CS200 12mm Platinum Contacting Conductivity Sensor

Product Manual

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DESIGNED IN CALIFORNIA
ASSEMBLED IN CALIFORNIA AND CZECH REPUBLIC
11751 MARKON DRIVE • GARDEN GROVE, CA 92841 • 714.895.4344 • WWW.SENSOREX.COM

Introduction

Thank you for choosing the Sensorex CS200 12mm Platinum Contacting Conductivity Sensor. See below for ordering configurations and product specifications.

Model # CS200 Ordering Matrix

Description	Code	X	X	X	X	X	X
CELL CONSTANT							
• 0.1/cm	B						
• 1.0/cm	C						
• 10/cm	D						
• Custom Modification *(customer-specified)*	M						
TEMPERATURE COMPENSATION							
• No Selection	N						
• PT1000 RTD	1						
• 10K Thermistor	3						
• Custom Modification *(customer-specified)*	M						
CABLE LENGTH							
• 3 ft. (1m) ●	AB						
• 10 ft. (3m) ●	AC						
• 20 ft. (6m) ●	AD						
• 33 ft. (10m) ●	AE						
• 3 ft. (1m) ●	BB						
• 10 ft. (3m) ●	BC						
• 20 ft. (6m) ●	BD						
• 33 ft. (10m) ●	BE						
• Custom Modification *(customer-specified)*	M						
CABLE TERMINATION CONNECTOR							
• BNC Connector *(only available with cable options "AB-AE")*	2						
• Tinned Leads	3						
• Custom Modification *(customer-specified)*	M						
BRANDING							
• Sensorex-Branded	A						
• No Branding	B						
• Custom Modification *(customer-specified)*	M						
INSTALLATION / FITTING TYPE							
• No Selection	N						
• ½" NPT Polypropelene	1						
• ¾" NPT Polypropelene	4						

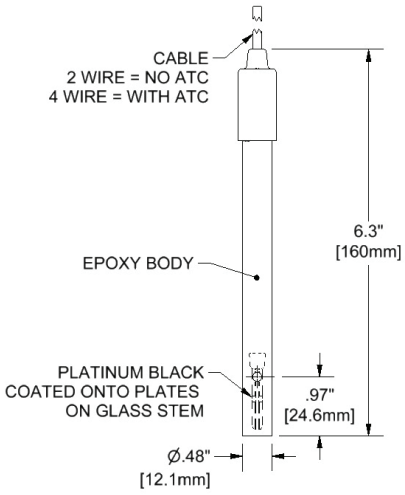
● *Two-wire cable. Only compatible with "N" under Temperature Compensation.*

● *Standard four-wire cable. NOT compatible with "N" under Temperature Compensation.*

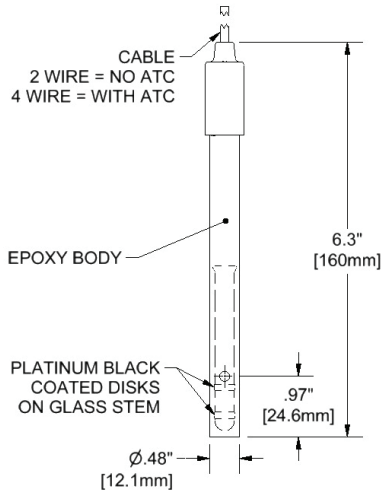
For example, choosing "0.1/cm" under Cell Constant would be **B**, *"PT1000 RTD" for Temperature Compensation would be* **1**, *"10 feet (3m)" with the blue option of "Two-wire cable" under Cable Length would be* **AC**, *"Tinned Leads" under Cable Termination Connector would be* **3**, *"Sensorex-Branded" under Branding would be* **A**, *and "1/2" NPT Polypropelene" under Installation/Fitting Type would be* **1**. *The order code would then be "***CS200 – B – 1 – AC – 3 – A – 1***".*

Specifications

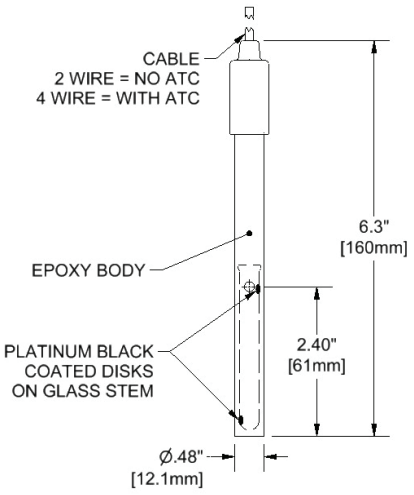
Temperature / Pressure Rating	• 0 – 70° C (32 – 158° F) • 7.5 bar
Temperature Compensation	Pt1000 or 10K NTC *See ordering information for more details.*
Wetted Materials	Epoxy and glass
Measuring Surface	Black coated platinum
Cell Constants	• 0.1cm^{-1} • 1cm^{-1} • 10cm^{-1} *See ordering information for more details.*



CS200-B



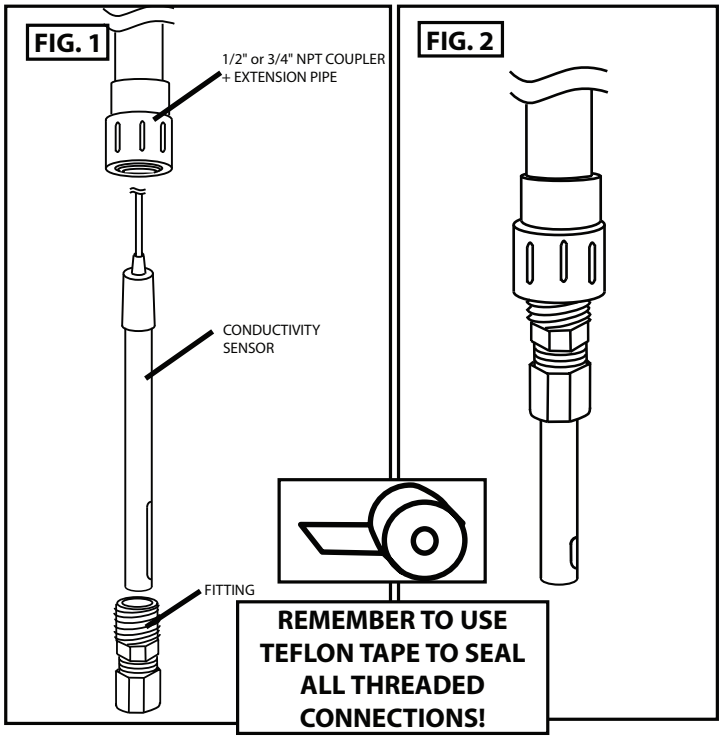
CS200-C



CS200-D

Calibration

Calibrate sensor according to meter/controller of the manufacturer's instructions using known certified conductivity standards. Contact Sensorex or go to www.sensorex.com for a complete selection of calibration standards. To ensure accuracy, calibrate in a large beaker or bucket, stirring sample with electrode. Avoid bubbles as much as possible. Bubbles cause erroneous readings.



Sensor Installation

Mechanical

Submersion Installation

The CS200 can be submersed and mounted in a tank for conductivity measurement using gland and nut fitting FC50P (1/2" NPT) or FC75P (3/4" NPT). The FC50P or FC75 must first be inverted so the nut is pointed downwards. Loosen the

nut by turning clockwise (remember that fitting is inverted). Slip electrode through hole in nut until desired depth is reached. Tighten nut (hand-tight) by turning counterclockwise. See **FIG 1** and **FIG 2**.

Inline Installation

Mounting inline is also possible using FC50P or FC75P fittings. For inline mounting, it is suggested that the sensor be mounted through the side of the tee as shown in **FIG 3** and **FIG 4**. The sensor must also be mounted such that the opening/slot in the body is pointed upward so as to allow any air bubbles to rise out of the sensor and escape with the flow.

Electrical

Installation for **Electrodes without Temperature Sensor Included** is supplied with two connections (**red** and **black**) and optional ground. Refer to **FIG 5**. These wires are for conductivity connection and have no unique polarity. Connect to any conductivity controller or transmitter as per the manufacturer's wiring instructions at the connections marked "conductivity" or "cell".

For sensors with temperature compensation, the wires are **green** and white. See **FIG 6** for wiring details. These temperature wires can be connected to the instrument's temperature input in any order, since the ouput is a resistance signal (ohms Ω). Please note that some meters require a three- or four-wire temperature signal input. In these cases, place a jumper wire (for three-wire type) or two jumper wires (for four-wire type) from the original lead to open temperature inputs. Refer to manufacturer's manual for details.

Sensor Cleaning

CS200 electrodes have platinum measuring surfaces. **Do not touch platinum black surface; this will remove platinum black coating that cannot be replaced.** Clean with 5%HCl or detergent.

FIG. 3

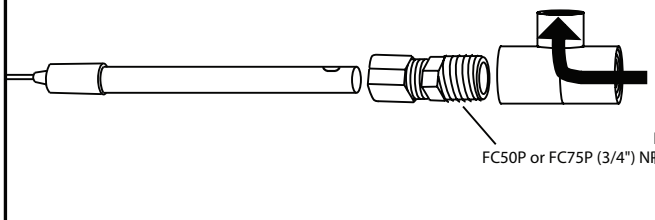


FIG. 4

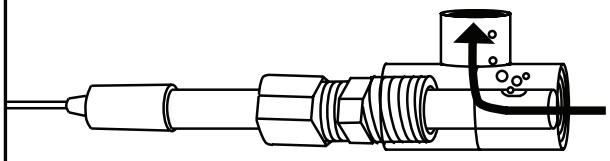


FIG. 5

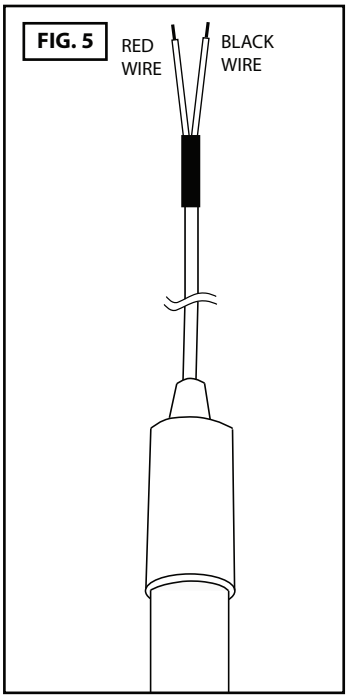


FIG. 6