Signet 2839-1V(D) to 2842-1V(D) PVDF Conductivity Electrodes

2839-1V

2840-1V

2841-1V
2842-1V

The Signet 2839-1V(D) to 2842-1V(D) Conductivity/ Resistivity Electrodes are available in four cell constants from 0.01 to 10.0 cm^{-1}, and are suitable for a wide variety of applications from high purity water quality monitoring to weak acids and bases. 316 SS electrode surface finishes are controlled in a precision bead blasting operation to ensure measurement accuracy and repeatability.

The PVDF insulator and process connections are injection over-molded to minimize variance between electrodes. Double threaded connections in either ¾ in. NPT or ISO 7/1-R 3/4 enable quick and easy installation in submersible or in-line configurations. Transmitter integral mounting kit and junction boxes are available as accessories.

A Certificate of Calibration is included with all 28391-V(D) to 2842-1V(D) Conductivity/Resistivity Electrodes. The electrodes are calibrated to meet ± 2% accuracy. Electrodes can be shipped back to the GF Signet factory for recertification.

Features

- **± 2% accuracy - Custom calibration certificate provided**
- **Dual-threaded**
- **Compact electrode length for easy in-line installation in small pipe sizes**
- **Triple orifice flow-through design reduces clogging and bubble entrapment**
- **316 SS electrodes with injection molded PVDF process connections and insulators**
- **Meets USP requirements**

Applications

- **Water Treatment & Water Quality Monitoring**
- **Reverse Osmosis**
- **Deionization**
- **Cooling Tower and Boiler Protection**
- **Distillation**
- **Desalination**
- **Demineralizer**
- **Semiconductor**
- **Aquatic Animal Life Support Systems**

Specifications

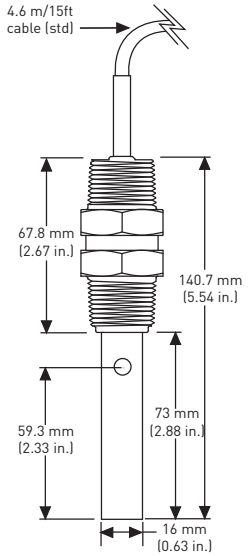
General				
Operating Range				
	2839	0.055 to 100 µS	0.02 to 50 ppm	18.2 MΩ to 10 KΩ
	2840	1 to 1,000 µS	0.5 to 500 ppm	1 MΩ to 1 KΩ
	2841	10 to 10,000 µS	5 to 5,000 ppm	
	2842	100 to 200,000 µS	50 to 100,000 ppm	
Cell Constant Accuracy		± 2%. When the information provided on the certificate of calibration is entered into the transmitter/controller. ± 5% when entered as a standard cell constant		
Dual-Threaded Process Connection		-1V versions: ¾ in. NPT		
		-1VD versions: ISO 7/1-R 3/4		
Cable Length (use for the 2839, 40 ,41 and 42)	standard	4.6 m (15 ft)		
	maximum	30 m (100 ft) all sensors when used with the 9900		
	0.01 cells	4.6 m (15 ft) used with 8850, 8860, and 2850*		
Temperature Element		PT1000		
Temp. Response, τ				
	0.01 cell	5 sec.		
	0.10 cell	10 sec.		
	1.0 cell	20 sec.		
	10.0 cell	30 sec.		
Temperature Accuracy		±0.5 °C	±0.9 °F	
Wetted Materials				
Internal O-ring (2841 and 2842)		FPM		
Insulator Material		PVDF		
Electrode Material		316 SS		
Threaded Process Connection		PVDF		
Max. Temperature/Pressure Rating				
		131 °C @ 2.76 bar	268 °F @ 40 psi	
Storage Temperature		-20 °C to 131 °C	-4 °F to 268 °F	
Shipping Weight				
2839		0.34 kg	0.74 lb	
2840, 2841, 2842		0.30 kg	0.66 lb	
Standards and Approvals				
		RoHS compliant		
		China RoHS		
		Manufactured under ISO 9001 for Quality and ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety		

* 2850 cable length 4.6 m (15 ft) maximum for all cells.
See Temperature and Pressure graphs for more information.

Dimensions

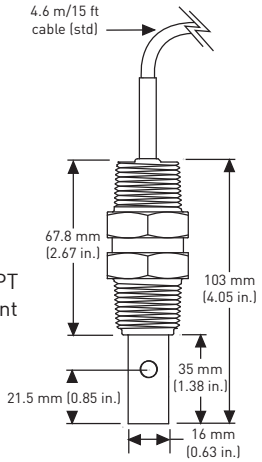
Dual-Threaded Electrodes

3-2839-1V(D) (0.01 cell)

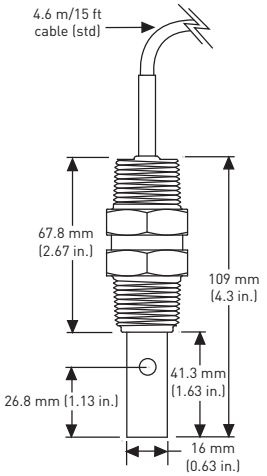


Dual threads 3/4 NPT or ISO 7/1-R 3/4 front and back

3-2840-1V(D) (0.1 cell)

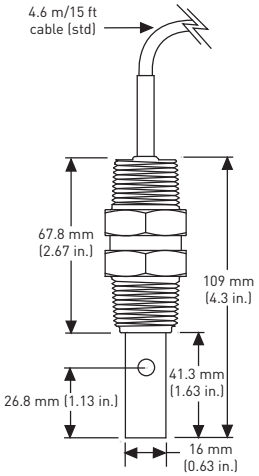


3-2841-1V(D) (1.0 cell)*



Dual threads 3/4 NPT or ISO 7/1-R 3/4 front and back

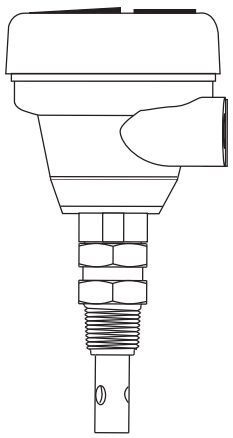
3-2842-1V(D) (10.0 cell)*



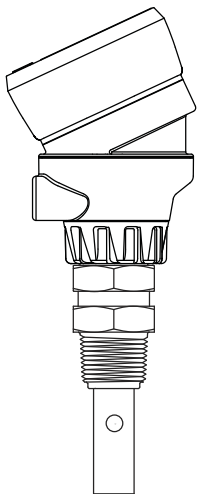
* Although these electrodes look similar in design, there is an inherent difference. From the bottom view, the 2841 electrode features a simple plastic insert. However, the 2842 electrode features a complex plastic insert with four holes through which liquid flows.

Integral Mount Sensor

The 2839-2842 Dual Threaded Conductivity Electrodes can be directly mounted to a 3-8850-3 transmitter, using the 8052 Integral Mount Kit, and a customer modified sensor cable length.



The 2839-2842 Dual Threaded Conductivity Electrodes can be directly mounted to a 3-9900-1 transmitter, 3-9900.396 direct conductivity module, 3-9900.396 angle adjust adapter and the 8052 Integral Mount Kit, and a customer modified sensor cable length.



System Overview

In-Line Installation

Panel Mount	Field Mount - Pipe, Tank, Wall	4 to 20 mA input	Integral Mount
Signet Instruments 8850 8860 8900 with 2850 Sensor Electronics 9900 with 3-9900.394 Direct Conductivity/Resistivity Module	Signet Instrument 8850 with 3-8050 Universal Mount Kit 9900 with 3-9900.394 Direct Conductivity/Resistivity Module	Signet 2850 Sensor Electronics with a customer supplied Programmable Logic Controller	Signet Instrument 8850 with 3-8052 Integral Mount Kit 9900 with 3-9900.394 Direct Conductivity/Resistivity Module

Signet 2839-2842 Conductivity Electrodes

Customer Supplied Fittings, 3/4 in. NPT or ISO threaded — All sold separately

Submersible Installation

Field Mount - Pipe, Tank, Wall

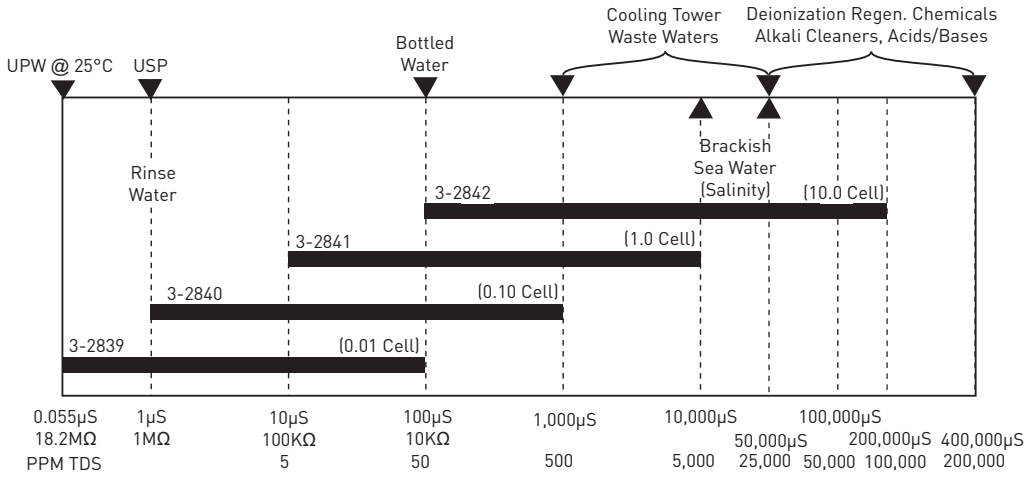
Signet Instruments
8850 8860
8900 with 2850 Sensor Electronics
9900 with 3-9900.394 Direct Conductivity/Resistivity Module

and customer supplied pipe extension or conduit with 3/4 in. FNPT threads*

Signet 2839-2842 Conductivity Electrodes

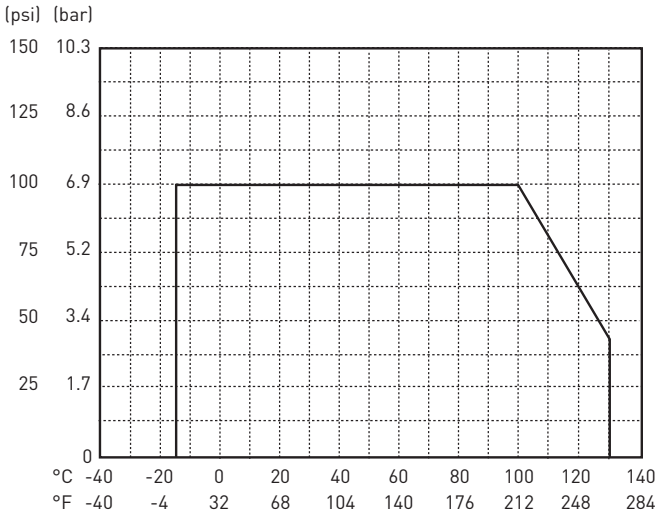
All sold separately

Operating Range Chart



Operating Temperature/Pressure Graphs

Note:
The pressure/temperature graphs are specifically for the Signet sensor. During system design the specifications of all components must be considered. In the case of a metal piping system, the PVDF process connector provided with the sensor may reduce the overall system working pressure.

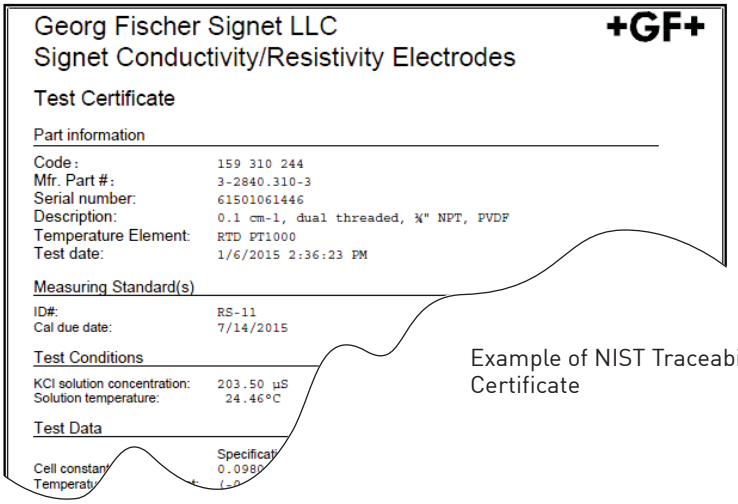


Application Tips

- Use 2839 series electrodes with the 3-2850-63 electronics and 8900 for applications requiring multiple measuring points.
- Liquid levels must be high enough to cover vent hole on sensor body.
- Install sensors in an area that will remain free of air bubbles and sediment build-up.
- Conductivity measurements are affected if electrodes are coated by process substances.
- Use Model 2839 with the 2850/8900 for low conductivity applications requiring multiple measuring points.

Ordering Notes

1) The Conductivity Certification tools are compatible with the following Signet Instruments: 8900, 9900.
2) The sensor cable can be extended up to 30 m (100 ft). See restrictions under General specifications.


Georg Fischer Signet LLC
Signet Conductivity/Resistivity Electrodes
+GF+

Test Certificate

Part information

Code:	159 310 244
Mfr. Part #:	3-2840.310-3
Serial number:	61501061446
Description:	0.1 cm-1, dual threaded, ¾" NPT, PVDF
Temperature Element:	RTD PT1000
Test date:	1/6/2015 2:36:23 PM

Measuring Standard(s)

ID#:	RS-11
Cal due date:	7/14/2015

Test Conditions

KCl solution concentration:	203.50 µS
Solution temperature:	24.46°C

Test Data

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Cell constan 0.098
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Example of NIST Traceability Certificate

Please refer to Wiring, Installation, and Accessories sections for more information.