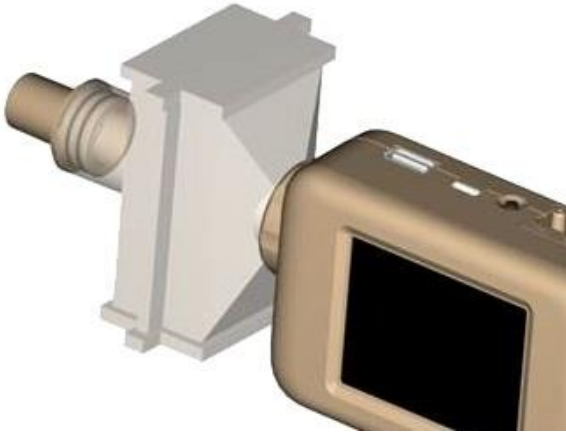
2. Insert replacement tube ends into the meter while aligning the anti-rotation locking notch on the tube end with the tab on the meter.



3. Screw collars back onto the meter.

## Using 0.5 Inch or 15-mm Tube Ends

If the filter is connected as shown below then no further action is needed.

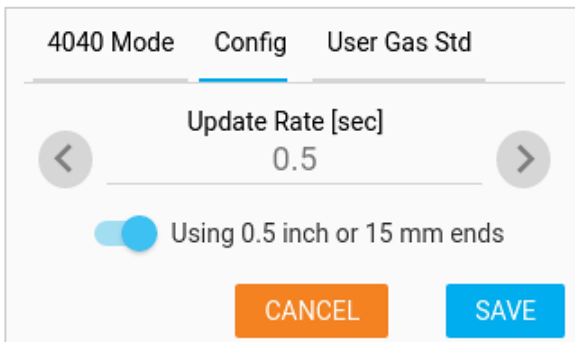


If the 0.5 inch or 15-mm tube ends are connected directly to the instrument, the user should select the Tube Ends Toggle Switch in the Meter's Settings screen. This will ensure the most accurate flow measurement readings.

This switch can be found by clicking on the **Settings** button in the Menu header

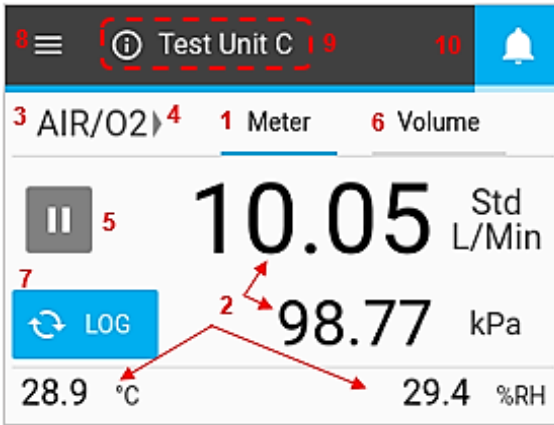


Select the **Config** tab. Click the **Edit** button, click the toggle switch, and then select **Save**.



# Touchscreen Display Overview

## Meter Home Screen




1. Meter Home Tab	6. Volume and Triggers Tab*
2. Measurement Readings	7. Log Data Button*
3. Type of Gas	8. Menu Drop-Down Screen
4. Flow Directional Indicator	9. Device Name and Information
5. Pause Display Button	10. Alerts Indicator

\*Available on 5310, 5320, and 5330 models only.

## Pause Display Button

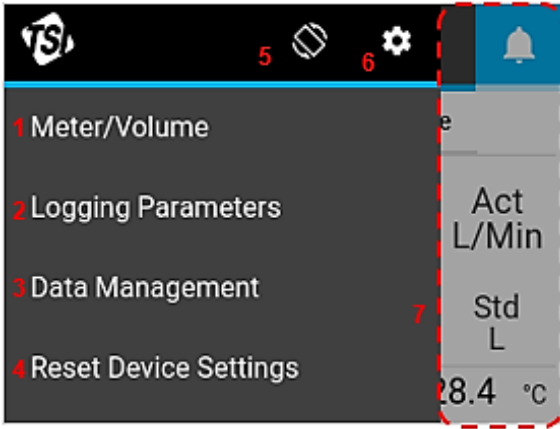
The **Pause** button is used to pause the display from updating. The current measurement values will remain fixed on the screen. The Meter will continue to make measurements while paused, and pausing the display does not affect any active datalog sessions.

When paused, the button's icon will change to a play icon .

Press the button again to resume display updates.

# Touchscreen Display Overview *(continued)*

## Menu Screen



1. Go to Meter Home Screen	5. Rotate Display 180°
2. Set Logging Parameters*	6. Settings Menu
3. Data Management*	7. Press anywhere outside menu to close menu screen
4. Reset Device Settings	

\*Available on 5310, 5320, and 5330 models only.

## Touchscreen Display

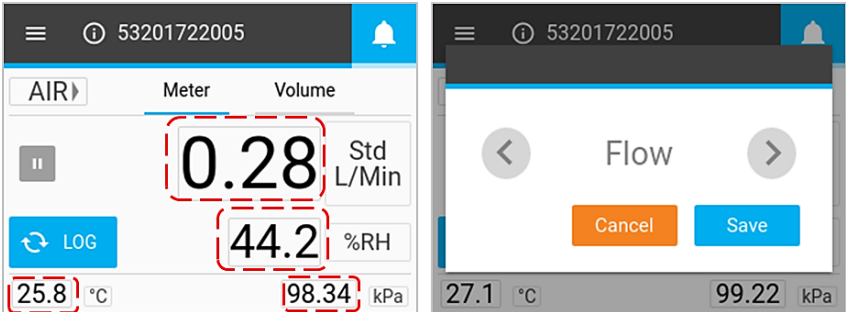
The touchscreen display is resistive and responds to pressure from your finger or other objects. Users can also operate the Meter while wearing gloves.



# Configuring the Meter

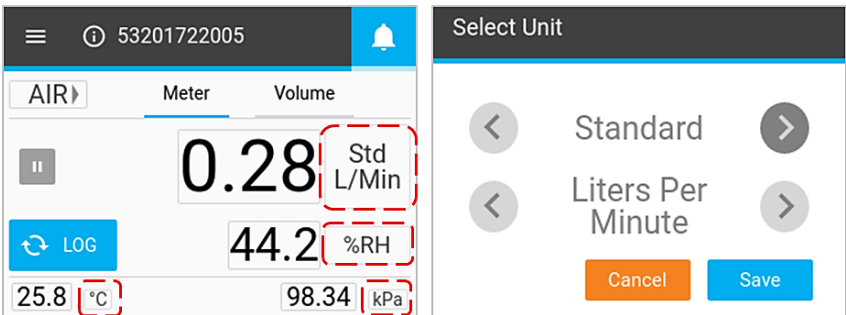
## Measurement Parameters

Press a value field, use the scroll arrows to select a parameter, and click **Save**.



## Units of Measurement

Press a units field, use the scroll arrows to select the desired units, and click **Save**.

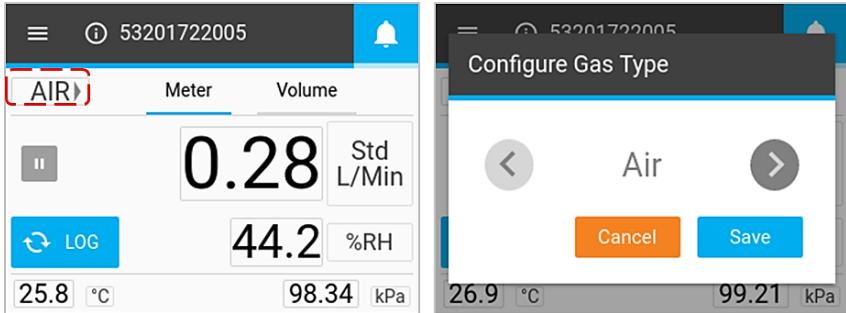


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## Configuring the Meter *(continued)*

### Type of Gas

Press the type of gas field, use the scroll arrows to select the type of gas, and click **Save**.



### NOTICE

If an Air/Oxygen mix is selected, the Meter assigns a 21% oxygen mix. The oxygen concentration can be customized using FLO-Sight™ Software.

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## Volume and Triggers

### (Models 5310, 5320, and 5330 only)

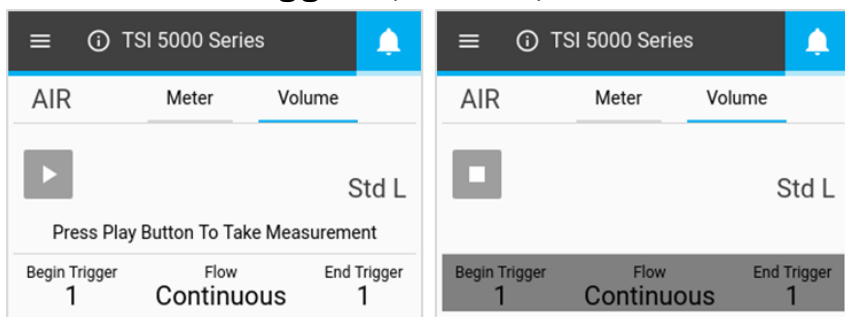
Volume is a calculated measurement that integrates flow over time and is controlled through triggers. Users can set begin and end triggers for volume measurements using flow rate, absolute pressure, or low differential pressure values.

### Setting Triggers

The meter must be stopped to edit trigger settings. On the **Volume** tab, confirm that the Meter is stopped (shown below left) and press on the field you would like to edit.

If a volume measurement is active (shown below right) then press the **Stop**  button to cancel the measurement and allow edits to be made to trigger settings.

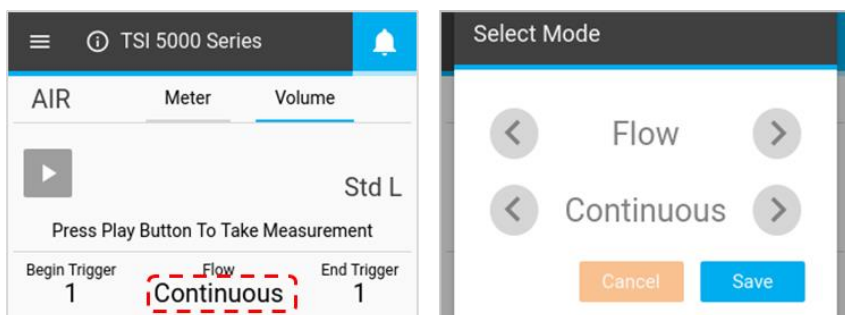
## Volume and Triggers *(continued)*



In the **Select Mode** screen, you can choose:

<b>Trigger Parameter</b>	Flow, Absolute Pressure, or Low Pressure
<b>Test Mode</b>	Single or Continuous

Use the arrows to scroll through the selection options and click **Save** to complete.



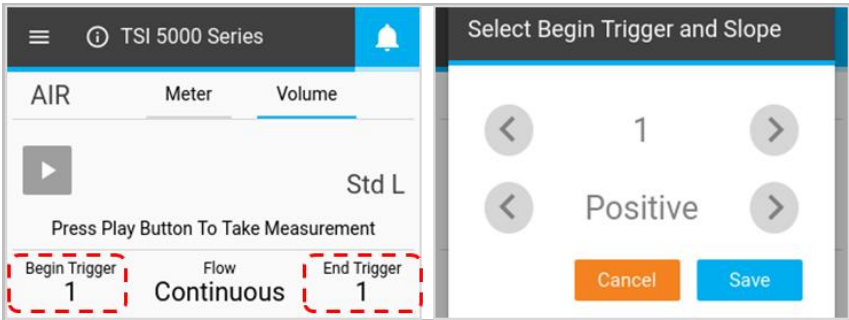
In the **Select Trigger** screens, you can choose:

<b>Begin / End Trigger Values</b>	Select from available values
<b>Begin / End Trigger Slopes</b>	Positive or Negative

Note trigger options for the volume begin and end triggers. These are set as the default options and cannot be changed by the user.

Trigger	Units	Trigger Values
Flow	Std L/min	+/- 0.1, 0.5, 1, 2, 3, 5, 7.5, 10, 20
Absolute Pressure	kPa	90, 95, 98, 100, 102, 104, 107, 110
Low Differential Pressure	cmH <sub>2</sub> O	+/- 0.5, 1, 2, 3, 4, 5, 10

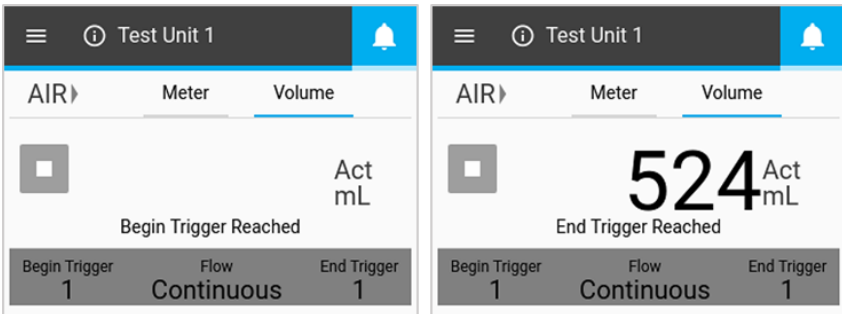
## Volume and Triggers (continued)



### Making Volume Measurements

Once all settings have been saved, press the **Play** button to lock editing and begin making volume measurements.

The Multi-Meter will notify you on screen when the begin trigger, and then end trigger, is reached. Once the end trigger has been reached, the Meter will deliver the volume measurement.



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