How to Read Your Smart Water Meter?

FIRST LOCATE YOUR WATER METER BOX:

Your water meter is typically located near the front of your property, inside a gray polymer meter box. The gray lid may have markings such as "MADE IN USA," "DFW," "METER," or "WATER."

Be careful when you pull open the Meter Box lid. It is very common to encounter: Yellow Jackets, Bees, Spiders, Ants, Snakes or other creatures that may be harboring inside the box.

IMPORTANT NOTICE: If you have one of UBWA's new Smart Water Meters, a transmitter will be mounted on a PVC stake inside the meter box, with a cable connecting the transmitter to the water meter.

Please use caution when opening the meter box or working around this equipment. It is extremely important that the transmitter, connecting cable, and other meter components are not disturbed or damaged.

Any damage caused by the customer to UBWA's water meter or meter-reading equipment, including but not limited to the meter box, lid, meter, transmitter, or connecting cable, will be repaired or replaced by UBWA at the customer's expense.

Umpqua Basin Water Association is not liable for any personal injuries or damage to the customer's equipment and/or facilities.

NEXT STEP: IDENTIFY YOUR WATER METER INSIDE THE METER BOX:

When you open the meter box cover, you will see one of two styles of light gray Mueller Smart Water Meters.

First Style – Older Mueller SSM Meter

On the front of the protective cover, you will find:

- Meter Serial Number: An 8-digit number located near the bottom left corner.
- Flow Direction Arrow: An upward-pointing arrow labeled "Flow," indicating the direction of water flow.
- Manufacturing Date: Located in the bottom right corner.

Second Style – Newer Mueller SSM Meter

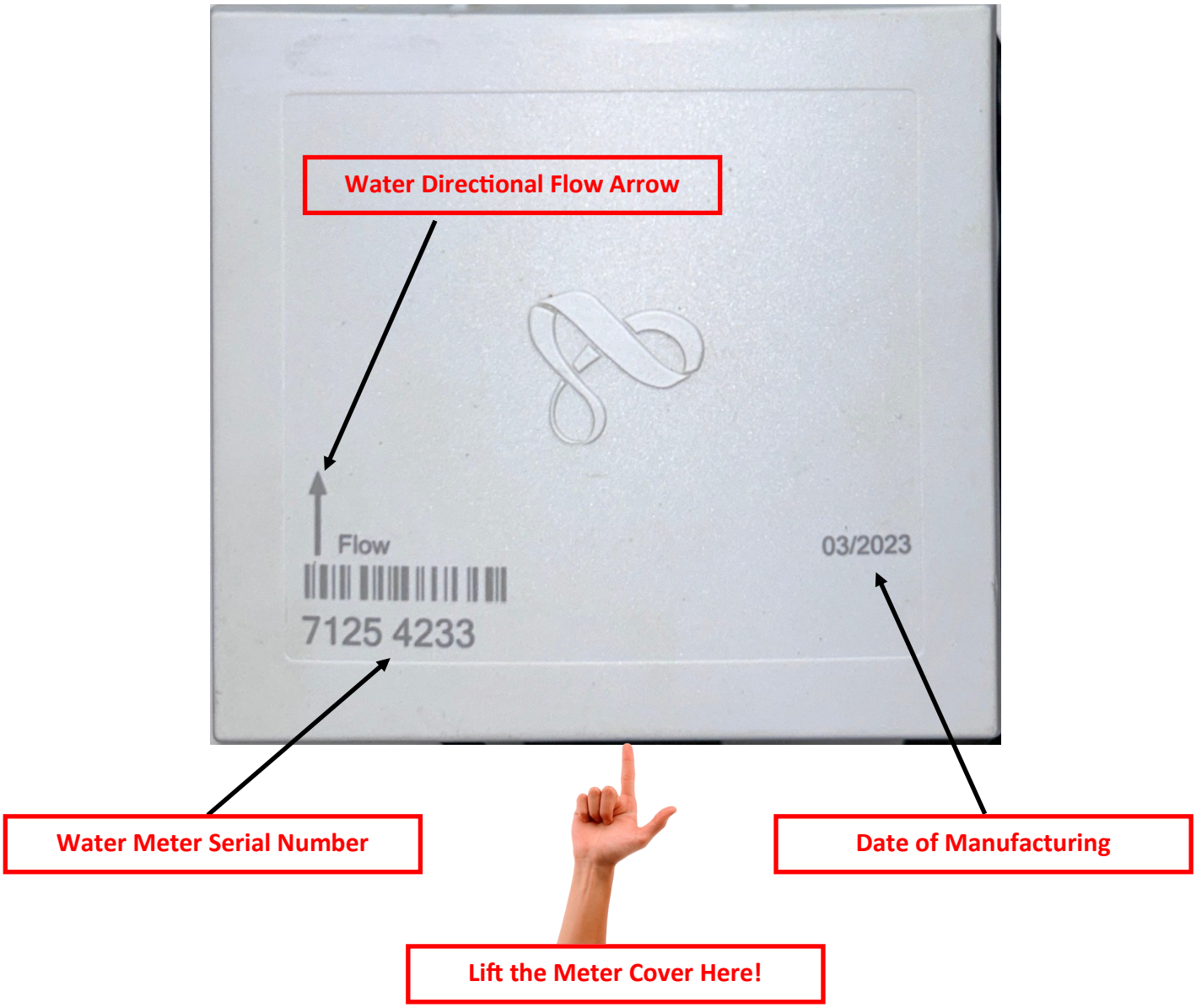
On the front of the protective cover, you will find:

- Manufacturer's Name: Mueller, located in the upper left corner.
- Meter Size and Part Number: Located in the bottom left corner.
- Model Number: "SSM," located in the bottom right corner.
- Manufacturing Date: Located near the model number in the bottom right corner.

Both meter styles have a protective cover that can be lifted to access the digital display and view your water consumption information.

First style of Mueller Water Meters

Lift the gray cover to reveal the digital display.



VIEWING THE DIFFERENT METER SCREENS

When you lift the meter's protective cover, the display may not show the information you're looking for. Don't worry! You can easily change screens.

Activating the Display

To conserve battery life, the meter's display automatically goes into sleep mode after approximately four minutes of inactivity. **To activate the display, locate the optical sensor directly below the digital screen and cover it with your finger.**

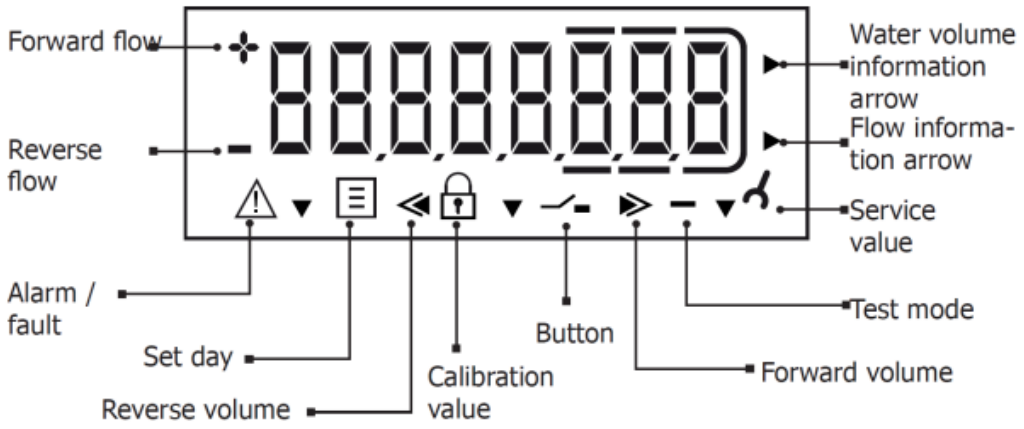
When activated, the display will briefly illuminate all the numbers and symbols. This is a normal screen test and does not indicate a problem. The meter will then display your total water consumption in gallons (GAL) for at least 10 seconds.

Viewing the Different Screens

After the initial 10 seconds, simply cover and uncover the optical sensor with your finger to advance to the next screen. Repeat until you find the information you're looking for.

The following pages will walk you through each screen, explain what the numbers and symbols mean, and help you understand how to read your water meter.

Display / Symbols



Displays

Error display (visual indication on the LCD display in the event of an error)

Error Code	Description
C1	Basic parameter error in flash or RAM - Meter must be replaced The meter must be replaced.
E1	Temperature measurement error (temp. outside range, sensor short-circuit, sensor break) Meter should be checked in the event of sensor short-circuit or sensor break
E4	Hardware error, faulty ultrasonic transducer or short-circuit in ultrasonic transducer Meter should be checked
E5	Too frequent reading (no communication possible for short time)

Alarms (permanent visual indication on the LCD display)

Alarm Messages	Description
A1	Reverse flow
A3	No consumption
A4	Fault / failure of ultrasonic or temperature measurement
A5	Leakage alarm
A6	Low temperatures (below 37.4°F)
A7*	Air in the measuring path, no volume measurement
A9	Low battery

* If air is trapped in the measuring path, E7 is output to the display. After a defined time (standard 15 min.) the E7 changes to an A7. The A7 is output to the display and saved in the fault memory.

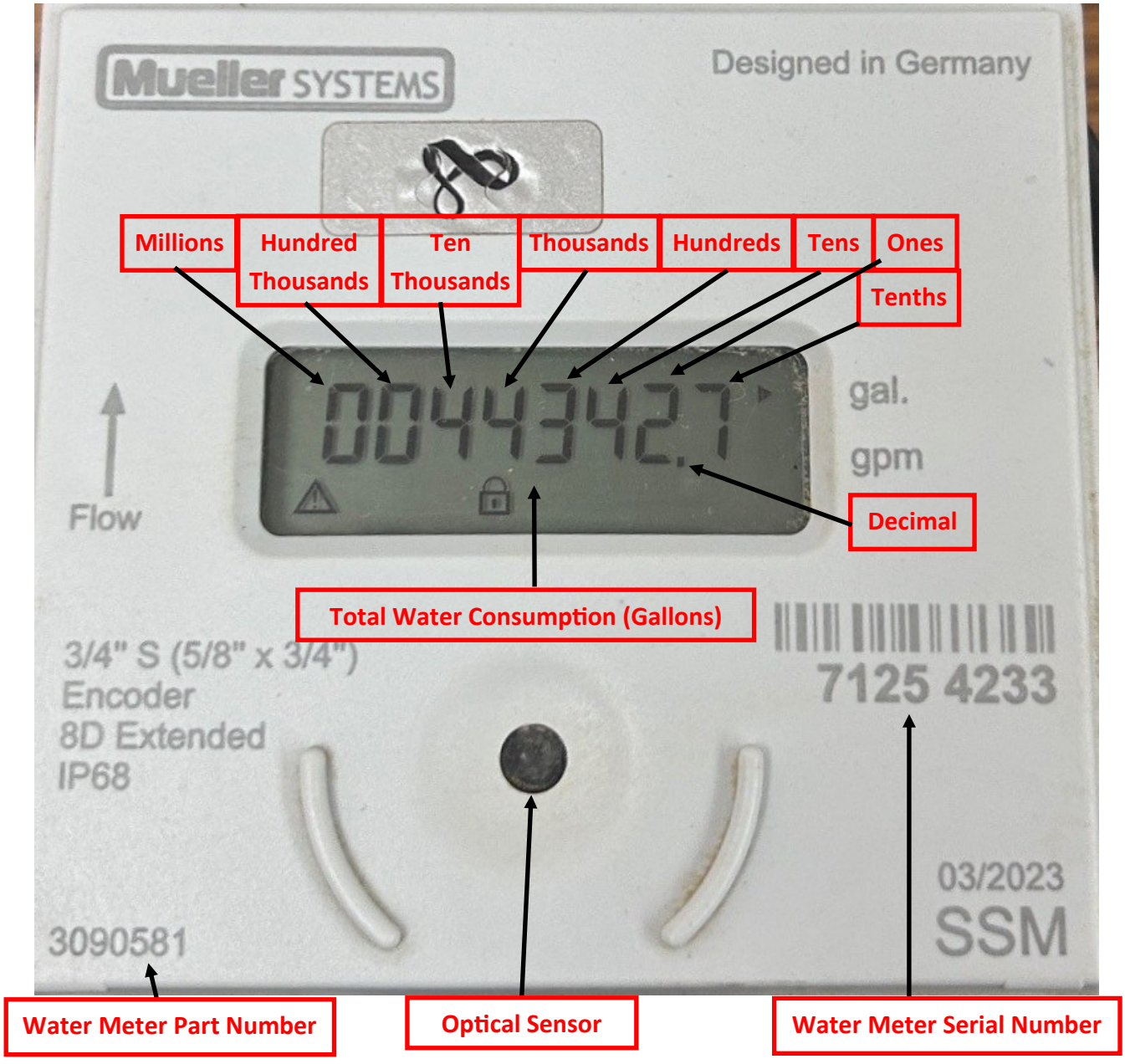
Combinations of error and alarm messages can occur simultaneously, e.g., E-7-A-1, corresponds to E7 and A1.

READING THE METER: Total Water Consumption (Gallons)

This screen is displaying the total amount of water that has passed through your meter, measured in gallons (GAL). Similar to the odometer in your vehicle, this reading increases as water is used.

Read the numbers from left to right. This is your meter's total accumulated water consumption.

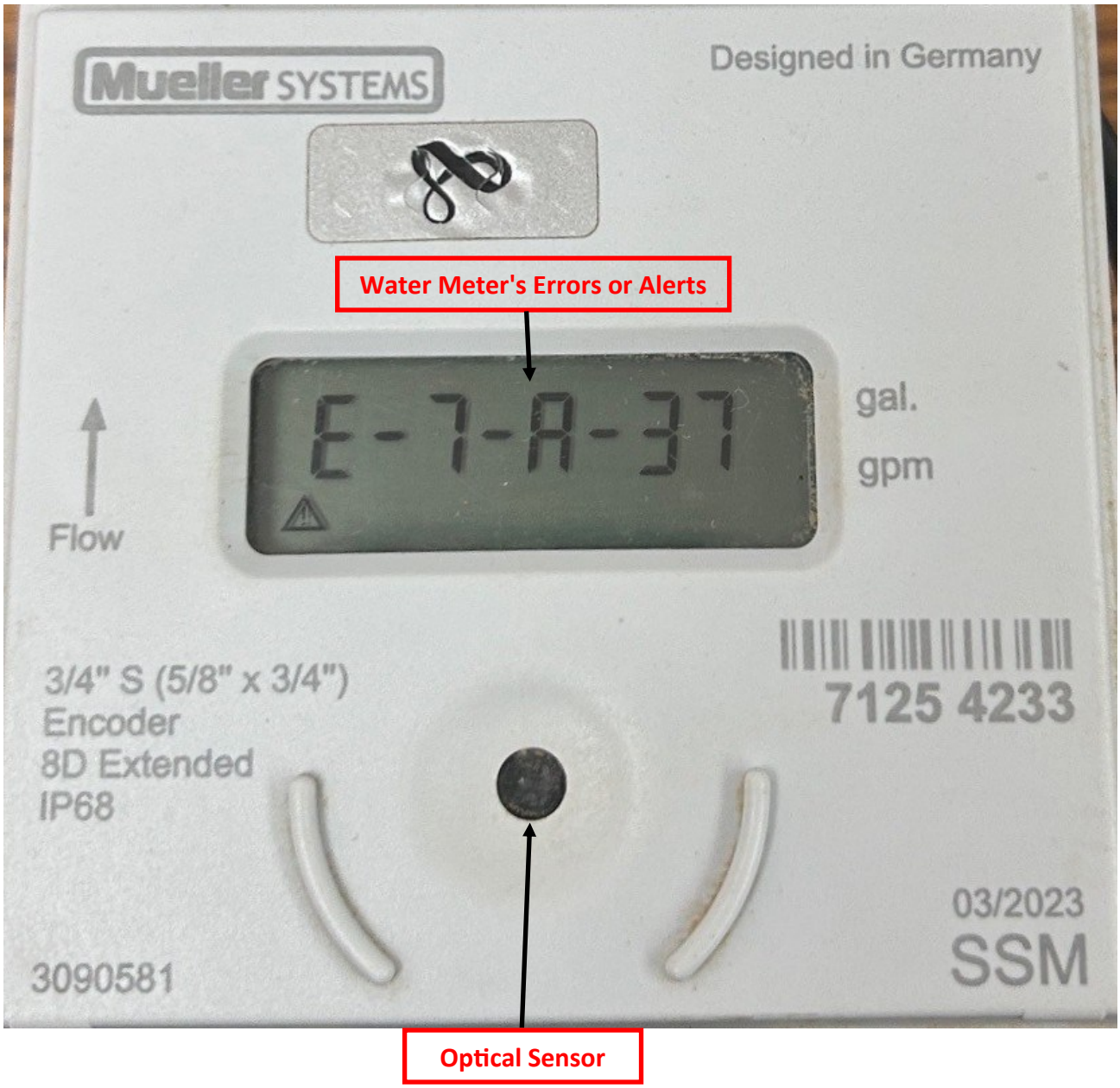
For billing purposes, your water consumption is calculated by subtracting the previous meter reading from the current meter reading. Water usage is recorded in whole gallons.



READING THE METER: Water Meter Errors or Alerts

This screen is displaying any Water Meter Errors or Alerts that are either active or not active.

Please refer to the page “UNDERSTANDING THE WATER METER DISPLAY” for a list of errors (page 3).



READING THE METER: Understanding the Water Meter's Flow Display

This screen is displaying the current usage in real time. Flow is displayed in gallons per minute (gpm).

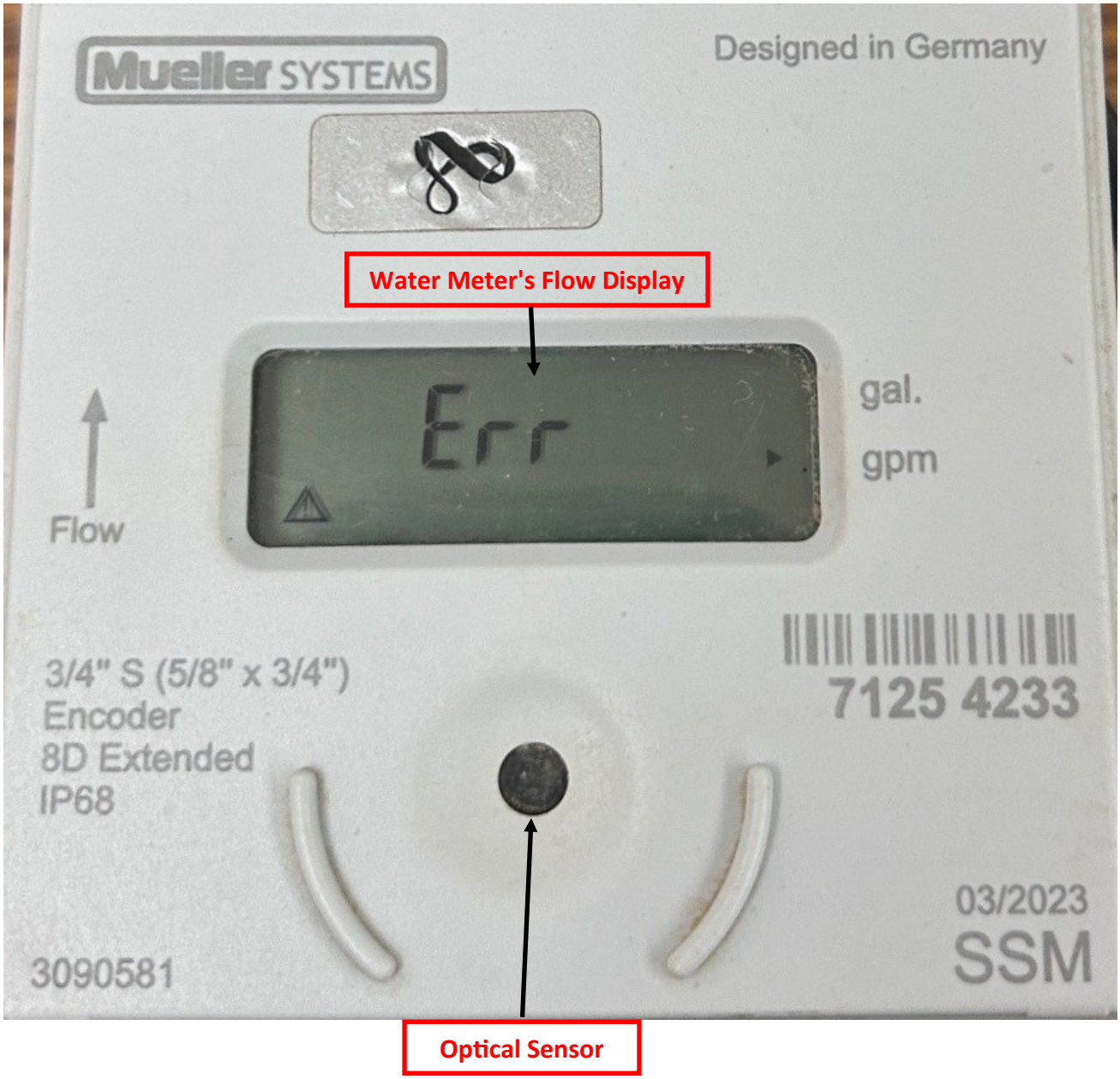
The display in the photograph shows “Err” because this meter is not connected to a water line and cannot provide a flow reading.

Under normal operating conditions, when no water is being used, the display should read 0.000 GPM.

If the display shows a number such as 0.550 GPM, water is flowing through the meter at a rate of 0.55 gallons per minute.

Checking for a Possible Leak.

Turn off all water-using fixtures. If the meter continues to display a flow rate greater than zero, you may have a water leak. This is one of the most useful screens for homeowners when checking for possible leaks.



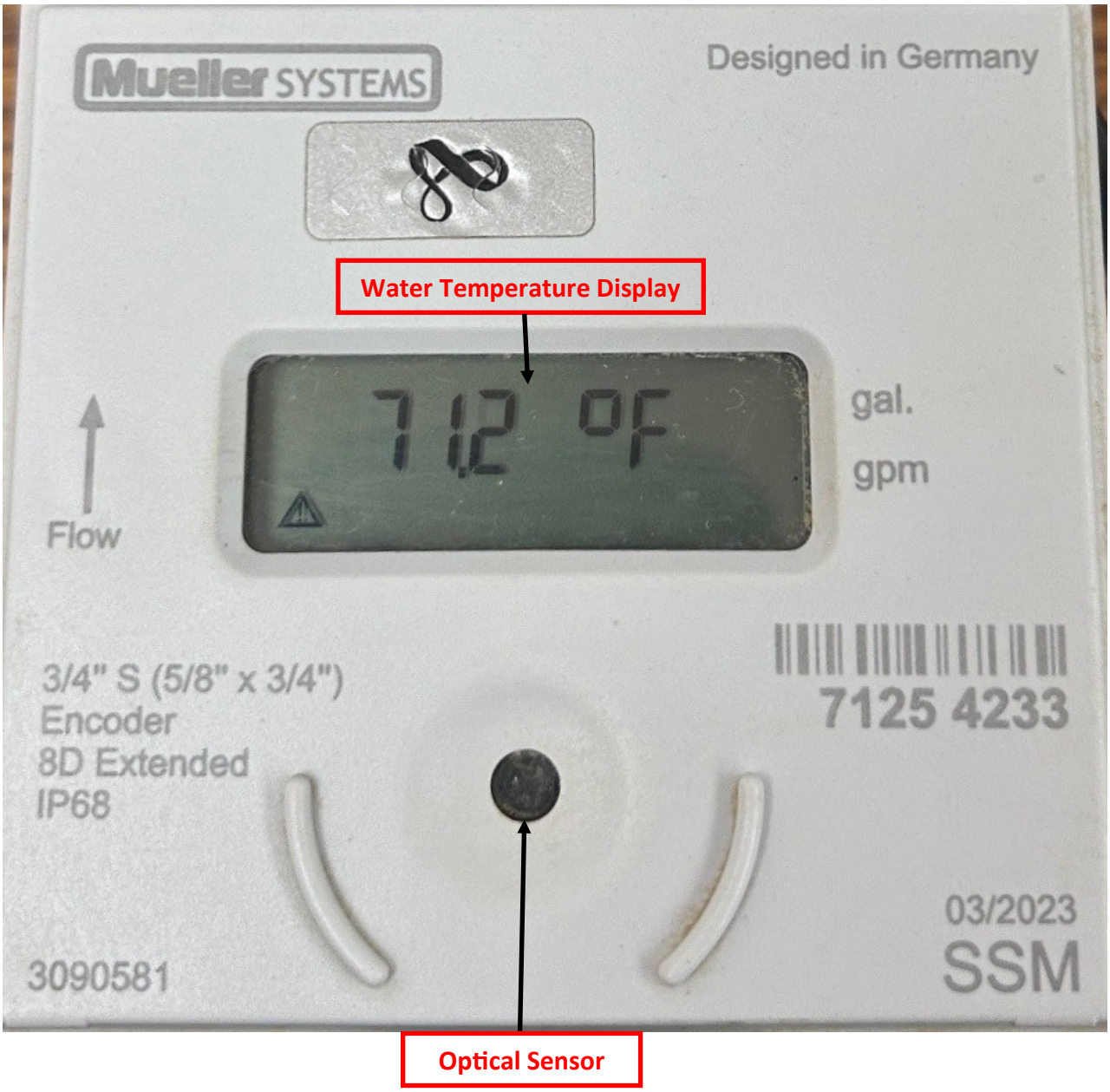
READING THE METER: Water Temperature Display

This screen is displaying the current temperature of the water inside your meter, measured in degrees Fahrenheit (°F).

In this example, the water temperature is 71.2°F.

The temperature reading reflects the water inside the meter, whether water is actively flowing or has been sitting in the service line.

Please note: The temperature displayed at the meter may differ from the temperature of the water coming from your household faucets, particularly when water has remained unused for an extended period.

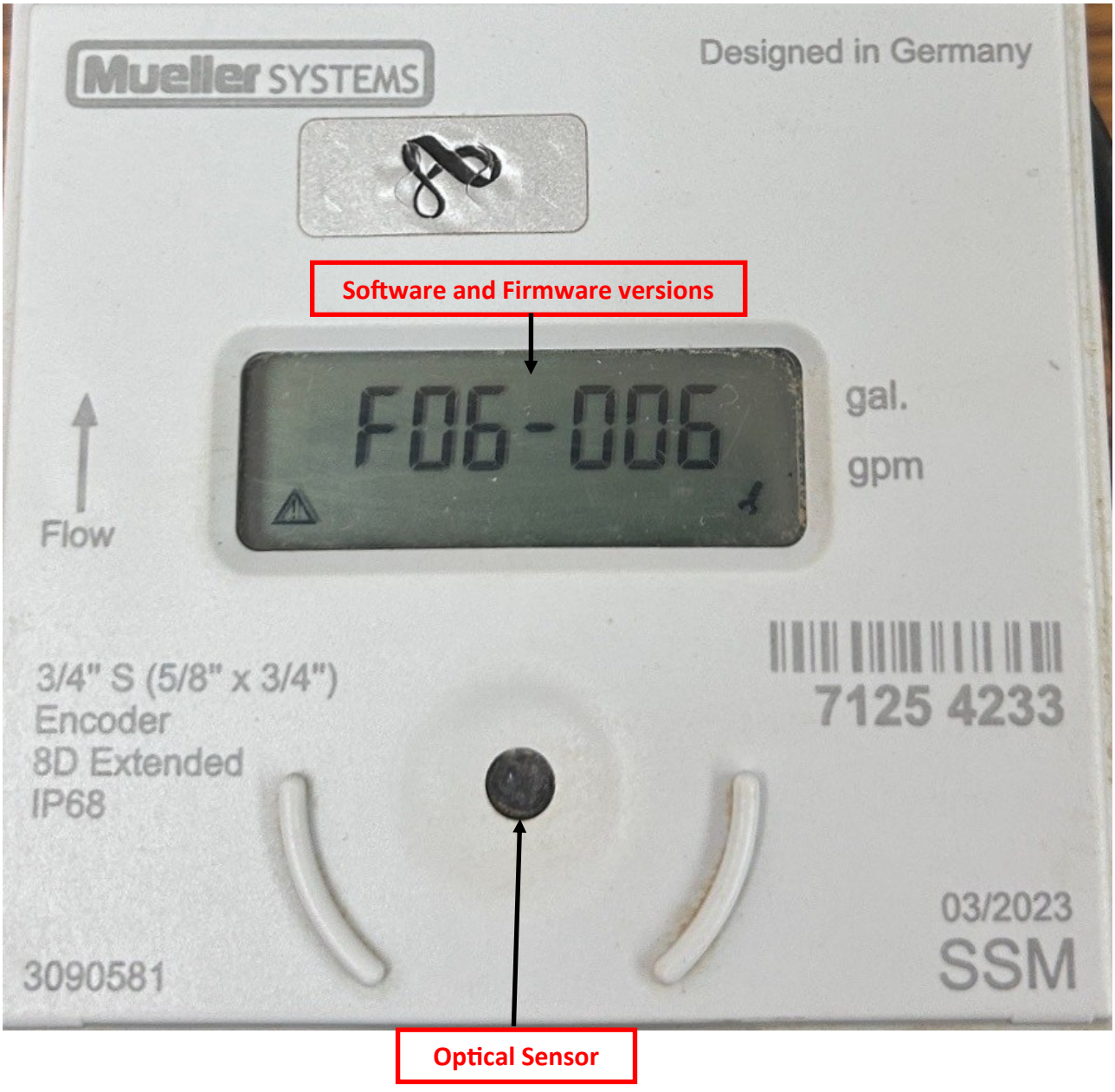


READING THE METER: Firmware and Software Display

This screen alternates between displaying the meter's current firmware and software versions.

These numbers identify the programming versions installed in the water meter and are primarily used by UBWA personnel for troubleshooting and technical support.

Homeowners do not need this information to read their meter, monitor water consumption, or check for possible leaks.

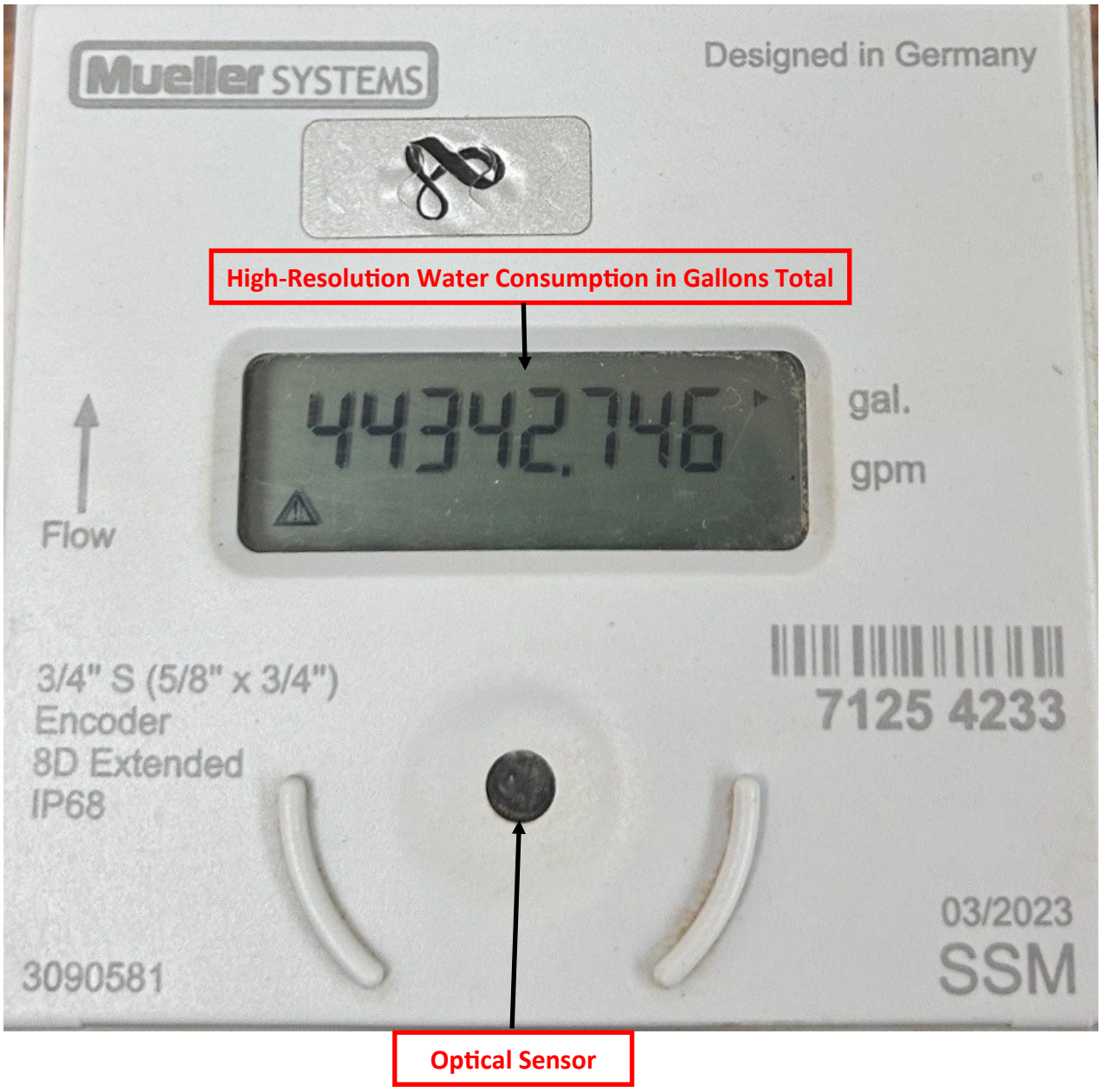


READING THE METER: High-Resolution Water Consumption

This screen is displaying the total amount of water that has passed through your meter, measured in gallons (GAL).

Unlike the standard meter reading, the high-resolution display provides a more precise reading, allowing you to see even small amounts of water usage.

This can be especially helpful when checking for possible leaks or monitoring water consumption over a short period of time. Unlike the GPM display, which shows how fast water is currently flowing, Screen 7 records the accumulated volume of water that has passed through the meter.



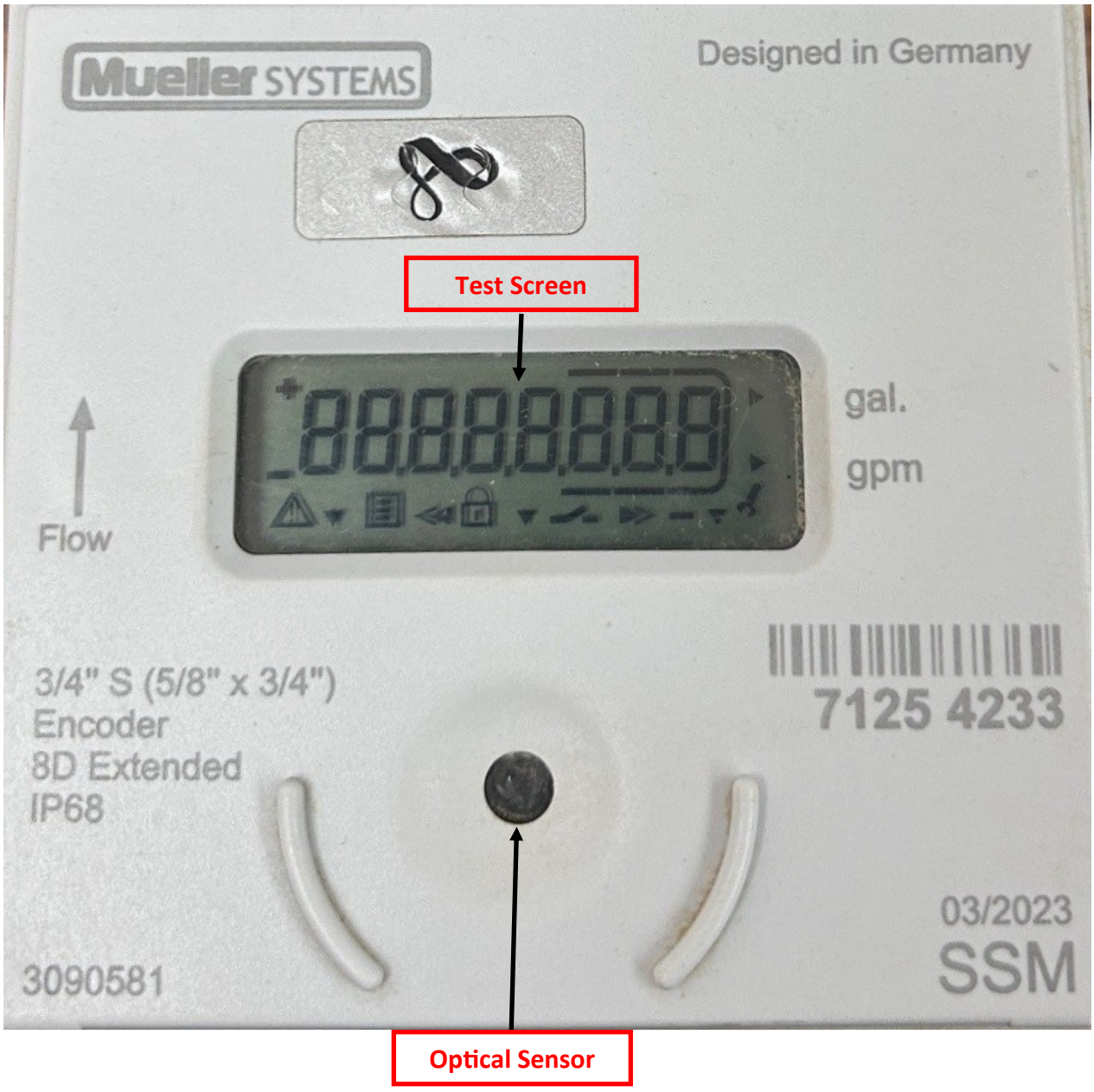
READING THE METER: Test Screen Display

When the meter display is activated, it briefly performs a display test. During this test, all numbers, symbols, and indicators on the screen illuminate at the same time.

This is a normal function of the water meter and allows you to see what the display segments are.

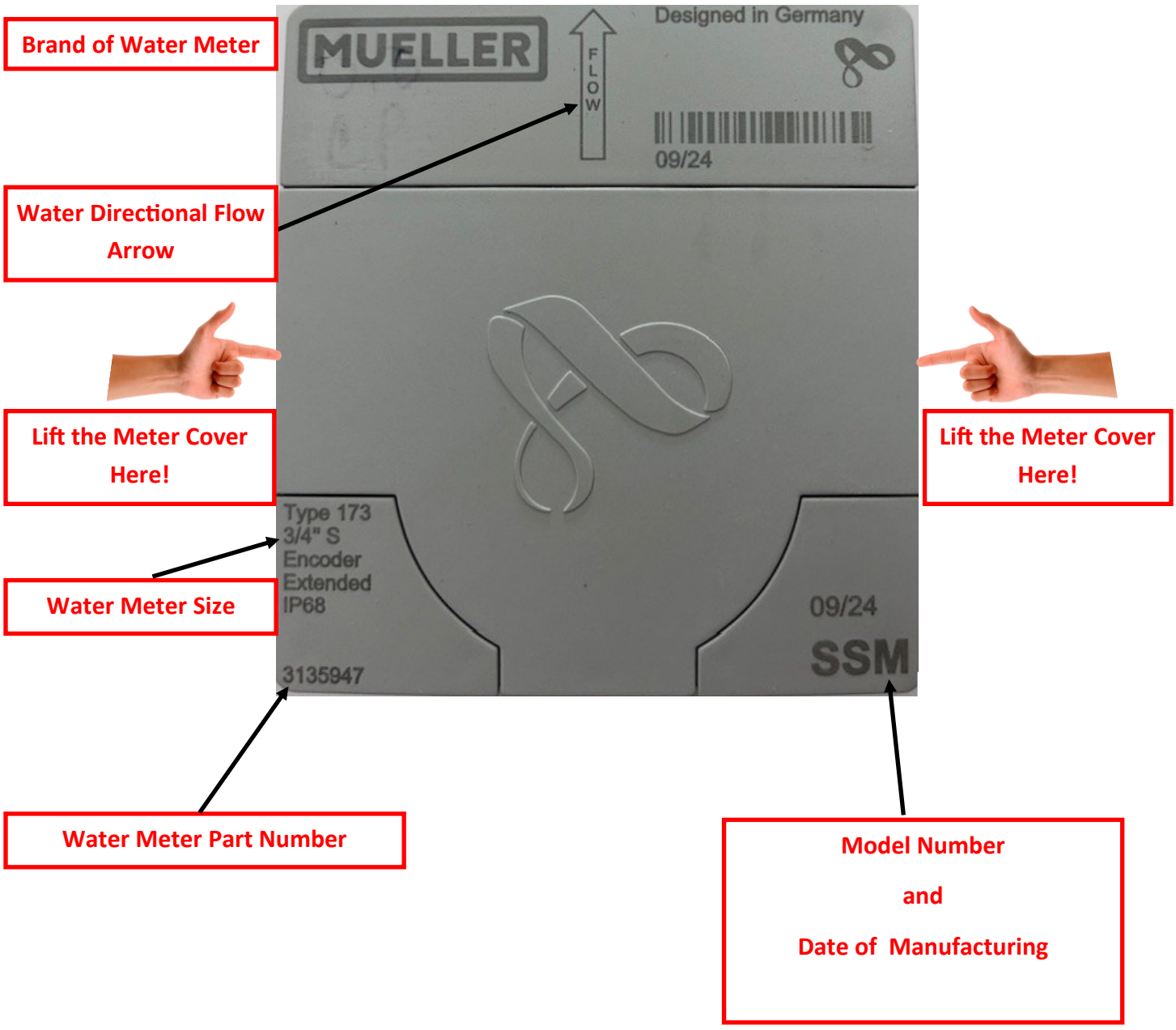
You may notice a series of 8s, along with arrows, warning symbols, and other indicators. These are not actual water consumption readings or indications that something is wrong with the meter.

Important: Do not use the numbers shown during the display test as your water meter reading.



Second style of Mueller Water Meters

Lift the gray cover to reveal the digital display.



UNDERSTANDING YOUR WATER METER DISPLAY

Your Mueller Smart Water Meter has a digital display that provides information about your water usage, including total gallons used, current water flow, and water temperature.

Activating the Display

To conserve battery life, the meter's display automatically goes into sleep mode after approximately four minutes of inactivity.

To activate the display, locate the optical sensor directly below the digital screen and cover it with your finger.

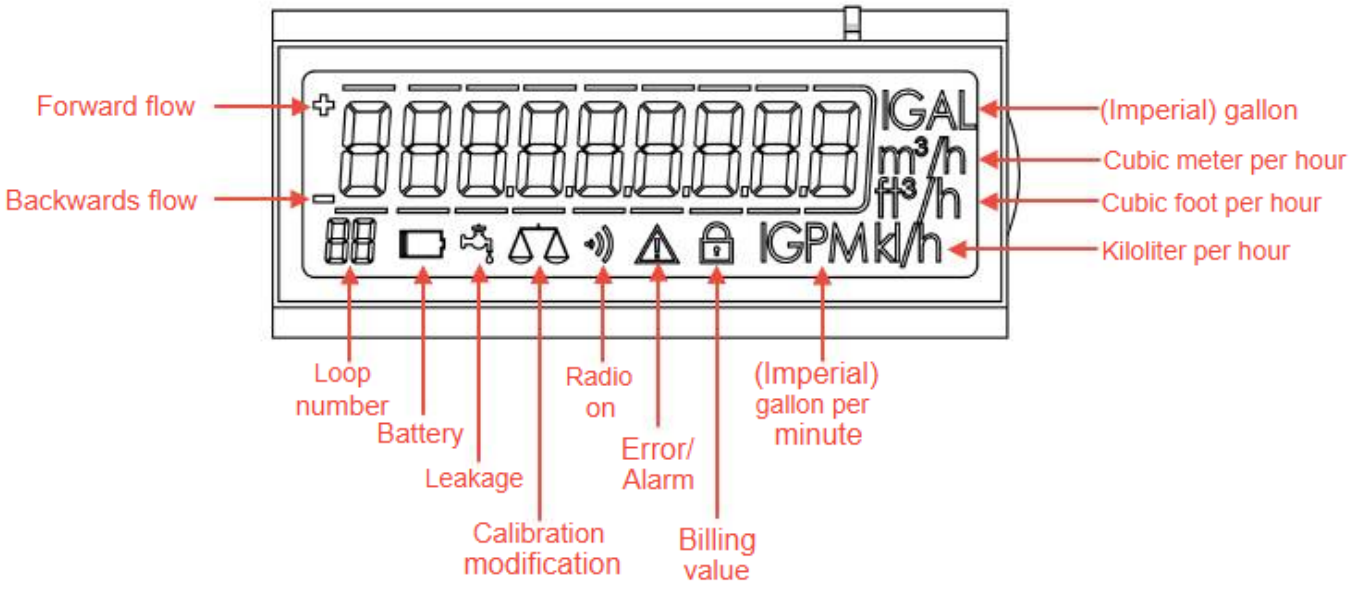
When activated, the display will briefly illuminate all the numbers and symbols. This is a normal display test and does not indicate a problem with your meter.

The meter will then display your total water consumption in gallons (GAL) for at least 10 seconds.

Viewing the Different Screens

After the initial 10 seconds, simply cover and uncover the optical sensor with your finger to advance to the next screen. Repeat this process until you find the information you're looking for.

The following pages will walk you through each screen, explain what the numbers and symbols mean, and help you understand how to read your water meter.



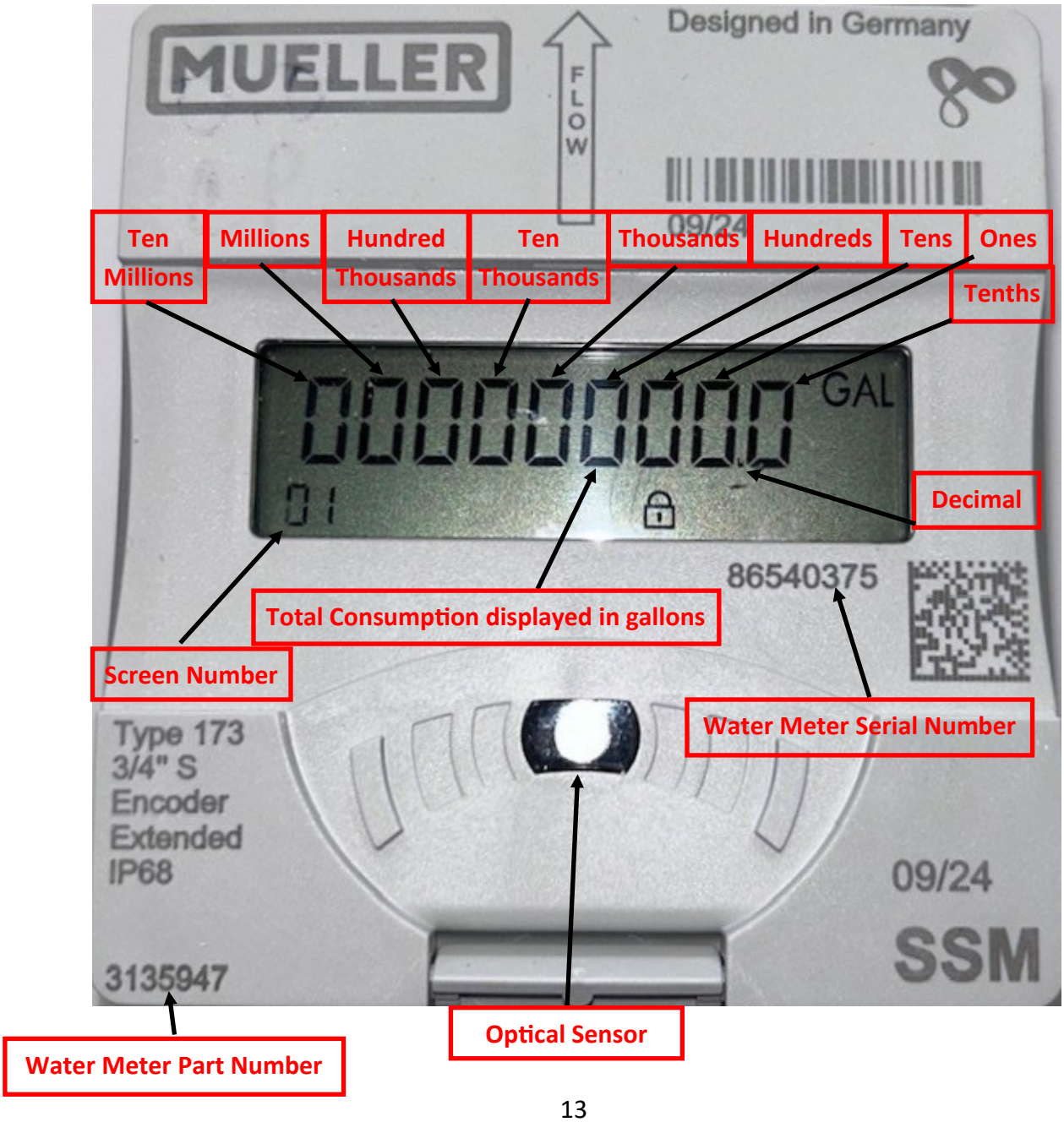
Digital Display of Screen Number 01.

READING THE METER: Total Water Consumption (Gallons)

Screen 1 displays the total amount of water that has passed through your meter, measured in gallons (GAL). Similar to the odometer in your vehicle, this reading increases as water is used.

Read the numbers from left to right, paying attention to the decimal point. This is your meter's total accumulated water consumption.

For billing purposes, water usage is calculated by subtracting the previous meter reading from the current meter reading. Water consumption is rounded to the nearest whole gallon.



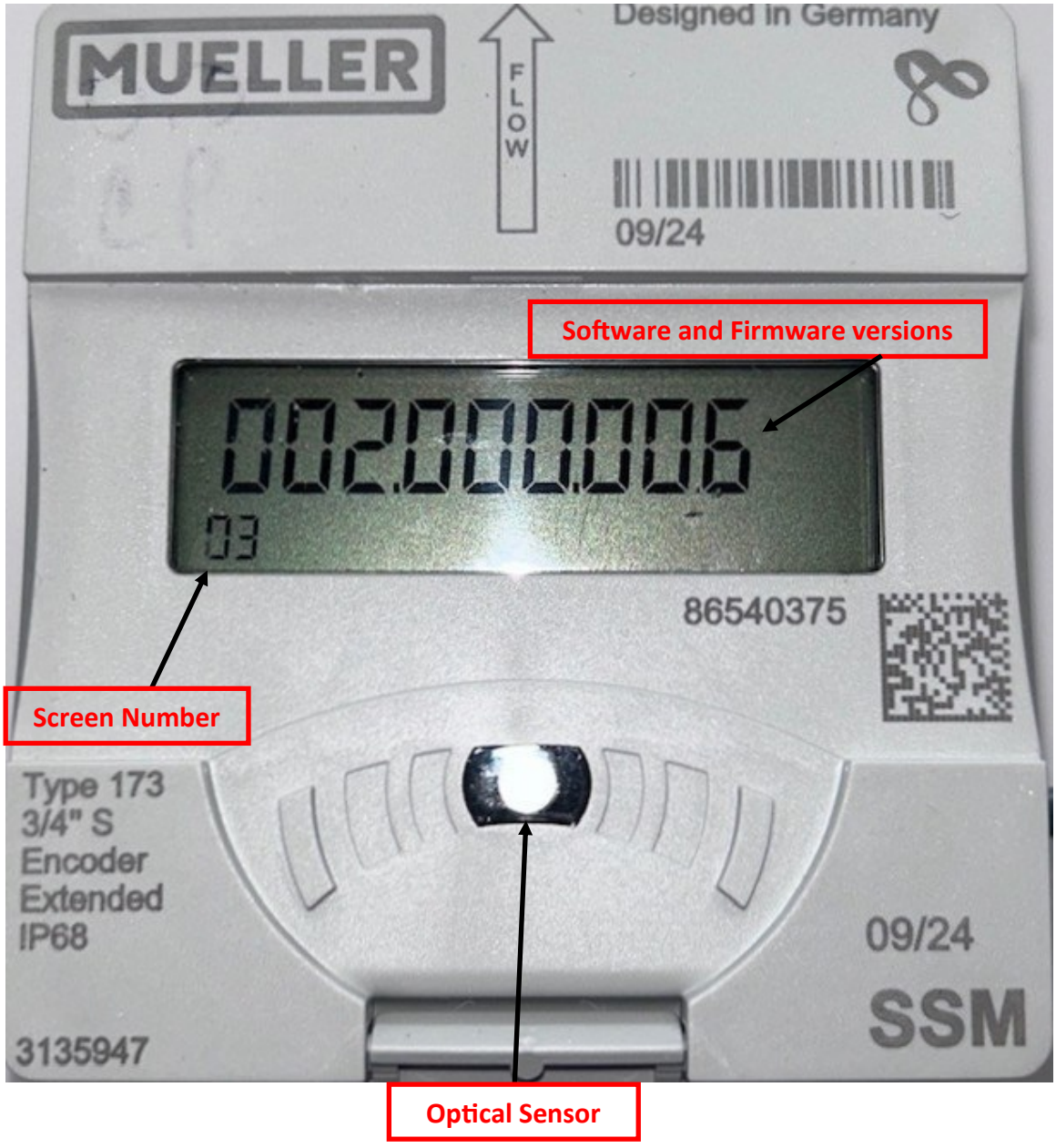
Digital Display of Screen Number 03.

READING THE METER: Software and Firmware Information

Screen 3 displays the software and firmware version information programmed into the water meter.

This information is primarily used by UBWA personnel for meter identification, troubleshooting, and technical support.

Homeowners do not need to use this screen to monitor water consumption or check for leaks.



Digital Display of Screen Number 04.

READING THE METER: Checking Your Water Flow

Screen 4 shows how much water is currently flowing through your meter, measured in gallons per minute (GPM).

When no water is being used, the display should read 0.000 GPM.

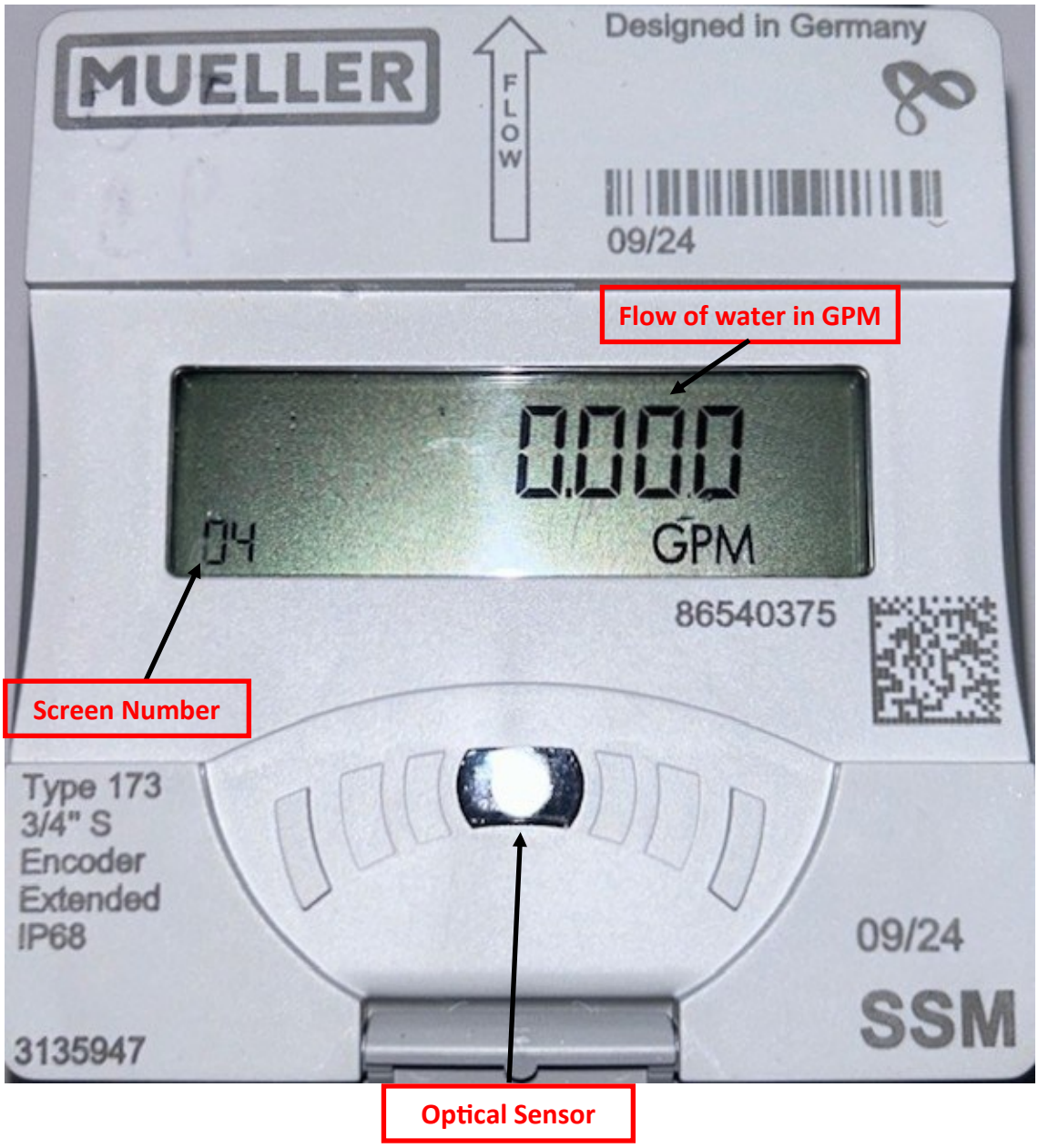
For example, a reading of 0.550 GPM means water is flowing through your meter at a rate of 0.55 gallons per minute.

Checking for a Possible Leak

Turn off all faucets, showers, appliances, irrigation systems, and other water-using fixtures.

Once everything is turned off, check the meter's GPM reading.

If the display continues to show a flow rate greater than 0.000 GPM, water is still passing through your meter, which may indicate a leak.



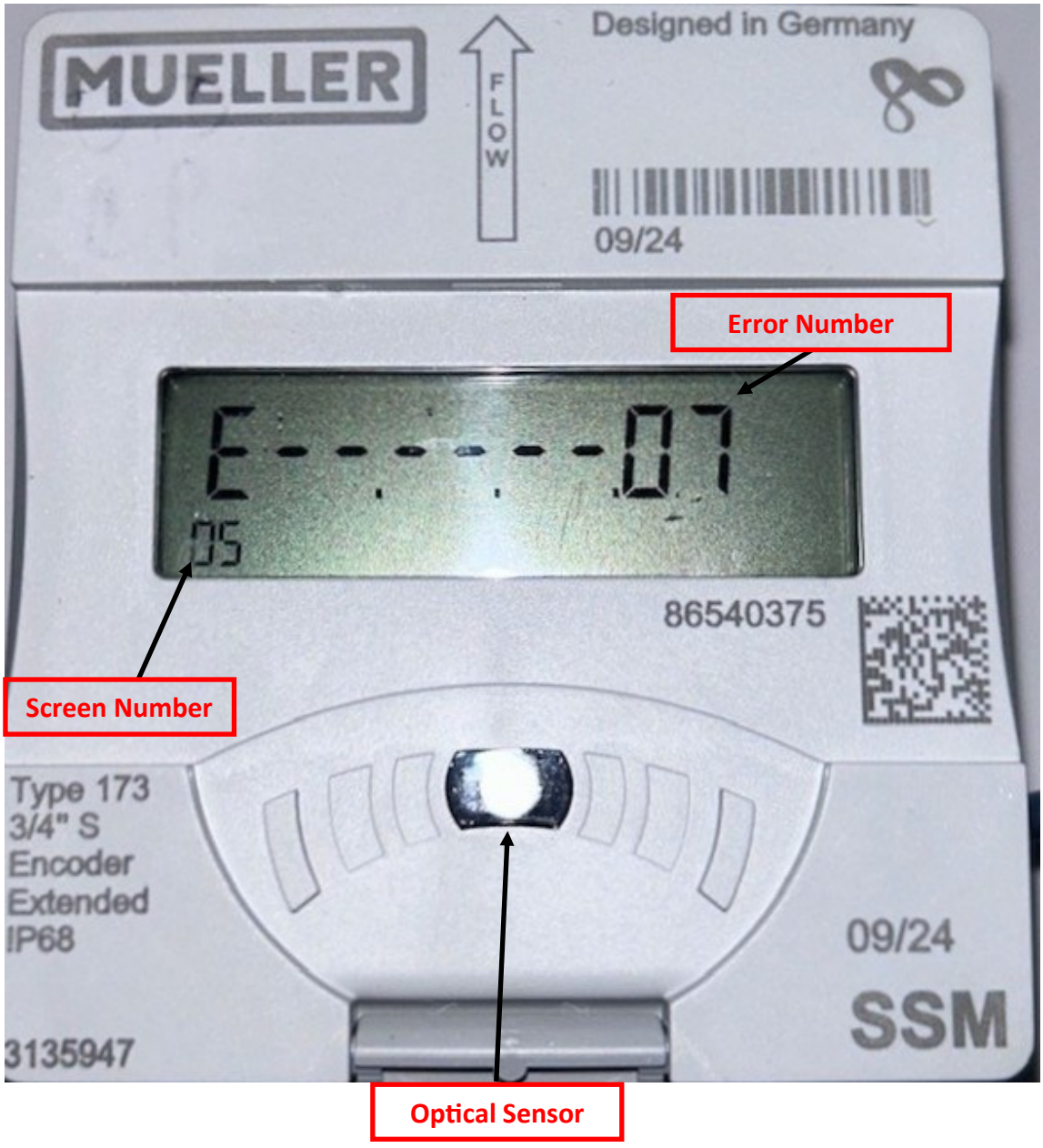
Digital Display of Screen Number 05.

READING THE METER: Error Message Screen

Screen 5 displays any errors the water meter may currently have. In this example. This is a new water meter. The Error is E07 which is “Possible Air In Line”.

- **A05: Possible Leakage**
- **A06: Possible Backflow**
- **A09: Low Battery**
- **E12 / A12 / H12: No Usage**
- **E13 / A13 / H13: High Temperature**
- **E14 / A14 / H14: Freeze Risk**

The “E” represents a Current Alarm. The “A” represents a Persistent Alarm and the “H” represents an Historical Alarm.



Digital Display of Screen Number 07.

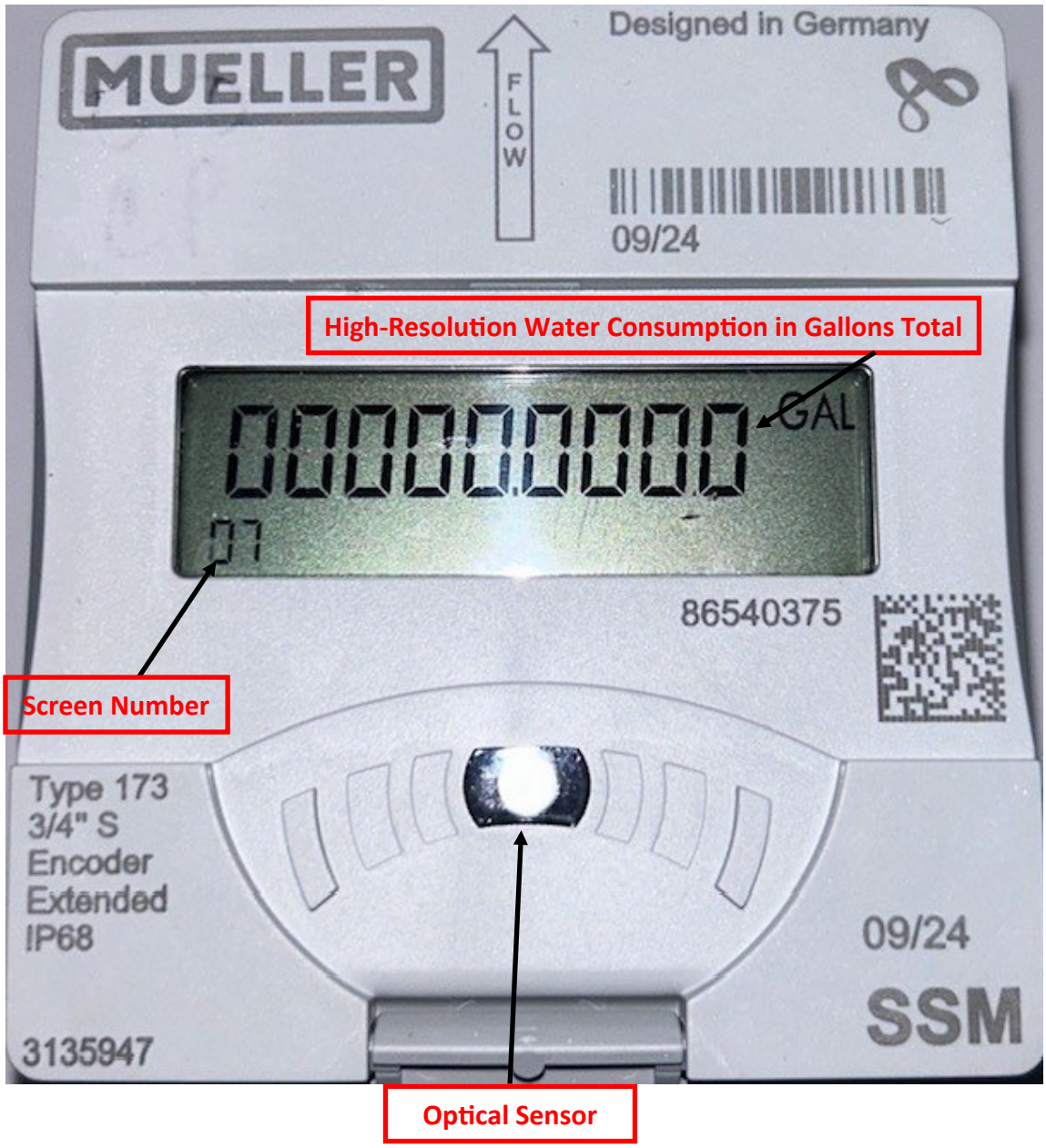
READING THE METER: High-Resolution Water Volume

Screen 7 displays the total amount of water that has passed through your meter, measured in gallons (GAL).

Unlike the standard meter reading, the high-resolution display provides a more precise reading, allowing you to see even small amounts of water usage.

This can be especially helpful when checking for possible leaks or monitoring water consumption over a short period of time.

Unlike the GPM display, which shows how fast water is currently flowing, Screen 7 shows the total amount of water that has passed through your meter over time.



A FINAL WORD FROM UMPQUA BASIN WATER ASSOCIATION

Taking a little time to become familiar with your smart water meter and checking it periodically can help you better understand your household's water consumption.

By understanding what is normal for your household, you can recognize unusual changes in water usage, identify possible leaks, and take steps to investigate potential problems before they become larger issues.

This smart water meter is a valuable tool that allows you to monitor your own water usage and answer many common questions about your water consumption.

If you still have questions or need assistance understanding a reading, please contact us and one of our staff will be happy to assist you.

Thank you for being part of Umpqua Basin Water Association!

Even a Small Drip Can Waste a Lot of Water!

The amount of water wasted depends on the size of the drip and how often it occurs. Here are some common examples:

Type of Drip or Leak	Small Drip (about 1/16 inch)		Medium Drip (about 1/8 inch)		Large Drip (about 1/4 inch)	
	Gallons per Day	Gallons per 30 Days	Gallons per Day	Gallons per 30 Days	Gallons per Day	Gallons per 30 Days
Faucet drip (1 drip every 5 seconds)	0.06	1.8	0.23	7	0.52	16
Faucet drip (1 drip every 2 seconds)	0.16	4.8	0.57	17	1.37	41
Faucet drip (1 drip every second)	0.32	9.5	1.14	34	2.74	82
Faucet drip (2 drips every second)	0.64	19	2.28	68	5.48	164
Hose drip (at connection)	0.8	24	3.0	90	6.0	180
Toilet leak (slow, continuous)	10	300	30	900	60	1,800

Small Leaks Waste BIG Water!

Check for drips regularly to help conserve water and avoid higher water bills.

Fixing a small drip today can save hundreds of gallons each year!