

# SC200™ UNIVERSAL CONTROLLER

## Applications

- Drinking Water
- Wastewater
- Industrial Water
- Power



## One Controller for the Broadest Range of Sensors.

Choose from 30 digital and analog sensor families for up to 17 different parameters.

### Maximum Versatility

The SC200 controller allows the use of digital and analog sensors, either alone or in combination, to provide compatibility with Hach's broad range of sensors, eliminating the need for dedicated, parameter-specific controllers.

### Ease of Use and Confidence in Results

Large, high-resolution, transreflective display provides optimal viewing resolution in any lighting condition. Guided calibration procedures in 19 languages minimize complexity and reduce operator error. Password-protected SD card reader offers a simple solution for data download and transfer. Visual warning system provides critical alerts.

### Wide Variety of Communication Options

Utilize two to five analog outputs to transmit primary and secondary values for each sensor, or integrate Hach® sensors and analyzers into MODBUS RS232/RS485, Profibus® DP, and HART networks.



*Password protected SD card reader offers a simple solution for data download and transfer, and SC200 and digital sensor configuration file duplication and backup.*



Be Right™

## Controller Comparison



| Features                     | Previous Models   |  | SC200™ Controller  | Benefits  |
|------------------------------|---|--|--|---|
|                              | SC100™ Controller   | GLI53 Controller                                 |  |   |
| <b>Display</b>               | 64 x 128 pixels<br>33 x 66 mm<br>(1.3 x 2.6 in.)          | 64 x 128 pixels<br>33 x 66 mm<br>(1.3 x 2.6 in.) | 160 x 240 pixels<br>48 x 68 mm<br>(1.89 x 2.67 in.)<br>Transreflective | <ul style="list-style-type: none"> <li>Improved user interface—50% bigger</li> <li>Easier to read in daylight and sunlight</li> </ul>   |
| <b>Data Management</b>       | irDA Port/PDA Service Cable                               | N/A  | SD Card Service Cable  | <ul style="list-style-type: none"> <li>Simplifies data transfer</li> <li>Standardized accessories/ max compatibility</li> </ul>   |
| <b>Sensor Inputs</b>         | 2 Max<br>Direct Digital<br>Analog via<br>External Gateway | 2 Max<br>Analog<br>Depending on<br>Parameter     | 2 Max<br>Digital and/or Analog<br>with Sensor Card                     | <ul style="list-style-type: none"> <li>Simplifies analog sensor connections</li> <li>Works with analog and digital sensors</li> </ul>   |
| <b>Analog Inputs</b>         | N/A   | N/A  | 1 Analog Input Signal<br>Analog 4-20mA Card                            | <ul style="list-style-type: none"> <li>Enables non-sc analyzer monitoring</li> <li>Accepts mA signals from other analyzers for local display</li> <li>Consolidates analog mA signals to a digital output</li> </ul> |
| <b>4-20 mA Outputs</b>       | 2 Standard  | 2 Standard                                       | 2 Standard<br>Optional 3 Additional                                    | <ul style="list-style-type: none"> <li>Total of five (5) 4-20 mA outputs allows multiple mA outputs per sensor input</li> </ul>   |
| <b>Digital Communication</b> | MODBUS RS232/RS485<br>Profibus DP V1.0                    | HART   | MODBUS RS232/RS485<br>Profibus DP V1.0<br>HART 7.2                     | <ul style="list-style-type: none"> <li>Unprecedented combination of sensor breadth and digital communication options</li> </ul>   |

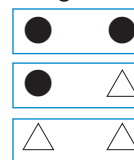
**Choose from Hach's Broad Range of Digital and Analog Sensors**

| Parameter               | Sensor  | Digital or Analog |
|-------------------------|---|-------------------|
| Ammonia                 | Amtax™ sc, NH4D sc, A-ISE sc, AN-ISE sc                   | ●                 |
| Chlorine                | CLF10sc, CLT10sc, 9184sc                                  | ●                 |
| Chlorine Dioxide        | 9187sc  | ●                 |
| Conductivity            | GLI 3400 Contacting, GLI 3700 Inductive                   | △                 |
| Dissolved Oxygen        | LDO® Model 2, 5740sc                                      | ●                 |
| Dissolved Oxygen        | 5500  | △                 |
| Flow                    | U53, F53 Sensors  | △                 |
| Nitrate                 | Nitratax™ sc, NO3D sc, N-ISE sc, AN-ISE sc                | ●                 |
| Oil in Water            | FP360 sc  | ●                 |
| Organics                | UVAS sc   | ●                 |
| Ozone                   | 9185sc  | ●                 |
| pH/ORP                  | pHD   | ●                 |
| pH/ORP                  | pHD, pH Combination, LCP                                  | △                 |
| Phosphate               | Phosphax™ sc  | ●                 |
| Sludge Level            | Sonatax™ sc   | ●                 |
| Suspended Solids        | Solitax™ sc, TSS sc                                       | ●                 |
| Turbidity               | 1720E, FT660 sc, SS7 sc, Ultraturb sc, Solitax sc, TSS sc | ●                 |
| Ultra Pure Conductivity | 8310, 8311, 8312, 8315, 8316, 8317 Contacting             | △                 |
| Ultra Pure pH/ORP       | 8362  | △                 |

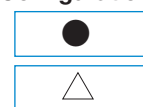
● = Digital    △ = Analog

Connect up to two of any of the sensors listed above, in any combination, to meet your application needs. The diagrams below demonstrate the potential configurations. Operation of analog sensors requires the controller to be equipped with the appropriate sensor module. Contact Hach Technical Support for help with selecting the appropriate module.

**2 Channel Configurations**



**1 Channel Configurations**



## Specifications\*

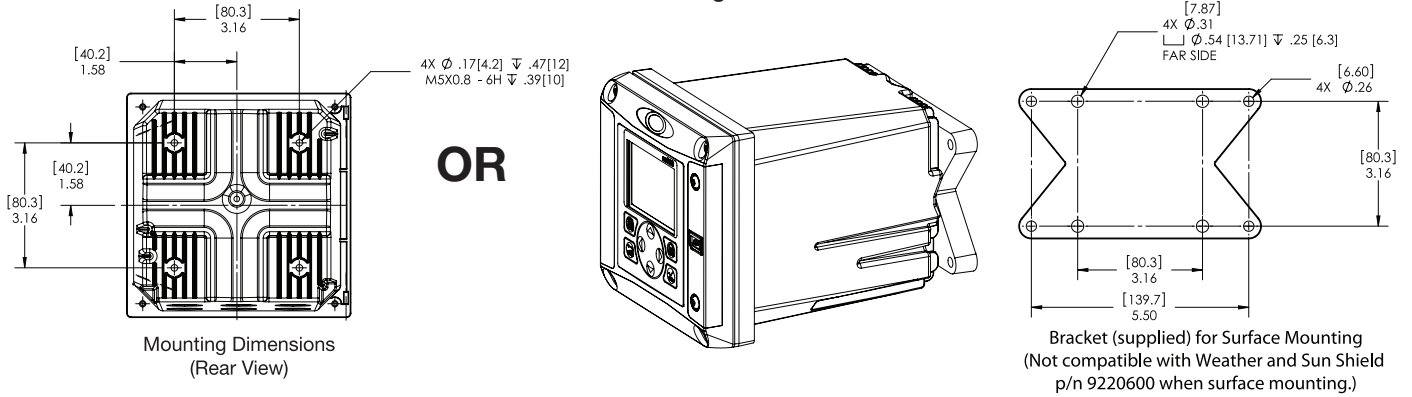
|                                      |   |
|--------------------------------------|---|
| <b>Dimensions (H x W x D)</b>        | 5.7 in x 5.7 in x 7.1 in<br>(144 mm x 144 mm x 181 mm)  |
| <b>Display</b>                       | Graphic dot matrix LCD with LED backlighting, transreflective   |
| <b>Display Size</b>                  | 1.9 x 2.7 in. (48 mm x 68 mm)   |
| <b>Display Resolution</b>            | 240 x 160 pixels  |
| <b>Weight</b>                        | 3.75 lbs. (1.70 kg)   |
| <b>Power Requirements (Voltage)</b>  | 100 - 240 V AC, 24 V DC   |
| <b>Power Requirements (Hz)</b>       | 50/60 Hz  |
| <b>Operating Temperature Range</b>   | -20 to 60 °C , 0 to 95% RH non-condensing   |
| <b>Analog Outputs</b>                | Two (Five with optional expansion module) to isolated current outputs, max 550 Ω , Accuracy: ± 0.1% of FS (20mA) at 25 °C, ± 0.5% of FS over -20 °C to 60 °C range<br><br>Operational Mode: measurement or calculated value |
| <b>Analog Output Functional Mode</b> | Linear, Logarithmic, Bi-linear, PID   |
| <b>Security Levels</b>               | 2 password-protected levels   |
| <b>Mounting Configurations</b>       | Wall, pole, and panel mounting  |
| <b>Enclosure Rating</b>              | NEMA 4X/IP66  |
| <b>Conduit Openings</b>              | 1/2 in NPT Conduit  |
| <b>Relay: Operational Mode</b>       | Primary or secondary measurement, calculated value (dual channel only) or timer   |

|                                  |  |
|----------------------------------|--|
| <b>Relay Functions</b>           | Scheduler (Timer), Alarm, Feeder Control, Event Control, Pulse Width Modulation, Frequency Control, and Warning  |
| <b>Relays</b>                    | Four electromechanical SPDT (Form C) contacts, 1200 W, 5 A   |
| <b>Communication</b>             | Modbus RS232/RS485, Profibus DPV1, or HART 7.2 optional  |
| <b>Memory Backup</b>             | Flash memory   |
| <b>Electrical Certifications</b> | EMC<br><br>CE compliant for conducted and radiated emissions:<br><br>- CISPR 11 (Class A limits)<br><br>- EMC Immunity EN 61326-1 (Industrial limits)<br><br>Safety<br><br>cETLus safety mark for:<br><br>- General Locations per ANSI/UL 61010-1 & CAN/CSA C22.2. No. 61010-1<br><br>- Hazardous Location Class I, Division 2, Groups A,B,C & D (Zone 2, Group IIC) per FM 3600 / FM 3611 & CSA C22.2 No. 213 M1987 with approved options and appropriately rated Class I, Division 2 or Zone 2 sensors<br><br>cULus safety mark<br><br>- General Locations per UL 61010-1 & CAN/CSA C22.2. No. 61010-1 |

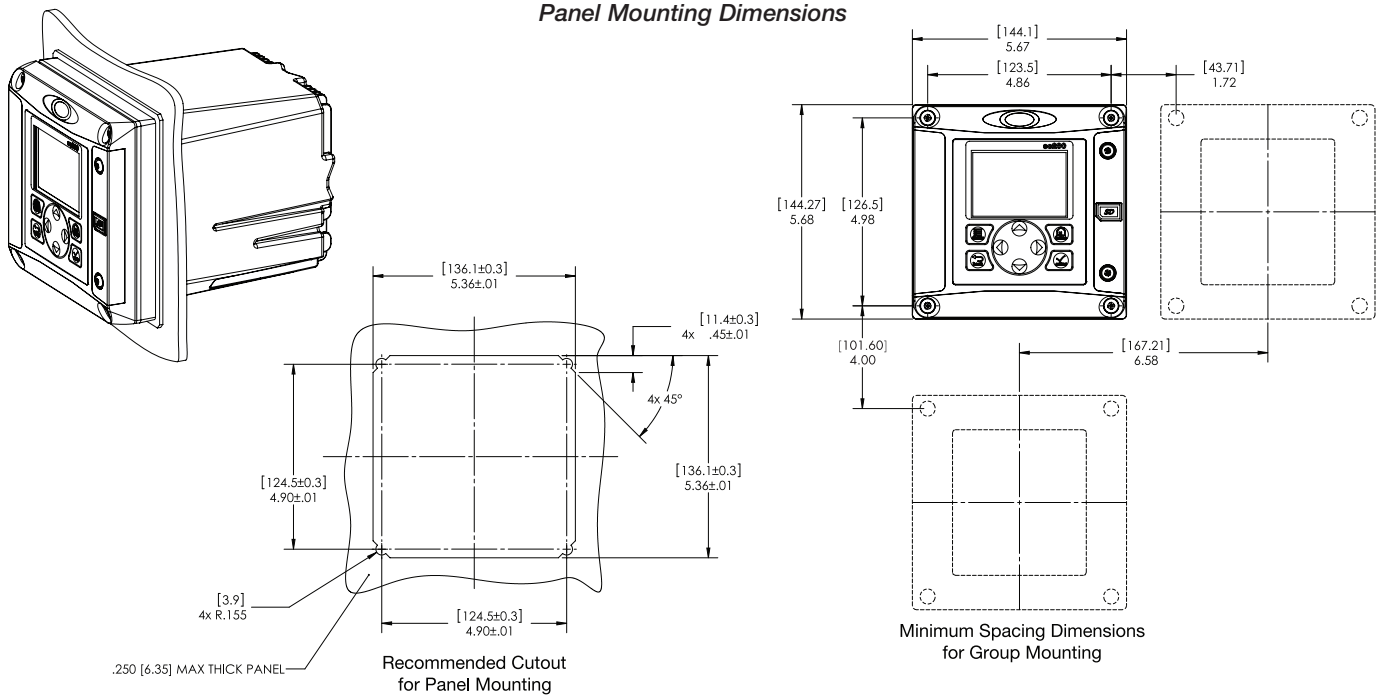
\*Subject to change without notice.

**Dimensions**

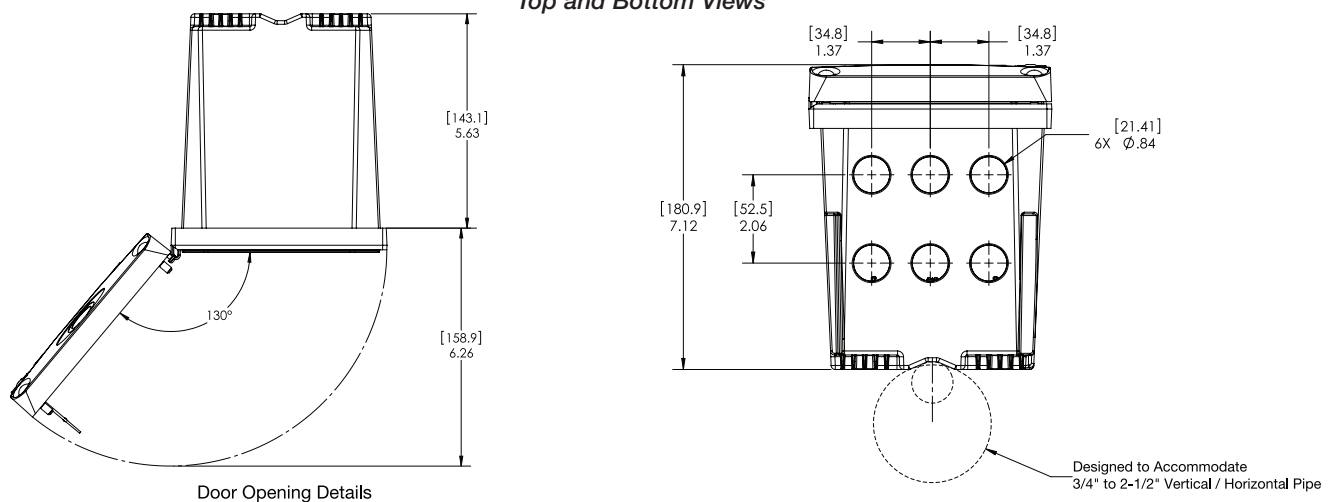
**Surface Mounting Dimensions**



**Panel Mounting Dimensions**



**Top and Bottom Views**





## Ordering Information

### SC200 for Hach Digital and Analog Sensors

|                        |   |
|------------------------|---|
| <b>LXV404.99.00552</b> | SC200 controller, 2 channels, digital                     |
| <b>LXV404.99.00502</b> | SC200 controller, 1 channel, digital                      |
| <b>LXV404.99.00102</b> | SC200 controller, 1 channel, pH/DO                        |
| <b>LXV404.99.00202</b> | SC200 controller, 1 channel, Conductivity                 |
| <b>LXV404.99.01552</b> | SC200 controller, 2 channels, digital, Modbus RS232/RS485 |
| <b>LXV404.99.00112</b> | SC200 controller, 2 channel, pH/DO                        |

Note: Other Sensor combinations are available. Please contact Hach Technical Support or your Hach representative.

Note: Communication options (Modbus, Profibus DPV1, and HART) are available. Please contact Hach Technical Support or your Hach representative.

### SC200 for Ultrapure Sensors

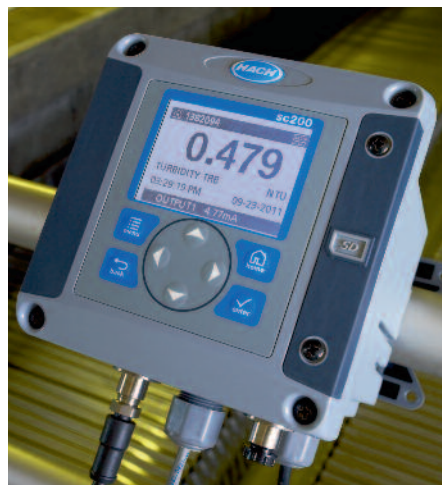
|                      |   |
|----------------------|---|
| <b>9500.99.00602</b> | SC200 controller, 1 channel, ultrapure conductivity |
| <b>9500.99.00702</b> | SC200 controller, 1 channel, ultrapure pH           |
| <b>9500.99.00662</b> | SC200 controller, 2 channel, ultrapure conductivity |
| <b>9500.99.00772</b> | SC200 controller, 2 channel, ultrapure pH           |

### Sensor and Communication Modules

|                |  |
|----------------|--|
| <b>9012900</b> | Analog pH/ORP and DO module for GLI Sensors              |
| <b>9013000</b> | Analog Conductivity module for GLI Sensors               |
| <b>9012700</b> | Flow module  |
| <b>9012800</b> | 4-20 mA Input Module                                     |
| <b>9525700</b> | Analog pH/ORP Module for Polymetron Sensors              |
| <b>9525800</b> | Analog Conductivity Module for Polymetron Sensors        |
| <b>9013200</b> | Modbus 232/485 Module                                    |
| <b>9173900</b> | Profibus DP Module                                       |
| <b>9328100</b> | HART Module  |
| <b>9334600</b> | 4-20 mA Output Module (Provides 3 additional mA Outputs) |

### Accessories

|                |  |
|----------------|--|
| <b>9220600</b> | SC200 Weather and Sun Shield with UV Protection Screen |
| <b>8809200</b> | SC200 UV Protection Screen                             |
| <b>9218200</b> | SD card reader (USB) for connection to PC              |
| <b>9218100</b> | 4 GB SD card   |



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LIT2665 Rev 8  
 K13 Printed in U.S.A.

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