Signet Chlorine

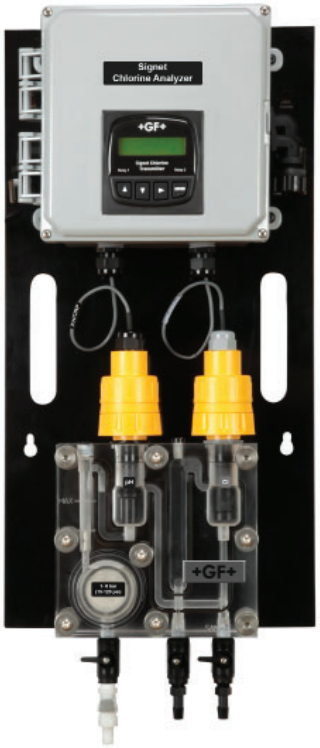



	2630	2632	2724	2650
Description	Amperometric Chlorine Electrode	Amperometric Chlorine Dioxide Electrode	Flat pH Electrode	Amperometric Electronics
Materials	CPVC		N/A	Valox® (PBT)
Wetted Materials	PTFE		Ryton® (PPS)	N/A
	FKM		Porous UHMW PE	
	Gold Plated/Silver Halide		Glass, FKM	
Operation Range	0.02 to 2 ppm (mg/l) 0.05 to 5 ppm (mg/l) 0.1 to 20 ppm (mg/l) 5.0 to 8.2 pH	0.02 to 2 ppm (mg/l)	0 to 14 pH	±450 mV
Connector Style	DryLoc®			
Display	N/A			
Output Specs	Digital (S^3L)			
Max. Relays	N/A			
Languages	N/A			
Operating Temperature (°C) (°F)	0 °C to 45 °C (32 °F to 113 °F)	0 °C to 45 °C (32 °F to 113 °F)	-10 °C to 85 °C (14 °F to 185 °F)	0 °C to 85 °C (32 °F to 185 °F)
Standards and Approvals	CE, FCC, RoHS compliant, China RoHS, Manufactured under ISO 9001 for Quality		RoHS compliant, China RoHS	CE, FCC, RoHS compliant, China RoHS

Specification Matrix

	2750-7	8630
Description	pH Electronics	Chlorine Transmitter
Materials	Valox® (PBT)	PBT, Neoprene, PP, Silicone Rubber
Wetted Materials	N/A	
Operation Range	0.0 to 14.0 pH	Free chlorine 0-20 ppm Chlorine dioxide 0 to 2 ppm pH: 0 to 14 pH
Connector Style	DryLoc®	N/A
Display	N/A	LCD
Output Specs	Digital (S^3L)	Current Loop (2) 4 to 20 mA
Max. Relays	N/A	2
Languages	N/A	English
Operating Temperature (°C) (°F)	0 °C to 85 °C (32 °F to 185 °F)	-10 °C to 70 °C (14 °F to 158 °F)
Standards and Approvals	CE, FCC, RoHS compliant, China RoHS, NEMA 4X/IP65	CE, FCC, UL, CUL, RoHS compliant, China RoHS, NEMA 4X/IP65 (front face only)

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 (±0.20 pH units).

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)**
- **Food and Beverage**
- **Swimming Pools**
- **Aquariums**
- **Water Parks**

EPA Compliant According to Method 334.0

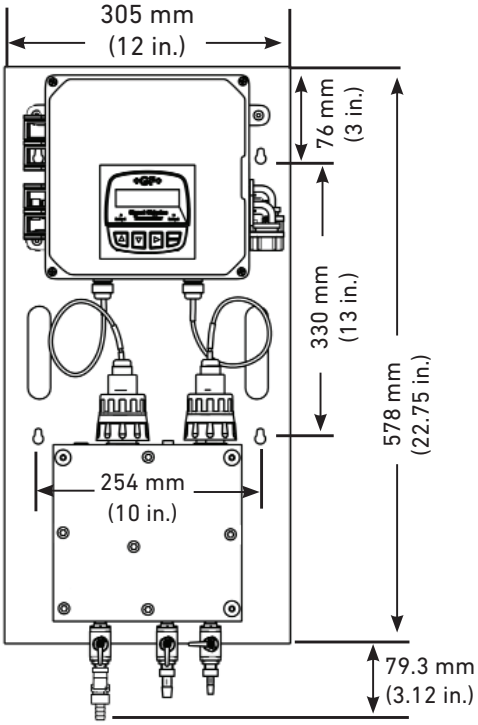
The 3-4630 chlorine system can be used for reporting chlorine residuals in accordance with EPA Method 334.0

U.S. Patent Nos: 8,336,375 B2, 6,666,701

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	EPR (EPDM), FKM	
Chlorine Electrode	PVC, PTFE, FKM, Nylon, Silicone	
pH electrode	PPS, Glass, UHMW PE, FKM	
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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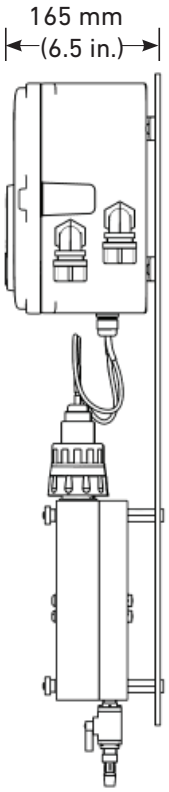
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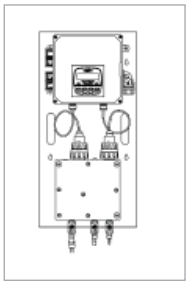
(6.5 in.)

Ordering Information

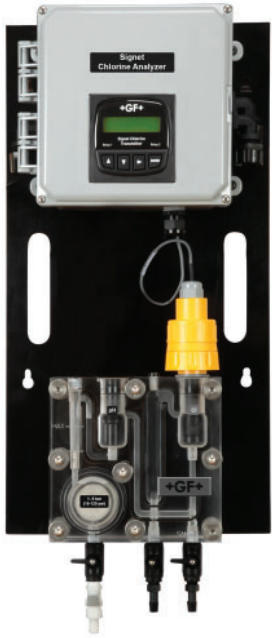


Mfr. Part No.	Code	Description
Chlorine System: Transmitter, Free Chlorine Panel and Sensor Electronics, with pH Sensor		
3-4630-11	**159 001 749**	Chlorine Panel measures 0.02 to 2 ppm, with pH sensor
3-4630-21	**159 001 692**	Chlorine Panel measures 0.05 to 5 ppm, with pH sensor
3-4630-31	**159 001 751**	Chlorine Panel measures 0.1 to 20 ppm, with pH sensor

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
3-2630-1	**159 001 746**	Free Chlorine Sensor, 0 to 2 ppm (mg/l)
3-2630-2	**159 001 662**	Free Chlorine Sensor, 0 to 5 ppm (mg/l)
3-2630-3	**159 001 747**	Free Chlorine Sensor, 0 to 20 ppm (mg/l)
3-2724-00	**159 001 545**	pH Sensor, Flat Glass, Pt1000 Temp Element, ¾ in. MNPT
3-2650-7	**159 001 670**	Chlorine - In-line Amperometric Electronics, digital (S^3L), 4.6 m (15 ft) cable
3-2750-7	**159 001 671**	pH - In-line Electronics, digital (S^3L), 4.6 m (15 ft) cable
3-8630-3P	**159 001 673**	Panel Mount Chlorine and pH Transmitter
3-3610-1	**159 001 683**	Flow Cell, Clear PVC ½ in. Tee
3-3610-2	**159 001 684**	Flow Cell, Clear PVC ½ in. Tee, Barb Conn
3-4630.390	**159 001 688**	Rebuild Kit: O-rings, Boots, Screws, 1 Filter Screen
3-4630.391	**159 001 689**	Pressure Regulator with 1 Spare Filter Screen
3-4630.392	**159 001 690**	Acrylic Flow Cell complete with all components and connections
3-2630.391	**159 001 674**	Electrolyte Kit, 30 ml bottle with syringe and needle
3-2630.394	**159 310 164**	Free Chlorine replacement PTFE membrane (1)
3-2630.398	**159 310 166**	Free Chlorine Sensor Maintenance Kit - (2) electrolyte and (2) PTFE membranes, (2) silicone bands
7300-0024	**159 001 693**	24 VDC Power Supply
3-0700.390	**198 864 403**	pH Buffer Kit: 1 each 4, 7, 10 pH buffer in powder form, makes 50 ml of each
3822-7004	**159 001 581**	pH 4.01 Buffer Solution, 1 pint (473 ml) bottle
3822-7007	**159 001 582**	pH 7.00 Buffer Solution, 1 pint (473 ml) bottle
3822-7010	**159 001 583**	pH 10.00 Buffer Solution, 1 pint (473 ml) bottle
3-2700.395	**159 001 605**	Calibration Kit: 3 polypropylene cups, box used as cup stand,1 pint pH 4.01, 1 pint pH 7.00
3800-5000	**159 838 107**	3.0M KCl Storage Solution for pH and ORP, 1 pint (473 ml) bottle
3-2700.397	**159 001 870**	Protective Cap for pH/ORP electrodes, 5 pieces
3-2700.398	**159 001 886**	Lubricant Kit

Signet 4632 Chlorine Dioxide Analyzer System



Features

- **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**

The Signet 4632 Chlorine Dioxide Analyzer System is an integrated all-in-one system designed to measure Chlorine Dioxide residual up to 2 ppm/mg/l.

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 4632 Chlorine Dioxide 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.

Applications

Residual Chlorine Monitoring:

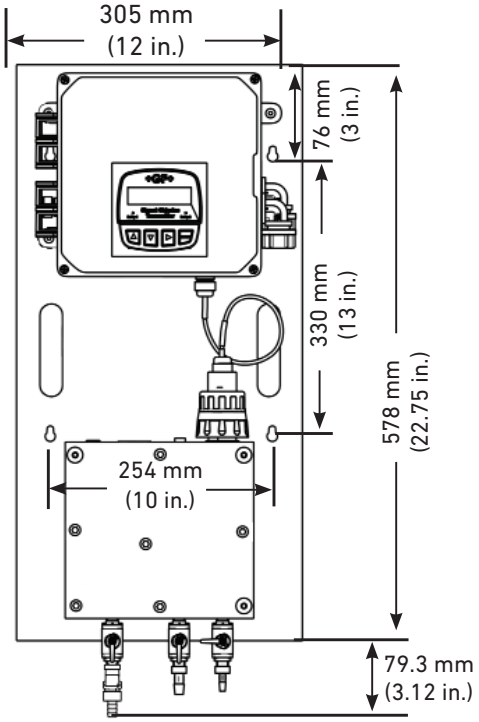
- **Cooling Towers**
- **Fruit and Vegetable Washing**
- **Water Distribution**
- **Wastewater Odor Control**
- **Poultry and Meat Processing**
- **UPW Treatment**
- **Hospital and Healthcare Facilities**

U.S. Patent No: 8,336,375 B2

Specifications

General		
Compatible	3-2632-1 Chlorine Dioxide Electrode, 0 to 2 ppm / 3-2650-7 Amperometric 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, FKM, Nylon, Silicone	
pH Electrode	PPS, Glass, UHMW PE, FKM	
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
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, UL, CUL, FCC	
	China RoHS	
	Manufactured under ISO 9001 for Quality and ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety	

Dimensions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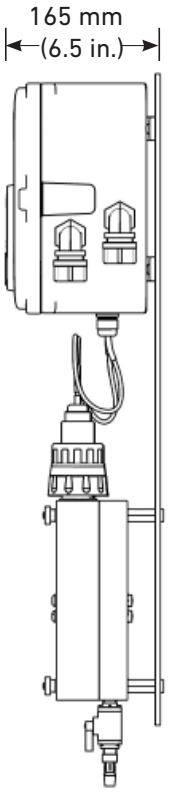
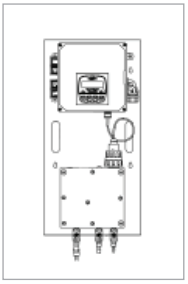

165 mm
(6.5 in.)

Ordering Information



Mfr. Part No.	Code	Description
3-4632-10	**159 001 768**	Chlorine Dioxide Panel, 0.02 to 2 ppm/mg/l, no pH sensor
3-4632-11	**159 001 769**	Chlorine Dioxide Panel, 0.02 to 2 ppm/mg/l, with pH sensor

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
3-2632-1	**159 001 767**	Chlorine Dioxide Electrode, 0 to 2 ppm (mg/L)
3-2650-7	**159 001 670**	Chlorine - In-line Amperometric Electronics, digital (S^3L), 4.6 m (15 ft) cable
3-2724-00	**159 001 545**	pH Sensor, Flat Glass, Pt1000 Temp Element, ¾ in. MNPT
3-2750-7	**159 001 671**	pH - In-line Electronics, digital (S^3L) , 4.6 m (15 ft) cable
3-8630-3P	**159 001 673**	Panel Mount Chlorine and pH Transmitter
3-4630.390	**159 001 688**	Rebuild Kit: O-rings, boots, screws, 1 filter screen
3-4630.391	**159 001 689**	Pressure Regulator with 1 spare filter screen
3-4630.392	**159 001 690**	Acrylic Flow Cell Complete with all components and connections
3-2632.391	**159 310 160**	Chlorine Dioxide Electrolyte, 30 mL (2) bottles
3-2632.398	**159 310 165**	Chlorine Dioxide Maintenance Kit - (2) electrolyte, (2) PTFE membranes, (2) silicone bands, and polishing paper
3-2630.394	**159 310 164**	Free Chlorine and Chlorine Dioxide Replacement PTFE membrane (1)
7300-0024	**159 001 693**	24 VDC Power Supply

Signet 8630 Chlorine Transmitter

Member of the ProcessPro® Family of Transmitters

The Signet 3-8630-3P ProcessPro Chlorine Transmitter simultaneously displays free chlorine or chlorine dioxide and pH levels on a bright LCD backlight display.

The 8630 transmitter has two 4 to 20 mA outputs that can be programed to transmit chlorine or pH information to a data collection device.

Two dry contact mechanical relays can be used to deliver an alarm signal or activate a chlorine dosing system.

Programming is simple and easy with Signet's standard 4-button keypad. The menu option allows the use of an optional pH sensor to accurately measure pH for display purposes or to calculate free chlorine levels. Select "Manual pH input" and enter the applications stable pH level to determine free chlorine levels.

Features

- **Displays free chlorine 0 to 20 ppm (mg/l), chlorine dioxide 0 to 2 ppm (mg/l) and pH 0-14**
- **Two programmable 4 to 20 mA outputs**
- **Two mechanical relays**
- **Temperature and pH compensation**
- **Displays diagnostic information from sensor memory**
- **Simple setup and easy customization**
- **Backlit LCD display**

c UL us LISTED
MEASURING EQUIPMENT
77CJ

Applications

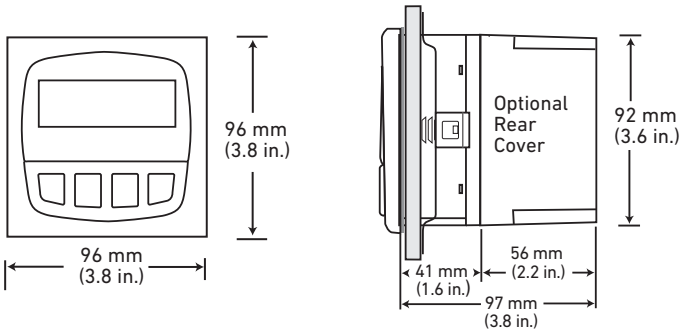
Residual Chlorine Monitoring:

- **Water Distribution**
- **Ground Water**
- **Surface Water**
- **HVAC Applications (cooling water)**
- **Food and Beverage**
- **Swimming Pools**
- **Aquariums**
- **Water Parks**

Specifications

General			
Compatibility		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	
		3-2632-1 Chlorine Dioxide Electrode, 0.02 to 2 ppm / 3-2650-7 Amperometric Electronics	
		3-2724-00 Flat pH Electrode / 3-2750-7 pH Sensor Electronics	
Display	LCD	Backlit alphanumeric 2 x16 character dot matrix	
Materials			
Case		PBT	
Panel Case Gasket		Neoprene	
Window		Polyurethane-coated polycarbonate	
Keypad		Silicone rubber	
Performance			
System Operational Ranges		Free Cl	0 to 20 ppm (mg/l)
		ClO_2	0 to 2 ppm (mg/l)
		pH Range	4 to 11 pH
Temperature Range		0 °C to 45 °C	32 °F to 113 °F
Maximum Cable Distance		Digital (S^3L)	30 m (100 ft) max.
		4 to 20 mA output	305 m (1,000 ft) max.
Electrical			
Power		12 to 24 VDC ±10%, regulated, 250 mA max. current	
Sensor Power		5 VDC ±1% @ 25 °C, regulated	
Input Specifications		One Digital (S^3L) input from Amperometric sensor	
		One Digital (S^3L) input from pH sensor	
Output Specifications		Current Loop (2 loops provided)	
		4 to 20 mA, isolated, adjustable span, reversible with minimum and maximum endpoint adjustment	
Update Rate		300 ms	
Maximum Loop Impedance		50 Ω max. @ 12 V	
		325 Ω max. @ 18 V	
		600 Ω max. @ 24 V	
Relay Outputs		2 mechanical SPDT contacts: High, Low, Off Pulse, or Window range	
Maximum Voltage Rating		5 A @ 30 VDC	5 A @ 250 VAC, resistive load
Hysteresis		User adjustable	
Time Delay		Programmable from 0 to 6400 s	
Environmental			
Operating Temperature		-25 °C to 120 °C	-13 °F to 248 °F
Storage Temperature		-15 °C to 80 °C	5 °F to 176 °F
Relative Humidity		0 to 95%, non-condensing	
Maximum Altitude		2000 m (6,562 ft)	
Enclosure		NEMA 4X/IP65 (front face only)	
Shipping Weight			
		0.5 kg	1.10 lb
Standards and Approvals			
		CE, FCC, UL, CUL	
		RoHS compliant, China RoHS	
		Manufactured under ISO 9001 for Quality and ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety	

Dimensions



FRONT VIEW

SIDE VIEW

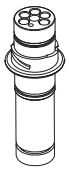
System Overview

Panel Mount

Signet 8630-3P
Chlorine Transmitter

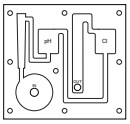
Signet Amperometric
Electronics
2650-7

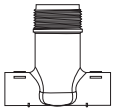
Signet Electrode
2630-1
2630-2
2630-3
2632-1



All sold separately

Signet Flow Cell
Signet Fitting
3610





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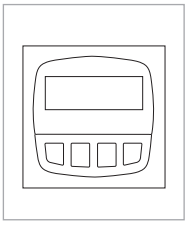


Mfr. Part No.	Code	Description
3-8630-3P	**159 001 673**	Panel Mount Chlorine and pH Transmitter

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
Mounting		
3-8050.395	**159 000 186**	Splashproof Rear Cover (panel mount only)
3-0000.596	**159 000 641**	Heavy Duty Wall Mount Bracket (panel mount only)
3-5000.598	**198 840 225**	Surface Mount Bracket (panel mount only)
Liquid Tight Connectors		
3-9000.392	**159 000 368**	Liquid Tight Connector Kit for rear cover (3 connectors)
3-9000.392-1	**159 000 839**	Liquid Tight Connector Kit, NPT (1 connector)
3-9000.392-2	**159 000 841**	Liquid Tight Connector Kit, PG 13.5 (1 connector)
Other		
3-8050.396	**159 000 617**	RC Filter Kit (for relay use), 2 per kit

Signet 2630 Amperometric Chlorine Electrode

The Signet 2630 Amperometric Chlorine electrode is designed to measure free chlorine in fresh water treatment applications. The electrode is available with a measurement range of 0.02 to 2 ppm, 0.05 to 5 ppm or 0.1 to 20 ppm. This electrode requires the Signet 2650 Amperometric Electronics module to communicate with the Signet 8630-3P Chlorine Transmitter.

Utilizing smart-sensor technology, this electrode has a unique embedded memory chip and can communicate a wide variety of information to the Signet 2650 electronics and Signet 8630-3P Transmitter.

Displayed information includes electrode type, factory calibration data, service time, chlorine range, high and low pH (with optional Signet pH electrode), temperature values and more.

Signet's patented DryLoc® connector provides quick assembly and a secure connection. Gold plated contacts and an O-ring seal ensure a waterproof and reliable interconnect to the Signet 2650 Amperometric Electronics.

The Signet 2630 Amperometric Chlorine Electrode has an integrated temperature element for automatic temperature compensation.

Features

- **Embedded memory chip accessible via the Signet 8630 transmitter**
- **Quick assembly with Signet's patented DryLoc® connector**
- **Integrated temperature element for automatic temperature compensation**
- **Separate drive electronics (Signet 2650), for easy electrode replacement without running new cable**

Applications

Residual Chlorine Monitoring:

- **Water Distribution**
- **Ground Water**
- **Surface Water**
- **HVAC Applications (cooling water)**
- **Boiler Feed Water**
- **Food and Beverage**
- **Swimming Pools**
- **Aquariums**
- **Water Parks**

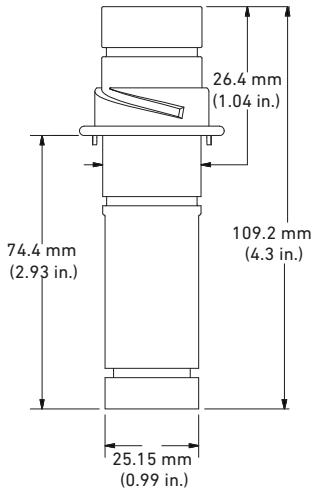
U.S. Patent No.: 6,666,701

Specifications

General				
Polarization Source		Signet 2650 Amperometric Electronics		
Compatibility		3-3610-1 Flow Cell, Clear PVC 1/2" Tee		
		3-3610-2 Flow Cell, Clear PVC 1/2" Tee, Barb Conn		
		3-4630.392 Acrylic flow cell complete with all components and connections		
Mounting		Signet DryLoc connection		
Materials		CPVC		
Free Chlorine				
	Membrane Material	PTFE		
	O-ring Material	FKM		
	Working Electrode	Gold		
	Counter Reference Electrode	Silver halide		
Wetted Material				
		PVC, PTFE, FKM, Nylon, Silicone		
Performance				
Electrode				
	Repeatability	±0.08 ppm (mg/l) or 3% of selected range whichever is less		
	Slope	15 to 85 nA/ppm (mg/l)		
	Response Time, T90	< 2 minutes		
System (including electronics and instrument)				
	Accuracy	< ±3% of electrode signal after calibration		
	Resolution	±0.5% of electrode range		
Sensor Conditioning				
	New, first start-up	4 hours maximum before calibration		
	Subsequent start-ups	2 hours maximum		
Temperature Element		Pt1000, Class B		
Operational Ranges and Limits				
	Free Chlorine Range	0.02 to 2 ppm (mg/l)	0.05 to 5 ppm (mg/l)	0.1 to 20 ppm (mg/l)
	Free Chlorine pH Operating Range	5.0 to 8.2 pH		
Maximum Media Temperature		0 °C to 45 °C	32 °F to 113 °F	
Maximum Operating Pressure				
Membrane		0.48 bar @ 25 °C (7 psi @ 77 °F)		
Flow Velocity Across Membrane Surface				
	Minimum	15 cm/s (0.49 ft/s)		
	Maximum	30 cm/s (0.98 ft/s)		
Interferences		ClO_2, ozone, bromine		
Chemical Compatibility		< 50% ethanol/water, < 50% glycerol/water		
Environmental				
System Temperature		-10 °C to 60 °C	-4 °F to 140 °F	
Storage Temperature		-10 °C to 60 °C	-4 °F to 140 °F	
Relative Humidity		0 to 95% indoor/outdoor non-condensing to rated ambient		
Shipping Weight				
		0.14 kg	0.30 lb	
Standards and Approvals				
		CE, FCC		
		RoHS compliant, China RoHS		
		Manufactured under ISO 9001 for Quality		

Dimensions

3-2630-X



System Overview

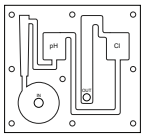
Panel Mount

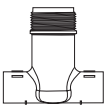
Signet Instrument
8630-3P

Signet Amperometric
Electronics
2650-7

Signet 2630-X
Chlorine Electrode

Signet Flow Cell
Signet Fitting
3610





All sold separately

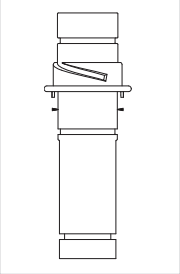
Application Tips

- The sensors should not be used in water containing surfactants, oils, organic chlorine or stabilizers such as cyanuric acid.

Ordering Notes

The sensor must have a stable and constant flow of water past its membrane for accurate free chlorine measurement. Typical flow rate should be 30.24 - 45.36 lph (8 - 12 gph).

Ordering Information



Mfr. Part No.	Code	Description
3-2630-1	**159 001 746**	Free Chlorine Electrode, 0.02 to 2 ppm (mg/l)
3-2630-2	**159 001 662**	Free Chlorine Electrode, 0.05 to 5 ppm (mg/l)
3-2630-3	**159 001 747**	Free Chlorine Electrode, 0.1 to 20 ppm (mg/l)

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
3-2630.391	**159 001 674**	Electrolyte Kit, 30 ml (2) bottles with syringe and needle
3-2630.394	**159 310 164**	Free Chlorine replacement PTFE membrane (1)
3-2630.398	**159 310 166**	Free Chlorine Sensor Maintenance Kit - (2) electrolyte and (2) PTFE membranes, (2) silicone bands, polishing papers
3-3610-1	**159 001 683**	Flow Cell, Clear PVC 1/2" Tee
3-3610-2	**159 001 684**	Flow Cell, Clear PVC 1/2" Tee, Barb Conn
3-2600.510	**159 500 422**	Silicone Band, Chlorine Sensor

Signet 2632 Amperometric Chlorine Dioxide Electrode

The Signet 2632 Amperometric Chlorine Dioxide electrode is designed to measure chlorine dioxide residual in water treatment applications. The electrode is available with a measurement range of 0 to 2 ppm. This electrode requires the Signet 2650 Amperometric Electronics module to communicate with the Signet 8630-3P Chlorine Transmitter.

Utilizing smart-sensor technology, this electrode has a unique embedded memory chip and can communicate a wide variety of information via the Signet 2650 electronics to the Signet 8630-3P Transmitter. The 8630 displayed information includes electrode type, factory calibration data, service time, chlorine range, high and low pH (with optional Signet pH electrode), temperature values and more.

Signet's patented DryLoc® connector provides quick assembly and a secure connection. Gold-plated contacts and an O-ring seal ensure a waterproof and reliable connection to the Signet 2650 Amperometric Electronics.

The Signet 2632 Amperometric Chlorine Dioxide Electrode has an integrated temperature element for automatic temperature compensation.

Features

- **Embedded memory chip accessible via the Signet 8630 transmitter**
- **Quick assembly with Signet's patented DryLoc® connector**
- **Integrated temperature element for automatic temperature compensation**
- **Separate drive electronics (Signet 2650), for easy electrode replacement without running new cable**

Applications

Residual Chlorine Monitoring:

- **Cooling Towers**
- **Ground Water**
- **Fruit and Vegetable Washing**
- **Water Distribution**
- **Wastewater Odor Control**
- **Poultry and Meat Processing**
- **UPW Treatment**
- **Hospital and Healthcare Facilities**

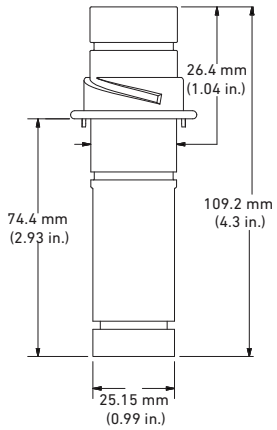
U.S. Patent No: 6,666,701

Specifications

General			
Polarization Source		Signet 2650 Amperometric Electronics	
Compatible Flow Cells		3-3610-1 Flow Cell, Clear PVC 1/2" Tee	
		3-3610-2 Flow Cell, Clear PVC 1/2" Tee, Barb Conn	
		3-4630.392 Acrylic flow cell complete with all components and connections	
Mounting		Signet DryLoc connection	
Materials		CPVC	
Chlorine Dioxide			
	Membrane Material	PTFE	
	O-ring Material	FKM	
	Working Electrode	Gold	
	Counter Reference Electrode	Silver halide	
Wetted Material			
		PVC, PTFE, FKM, Nylon, Silicone	
Performance			
Electrode			
	Repeatability	±0.08 ppm (mg/l) or 3% of selected range, whichever is less	
	Slope	40 to 200 nA/ppm (mg/l) @ 17 °C	
	Response Time, T90	< 2 minutes	
System (including electronics and instrument)			
	Accuracy	< ±3% of electrode signal after calibration	
	Resolution	≤ 0.5% of electrode range	
Sensor Conditioning			
	New, first start-up	4 hours maximum before calibration	
	Subsequent start-ups	2 hours maximum	
Temperature Element		Pt1000	
Operational Ranges and Limits			
	Chlorine Dioxide Range	0.02 to 2 ppm (mg/l)	
	pH Operating Range	4.0 to 11.0 pH	
Operating Temperature		0 °C to 45 °C	32 °F to 113 °F
Maximum Operating Pressure			
Membrane		0.48 bar @ 25 °C (7 psi @ 77 °F)	
Flow Velocity Across Membrane Surface			
	Minimum	15 cm/s (0.49 ft/s)	
	Maximum	30 cm/s (0.98 ft/s)	
Chemical Compatibility		< 50% ethanol/water, < 50% glycerol/water	
Environmental			
Operating Temperature		0 °C to 45 °C	32 °F to 113 °F
Storage Temperature		-10 °C to 60 °C	-4 °F to 140 °F
Relative Humidity		0 to 95% indoor/outdoor non-condensing to rated ambient	
Shipping Weight			
		0.14 kg	0.30 lb
Standards and Approvals			
		CE, FCC	
		RoHS compliant, China RoHS	
		Manufactured under ISO 9001 for Quality	

Dimensions

3-2632-1



System Overview

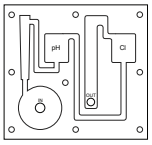
Panel Mount

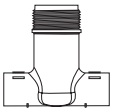
Signet Instrument
8630-3P

Signet Amperometric
Electronics
2650-7

Signet 2632-1
Chlorine Dioxide
Electrode

Signet Flow Cell
Signet Fitting
3610





All sold separately

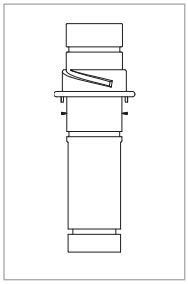
Application Tips

- The sensors should not be used in water containing surfactants, oils, organic chlorine or stabilizers such as cyanuric acid.

Ordering Notes

1) The sensor must have a stable and constant flow of water past its membrane for accurate chlorine measurement. Typical flow rate should be 30.24 - 45.36 lph (8 - 12 gph).

Ordering Information



Mfr. Part No.	Code	Description
3-2632-1	**159 001 767**	Chlorine Dioxide Electrode, 0.02 to 2 ppm (mg/l)

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
3-2632.391	**159 310 160**	Chlorine Dioxide Electrolyte, 30 mL (2) bottles
3-2632.398	**159 310 165**	Chlorine Dioxide Maintenance Kit - (2) electrolyte, (2) PTFE membranes, (2) silicone bands, and polishing paper
3-2630.394	**159 310 164**	Free Chlorine and Chlorine Dioxide replacement PTFE membrane (1)