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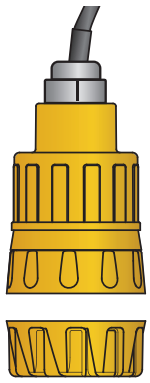
Signet 2650 DryLoc® Amperometric Electronics

English

3-2650.090 Rev. 10 01/19

Operating Instructions

CAUTION!
- Remove power before wiring input or output connections.
- Follow instructions carefully to avoid personal injury or damage to the electronics.

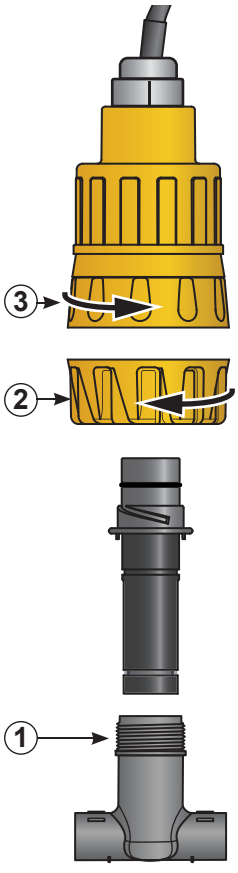


Description

The Signet 2650 Amperometric Electronics provide the polarization voltage and signal conditioning required by all Signet Amperometric Sensors. Sophisticated circuitry makes system setup and verification easy.

Features:
- Passes data stored in sensor memory, such as factory calibration data, service time, range 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 sensor.
- Separate drive electronics from sensor make for easy sensor replacement without running new cable.
- DryLoc connectivity allows easy sensor removal for calibration.

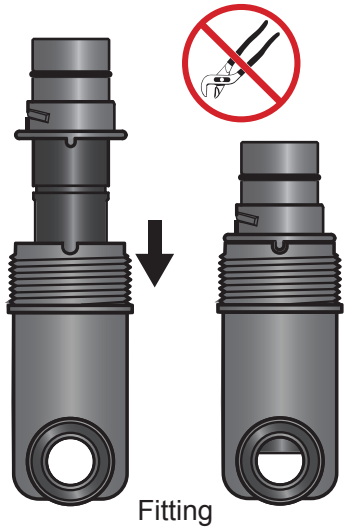
Installation - Tee Fitting



1. Insert sensor fully into fitting.

   Lubricate O-rings with a non-petroleum based, viscous lubricant (grease) compatible with the system.

2. Install the yellow nut on to the fitting and hand tighten. Do Not Use Tools.



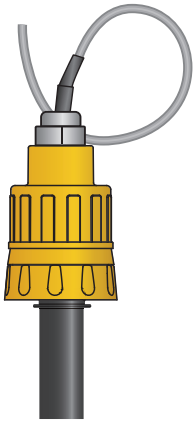
Fitting

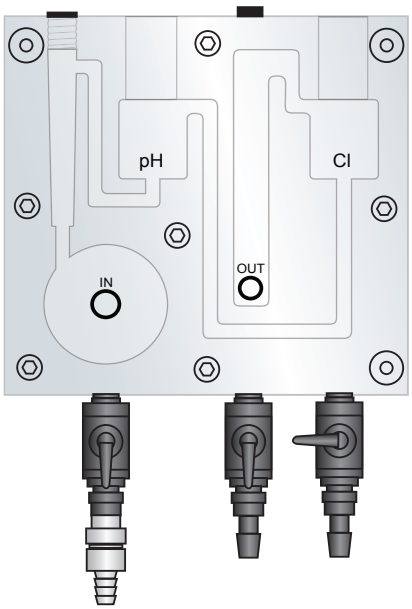
3. Align the 2650 Electronics with the pins on the sensor. Engage it by gently turning the lock ring ¼-turn counter-clockwise.

Do Not Use Lubricant or Sealing Tape on Threads.
Do Not Overtighten.

463X Flow Cell Installation

The bottom yellow nut is not used when using the 2650 electronics with the Signet 463X flow cell.





Signet 463X flow cell

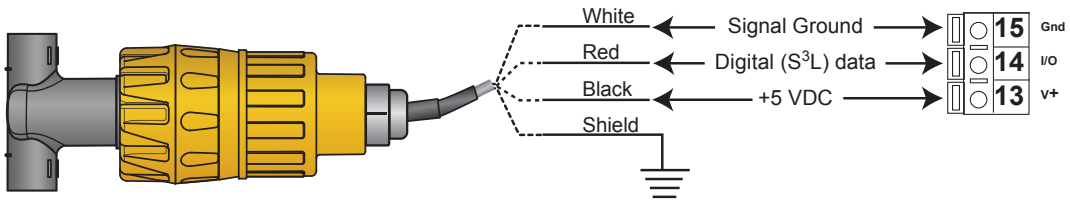
CHEMICAL COMPATIBILITY WARNING

The retaining nuts of the Amperometric Electronics are not designed for prolonged contact with aggressive substances. Strong acids, caustic substances and solvents or their vapor may lead to failure of the retaining nut, ejection of the sensor and loss of the process fluid with possibly serious consequences, such as damage to equipment and serious personal injury. Retaining nuts that may have been in contact with such substances, e.g. due to leakage or spilling, must be replaced.

Wiring

Chlorine Digital (S^3L) Wiring

- Remove approximately 10 mm (0.4 in.) of insulation and tin each conductor before inserting into terminals.



- Refer to the wiring diagram above to connect the 2650 cable to the terminals on the 8630 Chlorine Transmitter.
- Maximum cable length is 30 m (100 ft).
- Cable should have noise immunity for the sensor signal of up to 30 m (100 ft).
- Cable capacitance must be less than 30 pF/foot.

Specifications

General

Compatible Sensors: All Signet Amperometric DryLoc Sensors
Compatible Instruments: Signet 3-8630-3P Chlorine Transmitter

Mounting:	DryLoc connection
Materials:	Valox® (PBT)*
Cable:	4.6 m (15 ft) 3 conductor shielded, 22 AWG
Shipping Weight:	0.64 kg (1.41 lb)

Performance

Electronics Accuracy:	< 5 nA or 1% of reading, whichever is greater @ 25 °C over full input range
Temperature:	± 1.0 °C (PT1000) over full operation range (when calibrated at ambient temperature)
System Response:	500 ms (update rate)
Operational Range:	± 450 nA
Resolution:	0.1 nA

Electrical

Input Specifications:

Sensor:	Raw signal
Temperature:	PT1000 RTD

Output Specifications:

Digital (S^3L):	Serial ASCII, TTL level 9600 bps
Max. Cable Length:	30 m (100 ft)

Power Supply Input:
Digital (S^3L) mode: 5 to 6.5 V ± 10%, 3 mA max

Environmental

Storage Temperature:	–20 °C to 85 °C (–4 °F to 185 °F)
Operating Temperature:	0 °C to 85 °C (32 °F to 185 °F). Electronics only
Relative Humidity:	0 to 95%, non-condensing (no electrode connected)
Enclosure Requirements:	NEMA 4X/IP65 with electrode connected

Standards and Approvals

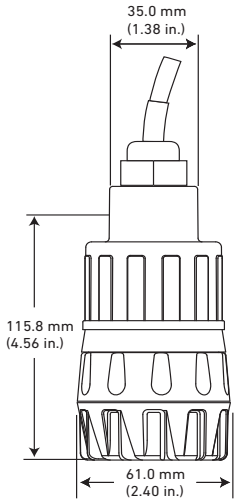
CE
RoHS compliant
Manufactured under ISO 9001 for Quality, ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety.

FC This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

China RoHS (Go to www.gfsignet.com for details)

* Valox® is a registered trademark of SABIC Innovative Plastics

Dimensions



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