

# Signet 2610 Process Optical Dissolved Oxygen Sensor **+GF+**

Gen II



The Signet 2610 RDO® Pro is a rugged, reliable sensor designed to deliver accurate dissolved oxygen (DO) data across a wide measuring range while reducing maintenance costs. It features the latest optical technology for DO measurement and eliminates the replacement of membrane and reference solutions.

The Signet 2610 optical sensor cap is calibrated at the factory and requires no field calibration. The optical measurement technology resists abrasion and bleaching allowing for a long life in many harsh applications. The DO sensor has a built in Modbus RS485 and 4 to 20 mA current loop outputs for ease of interface to existing control systems. The 3-2610-51 version includes the Signet digital (S³L) interface for direct connection with the 9900 SmartPro® Transmitter, 9950 SmartPro® Dual Channel Transmitter and 8900 Multi-Parameter Controller.

Additional features include a 10 m (32.8 ft) cable with stripped and tinned ends as well as a titanium temperature sensor for improved compatibility in salt water applications.

## Features










- Two year measurement cap life
- Optical DO measurement, no flow requirements
- Rugged construction
- Calibration built into the measurement cap  
2% of range 0.2 to 20 ppm
- No membranes or filling solutions
- Flexible communications  
Digital (S³L), 4 to 20 mA or Modbus
- Measurement Range: 0.2 to 20 ppm,  
in-line or submersible
- 3-2610-51 compatible with 9900 SmartPro Transmitter, 9950 SmartPro Dual Channel Transmitter and 8900 Multi-Parameter Controller



## Applications

- Municipal and Industrial Wastewater Treatment
- Drinking Water Reservoir Monitoring
- Environmental Water Discharge Monitoring
- Aquatic Life Support

## System Overview

Panel Mount	Pipe, Tank, Wall Mount	4 to 20 mA Output	Automation System	In-line Installation
Signet Instruments - 8900 - 9900 - 9900-1BC - 9950	Signet Instruments - 9900 with 3-8050 Universal Mount Kit	Customer Supplied Chart Recorder, Programmable Logic Controller, or Programmable Automation Controller	0486 Profibus Concentrator and Customer Supplied Programmable Logic Controller or Programmable Automation Controller	Signet Pipe Adapter - 3-2610.501
 	 + 	 OR 	 + 	

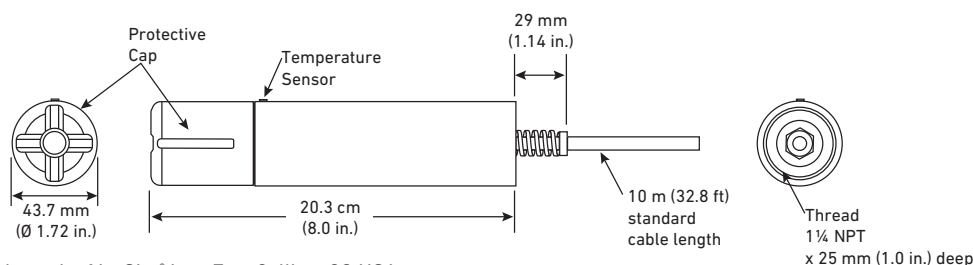
**Signet 2610-51**  
**Process Optical**  
**Dissolved Oxygen Sensor**



## Specifications

General		
Sensor Type	Luminescent dissolved oxygen sensor	
Transmitter/Local Display	Optional, not required. Compatible with 8900 and SmartPro instruments	
Communications Options	Digital (S <sup>3</sup> L), 4 to 20 mA, Modbus (RS485)	
Maximum Cable Length	Modbus and 4 to 20 mA: up to 1,219 m (4,000 ft)	Digital (S <sup>3</sup> L): 38 m (125 ft)
Internal Mounting Thread	1 ¼ NPT	
Power Requirements	12 to 24 VDC ±10% regulated	
4 to 20 mA output span	0 to 20 mg/L	
Performance		
Salinity Range	0 to 42 PSU, fixed or real-time capable	
pH Range	2 to 10 pH	
Barometric Range	507 to 1,115 mbar, fixed or real-time capable	
Maximum Pressure	300 psi	
Range	0 to 20 mg/L concentration, 0 to 200% saturation	
Accuracy (DO)	±0.1 mg/L, 0 to 8 mg/L,	
	±0.2 mg/L, 8 to 20 mg/L	
Response Time of Cap	T90: 30 sec	
	T95: 37 sec @ 25 °C	
Repeatability	0.05 mg/L	
Resolution	0.01 mg/L	
Environmental		
Wetted Materials	ABS, Titanium and FKM	
Usage Life of Cap	2 years from the first instrument reading	
Shelf Life of Cap	24 months from date of manufacture (install within 12 mo. of manufacture)	
Operating Temperature	0 °C to 50 °C	32 °F to 122 °F
IP Rating	IP-67 with cap off, IP-68 with cap installed	
Compliance	Heavy industrial, IEC 61000-6-2:2005	
Storage Conditions, Cap	1 °C to 60 °C	33 °F to 140 °F, in factory container
Storage Conditions, Sensor	-5 °C to 60 °C	23 °F to 140 °F
Warranty		
Sensor	3 years from date of manufacture	
Standards and Approvals		
	CE, FCC	
	RoHS Compliant, China RoHS	

## Dimensions



RDO is a registered trademark of In-Situ® Inc., Fort Collins, CO USA

## Ordering Information

Mfr. Part No.	Code	Description
3-2610-51	<b>159 001 849</b>	Gen II Optical Dissolved Oxygen Sensor (0.2 to 20 ppm) with Digital S <sup>3</sup> L, 4 to 20 mA, and Modbus output
3-2610.394	<b>159 310 301</b>	Replacement Optical Dissolved Oxygen Sensor cap (0.2 to 20 ppm) for Gen II 3-2610-51 DO Sensor
3-2610.392	<b>159 310 122</b>	Replacement Optical Dissolved Oxygen Sensor Cap (0.2 to 20 ppm) for 3-2610-31 and 3-2610-41 DO Sensors
3-2610.501	<b>159 500 413</b>	DO Threaded Pipe Adapter kit, includes one each: 2 in. male NPT pipe adapter, 1 ¼ in. closed nipple, ¾ in. closed nipple.
3-0252	<b>159 001 808</b>	Configuration Tool

For installation options, see instruction manual and Specials Catalog (3-0000.720)

**3-2610.099 Rev J (03/20)**

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3401 Aero Jet Avenue, El Monte, CA 91731-2882 U.S.A. • Tel. (626) 571-2770 • Fax (626) 573-2057 • [www.gfsignet.com](http://www.gfsignet.com) • e-mail: [signet.ps@georgfischer.com](mailto:signet.ps@georgfischer.com)

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