

## Water Technologies

### Stranrol® 916P pH / Conductivity and 916O HRR® / Conductivity Controllers

#### Product Sheet

# SIEMENS

#### Description

##### STRANTROL® 916P CONTROLLER

The Stranrol® 916P controller accurately and reliably maintains pH and conductivity control in industrial process water and cooling water applications. The 916P combines innovative sensor technology with unique control schemes to offer an unequaled solution for industrial water treatment applications.

##### STRANTROL® 916O CONTROLLER

The Stranrol® 916O controller is configured for High Resolution Redox® (HRR®) and conductivity control, which can dramatically improve disinfection of industrial process water and cooling water applications. The Stranrol® 916O utilizes industry leading sensor technology with unique control algorithms to provide accurate and reliable control. Stranrol's HRR® sensor is recognized as the worldwide benchmark for ORP monitoring and control.

Each unit is equipped with three relays. The three relays can be configured for any combination of control or alarm. Two relays are rated at 5 amps (120 VAC); one at 1 amp. Use the first relay for on/off control or Siemens' Time-Based Proportional (TBP) control in which simple chemical feeders can mimic the accuracy of more expensive PID control. The second relay may be configured to control a second feeder to an alternate setpoint. The third relay may be used to perform an Automatic Probe Wash function.

The unit's (4) 4-20mA outputs may be used for direct data recording or transmitting data to a computer or distributed control system. The 4-20mA outputs may also be configured for PID control of continuous blowdown, oxidant or pH control.

Additionally, the Stranrol® 916 controller provides 2 digital inputs: One to accept a signal from a timer and/or sample stream flow switch, and another input to accept and totalize a signal from a contacting water meter as well as triggering a feed event.



#### Benefits of the Stranrol® 916 Controller Includes:

- Accurate and Reliable pH, HRR® and Conductivity Control
- Optional Sensor Wash and Flow Switch for Peak Performance and Safety
- User-Programmable Feed Modes to Meet Application Needs

## Inputs

Sensor Input: Isolated HRR® sensor

-or-

Isolated pH sensor

-and-

Conductivity/Temperature  
Combination

Carbon contacts K=1.0 / RTD,  
100Ω Platinum  
13' shielded cable

Ranges: HRR®: -500mV to +1000mV

pH: 1-14pH units

Cond: 100-20,000 μS/cm

Temp: 32-220°F (0-100°C)

0-9,999,999.9 Gallons

Resolution: HRR®: 1mV

pH: .02pH units

Conductivity: 7 μS/cm

Temperature: 1.0°F (1.0°C)

Digital Input: .5 Hz

4-20mA outputs ± 0.5%

Voltage: 120/240 VAC, 50/60Hz

Max Current: 11.1 amps

Phase: Single

Digital Inputs: Contact Closure (Totalizer &  
ChemFeed trigger)

Sample Flow Switch  
(Blowdown & ChemFeed  
enable)

Sensing accuracy: Conductivity ± .1% per  
year

HRR ± .1% per year

## Outputs

Analog Outputs:

4 isolated fully rangeable 4-20mA up to 750  
ohms with control or record capabilities.

Resolution: ± .5%

Three programmable relays for chemical  
control, alarm, sensor wash, blowdown, or  
triggered timer function. 120/240 VAC,  
50/60Hz

Two 5 amp, one 1 amp

## Ratings

ETL approved to UL® Standard 508

CE approved for heavy industrial use

Voltage: 120/250 VAC, 50/60 Hz

Max. Current: 11.1 amps

## Enclosure

Rating: NEMA 4X (IP 66)

Dimensions: (H x W x D)

7.1 x 7.2 x 4.4 in

(180 x 182 x 111 mm)

Weight: 2.1 pounds (0.95 kg)

Material: UL® Listed Polycarbonate

## Sample Flowcell

Design ensures sensor remains wetted at all  
times. Flowcell comes complete with  
fittings, including two isolation valves and a  
sample tap. Flowcell cover is clear permitting  
on-line inspection of sensor tips.

Material: Schedule 80 PVC

Pressure: Tested to 100 psig

(6.8 bar)

Temperature: 120°F (48.8°C) (Max)

Cover: Clear Polycarbonate

Fittings: ½" NPT Schedule 80 PVC

## User Interface

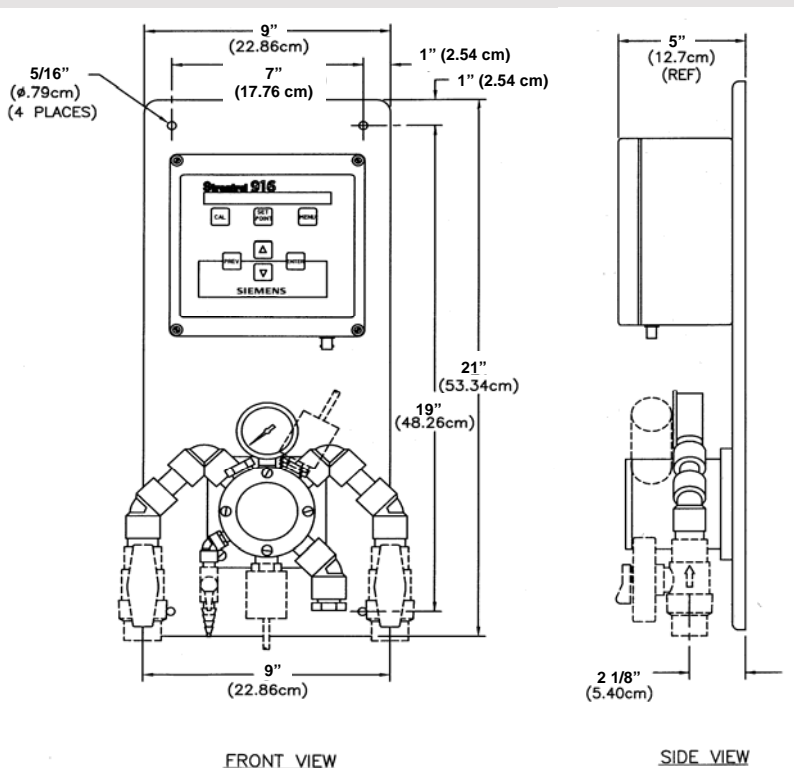
Display: 16 character backlit LCD display  
shows real time sensor readings, alarms,  
programming values and menus.

Keypad: 7 pressure sensitive keys for setting  
calibration, control setpoints, alarms,  
4-20mA, triggered timer and sensor clean  
values. UP, DOWN, PREV, and ENTER keys for  
scrolling through menu and changing  
settings. CAL button for single point  
calibration. SETPOINT for changing the  
control value. MENU for more detailed  
configuration.

## Options

**Automatic sensor washing:** Highly  
recommended for high Total Dissolved Solids  
(TDS) applications such as recirculated  
cooling water. On-line sensor washing is  
available by requesting the optional  
diaphragm pump and tank package (part no.  
7149002).

**Sample flow switch:** The optional sample  
flow switch assures that when the sample  
stream is interrupted for any reason,  
blowdown and the feed of chemicals is  
halted. This is a valuable safety device as well  
as a way to prevent overfeeding of chemical  
due to a trapped "dead" sample.



Strantrol, HRR and High Resolution Redox are trademarks of Siemens, its subsidiaries or affiliates. UL is a registered trademark of Underwriters Laboratories, Inc.

The information provided in this brochure contains merely general descriptions or characteristics of performance which in actual case of use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of the contract.

Siemens  
Water Technologies  
595 Industrial Drive  
Bradley, IL 60915, USA  
800.809.0971 phone  
www.usfilter.com  
stranco.water@siemens.com

Literature No. ST-916-DS-0706  
Subject to change without notice.  
©2006 Siemens Water Technologies Corp.