

2839-2842 DryLoc™ Conductivity/Resistivity Electrodes

3-2840.099 (A-10/02)



Features

- DryLoc™ electrode connector for use with 2850 Conductivity/Resistivity Sensor Electronics
- Controlled surface finish ensures accuracy and repeatability
- 316SS electrodes with injection molded PEEK™ process connections and insulators
- Compact electrode length for easy in-line installation
- Replaceable insulator on Model 2842 (10.0 cell constant)
- Triple orifice flow-through design reduces clogging and bubble entrapment
- 3/4 in. NPT or ISO 7/1 - R 3/4 process connections
- Cell constants may be traceable to NIST and certified to within $\pm 1\%$ of value

Description

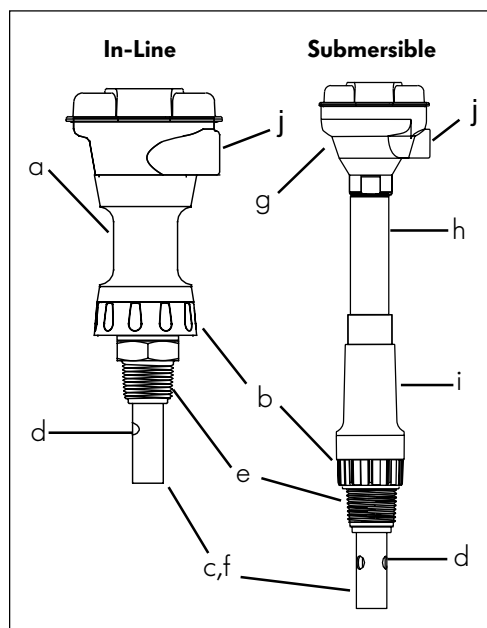
The 2839-2842 DryLoc™ Conductivity/Resistivity Electrodes are available in four cell constants from 0.01 to 10.0, and are suitable for a wide variety of applications from high purity water quality monitoring to demineralizer regeneration. 316SS electrode surface finishes are controlled in a precision bead blasting operation to ensure measurement

accuracy and repeatability, and the PEEK™ insulator and process connections are injection over-molded to minimize variance between electrodes. The DryLoc™ electrode connector quickly forms a robust assembly with the 2850 Conductivity/Resistivity Sensor for submersible and in-line installations.

System Features

These electrodes are compatible only with +GF+ SIGNET 2850 Conductivity/Resistivity Sensor Electronics.

- 2850-1, -2 Conductivity/Resistivity Sensor Electronics (sold separately)
- DryLoc™ electrode connector
- 2839-2842 DryLoc™ electrode
- Triple orifice flow-through design
- Injection over-molded 3/4 in. NPT or ISO 7/1 - R 3/4
- Compact electrode length
- 8052-1CR, -2CR junction box (sold separately)
- Extension pipe (customer supplied)
- 2850-3, -4 Conductivity/Resistivity Sensor (sold separately)
- S³L™ or 4 to 20mA output (field selectable)



Applications

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

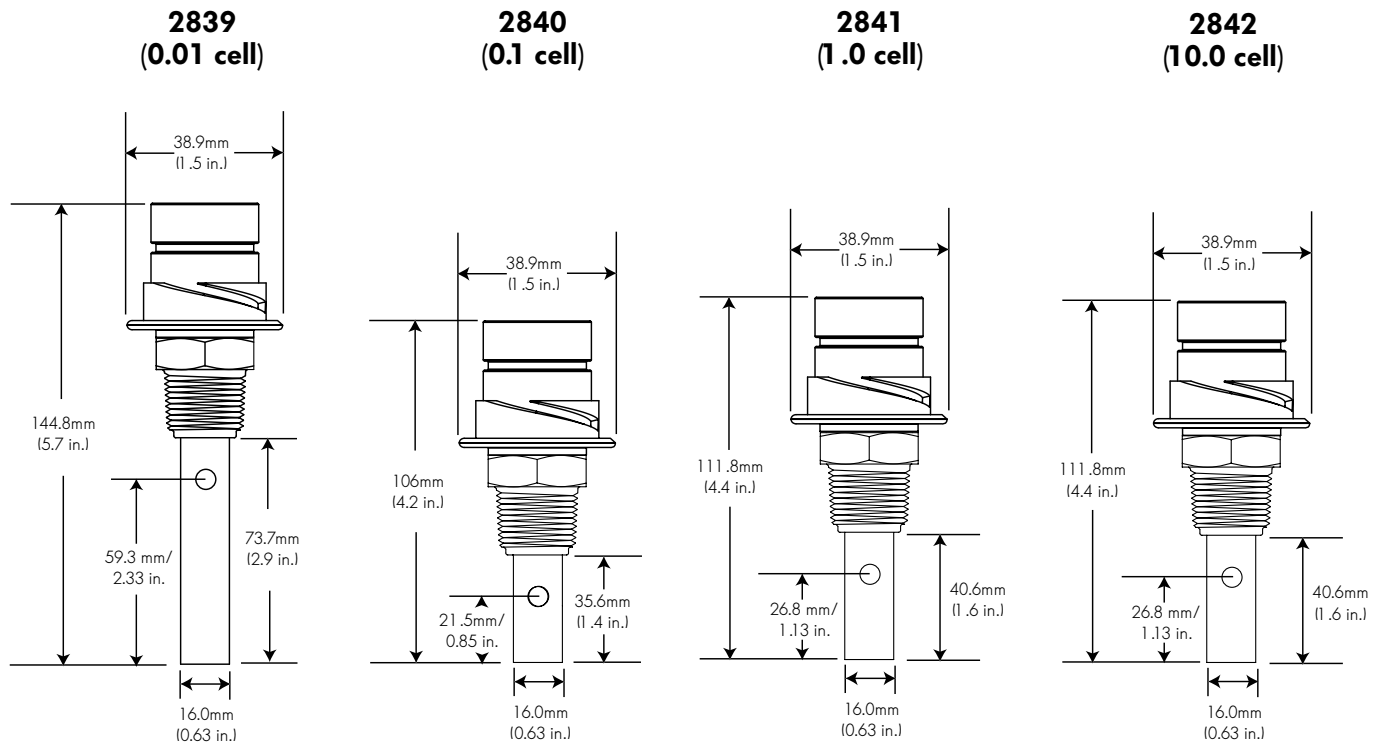
Options



+GF+ SIGNET

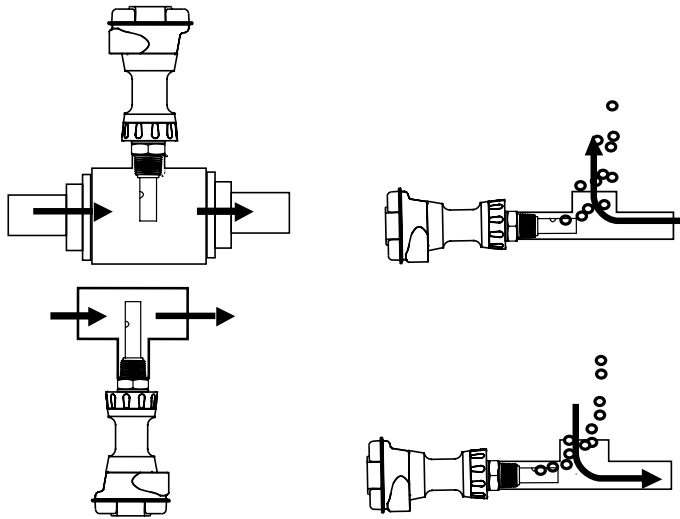
www.gfsignet.com

Dimensions



Installation

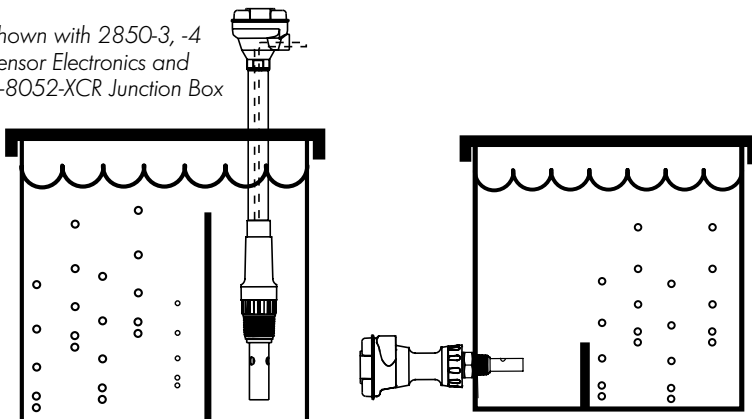
Shown with 2850-1, -2 Sensor Electronics



In-line Installation

- Position the electrode to avoid entrapment of air bubbles.
- The preferred installation for in-line applications directs flow straight into the electrode.
- If the electrode is mounted vertically in a tee, do not recess the orifices inside the tee. Mounting upside down may help prevent air entrapment.
- An oversized tee or flow cell may be helpful for in-line installations.

Shown with 2850-3, -4
Sensor Electronics and
3-8052-XCR Junction Box

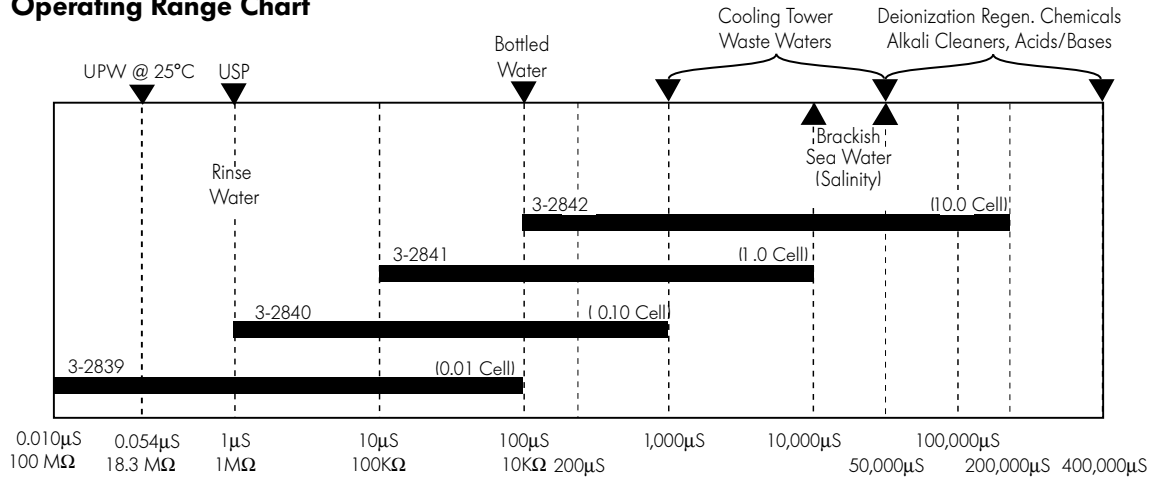


Submersible/Tank Installation

- If installed in an aerated vessel, ensure that the electrode is in a stillwell to avoid entrapment of air bubbles.
- Select a location that will remain free of sediment.
- To prevent moisture accumulation at the cable-end of the electrode, fill the lower 3 to 4 in. of conduit or extension pipe with a flexible sealant, such as silicone.

Specifications

Operating Range Chart



General

Compatibility: +GF+ SIGNET 2850 Conductivity/Resistivity Sensor (see data sheets for more information)

Accuracy: $\pm 2\%$ of cell constant value (standard)
Cell constants can be traceable to NIST and certified to within $\pm 1\%$ of value (contact factory)

Temperature element: PT-1000

Temp. response, τ : 5 sec. (0.01 cell), 10 sec. (0.10 cell), 20 sec. (1.0 cell), 30 sec. (10.0 cell)

Temp. accuracy: $\pm 0.5^\circ\text{C}$

Wetted materials

- DryLoc™ connection to 2850: CPVC
- Internal O-ring (2841 and 2842): FPM
- Insulator material: PEEK™
- Electrode material: 316SS

Shipping Weight

- 2839: 0.34 kg (0.74 lb)
- 2840, 2841, 2842: 0.30 kg (0.66 lb)

Process Connection (PEEK™)

- -2 versions: 3/4 in. NPT
- -2D versions: ISO 7/1 - R 3/4

Environmental

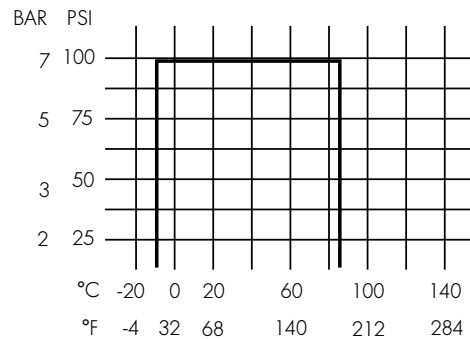
Operating temperature/pressure:

-10° to 85°C @ 6.9 bar (14° to 185°F @ 100 psi)

Storage temperature: -20° to 85°C (-4° to 185°F)

Standards and Approvals

- CE
- Manufactured under ISO 9001 and ISO 14001



Ordering Information

Mfr. Part No.	Code	Description
3-2839-2	159 000 922	Cell 0.01, DryLoc™, 3/4 in. NPT
3-2839-2D	159 000 924	Cell 0.01, DryLoc™, ISO 7/1-R 3/4
3-2840-2	159 000 787	Cell 0.1, DryLoc™, 3/4 in. NPT
3-2840-2D	159 000 789	Cell 0.1, DryLoc™, ISO 7/1-R 3/4
3-2841-2	159 000 791	Cell 1.0, DryLoc™, 3/4 in. NPT
3-2841-2D	159 000 793	Cell 1.0, DryLoc™, ISO 7/1-R 3/4
3-2842-2	159 000 795	Cell 10.0, DryLoc™, 3/4 in. NPT
3-2842-2D	159 000 797	Cell 10.0, DryLoc™, ISO 7/1-R 3/4

Accessories

Mfr. Part No.	Code	Description
3-2850-1	159 000 783	In-line Sensor Electronics w/Junction Box
3-2850-2	159 000 784	In-line Sensor Electronics w/Junction Box & EasyCal
3-2850-3	159 000 785	Submersible Sensor Electronics, NPT
3-2850-4	159 000 857	Submersible Sensor Electronics, ISO
3-2831	159 000 888	Conductivity Recertification Tool
3-8050-1CR	159 000 889	Universal Mount Junction Box w/CR Cell Ranges
3-8050-2CR	159 000 802	Universal Mount Junction Box w/CR EasyCal
3-8052-1CR	159 000 890	3/4 in. NPT Mount Junction Box w/CR Cell Ranges
3-8052-2CR	159 000 803	3/4 in. NPT Mount Junction Box w/EasyCal
3-9000.392-1	159 000 839	Liquid-tight Connector Kit, 1 set, 1/2 in. NPT
3-9000.392-2	159 000 841	Liquid-tight Connector Kit, 1 set, PG 13.5
3-2842.390	159 000 925	2842 replacement insulator, PEEK™ w/FPM O-ring

Engineering Specifications

- The electrodes shall be constructed of 316SS and PEEK™.
- The electrodes shall have an injection molded 3/4 in. process connection in PEEK™ (NPT or ISO).
- The electrodes shall have an accuracy of $\pm 2\%$ of cell constant.
- The electrode with a 10.0 cell constant shall have a replaceable insulator.
- The electrodes shall have a triple orifice design to reduce clogging and bubble entrapment.
- The electrodes shall have an operating temperature of -10° to 85°C @ 6.9 bar (14° to 185°F @ 100 psi).
- The electrodes shall be supplied with a PT-1000 platinum RTD.
- The electrodes shall be available with +GF+ SIGNET DryLoc™ for connection to 2850.
- The electrodes shall meet CE standards and be manufactured under ISO 9001 and ISO 14001.
- The electrodes shall be +GF+ SIGNET Models 2839-2842 C/R Electrodes.

For more information on these products, please contact your local sales company:

A	Georg Fischer Rohrleitungssysteme GmbH, Sandgasse 16, A-3130 Herzogenburg, Tel. 02782/56 43-0, Fax 02782/51 56
AUS	George Fischer IPS Pty Ltd., 186-190 Kingsgrove Road, Kingsgrove, NSW 2208, Tel. 02 9554 3977, Fax 02 9502 2561
B/L	Georg Fischer N.V./S.A., Digue du Canal 109-111 – Vaartdijk 109-111, B-1070 Bruxelles/Brussel, Tél. 02/556 40 20, Fax 02/524 34 26
BAR	George Fischer Ltda Av. dos Nações Unidas, 21689 CEP 04795-100 - S.Paulo - SP Tel.: 155111 247 1311 Fax: 155111 247 6009
CH	Georg Fischer Rohrleitungssysteme (Schweiz) AG, Amsler-Laffon-Strasse 1, Postfach, CH-8201 Schaffhausen, Tel. 052/631 3026, Fax 052/631 2897
D	Georg Fischer GmbH, Daimlerstraße 6, Postfach 1154, D-73093 Albershausen, Tel. 07161/302-0, Telex 7278 67, Fax 07161/302259
DK	Georg Fischer A/S, Klintehøj Vænge 17, DK-3460 Birkerød, Tel. 42/81 1975, Fax 42/81 1622
E	Georg Fischer S.A., Sistemas de tuberías para la industria, Calle Isla de la Palma, 32 – Nave 1, E-28700 San Sebastián de los Reyes (Madrid), Tel. 91/663 80 00, Fax 91/663 81 76
F	George Fischer S.A., 105-113, rue Charles Michels, B.P.174, F-93208 Saint-Denis Cedex 1, Tél. 1/49 22 13 41, Fax 1/49 22 13 00
GB	George Fischer Sales Limited, Paradise Way, Coventry, CV2 2ST, Tel. 01203/53 55 35, Telex 330032, Fax 01203/53 04 50-51
I	Giorgio Fischer S.p.A., Via Sondrio 1, I-20063 Cernusco S/N (MI), Agente generale di vendita Tufira S.r.l., Tel. 02/92 18 61, Fax 02/92 14 07 85
J	Georg Fischer Ltd., 2-47, Shikitsuhigashi, 1-chome, Naniwa-ku, Osaka 556, Tel. 6/648 2838, Telex 5267785, Fax 6/648 2565
N	Georg Fischer A.S., Bygdøy Allé 23, Postboks 3223 Elisenberg, N-0208 Oslo 2, Tel. 22/444 110, Fax 22/43 40 19
PRC	Georg Fischer Piping Systems, Ltd., No. 218 Kang Qiao Dong Road, Pudong Shanghai 201319 Tel. 86 21 58 13 33 33, Fax 86 21 58 13 33 66
RA	George Fischer Inc., Lavalle 2614, 1640 Martinez Buenos Aires, Tel. 01/798 74 01, Fax 01/798 40 74
NL	Georg Fischer N.V., Lange Veenteweg 19, Postbus 35, NL-8160 AA Epe, Tel. 0578678222, Fax 0578621768
S/SF	Georg Fischer AB, Box 113, S-12523 Alvsjö-Stockholm, Tel. 08/7274700, Fax 08/7492370
SGP	George Fischer Pte. Ltd., 15 Kaki Bukit Road 2, KB Warehouse Complex, SGP-417 845 Singapore/Singapore, Tel. 747 06 11, Fax 747 05 77
USA*	George Fischer Inc., 2882 Dow Ave., Tustin, CA 92780-7285, Tel. 714/731-8800, Toll Free 800/854-4090, Fax 714/731-4688, e-mail: info@us.piping.georgefischer.com, Internet: http://www.us.piping.georgefischer.com

*Serving North, Central, and South America

+GF+ SIGNET

Signet Scientific Company, 3401 Aerojet Avenue, El Monte, CA 91731-2882 U.S.A. • Tel. (626) 571-2770 • Fax (626) 573-2057

For Worldwide Sales and Service, visit our website: gfsignet.com • e-mail: info@gfsignet.com

Specifications subject to change without notice. All rights reserved. All corporate names and trademarks stated herein are the property of their respective companies.