



## SC4200 STREAMING CURRENT DETECTOR

### DESCRIPTION

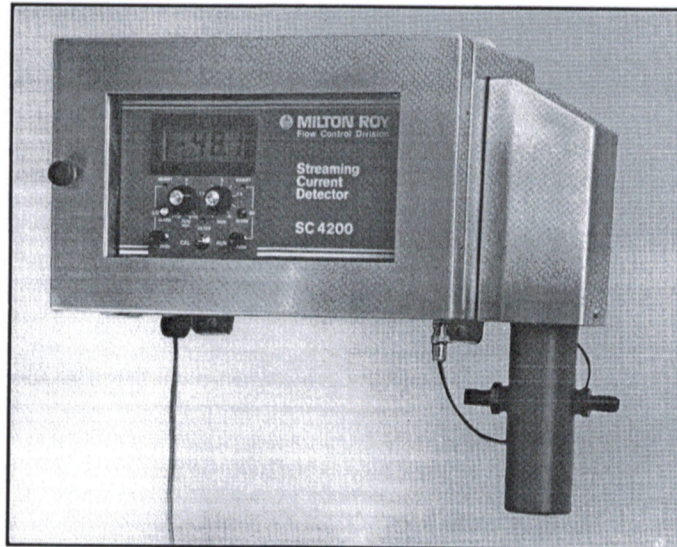
The Milton Roy Model SC4200 Streaming Current Detector (SCD) is an on line electrokinetic charge analyzer that measures the net ionic and particle surface charge in a chemically treated water or wastewater sample. The SCD allows continuous monitoring and control of the coagulation process, thereby providing:

- Consistent water quality
- Uniform chemical dosing under varying conditions
- Reduced chemical costs
- Reduced manual supervision and/or automatic operation of the treatment process

The SC4200 represents the most advanced level of Streaming Current Technology available today. The SC4200'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 SC4200 incorporates a number of key improvements that provide even greater stability, response, and improved operation over previous successful designs.

In addition, the SC4200 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.

### SC4200



### 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.

### SC4200 MODEL SELECTION GUIDE

SC4200 — ☐

☐  
**Output Signal**  
4 = 4-20 mA

☐  
**Probe Cleaning Options**  
0 = Standard Manual Jet Wash  
J = Automatic Jet Wash\*

☐  
**Other Options**  
0 = None  
X = Special

☐  
**Operating Voltage**  
D = 115 VAC, 50/60 hz  
E = 230 VAC, 50 hz

☐  
**Probe Configuration**  
F = Standard Flow Through  
W = High Flow

\* 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.



# SC4200

PD 1042 SC

Effective 9/15/93



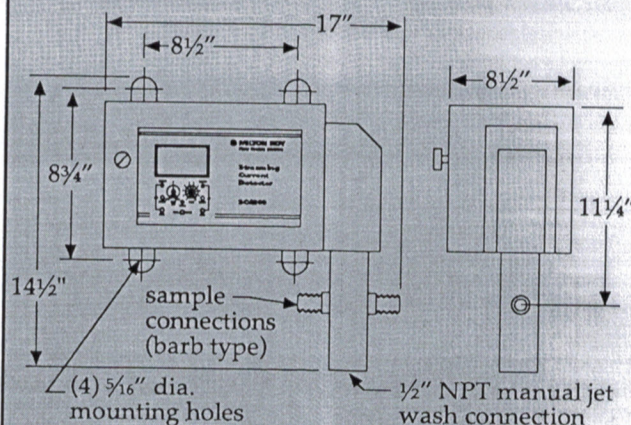
# MILTON ROY

## SC4200 SPECIFICATIONS

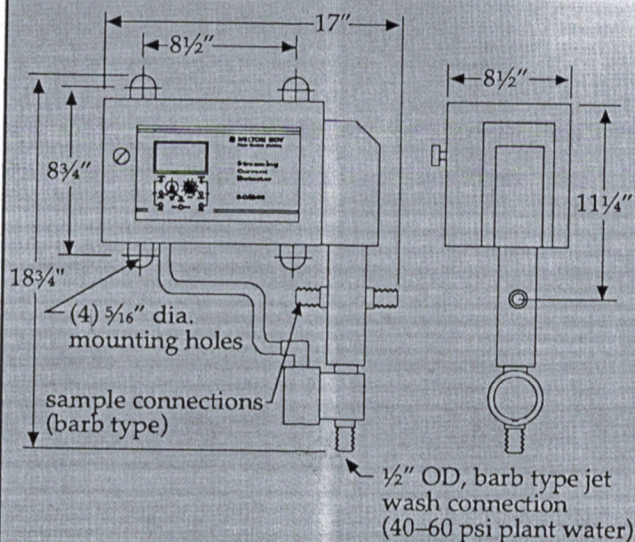
|                                   |                                                                                                                                         |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Power Required .....              | 115 VAC, 50/60 hz (standard)<br>230 VAC, 50 hz (optional)                                                                               |
| Instrument Output ....            | Two 4-20 mA Streaming Current<br>Signals: 1 factory calibrated output;<br>1 customer calibrated output (max.<br>500 OHM load each)      |
| Meter Readout .....               | Digital: -100 to +100 SC Units                                                                                                          |
| Operating Modes .....             | Calibration and Run mode selectable                                                                                                     |
| System Accuracy .....             | 1% of full scale                                                                                                                        |
| Response Time .....               | Less than 5 seconds                                                                                                                     |
| Gain Adjustment .....             | Full range continuous from 1-10 on<br>front panel; additional internal adjust.                                                          |
| Zero Adjustment .....             | Full range                                                                                                                              |
| Signal Filter .....               | Adjustable low pass                                                                                                                     |
| Sample Cell .....                 | Flow through, external type,<br>Manual Jet Wash conn. (std);<br>Automatic Jet Wash System (opt)                                         |
| Sample Flow Rate .....            | Standard probe: 2-4 L/min<br>(0.5-1 gal/min)<br>High flow probe: 4-20 L/min<br>(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)<br>Barb Type, 1" ID tube (high flow)                                                                 |
| Alarms .....                      | High and Low adjustable<br>Relays: SPST, 0.4 amps at 115 VAC                                                                            |
| Operating Temp. ....              | 32°F to 120°F (0°C to 50°C)                                                                                                             |
| Enclosure .....                   | NEMA 4X, 316 Stainless Steel                                                                                                            |
| Weight .....                      | 24 lbs.                                                                                                                                 |
| Remote Controller<br>Option ..... | RC7200 Remote Controller Station<br>(accepts 4-20 mA signal from<br>SC4200 via 2 wire, twisted pair 22<br>AWG); max 3000 ft. separation |

## SC4200 DIMENSIONS

### Manual Jet Wash



### Automatic Jet Wash



## FEATURES

- Digital LCD display, -100 to +100 Streaming Current Units
- Full range Zero, Gain, and Filter adjustments
- High and Low alarms
- Calibration or Run mode selectable
- Dual 4-20 milliamp Streaming Current outputs
- Robust industrial design, including 316SS enclosure
- Advanced probe design featuring high flow to 5 GPM
- Advanced electronics; patented "Phase Correction" circuitry
- Standard manual Jet Wash bottom flush connection
- Compatible with Milton Roy RC7200 Controller or other PID controllers for closed loop automatic control

**Milton Roy Company**  
**Flow Control Division**  
**A Sundstrand Subsidiary**



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