Signet 2839-1V(D) to 2842-1V(D) 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 2839-1V(D) to 2842-1V(D) Conductivity/Resistivity Electrodes. The electrodes are calibrated to meet ± 2% accuracy.

The certificate includes calculated cell constant and temperature offset which when entered into the "custom cell" menu of any Signet meter would provide a 2% accuracy of the sensors reading. 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**

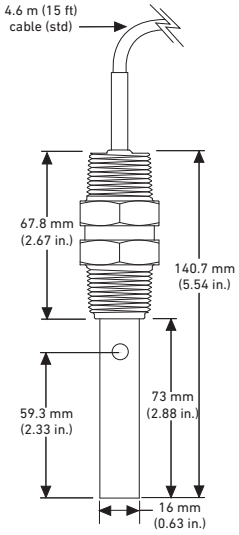
Specifications

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 custom cell constant is entered into the transmitter/meter or when wet calibrated with a traceable standard.		
Dual-Threaded Process Connection		-1V versions: ¾ in. NPT		
		-1VD versions: ISO 7/1-R 3/4		
Cable Length (use for the 2839, 2840, 2841 and 2842)	Standard	4.6 m (15 ft)		
	Maximum	30 m (100 ft) all sensors when used with the 9900, 9950 and direct conductivity/resistivity modules		
	2850 cable length 4.6 m (15 ft) maximum for all cells			
Temperature Element		Pt1000		
Temperature Response, t				
	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				
Electrode Material		316 SS		
Threaded Process Connection		PVDF		
Internal O-ring (2841 and 2842)		FKM		
Insulator Material		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, ISO 14001 and ISO 45001		

Dimensions

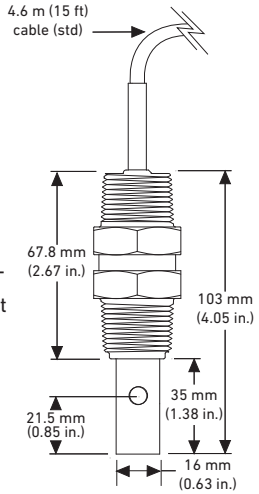
Dual-Threaded Electrodes

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

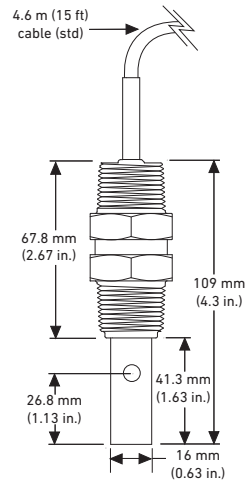


Dual threads 3/4 NPT or ISO 7/1-R 3/4 front and back

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

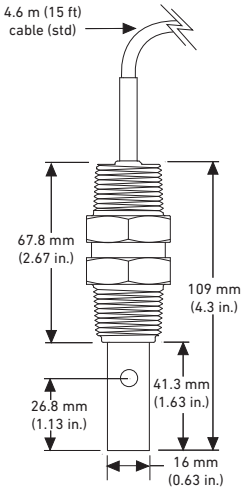


3-2841-1V(D) (1.0 cell)*



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

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

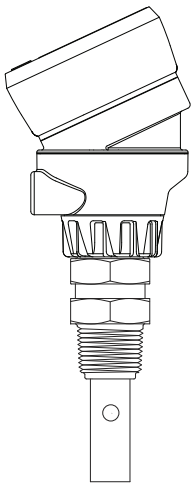


* Although these electrodes look similar in design, there is an inherent difference. From the bottom view, the 2841 electrode features a simple plastic insert. However, the 2842 electrode features a complex plastic insert with four holes through which liquid flows.

Integral Mount Sensor

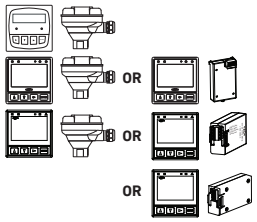
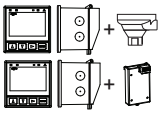
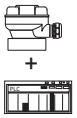
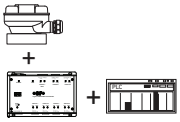
The 2839-2842 Dual Threaded Conductivity Electrodes can form an Integral Mount System with the 3-9900-1 Signet Transmitter when using the 3-9900.396 Direct Conductivity Module, angle adapter and the 8052 Integral Mount Kit.

Complete Integral Mount System with 9900 transmitter are available through our Specials program.



System Overview

In-Line Installation

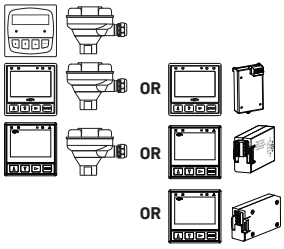
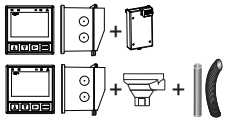
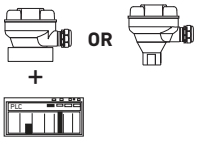
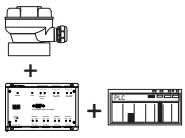
Panel Mount	Pipe, Tank, Wall Mount	4 to 20 mA Output*	Automation System	Field (Integral) Mount*
Signet Instruments with 2850 Sensor Electronics - 8900 - 9900 or with 3-9900.394 Direct Conductivity/Resistivity Module - 9950 with 9950.394 Direct Conductivity/Resistivity Module or with 3-9950.394-2 Dual Channel Conductivity Module	Signet Instruments with 2850 Sensor Electronics - 9900 and Rear Enclosure or with 3-9900.394 Direct Conductivity/Resistivity Module and Rear Enclosure	Signet 2850 Sensor Electronics with - Customer Supplied Programmable Logic Controller or - Programmable Automation Controller	Signet 2850 Sensor Electronics with - 0486 Profibus Concentrator and - Customer Supplied Programmable Logic Controller or - Programmable Automation Controller	Signet Instrument - 9900 with 3-9900.394 Direct Conductivity/Resistivity Module, 3-9900.396 angle adapter and 3-8052 Integral Mount Kit
				

Signet 2839-2842 Conductivity Electrodes

Customer Supplied Fittings, 3/4 in. NPT or ISO threaded

All Sold Separately

Submersible Installation

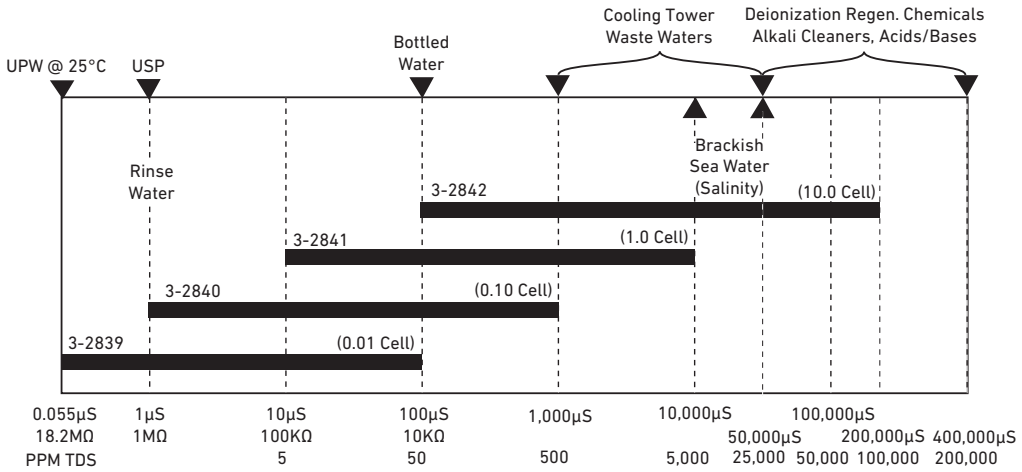
Panel Mount	Pipe, Tank, Wall Mount	Field (Integral) Mount	4 to 20 mA Output*	Automation System
Signet Instruments with 2850 Sensor Electronics - 8900 - 9900 or with 3-9900.394 Direct Conductivity/Resistivity Module - 9950 with 9950.394 Direct Conductivity/Resistivity Module or with 3-9950.394-2 Dual Channel Conductivity Module	Signet Instruments with 2850 Sensor Electronics - 9900 and Rear Enclosure or with 3-9900.394 Direct Conductivity/Resistivity Module, Rear Enclosure and customer supplied pipe extension or conduit with 3/4 in. FNPT threads*	Signet Instrument - 9900 with 3-9900.394 Direct Conductivity/Resistivity Module, 3-9900.396 angle adapter and 3-8052 Integral Mount Kit	Signet 2850 Sensor Electronics with - Customer Supplied Programmable Logic Controller or - Programmable Automation Controller	Signet 2850 Sensor Electronics with - 0486 Profibus Concentrator and Customer Supplied Programmable Logic Controller or - Programmable Automation Controller
				

Signet 2839-2842 Conductivity Electrodes

All Sold Separately

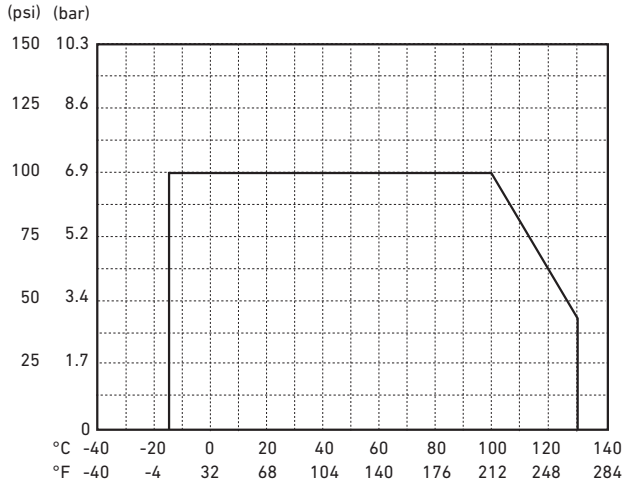
*Refer to the Signet Submersion Kit brochure (3-0000.707) located on our website for installation suggestions and options.

Operating Range Chart



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.

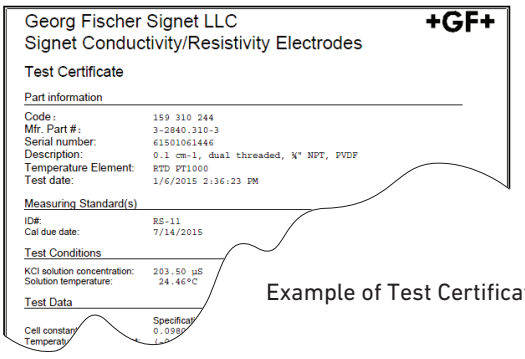


Application Tips

- 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.

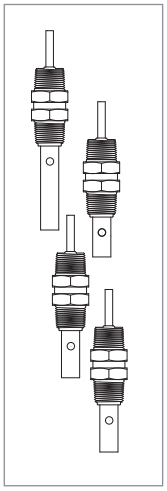
Ordering Notes

1) The Conductivity Certification tools are compatible with the following Signet Instruments: 8900, 9900, and 9950.
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
Example of Test Certificate

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

Ordering Information



Sensors for use with 9900, 9950 and 2850 instruments

Mfr. Part No.	Code	Cell Constant	Connection	Thread Size(s)	Cable Length
3-2839-1V	**159 001 810**	0.01 cm-1	Dual Threaded	¾ inch NPT	4.6 m (15 ft)
3-2839-1VD	**159 001 811**	0.01 cm-1	Dual Threaded	ISO 7/1-R 3/4	4.6 m (15 ft)
3-2840-1V	**159 001 812**	0.1 cm-1	Dual Threaded	¾ inch NPT	4.6 m (15 ft)
3-2840-1VD	**159 001 813**	0.1 cm-1	Dual Threaded	ISO 7/1-R 3/4	4.6 m (15 ft)
3-2841-1V	**159 001 814**	1.0 cm-1	Dual Threaded	¾ inch NPT	4.6 m (15 ft)
3-2841-1VD	**159 001 815**	1.0 cm-1	Dual Threaded	ISO 7/1-R 3/4	4.6 m (15 ft)
3-2842-1V	**159 001 816**	10 cm-1	Dual Threaded	¾ inch NPT	4.6 m (15 ft)
3-2842-1VD	**159 001 817**	10 cm-1	Dual Threaded	ISO 7/1-R 3/4	4.6 m (15 ft)

Special Order Options - Please consult the factory
Cable length extensions of up to 30 m (100 ft) are available.
For any sensor being used with the 2850-6X, cable length should not exceed 4.6 m (15 ft).

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
3-2850.101-1	**159 001 392**	Plug-in NIST Traceable Recertification Tool, 1.0 µS Simulated, for use with 8900, 9900, 9950, 2850 and the 2850 4-20 mA output
3-2850.101-2	**159 001 393**	Plug-in NIST Traceable Recertification Tool, 2.5 µS Simulated, for use with 8900, 9900, 9950, 2850 and the 2850 4-20 mA output
3-2850.101-3	**159 001 394**	Plug-in NIST Traceable Recertification Tool, 10.0 µS Simulated, for use with 8900, 9900, 9950, 2850 and the 2850 4-20 mA output
3-2850.101-4	**159 001 395**	Plug-in NIST Traceable Recertification Tool, 18.2 MΩ Simulated, for use with 8900, 9900, 9950, 2850 and the 2850 4-20 mA output
3-2850.101-5	**159 001 396**	Plug-in NIST Traceable Recertification Tool, 10.0 MΩ Simulated, for use with 8900, 9900, 9950, 2850 and the 2850 4-20 mA output
3-2850-61	**159 001 400**	Universal Junction Box, Conductivity Electronics, digital (S^3L) output
3-2850-62	**159 001 401**	Universal Junction Box, Conductivity Electronics, 4 to 20 output
3-8052	**159 000 188**	¾ in. Integral Mounting Kit
5523-0322	**159 000 761**	Sensor cable (per ft), 3 cond. plus shield, 22 AWG, for cable extension through a junction box for the following sensors: 3-2840, 3-2841, 3-2842
3-8050-1	**159 000 753**	Universal Mount Junction Box

3-2839-1V.099 Rev F (09/20)

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