SAGE PRISM™ PORTABLE DATALOGGING FLOW METER

The Sage Prism™ is the newest innovation in our Product Line, offering a Battery Operated Thermal Mass Flow Meter with extensive Datalogging capability. Designed to operate for up to 10 hours on a built-in rechargeable Lithium-ion battery, the Insertion Style Portable Thermal Mass Flow Meter can measure and log Gas Flows through existing ports in pipes 1" and larger.

The ergonomically designed Prism Portable can log in AUTO LOGGING Mode or MANUAL LOGGING Mode. AUTO Mode will capture a Flow data point every 10 seconds. MANUAL Mode will capture a Flow data point each time the SEL button is pressed – and the Display will flash as the point is captured. The data is stored within the Portable for subsequent transferring to a file, and also displays the data visually.

PRISM DISPLAY

The Display is a high contrast, photo-emissive graphical display, readable even in sunlight (known as an Organic LED). The Real Time data that is displayed follows:

- A 4-digit Log# of the captured data (which sequentially advances after each data capture)
- A numerical display of the instantaneous Flow Rate
- A graphical bar representing the Flow Rate
- A numerical display of the Gas Temperature
- A Date and Time Stamp of the data capture
- A Channel ID (A–P) associated with the User's selection of up to 16 different calibrations, or user-defined settings (Full Scale, Pipe ID, etc.)
- Option to switch to TAG ID Navigation displaying up to 99 unique 8-character TAG IDs defining specific pipe locations

FEATURES AND BENEFITS OF SAGE PRISM

- Portability with up to 10 Hours of rechargeable battery operation
- Datalogging of Gas Mass Flow Rate with up to 3800 data points
- Easily transfers data into Excel Spreadsheet format
- Easy to read Organic LED Display
- Displays Flow, Temperature, Log#, Channel ID, Date & Time Stamps
- Up to 16 unique Calibrations or Configurations (A–P) in one Meter as well as the ability to copy data from any Channel to another
- Optionally can associate Channels with up to 99 unique TAG#'s (pipe locations) to a specific Channel (A–P)
- Turndown of 100 to 1, and Resolution as much as 1000 to 1
- No moving parts, and negligible pressure drop
- Configurable with Keypad or Sage Addresser software (included)
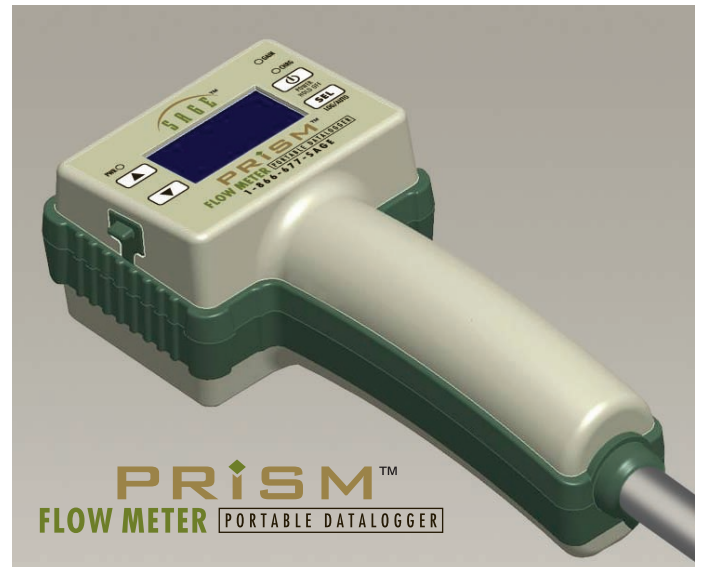
ADDRESSER SOFTWARE

Sage provides free software, Addresser, as well as an interconnect cable to handle all data transfers to and from the Portable and a computer. The cable will be connected between the Mini-USB mating receptacle on the side of the Portable, and the USB Port of your computer or laptop.

The Sage Prism can be set up for up to 16 Calibrations or Configurations that initially default to Channel A, Channel B, Channel C, etc. Prior to using the Flow Meter, those Channels can be renamed (up to 8 characters) using the software to clearly describe the Channel's calibration parameters (i.e., NATGAS2"). However, the software will not be required to select the Channels upon use, that can be done with the UP and DOWN command buttons (see page 2).

For those Users who intend to cover a large number of pipes (for example, conducting an energy audit in a large factory), the User can switch the Prism from CHANNEL Navigation Mode to TAG ID Navigation Mode (see page 2). In this mode, up to 99 specific TAG IDs (up to 8 characters) can be assigned using the software. Once TAG IDs are assigned, such as BLDG3NG2 (i.e., the 2nd Natural Gas pipe in Bldg 3), those unique Tags can be associated with appropriate Calibration Channels either using the Addresser software or a screen selection on the Prism called RE-MAP. This ability to associate unique TAG IDs with a specific Channel, allows the User to apply the proper Calibration and settings for each TAG ID (pipe), so the measurements for that location will be accurate.

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CONVENIENT TRANSFER OF DATA

After all of the required data has been captured, the Prism has a screen called FILES/LOG that can be selected. This screen allows the Portable either to clear its data (Clear Log File); or, once the USB cable is connected between the Prism and a PC, and the Addresser software is opened, the User can output the data (Output Log File) to a file. The User will name the file, choosing a "name.txt" format for Text file, or "name.csv" format for an Excel file (comma delimited). All of the parameters associated with each captured data point (up to 3800 data points) will appear (LOG#, TAG ID, Channel, Date Stamp, Time Stamp, Flow, Temperature). Note that any of the 8-character IDs that were modified earlier, will help identify which pipes or locations were logged. Of course, once the data is transferred from the Meter to a file, it can then be manipulated in any convenient manner.

CONVENIENT USER-FRIENDLY COMMAND BUTTONS

The two buttons to the left of the Display are simply to navigate through the Channels (A–P), or optionally through TAG ID's (01–99). The UP arrow cycles forward; and the DOWN arrow cycles in the reverse order.

If in CHANNEL Navigation Mode, the Channels (A–P) will advance with the UP arrow button, displaying its Channel designation (A–P) as well as its 8-character Channel name (the Addresser software can modify the Channel names).

If in TAG ID Navigation Mode, the TAG# as well as the 8-character TAG ID, will advance (from 01 to 99) each time the UP arrow is depressed (or the TAGS reverse when DOWN arrow is pressed).

Once the User has selected the desired ID, the SEL button will be used to Manually log a point (MANUAL LOGGING Mode). Each time the SEL button is pressed, a point is captured and the Display flashes to acknowledge that a data point has been taken. For AUTO LOGGING Mode, hold the SEL button for 3 seconds, and data will automatically be logged every 10 Seconds. To suspend AUTO LOGGING, press any button. The Power button is also used to switch Modes. Each time the Power button is pressed for 1 second, a new Mode appears in the following order: RE-MAP Mode (associates TAGS to Channels); FILE/LOG Mode (output to PC or clear data); TAG ID Mode (displays specific pipe Tag with its associated Channel); and finally back to the CHANNEL Mode (the Factory default). To turn Prism off, hold Power button for 4 seconds.

16 UNIQUE PRE-CALIBRATED RANGES

The Prism Flow Meter can store up to 16 totally independent Calibrations or Configurations (Channel IDs) designated with a single alpha character (A–P). Thus, the User can request a variety of Gas Calibrations upon purchase, each of which can be totally unique and independent from one another. When the UP/DOWN buttons cycle through the Channels, the calibration designation will be displayed also (i.e., CHAN A–CHANNEL, CHAN B–CHANNEL, etc.).

RECHARGING THE INTERNAL BATTERY

The Prism Flow Meter is supplied with a 12 Volt charger that plugs into the Mini-USB mating receptacle on the side of the Flow Meter. Even though the same mating receptacle is also used for the Addresser communication cable, the Prism recognizes that the Charger is connected, and not the Addresser, and it begins recharging. The Charging light will be lit, and the Meter will recharge the Lithium-ion battery in 3 to 4 hours. However, you must remove the Charger to operate. A fully charged Prism will run up to 10 hours continuously, providing a full days worth of data (or many days with intermittent use). If the Prism is left inactive for 15 minutes, it will automatically power down.

| PART NUMBERING FOR INTEGRAL STYLE[1]	Max Pipe Size	Style	STCF05 Mounting[3]	SVA05LP Mounting[4]	SVA05 Mounting[5]
	1"–3"	Integral	SID-05-06-DC12A-GAS	SID-05-12-DC12A-GAS	SID-05-15-DC12A-GAS
The Sage Prism Product Line consists of an ergonomically designed molded enclosure with an Insertion Style probe, and is normally available in an Integral Style (SID) with a fixed probe. The probe length (to be inserted into the center of the pipe) depends on the maximum pipe size as well as the choice of Mounting Hardware. See table *(right)* for Part Numbers[2] (assuming a single Channel calibration of specified Gas).	4"	Integral	SID-05-06-DC12A-GAS	SID-05-15-DC12A-GAS	SID-05-15-DC12A-GAS
	6"–12"	Integral	SID-05-12-DC12A-GAS	SID-05-15-DC12A-GAS	SID-05-18-DC12A-GAS
	14"–24"	Integral	SID-05-15-DC12A-GAS	SID-05-24-DC12A-GAS	SID-05-24-DC12A-GAS
	26"–36"	Integral	SID-05-24-DC12A-GAS	N/A	N/A
		Mounting[6]	STCF05	SVA05LP	SVA05

1 Optionally, a cabled version is available, which has a 2 foot coiled cable (stretches to 10 feet). Specify SCD instead of SID
2 "DC12A" refers to standard 12 volt charger that plugs into an AC outlet. Optionally, "DC12B" is available, which is a DC to DC converter that charges from an auto accessory outlet
3 The STCF05 is a Teflon Ferrule (max 125 psig) Compression Fitting (½" tube x ½" pipe fitting)
4 The SVA05LP is a Low Pressure (max 50 psig) Isolation Valve Assembly (½" tube x ¾" pipe fitting)
5 The SVA05 is a Medium/ High Pressure (max 650 psig) Isolation Valve Assembly (½" tube x ¾" pipe fitting)
6 Mounting Hardware should be ordered on a separate line item, since hardware is needed for each Datalogging location

SPECIFICATIONS

Accuracy is +/– 0.5% of Full Scale +/– 1% of reading with a turndown of 100 to 1 and resolution as much as 1000 to 1. Repeatability is 0.2%. Gas Temperature: –40ºF to 200ºF (–40ºC to 93ºC) ; Ambient Temperature: –4ºF to 125ºF (–20ºC to 52ºC). The Flow Meter is Sage Metering, Inc. Prism Series, with the trade name Sage Prism™. Pressure Rating is 500 psig. Response Time is 1 second (each time constant) for Flow change.
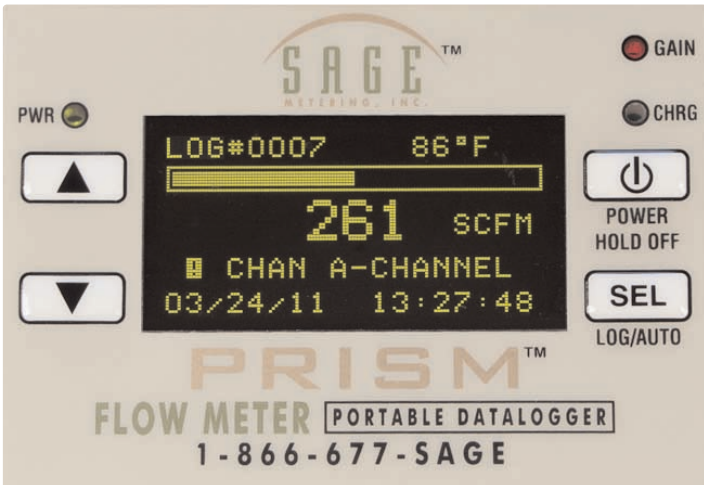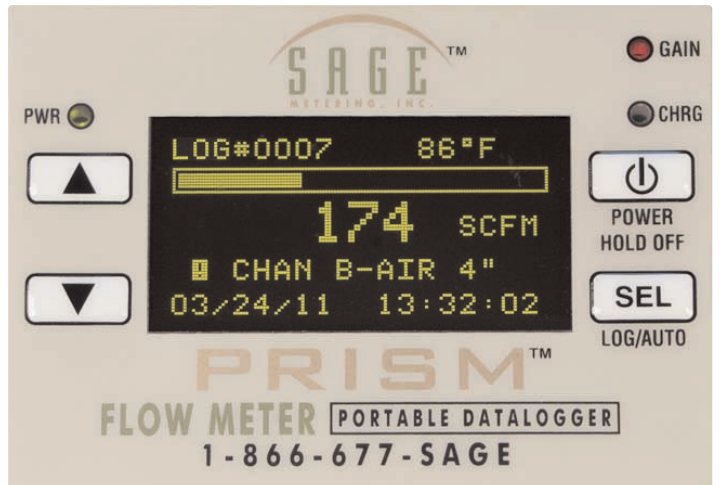

Prism Flow Meter shown here with its probe
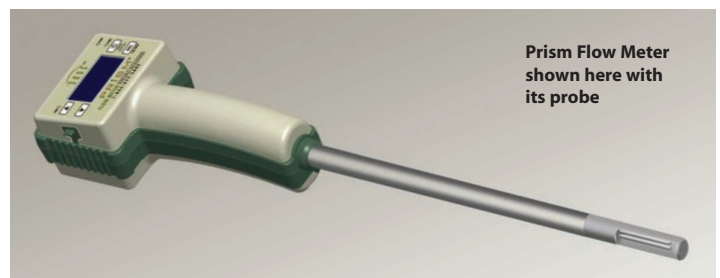
PRISM DISPLAY EXAMPLES
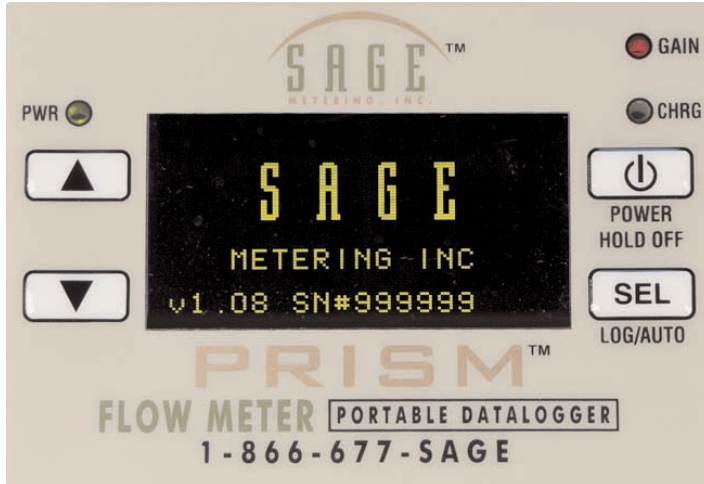
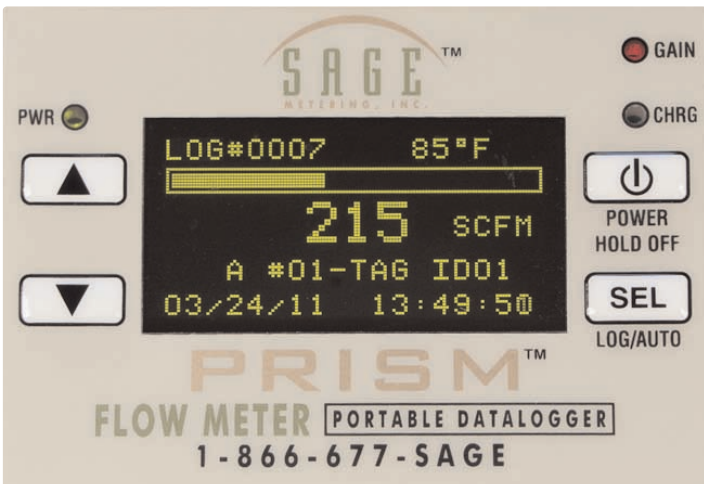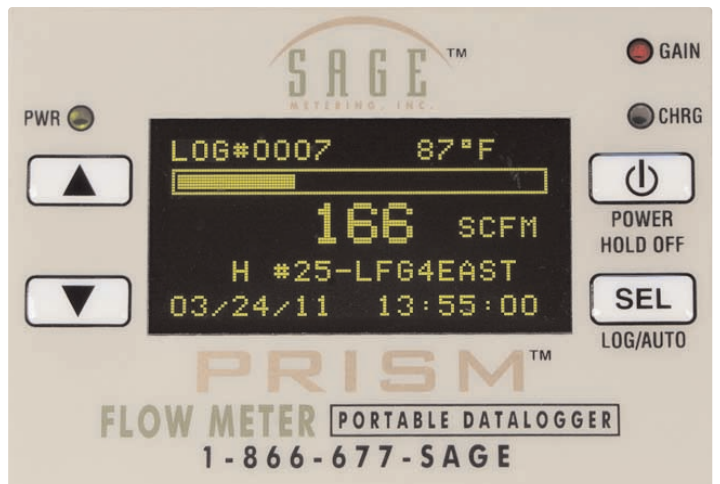**Serial Number Start up Screen**

Start up Splash Screen

Channel ID Navigation Mode Example 1

Channel ID Navigation Mode Example 2

Tag ID Navigation Mode Example 1

Tag ID Navigation Mode Example 2

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