



CS700 High-Performance Stainless Steel Contacting Conductivity Sensor Product Manual



Table of Contents

Introduction.....	1
Specifications	2
Calibration	3
Sensor Installation	3
Sensor Cleaning	3

Introduction

Thanks for choosing the Sensorex CS700 High-Performance Stainless Steel Contacting Conductivity Sensor. See below for ordering configurations and product specifications.

MODEL # CS700

Description

CELL CONSTANT

- 0.01/cm
- 0.1/cm
- 1.0/cm
- Custom Modification (customer-specified)

TEMPERATURE COMPENSATION

- PT1000 RTD
- Custom Modification (customer-specified)

CABLE LENGTH

- 10 ft. (3m) ●
- 20 ft. (6m) ● : ● Standard Four-Wire Cable
- 33 ft. (10m) ●
- 10 ft. (3m) ●
- 20 ft. (6m) ● : ● High-Temperature Four-Wire Cable
- 33 ft. (10m) ●
- Custom Modification (customer-specified)

CABLE TERMINATION CONNECTOR

- Tinned Leads
- Custom Modification (customer-specified)

BRANDING

- Sensorex-Branded
- No Branding
- Custom Modification (customer-specified)

INSTALLATION / FITTING TYPE

- ½" NPT Stainless Steel
- ½" NPT PVDF
- ¾" NPT Stainless Steel
- ¾" NPT PVDF
- Custom Modification (customer-specified)

TEMPERATURE AND PRESSURE RATING*

- 0 – 70° C (32 - 158° F) and 0 – 100 psig
- 0 – 150° C (32 - 302° F) and 0 – 200 psig (not available with options "3" and "6" under Installation / Fitting Type)

Code

A
B
C
M

1
M

BC
BD
BE
CC
CD
CE
M

3
M

A
B
M

2
3
5
6
M

B
G

Specifications

Sensor Specifications

Cell Constants	<ul style="list-style-type: none"> • K = 0.01/cm • K = 0.1/cm • K = 1.0/cm
Temperature Rating	<ul style="list-style-type: none"> • Standard cable: 70° C (158° F) • High-temperature cable: 130° C (266° F)
Pressure Rating	200 psig (1,379 kpa, 13.8 bar)
Materials	<ul style="list-style-type: none"> • Stainless Steel 316L • Teflon* insert • Viton** O-rings • PPS top cap
Process Connection	1/2" NPT or 3/4" NPT
Temperature	Via Pt1000RTD (+ two-wires)
Compensation	

Wiring – Sensor Input

Standard Cable Only

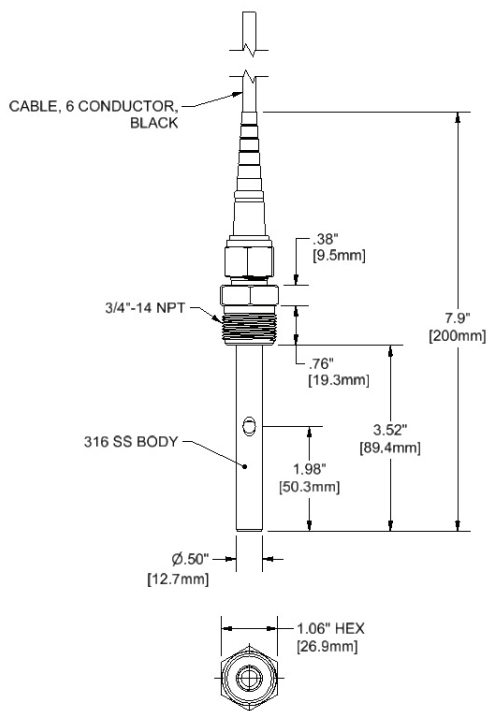
Wire Color	Function
Red	Conductive sensor body
Black	Conductive sensor pin (internal)
Green	Temperature sensor #1
White	Temperature sensor #2
Clear	Shield

Please follow the wiring instructions for your controller.

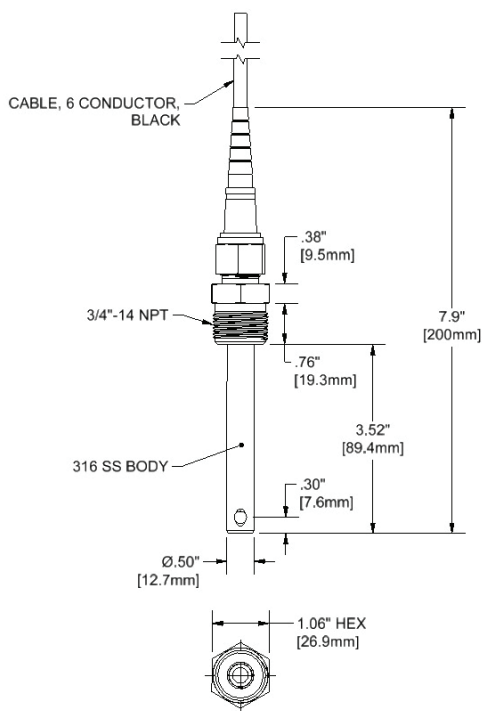
* Teflon® is a patent of DuPont.

** Viton® is a patent of DuPont.

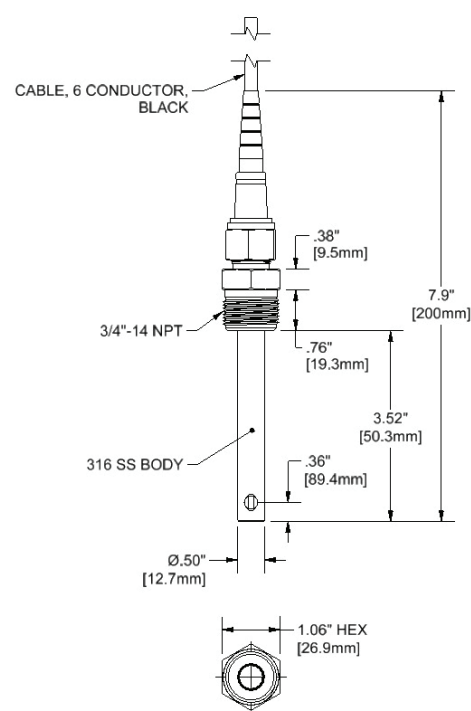
K=0.01



K=0.1



K=1.0



Calibration

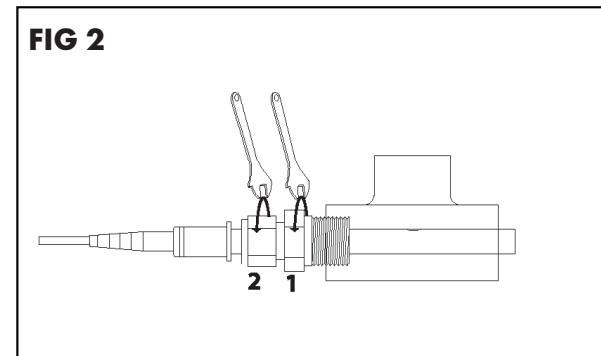
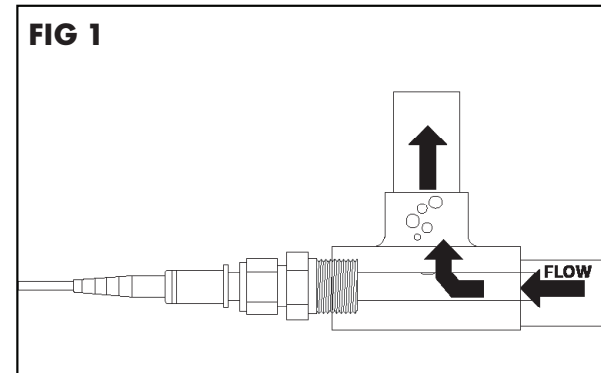
Calibration is suggested with at least two points - zero (in air), and a second point above the highest expected value. Follow instructions for your controller. Your sensor was calibrated at the factory. Input the cell constant provided into your electronics.

Sensor Installation

- 1.** Install sensor in end of tee fitting. See **FIG 1**. Make sure that the hole in the sensor body is oriented so that bubbles will escape from the sensor.
- 2.** Tighten Fitting 1 into the tee first by turning clockwise. See **FIG 2**.
- 3.** Tighten Fitting 2 by turning clockwise. This tightens the internal ferrule and sets the insertion depth of the sensor.

CAUTION

Once the fitting is tightened, it is not reversible. If an attempt is made to reverse the fitting, the sensor body will be damaged and the sensor reading adversely affected.



Sensor Cleaning

Do NOT clean sensors with an abrasive brush that could scratch the surface of the stainless steel. This will adversely affect the measurement.