Hach FL900 Standard (Non-Wireless) Flow Logger

Flow

When combined with the Flo-Dar®, Flo-Tote® 3, AV9000 module and IM9001 module, the Hach FL900 Series Flow Logger takes flow monitoring to a whole new level. With features that reduce site time and increase crew safety, the flow monitoring system allows you to easily manage your flow data, as well as your budget.

WW

Features and Benefits

IW

The FL900 Flow Logger provides users with a reliable, budget saving solution for open channel portable flow monitoring applications. The robust logger's time-saving features will drastically decrease site time and increase safety for monitoring crews. The Logger LED provides instant communication verification of correct site set-up and flow meter communication prior to leaving the site.

Increase Monitoring Crew Safety

With the time saving features designed into the FL900 Flow Loggers, crews spend less time in the manhole and less time on site to decrease monitoring costs while increasing the safety of flow monitoring crews.

Plug and Play Sensor Ports

The FL900 Series Flow Logger is available with 1, 2 or 4 sensor ports. The logger auto-detects the type of sensor connected to allow customers maximum flexibility for their Hach flow sensor inventories.

Easy Installation/Versatile Mounting Options

The logger can be quickly attached to a wall, pole or manhole ladder in minutes. Users can choose to hang logger from standard carabiner or optional 4-bolt wall mount for pole, horizontal or vertical wall mount or ladder rung mount.

C

Applications

Municipal
- *Sanitary Sewer Evaluation Studies*
- *Collection Systems*
- *Capacity Studies*
- *Combined Sewer Overflows*
- *Inflow and Infiltration (I&I) Studies*
- *Billing / Custody Transfer*
- *Plant Influent and Effluent*

Industrial
- *Process Waste*
- *Plant Influent*
- *Plant Effluent*
- *Non-contact Cooling Water*
- *Stormwater Monitoring and Compliance*

*Requires AV9000 Analyzer module.

**DW = drinking water   WW = wastewater municipal   PW = pure water / power
IW = industrial water   E = environmental   C = collections   FB = food and beverage**

HACH®

Be Right™

Specifications*

Dimensions (W x D x H)
25.4 x 22 x 40 cm (10.0 x 8.7 x 16.0 in.)

Enclosure
PC/ABS structural foam

Environmental Rating
NEMA 6P (IP68)

Weight (Using Model FL900)
4.5 kg (10 lb)—no batteries; 6.3 kg (14 lb)—2 batteries;
8.2 kg (18 lb)—4 batteries

Operating Temperature
-18 to 60ºC (0 to 140ºF) at 95% RH

Storage Temperature
-40 to 60ºC (-40 to 140ºF)

Power Requirements
8 to18 Vdc from batteries

**Battery Life at 15 minute logging intervals
(at room temperature)**
185 days with 4 lantern batteries and a Flo-Dar sensor
306 days with 4 lantern batteries and a Flo-Tote sensor
296 days with 4 lantern batteries and a Sub AV sensor
with AV9000 analyzer module
(4 lantern batteries shall be included with each logger)

Sensor Ports
1, 2 or 4

Connectors
Stainless steel connectors

LED Status Indicator
– Green Flashes every 3 seconds during normal operation.
  Flashes every 15 seconds during sleep mode.
– Red Flashes when an attached sensor does not agree with
  the logger program, when an expected sensor is not found
  or the sensor is not working properly.

Datalog Channels
16 maximum

Alarms
Maximum of 16 channel alarms including high/high,
high, low, low/low

Alarm Actions
Change logging interval

Logging Intervals
1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 or 60 minutes
Primary and secondary intervals for dynamic logging.

Data Storage
Event Log: 1,000 events maximum in non-volatile flash memory
Sample History: 2,000 sample events maximum in non-volatile
flash memory
Datalog: 325,000 data points; 1128 days for 3 channels at
15-minute log intervals

Local Communication
USB
RS232 (Baud rates: 9600, 19200, 38400, 57600, 115200)

Protocols
Local Modbus RTU

Timebase Accuracy
±0.002%

Supported Sensors / External Devices
Flo-Dar, Flo-Tote 3, Submerged Area Velocity Sensor[†],
and Sigma 950[†], Rain Gauge, Sigma SD900 Sampler (with
FL901, FL902 and FL904 only)

Certifications
Logger: CE

Warranty
1 year

Set-up/Data Retrieval
Flo-Ware for Windows software is required for programming
the logger, data management, and report generation. It is
compatible with desktop/laptop computers utilizing Windows
operating system. Minimum resolution needed is 1024x768.
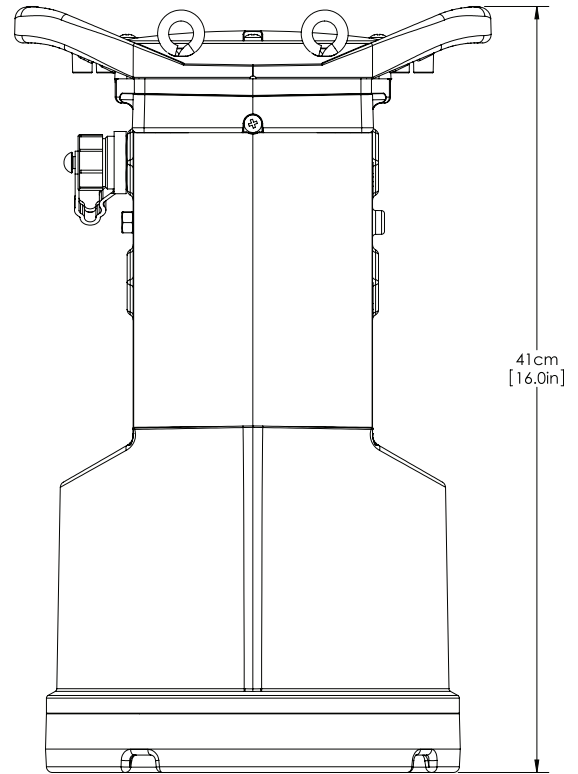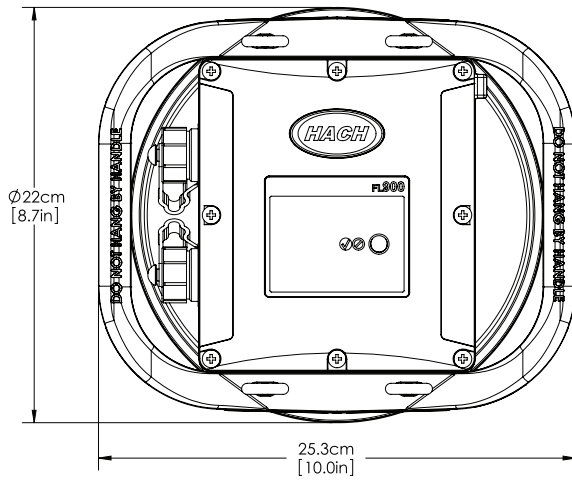
CE FL900 Flow Logger meets CE requirements.

[†]*Requires external module.*

Specifications subject to change without notice.

Engineering Specifications

1. Exterior dimensions of the Flow
   Logger shall be:
   25.4 W x 22 D x 40 cm H
   (10.0 W x 8.7 D x 16.0 in. H)
2. The Flow Logger enclosure material
   shall be PC/ABS structural foam with
   NEMA 6P (IP68) rating.
3. The Operating temperature for the
   Flow Logger shall be -18 to 60ºC
   (0 to 140ºF) at 95% relative humidity
   and storage temperature of
   -40 to 60ºC (-40 to 140ºF).
4. Power requirements of the Flow
   Logger shall be 8 to18 Vdc from
   batteries.
5. The Flow Logger shall have a
   battery life of 185 days, when
   using a Flo-Dar sensor, 306 days

when using a Flo-Tote sensor, and
360 days when using a Sub AV with
AV9000 analyzer module, utilizing 4
batteries at a 15 minute logging
interval at room temperature.
6. The Flow Logger shall have 1, 2 or 4
   sensor ports and one communications
   port with stainless steel connector.
7. The Flow Logger shall have primary
   logging intervals of 1, 2, 3, 4, 5, 6, 10,
   12, 15, 20, 30 or 60 minutes.
8. The Flow Logger shall have
   secondary logging intervals available
   to modify the logging rate based on a
   defined channel alarm condition or
   trigger for dynamic logging.

9. The Flow Logger data storage event
   log shall be 1,000 events maximum in
   non-volatile flash memory.
10. Timebase Accuracy of the Flow
    Logger shall be 0.002%.
11. The Flow Logger shall support the
    Flo-Dar, Flo-Tote 3, Submerged Area
    Velocity Sensor and Sigma 950.
12. The Flow Logger shall be able to
    connect to a lap top or desk top PC
    using either USB or RS232 serial
    connection.
13. The Flow Logger shall have an LED
    indicator for operating /programming
    status visible on the topmost
    horizontal surface of the logger.
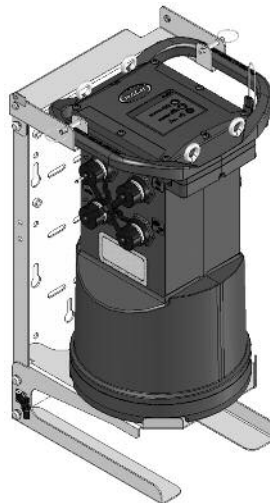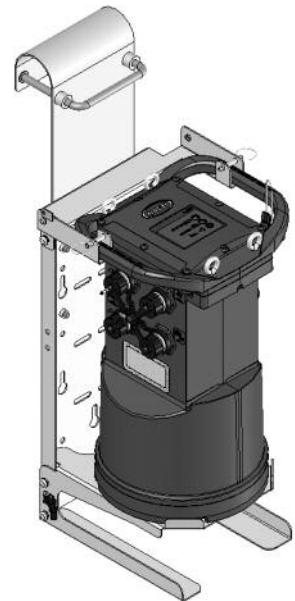14. The Flow Logger shall be a Hach
    FL900 Flow Logger.

Dimensions

Installation/Mounting Options

Flow Logger
Suspension Cable with Carabiner
(Standard)

Flow Logger Wall Mount
Prod. No. 8542700
(Optional)

Flow Logger Ladder Rung Mount
Prod. No. 8544500
(Optional)

Ordering Information

Flow Logger

FL900.97   FL900 Flow Logger, 1 sensor port, no aux port

FL901.97.XX   FL901 Flow Logger, 1 sensor port, 1 aux port

FL901.97.XR   FL901 Flow Logger with optional Rain Gauge*

FL902.97.XX   FL902 Flow Logger, 2 sensor ports, 1 aux port

FL902.97.XR   FL902 Flow Logger with optional Rain Gauge*

FL904.97.XX   FL904 Flow Logger, 4 sensor ports, 1 aux port

FL904.97.XR   FL904 Flow Logger with optional Rain Gauge*

*Order Rain Gauge, Hach Prod. No. 8542800 separately.

Analyzer Modules

FL900AV.97   FL900 Flow Logger with AV9000 analyzer module

8531300   AV9000 Digital Analyzer module (required to attach a Sigma Sub AV sensor)

8549800   IM9001 Interface module (required to attach a Sigma 950 flow meter)

Cables

8528200   Cable, Communication, RS232

8528300   Cable, Communication, USB

Software

Model T200-900   Flo-Ware Desktop PC/Laptop Software

Mounting Hardware

9542   Manhole Support Bracket/Spanner; 18-28"

9557   Manhole Support Bracket/Spanner; 28-48"

5713000   Manhole Support Bracket; 18-27"

8544300   Suspension cable, 16 in.

8543800   Wall mount bracket (304 Stainless)

8545600   Wall mount bracket with ladder hanger (304 Stainless)

8542700   Wall mount bracket with AC Power Supply shelf (304 Stainless)

8544500   Wall mount bracket with AC Power Supply Shelf with ladder hanger (304 Stainless)

Replacement Parts

8755500   Desiccant refill beads, Bulk 1.5 lb

11013M   Battery, 6V lantern

8524400   Battery compartment cover

8533400   O-ring for battery cover

For Models with wireless communication option, see Lit. No. 2711

At Hach, it's about learning from our customers and providing the right answers. It's more than ensuring the quality of water—it's about ensuring the quality of life. When it comes to the things that touch our lives...

Keep it pure.

Make it simple.

Be right.

For current price information, technical support, and ordering assistance, contact the Hach office or distributor serving your area.

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