



ITCS3020 SMART TOROIDAL CONDUCTIVITY SENSOR

GENERAL PURPOSE, NORYL BODY SENSOR

PRODUCT SPECIFICATION SHEET



The Sensorex TCS series toroidal (inductive) conductivity sensors feature wide measurement ranges and dependable toroidal technology over the range 0-2000 $\mu\text{S}/\text{cm}$. Resistant to corrosion, coatings, and fouling common to contacting conductivity sensors, the TCS series is designed for a long and trouble-free service life.

Noryl material of construction has a wide solvent tolerance and temperature stability to 105 degrees C. All models can be submersed by utilizing the 3/4" MNPT threads on the sensor or installed inline using the FC95C flow cell. A Pt 1000 RTD ATC element is built into the TCS sensor. All TCS sensor models are supplied with 20 ft long 4-conductor cable. Custom lengths are available.

The 4-20 mA models provide temperature compensated conductivity output. The Modbus models provide conductivity and temperature along with calibration data and sensor name.

Noryl body resists coating, corrosion and fouling in many common applications

Comes preset for your preferred communication but can be modified in field using free Sensorex software

Threaded 3/4" NPT for submersion mounting; Flange for inline mounting (order flow cell separately)

Choose from two models

Low Range for readings to 500,000 $\mu\text{S}/\text{cm}$

High Range for readings to 2,000,000 $\mu\text{S}/\text{cm}$

SPECIFICATIONS

Measuring Range

Low Range Models 150-500,000 $\mu\text{S}/\text{cm}$

High Range Models 150-2,000,000 $\mu\text{S}/\text{cm}$

Body Material

Noryl

Max Temperature

-25°C to 105°C

Max Pressure

150 psig

Temperature Compensation

Pt 1000 RTD

Cable Length

4 conductor in standard 20ft (6m) length; custom lengths available on request.

Process Connection

3/4" MNPT

Response Time

<10 seconds for 95% change

Resolution - Conductivity

0.2-2000 $\mu\text{S}/\text{cm}$ 0.2 μS

2,000-100,000 $\mu\text{S}/\text{cm}$ 2 μS

>100,000 $\mu\text{S}/\text{cm}$ 20 μS

Accuracy - Conductivity

+/-5 μS or 2% of reading, whichever is greater

Resolution - Temperature

0.05°C

Accuracy - Temperature

0.5°C typical 1.0°C max.

Accuracy - Loop Current

32 μA

Power Supply

4-20mA mode 23-36 VDC

Modbus mode 7- 36 VDC

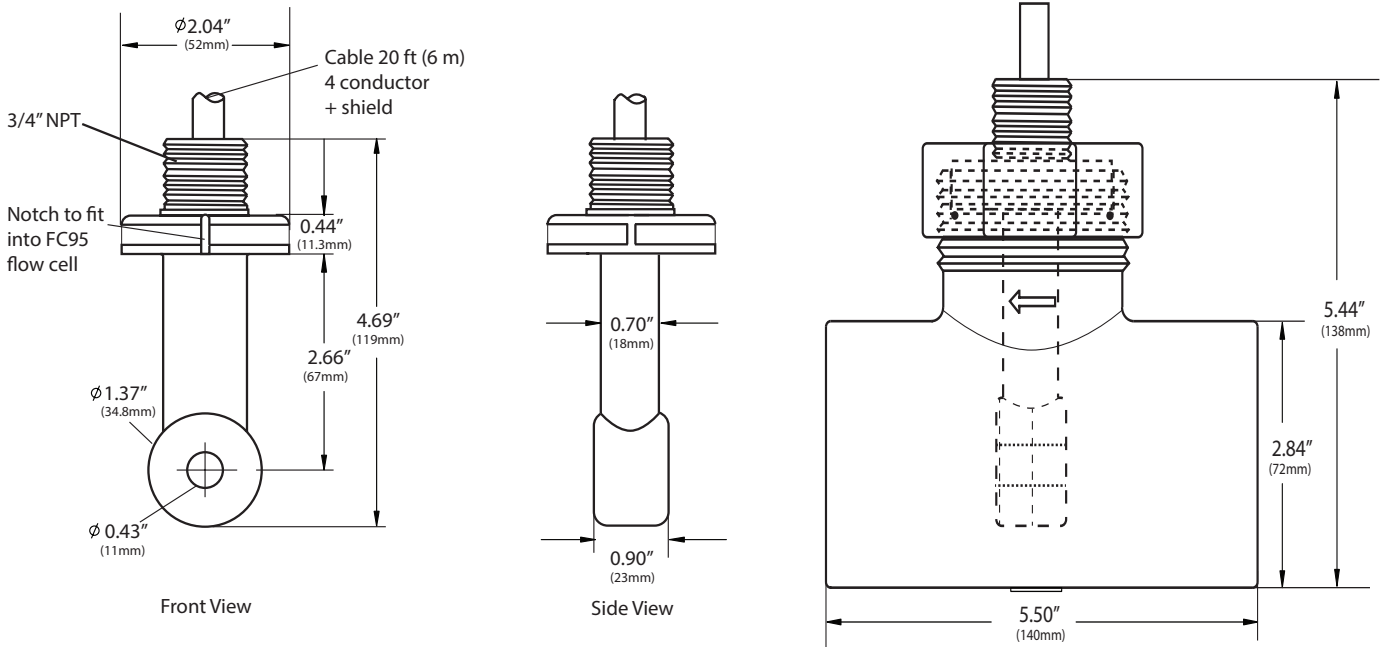
DESIGNED AND ASSEMBLED IN CALIFORNIA, USA

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ITCS3020 DIMENSIONAL VIEWS

ITCS3020



ORDERING INFORMATION

Part Number	Description
ITCS3020-MA-500	Smart Toroidal Conductivity Sensor, Noryl body, 4-20 mA output, 0-500 mS Range, 20 ft cable
ITCS3020-MB-500	Smart Toroidal Conductivity Sensor, Noryl body, 485 Modbus output, 0-500 mS Range, 20 ft cable
ITCP3020-MA-2000	Smart Toroidal Conductivity Sensor, Noryl body, 4-20 mA output, 0-2000 mS Range, 20 ft cable
ITCSP3020-MB-2000	Smart Toroidal Conductivity Sensor, Noryl body, 485 Modbus output, 0-2000 mS Range, 20 ft cable
FC95C	Tee fitting with compression fitting for sensor, 2" Sockets for process, CPVC material



Sensorex toroidal sensors provide off the shelf options but are also designed with the OEM in mind. We can provide custom cable lengths, specialized connectors, and even match coil windings / inductance to work with your instrument or system. Contact your Sensorex sales representative or visit our [OEM page](#) (scan code at right).



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