HACH SC200 UNIVERSAL CONTROLLER WITH ULTRASONIC FLOW SENSOR



Applications

- Wastewater
- Collection Systems
- Industrial Water

The SC200 Universal Controller with Ultrasonic Sensor is designed to give highly accurate flow and depth measurements for your open channel flow monitoring applications.

From the easy-to-read display to reliable data management with SD card data transfer, the flow system provides an economical choice for flow monitoring.

The flow system can be used for a variety of applications including NPDES permitting requirements and the monitoring of storm water, inlet flow, final effluent and activated sludge. It replaces the Hach GLI53 analog controller with advanced features for easier operator use.

The SC200 controller platform can be configured to operate either 2 Digital Sensor Inputs, or 1 or 2 Analog Sensor Inputs, or a combination of Digital and Analog Sensor Inputs. Customers may choose communication options from a variety of offerings ranging from MODBUS RTU to Profibus DPV1.

Maximum Versatility

- Standardized controller eliminates the need for a variety of dedicated controllers
- Multi-channel controller operates either 1 or 2 sensors reducing inventory holding costs and providing an inexpensive option to add a second sensor at a later time
- True dual sensor controller provides 4-20 mA outputs to transmit primary and secondary measurement values
- Controller may be panel, surface or pole mounted (hardware included)

Display

- · Large display with scrolling menus for easy set up
- Transreflective display stays readable even in sunlight

Data Management

- SD Card simplifies data dowload and transfer
- Update firmware via SD card or special RS232 cable

Ultrasonic Flow Sensor

- Select primary gauging structure from the library of flumes and weirs for flow sensor set up or enter a flow curve for non-standard structure
- Non-contact flow sensor requires no routine maintenance
- Pulse echo technology

Sensor Inputs

- Analog sensor modules may be added in the field
- Digital sensor ports are factory installed
- Controller will scan and detect new sensors added
- Works with GLI and Hach digital sensors

Analog Inputs

- Enables non-sc analyzer monitoring
- Accepts mA signals from other analyzers for local display
- · Consolidates analog mA signals to a digital output

4-20 mA Outputs

• Total of six (6) 4-20 mA outputs (2 std/4 optional) enables up to 3 mA outputs per sensor input

Digital Communication

• MODBUS 232/485 and Profibus DP V1.0

Ease of Use and Confidence in Results

- New display and guided calibration procedures reduce operator error
- Password protection to prevent tampering and unwanted programming changes
- Visual warning system provides critical alerts



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Be Right"



Specifications*

SC200 General Specifications

Display Graphic dot matrix LCD with LED

backlighting. Transreflective

Display Size 48 x 68 mm (1.89 x 2.67 in.)

 Display Resolution
 240 x 160 pixels

 Height x Width x Depth
 144 x 144 x 181 mm (5.7 x 5.7 x 7.1 in.)

 Weight
 1.70 kg (3.75 lb)

Power $100 - 240 \text{ Vac } \pm 10\%, 50/60 \text{ Hz};$

 Requirements
 24 Vdc -15% + 20%

 Operating
 -20 to 60°C (-4 to 140°F),

 Temperature
 0 to 95% RH non-condensing

 Storage
 -20 to 70°C (-4 to 158°F),

 Temperature
 0 to 95% RH non-condensing

Analog Output Signal

Two 0/4 to 20 mA isolated current outputs, max 500Ω

Operational Mode

Primary or secondary measurement or calculated value

(dual channel only)

Functional Mode

Linear, Logarithmic, Bi-linear, PID

Optional 4 additional 4/20 mA isolated current outputs, max 500Ω @ 18-24 Vdc (customer-supplied power source)

Security LevelsTwo password protected levelsEnclosure MaterialsPolycarbonate, Aluminum (powder

coated), Stainless Steel

Mounting Wall, pole and panel mounting

Configurations

Enclosure Rating NEMA 4X / IP 66 **Conduit Openings** 1/2" NPT Conduit

Relays

Four electromechanical SPDT (Form C) contacts, 1200W, 5 A. 250 Vac

Operational Mode

Primary or secondary measurement, calculated value (dual channel only) or timer

Functional Mode

Alarm, Timer, Feeder Control, PWM or FM Control,

System Alarm

DigitalMODBUS RS232/RS485,CommunicationProfibus DPV1 optional

Memory Backup Flash memory

Electrical EMC: CE compliant for conducted and radiated emissions CISPR 11 (Class

A limits), EMC Immunity EN 61326-1

(Industrial limits)

Safety: General Purpose UL/CSA 61010-1 with cETLus safety mark

Data Logging Secure Digital Card (Maximum

recommended capacity 8 GB) or special RS232 cable connector for data logging and performing software

updates.

UltraSonic Flow Sensor

Flow Rate 0-9999, 0-999.9, 0-99.99 with

selectable flow rate units

Volume 0-9,999,999 with selectable volume

units

Depth 0.25 m (10 in.) to 6 m (20 ft.)

Measurement ±1 mm (0.04 in.)

Range/Resolution

Air Temperature -40 to to 90°C (-40 to 194°F)

±0.1°C (0.18°F)

Input Filter 999 sec

Totalizers 8-digit resettable LCD software totalizer

Totalized Flow Gal., ft.³, acre-ft., lit., m³, in.³

Totalizer may be set to auto or manual

mode.

(Menu option to reset is available in

manual mode only.)

Accuracy $\pm 0.5\%$ of spanRepeatability $\pm 0.1\%$ of span

 Sensor Cable (integral) Lengths
 10 m (33 ft.), 20 m (66 ft.), 50 m (164 ft.), or 100 m (328 ft.)

 Calibration
 Cal Depth 1 point; Cal Depth 2 point

Methods

Operating 75kHz

Frequency

Construction NEMA 6P (IP68) polybutylene

terephthalate (PBT) body with integral

temperature sensor

Weight ~0.5 kg (1.1 lb)

Select from the Following Gauge Types:

V Notch Weir Rectangle Weir Rectangle Flume Round Bot Flume Cipolletti Weir Neyrpic Flume

Parshall Flume
P Bowlus Flume
Khafagi Flume
L Lagco Flume
H Type Flume
Trapezoidal Flume

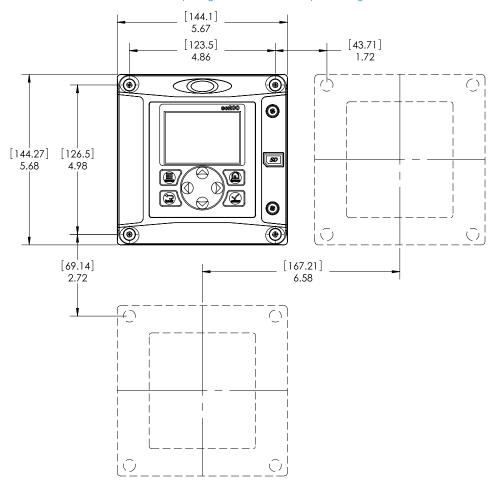
User Defined

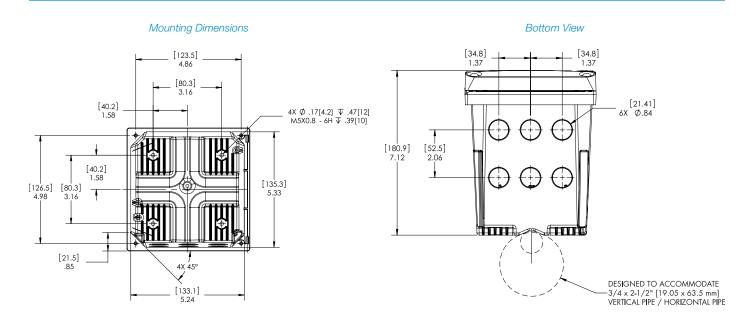
*Subject to change without notice.

Dimensions

The SC200 controller unit can be installed on a surface, panel, or pipe (horizontally or vertically). No tools are needed to connect the controller unit to any Hach digital sensor. NOTE: Dimensions are in inches [millimeters].

Minimum Spacing Dimensions for Group Mounting





Old I I53 Sensor

Ordering Information

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SC200 Controller and Module Smart Part Numbering System		0	_	<u> </u>	_
LXV404.9	99. X	Х	Х	X	Х
Power	0				
No power cord	0				╀
No power cord Type-O-installed strain reliefs	1				┡
With EU power cord installed with cord grip	2				L
With UK power cord installed with cord grip	3				
With US power cord installed with cord grip	5				L
24VCD power supply with no cord or cord grips	7				
Communications Output					
Standard (two 4-20mA outputs)		0			
MODBUS 232 & 485		1			
Profibus DP		3			
HART + four 4-20mA analog outputs		5			
Four additional 4-20mA analog outputs		9			Г
Sensor Input 1					
pH & DO			1		Г
Conductivity			2		
Flow			3		Г
mA input			4		
Digital			5		Г
Sensor Input 2					
None				0	
pH & DO				1	Г
Conductivity				2	Г
Flow				3	Г
mA input				4	Г
Digital				5	Г
Brand					
Hach					2
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Ultrasonic Flow Sensors

U53S010 Ultrasonic sensor with 10 ft. cable

U53S030 FL900 Flow Logger with AV9000 analyzer

module, 1 sensor port

U53S100 Ultrasonic sensor with 100 ft. cable

Power Cords

9202900 SC200 power cord with strain relief, 125 Vac

9203000 SC200 power cord with strain relief,

230 Vac, European-style plug

DASTEC S.R.L.

Distribuidores Autorizados

Buenos Aires, Argentina Tel.: (54-11) 5352-2500 E mail: info@dastecsrl.com.ar Web: www.dastecsrl.com.ar

Accessories

9220600 SC200 Weather and Sun Shield

with UV Protection Screen

8809200 SC200 UV Protection Screen

1000G3088-001 Weather Protection Cover

9218200 SD card reader (USB) for connection to PC

9218100 4 GB SD card **9012700** Flow Module

9013100 Module for 4 additional analog mA out

(passive)

9013200 Modbus moduleYAB104 Profibus DP kitLZX887 Data com cable

3004A0017-001 Flow sensor mounting kit

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