Model CSX2 Conductivity Sensor

ELECTRO-CHEMICAL DEVICES

Features

- Rugged 316 stainless steel construction
- Double EPR o-ring seals
- Standard 3/4" MNPT process connection
- Cast Aluminum Junction Box
- PEEK insulator

Benefits

- High Temperature, 200˚C and High Pressure, 250 psig sensor
- Redundant, maximum reliability
- Standard pipe fittings, no special adapters needed
- Convenient access to wiring
- Chemically resistant with high heat deflection temperature

Model CSX2
Conductivity Sensor

Description

The ECD Model CSX2 conductivity sensor is designed for high pressure, high temperature conductivity measurements. It is an ideal choice for boiler control applications, blowdown control, condensate monitoring, leak detection on heat exchangers, and steam purity measurements are just a few of the many applications in which this rugged and reliable sensor can be used.

The Model CSX2 has a 316 stainless steel outer body and center electrode separated by a PEEK® (poly ether ether ketone) internal insulator. All possible leak paths through the sensor are double sealed with EPR O-rings for maximum on-stream reliability. Hot water is a severe environment for any elastomer. The front EPR o-ring seals bear the brunt of the chemical attack, allowing the back seals to remain relatively unaffected. This redundant design increases the reliability of the CSX2, dramatically increasing the usable lifetime of the sensor in these harsh applications.

The weather resistant aluminum junction box allows easy access to the terminal strip or the signal conditioner. The signal conditioner amplifies the conductivity signal allowing a noise free signal to be transmitted hundreds of feet. If the temperature is below 70˚C the signal conditioner can be mounted in the CSX2's integral junction box otherwise it is located in the instrument or if the sensor is more than 10 feet from the instrument, in a remote junction box.

A wide range of signal conditioners are available that optimize the conductivity measurement for a specific range. The Model C22 controller, Model T23 and T28 transmitters have a user specified signal conditioner mounted inside the instrument or optionally in a remote junction box.

The Model CSX2 conductivity sensor is designed for high temperature service up to 200˚C at pressures of 250 psig. At temperatures below 100˚C the CSX2 sensor is rated for pressures up to 400 psig. The CXS2 junction box has a ¾" FNPT port for cable connection. High temperature cable and cable glands are user supplied. Low temperature PVC jacketed cable and gland fittings are available from ECD.

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Specifications

Measuring principle:
Electrolytic Conductivity, two-electrode sensor

Cell Constant:
1.0/cm

Measuring Range:
1.0 - 50,000 µS

Analyzer/Remote Signal Conditioner: (select range)
1µS, 2µS, 5µS, 10µS, 20µS, 50µS, 100µS, 200µS, 500µS, 1mS, 2mS, 5mS, 10mS, 20mS, 50mS

Process Temperature Range:
–5 ...200°C

Process pressure range:
250 psig at 200˚C
400 psig at 100˚C

Temperature Compensation:
10 kΩ Platinum RTD temperature sensor

Materials of Construction:
Sensor body: stainless steel 316
PEEK (poly ether ether ketone) insulator, EPR o-rings

Junction Box: Explosionproof, weatherproof aluminum with ¾" FNPT connection, includes a low temperature (80˚C) ½" polyamide cable gland with reducer bushing

Process Connection:
¾" MNPT Thread

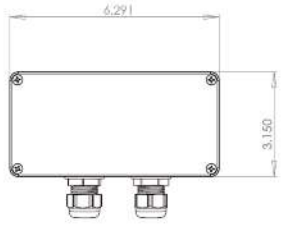
Electrical connections:
From Sensor to Signal Conditioner/Analyzer:
User Supplied 4 conductor shielded cable
Signal Conditioner in optional junction box to Transmitter:
Shielded 7-conductor cable (PN 9640004.COND)

Maximum Total Cable Length:
100 m cable extension with optional junction box

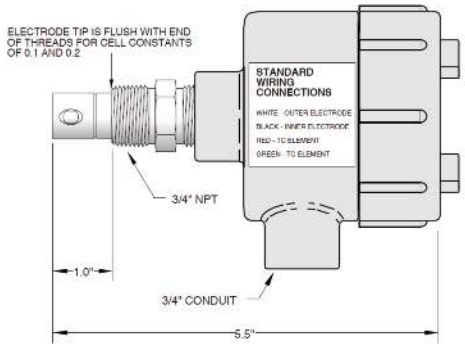
Shipping Weight:
3.0 lbs (1.4 kg)

Part No.	Model and Product Description
1300400-1	CSX2 conductivity sensor with integral junction box

Part No.	Spare Parts and Accessories Description
9250008	Aluminum Junction Box (XJB)
1000190-1	Signal Conditioner in Remote Junction Box, 1µS
1000190-2	Signal Conditioner in Remote Junction Box, 2µS
1000190-3	Signal Conditioner in Remote Junction Box, 5µS
1000190-4	Signal Conditioner in Remote Junction Box, 10µS
1000190-5	Signal Conditioner in Remote Junction Box, 20µS
1000190-6	Signal Conditioner in Remote Junction Box, 50µS
1000190-7	Signal Conditioner in Remote Junction Box, 100µS
1000190-8	Signal Conditioner in Remote Junction Box, 200µS
1000190-9	Signal Conditioner in Remote Junction Box, 500µS
1000190-10	Signal Conditioner in Remote Junction Box, 1mS
1000190-11	Signal Conditioner in Remote Junction Box, 2mS
1000190-12	Signal Conditioner in Remote Junction Box, 5mS
1000190-13	Signal Conditioner in Remote Junction Box, 10mS
1000190-14	Signal Conditioner in Remote Junction Box, 20mS
1000190-15	Signal Conditioner in Remote Junction Box, 50mS
9640004.COND	7 conductor cable, Tinned ends, 60˚C, 10 ft. increments
9640037	4 conductor cable, tinned ends, 80˚C, 10 ft. increments
9360005	½" MNPT cable Gland, 80˚C



Remote Junction Box



Specifications subject to change without notice.

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CERTIFIED ISO9001 QUALITY SYSTEM