

# SC5200

## STREAMING CURRENT DETECTOR

### DESCRIPTION

The Milton Roy Model SC5200 Streaming Current Detector (SCD) is an on line electrokinetic charge analyzer that measures the net ionic and particle surface charge in a chemically treated water or wastewater sample. The SCD allows continuous monitoring and control of the coagulation process, thereby providing:

- Consistent water quality
- Uniform chemical dosing under varying conditions
- Reduced chemical costs
- Automatic operation of the treatment process



The SC5200 is a complete SCD and process controller in one package. Once installed, it is ready to control any coagulant dosing pump or control valve that accepts a 4-20 mA process signal. No other control instruments are required for a closed loop control.

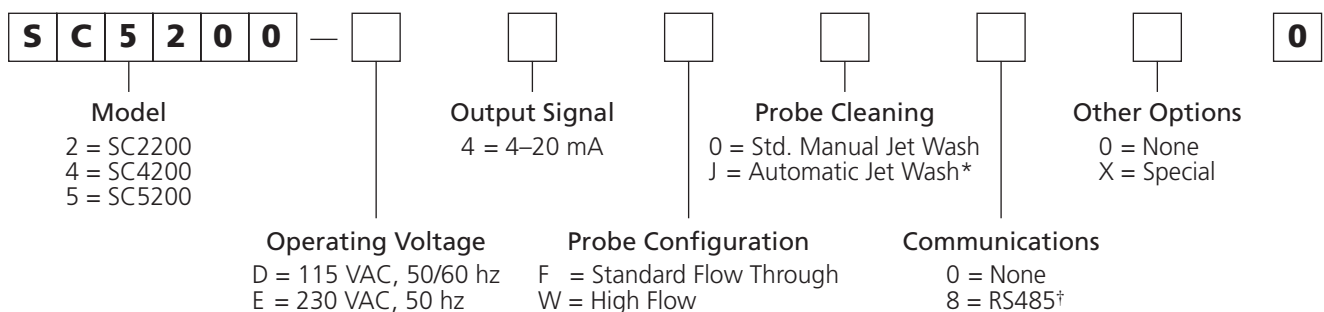
The SC5200 represents the most advanced level of Streaming Current Technology available today. The SC5200's electronics, sampling system and overall design are the direct result of years of studies and research and development aimed at advancing the technology. Though SCD's have been an accepted part of water treatment for over a decade, the SC5200 incorporates a number of key improvements that provide even greater stability, response, and improved operation over previous successful designs.

In addition, the SC5200 is the first of a new generation of SCD's designed to operate in wastewater treatment. Special probe designs and electronic advances have opened the door to controlling coagulant feed to belt presses, centrifuges, and other dewatering equipment.

### JET WASH SAMPLE CELL CLEANING

The Automatic Jet Wash is an optional patented sample cell cleaning system available on Milton Roy SCD's. The system is designed to maintain cell cleanliness and signal reliability by automatically flushing the sample cell on a predetermined cycle. Flushing is accomplished by injecting water at high velocity through the bottom of the sampling cell, which scours the cell surfaces and forces contaminants into the sample stream drain. Cleaning frequency is field adjustable to suit the application. Signal output is automatically locked during the cleaning cycle to ensure control stability.

### SC5200 MODEL SELECTION GUIDE



\* Automatic Jet Wash is factory set at 30 seconds every 2 hours. Jet Wash timing is field adjustable.

Available settings are 30 seconds to 7 minutes (30 second intervals) every 15, 30, or 45 minutes or 1, 2, or 4 hours.

# SC5200

## STREAMING CURRENT DETECTOR

### SC5200 SPECIFICATIONS

|                       |                                                                                                                                                                  |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Required        | 115 VAC, 50/60 hz (standard) 230 VAC, 50 hz (optional)                                                                                                           |
| Instrument Output     | 4-20 mA Streaming Current Signal;<br>4-20 mA Process Signal (max. 500 OHM load each)                                                                             |
| Meter Readout         | Dual Digital Display: -100 to +100 Streaming Current Units; and Process Set Point                                                                                |
| Control Functions     | Single loop Proportional+Integral+Derivative (PID) control; Continuous auto tune; Microprocessor based with self diagnostics; Automatic & Manual mode selectable |
| Communications        | RS-485 (optional)                                                                                                                                                |
| System Accuracy       | 1% of full scale                                                                                                                                                 |
| Response Time         | Less than 5 seconds                                                                                                                                              |
| Gain Adjustment       | Full range                                                                                                                                                       |
| Zero Adjustment       | Full range                                                                                                                                                       |
| Signal Filter         | Adjustable low pass                                                                                                                                              |
| Sample Cell           | Flow through, external type, Manual Jet Wash conn. (std); Automatic Jet Wash System (opt)                                                                        |
| Sample Flow Rate      | Standard probe: 2-4 L/min (0.5-1 gal/min)<br>High flow probe: 4-20 L/min (1-5 gal/min)                                                                           |
| Sample Flow Sensor    | Optional, consult Milton Roy                                                                                                                                     |
| Sample Wetted Parts   | PVC, Delrin, PTFE, & Silver                                                                                                                                      |
| Sample Connections    | Barb Type, 1/2" ID tube (standard) Barb Type, 1" ID tube (high flow)                                                                                             |
| Alarms                | Band type: deviation from set point Relays: SPDT, 2 amps at 115/230 VAC                                                                                          |
| Operating Temp        | 32° F to 120° F (0 C to 50 C)                                                                                                                                    |
| Enclosure             | NEMA 4X, 316 Stainless Steel                                                                                                                                     |
| Weight                | 24 lbs.                                                                                                                                                          |
| Remote Display Option | RC7200 Remote Controller Station (accepts 4-20 mA signal from SC4200 via 2 wire, twisted pair 22 AWG); max 3000 ft. separation                                   |

### FEATURES

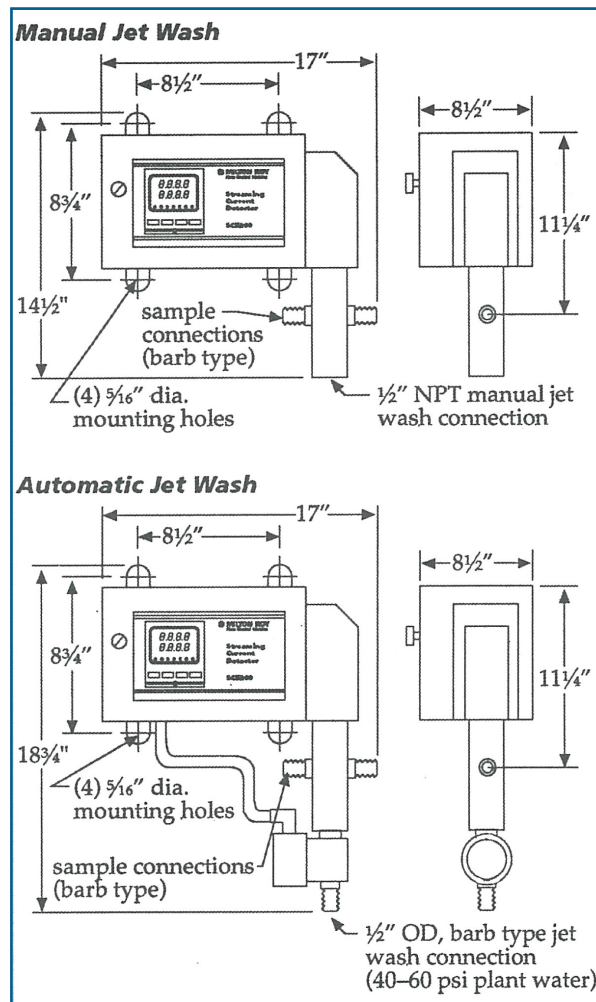
- Complete SCD and PID process controller in one package
- Automatic control of the coagulant dosing process
- Digital LED display, -100 to +100 Streaming Current Units and Set Point
- Full range Zero, Gain, and Filter adjustments; Alarms
- Dual 4-20 milliamp Streaming Current outputs; Process and Monitor
- Robust industrial design, including 316SS enclosure
- Advanced probe design featuring sample flows to 5 GPM
- Advanced electronics; patented "Phase Connection" circuitry
- Standard manual Jet Wash bottom flush connection
- RS-485 opt. - direct serial computer link to process controller

All information contained herein subject to change without notice.

Literature #PD 1052 SC • Rev 9/2022

©2021 Milton Roy, LLC. All rights reserved.

### SC5200 DIMENSIONS



 **MILTON ROY**