

# Signet 4630 Chlorine Analyzer System



The Signet 4630 Chlorine Analyzer System is an integrated all-in-one system designed to measure free chlorine. The 3-4630 chlorine panel with pH sensor is used to accurately calculate free chlorine in applications that have varying pH values ( $\pm 0.20$  pH units).

In applications where the pH is stable, the pH sensor is not required and the pH value is manually entered into the transmitter to calculate the chlorine levels.

The unique integrated clear flow cell combines sensors, flow regulator, filter and variable area flow indicator in one compact unit. An integrated flow regulator with removable filter accepts inlet pressures of 1 to 8 bar (15 to 120 psi), while maintaining constant flow and minimal pressure to the sensors.

Water flows vertically into sensor tip eliminating bubble entrapment. The flow cell is designed to maintain a minimum amount of water to ensure sensors stay submerged, even when the system and flow is turned off.

The Signet 4630 Chlorine Analyzer System allows quick setup and easy installation and is supplied with a 100-240 VAC power supply, two 4 to 20 mA outputs and two dry contact mechanical relays. The flow cell accommodates two sensors: one chlorine and an optional pH sensor.

## Features

- EPA 334.0 Compliant
- Reagent free measuring
- Complete panel system allows for quick and easy installation
- Built-in flow regulator maintains constant flow and pressure to the sensors regardless of inlet pressure
- Pre-wired panel includes a 100/240 VAC power supply, two 4 to 20 mA outputs and two mechanical relays
- Optional automatic pH compensation



## Applications

### Residual Chlorine Monitoring:

- Water Distribution
- Ground Water
- Surface Water
- HVAC Applications (cooling water)
- Gray Water Dechlorination
- Food and Beverage
- RO Membrane Protection
- Swimming Pools
- Aquariums
- Water Parks

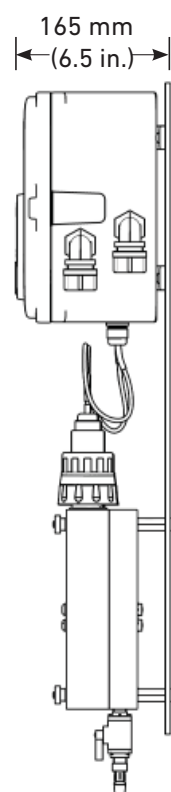
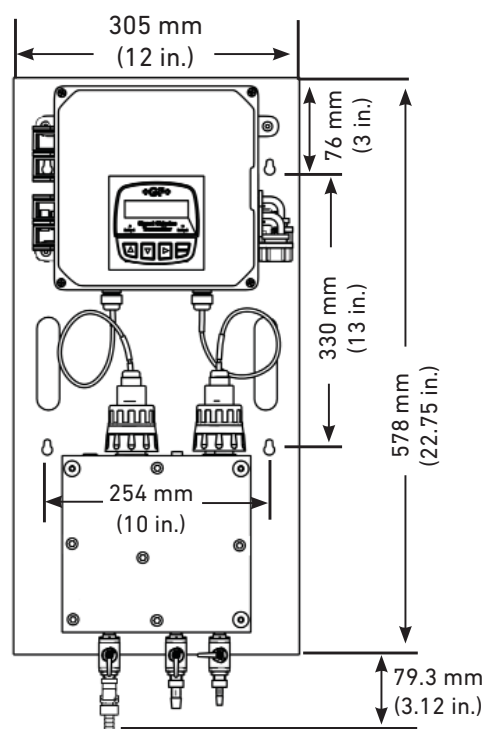
### EPA Compliant According to Method 334.0

The 3-4630 chlorine system can be used for reporting chlorine residuals in accordance with EPA Method 334.0

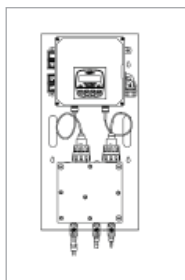
# Specifications

General		
Compatible	3-2630-1 Free Chlorine Electrode, 0.02 to 2 ppm / 3-2650-7 Amperometric Electronics	
	3-2630-2 Free Chlorine Electrode, 0.05 to 5 ppm / 3-2650-7 Amperometric Electronics	
	3-2630-3 Free Chlorine Electrode, 0.1 to 20 ppm / 3-2650-7 Amperometric Electronics	
	Signet 3-2724-00 Flat pH Electrode, 0 to 14 pH / 3-2750-7 pH Sensor Electronics	
Materials		
Panel	Black Acrylic	
Flow Cell	Acrylic	
Wiring Enclosure	Polycarbonate	
Wetted Materials		
Flow Cell, Spacer Rings	Acrylic	
Flow Regulator Housing	Polycarbonate	
Strainer, E-clip, Regulator Spring, Float	Stainless Steel	
Valves, Vent	Polypropylene	
Flow Cell O-rings, Diaphragm	EPDM, FKM	
Chlorine Electrode	PVC, PTFE, FPM, Nylon, Silicone	
pH electrode	PPS, Glass, UHMW PE, FPM	
Sealing Tape on Valves, Plug and Vent	PTFE	
Plug	Polyethylene	
Max. Temperature/Pressure Rating		
System Inlet Pressure Rating	1 to 8 bar	15 to 120 psi
Pressure Regulator	< 0.69 bar (10 psi) variation over all ranges of flow and pressure	
Flow Tolerance	± 15% or rated specification above	
Flow Rate Limits	30.24 to 45.36 LPH	8 to 12 US gal/h
Storage Temperature	0 °C to 65 °C	32 °F to 149 °F
Operating Temperature	0 °C to 45 °C	32 °F to 113 °F
pH Range	5.0 to 8.2 pH	
Electrical		
AC Input - Standard Configuration	100 to 240 VAC nominal 50 to 60 Hz, 0.17 A at 100 VAC	
DC Input - Optional Configuration	12 to 24 VDC ±10% regulated, 250 mA max.	
Environmental		
Relative Humidity	0 to 95%	
Maximum Altitude	2000 m (6,562 ft)	
Enclosure	NEMA 4X (with output wire glands sealed)	
Shipping Weight		
	10 kg	22 lb
Standards and Approvals		
	CE, FCC, UL, CUL	
	China RoHS	
	Manufactured under ISO 9001 for Quality and ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety	

Dimensions



## Ordering Information



Mfr. Part No.	Code	Description
Chlorine panel, transmitter, free chlorine sensor and sensor electronics, no pH sensor		
3-4630-10	<b>159 001 748</b>	Chlorine sensor measures 0.02 to 2 ppm, no pH sensor
3-4630-20	<b>159 001 691</b>	Chlorine sensor measures 0.05 to 5 ppm, no pH sensor
3-4630-30	<b>159 001 750</b>	Chlorine sensor measures 0.1 to 20 ppm, no pH sensor
Chlorine panel, transmitter, free chlorine sensor and sensor electronics, with pH sensor		
3-4630-11	<b>159 001 749</b>	Chlorine sensor measures 0.02 to 2 ppm, with pH sensor
3-4630-21	<b>159 001 692</b>	Chlorine sensor measures 0.05 to 5 ppm, with pH sensor
3-4630-31	<b>159 001 751</b>	Chlorine sensor measures 0.1 to 20 ppm, with pH sensor

## Accessories and Replacement Parts

Mfr. Part No.	Code	Description
3-2630-1	<b>159 001 746</b>	Free Chlorine sensor, 0 to 2 ppm (mg/l)
3-2630-2	<b>159 001 662</b>	Free Chlorine sensor, 0 to 5 ppm (mg/l)
3-2630-3	<b>159 001 747</b>	Free Chlorine sensor, 0 to 20 ppm (mg/l)
3-2724-00	<b>159 001 545</b>	pH sensor, flat glass, PT1000 temp element, 3/4 in. MNPT
3-2650-7	<b>159 001 670</b>	Chlorine - In-line Amperometric Electronics, Digital (S <sup>3</sup> L), 4.6 m (15 ft) cable
3-2750-7	<b>159 001 671</b>	pH - In-line Electronics, Digital (S <sup>3</sup> L), 4.6 m (15 ft) cable
3-8630-3P	<b>159 001 673</b>	Panel mount chlorine and pH transmitter
3-3610-1	<b>159 001 683</b>	Flow Cell, Clear PVC 1/2" Tee
3-3610-2	<b>159 001 684</b>	Flow Cell, Clear PVC 1/2" Tee, Barb Conn
3-4630.390	<b>159 001 688</b>	Rebuild kit: O-rings, boots, screws, 1 filter screen
3-4630.391	<b>159 001 689</b>	Pressure regulator with 1 spare filter screen
3-4630.392	<b>159 001 690</b>	Acrylic flow cell complete with all components and connections
3-2630.391	<b>159 001 674</b>	Electrolyte kit, 30 ml bottle with syringe and needle
3-2630.394	<b>159 310 164</b>	Free Chlorine Replacement PTFE membrane (1)
3-2630.398	<b>159 310 166</b>	Free Chlorine Sensor maintenance kit - (2) electrolyte and (2) PTFE membranes, (2) silicone bands
7300-0024	<b>159 001 693</b>	24 VDC Power Supply
3-0700.390	<b>198 864 403</b>	pH Buffer Kit: 1 each 4, 7, 10 pH buffer in powder form, makes 50 ml of each
3822-7004	<b>159 001 581</b>	pH 4.01 buffer solution, 1 pint (473 ml) bottle
3822-7007	<b>159 001 582</b>	pH 7.00 buffer solution, 1 pint (473 ml) bottle
3822-7010	<b>159 001 583</b>	pH 10.00 buffer solution, 1 pint (473 ml) bottle
3-2700.395	<b>159 001 605</b>	Calibration kit: 3 polypropylene cups, box used as cup stand, 1 pint pH 4.01, 1 pint pH 7.00