

C450

Conductivity Sensor



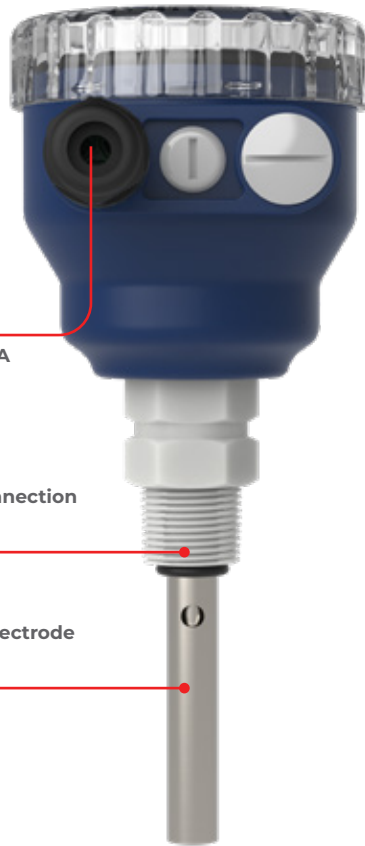
Direct C400 Controller with
SimpliCal® Auto Calibration



Direct 4-20mA

3/4" NPT Connection

Titanium Electrode



- ✓ No Costly Conductivity Module Required
- ✓ Direct 4-20mA & RS485 Outputs
- ✓ Temperature Compensated
- ✓ High Accuracy
- ✓ Quick Response Time
- ✓ 3/4" NPT Connection
- ✓ Factory Calibrated
- ✓ 2-Electrodes
- ✓ Conductivity | TDS | Salinity | Resistivity
- ✓ Optional Local Display c/w High/Low Alarm Set-points

This rugged titanium workhorse is available in 4 different cell classes for a truly versatile sensor

The ProCon® C450 series double electrode conductivity sensor has been proven to operate seamlessly in industrial applications up to 200,000µS/cm.

Measuring specific conductivity of aqueous solutions is becoming increasingly important for determining impurities in water.

The measurement accuracy is greatly affected by temperature variation, polarization of the contact electrode surface, and cable capacitance.

The ProCon® line of analytical sensors have been designed for difficult industrial applications and to outperform even in extreme conditions.

The 2-wire 4-20mA, 4-wire or 4-20mA + RS485 output options simplify calibration and communication with remote displays and controllers.

Specifications

Power Supply	9 – 36VDC
Sensor Electrode Material	Titanium Alloy
Housing Material	PP
IP Rating	IP68
Measurement Range	0 – 100µS 0 – 1,000µS 0 – 10,000µS 0 – 200,000µS
Accuracy	±1% of Reading
Pressure Resistance	150 Psi
Temperature Compensation	PT1000 (Std) PT100
Temperature Range	14 – 176°F -10 – 80°C
Calibration	Factory Calibrated
Connection Methods	• 4-20mA 2 wire • 4-Wire (direct to ProCon® controller) • 4-20mA + RS485
Cable Length (w/o J-Box)	Flying Lead: 5m cable can be extended to 100m
Installation Thread	NPT 3/4"



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Wiring

4-20mA 2-wire

- 1 Blue: mA-
- 2 Brown: mA+



4-20mA 4-wire

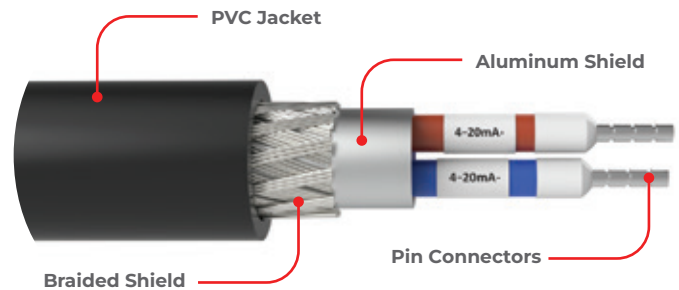
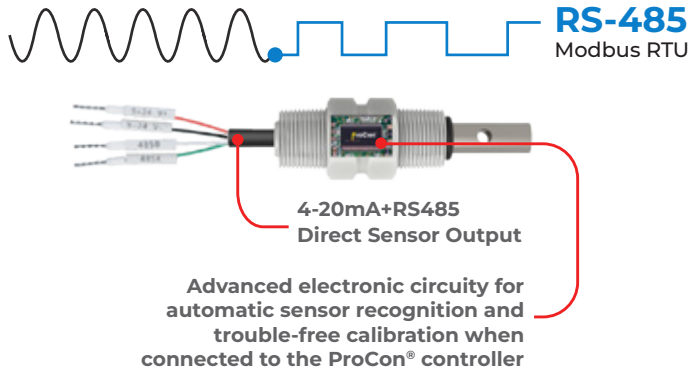
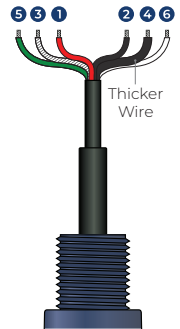
- 1 Transparent: (+) Sensor
- 2 Black (thick): (-) Sensor
- 3 Green: (+) Temperature
- 4 White: (-) Temperature

Connects directly to ProCon® controller



4-20mA + RS485 Output

- 1 Red: 9-24VDC +
- 2 Black: 9-24VDC -
- 3 Transparent: 4-20mA
- 4 Black (thick): Ref
- 5 Green: RS 485 A
- 6 White: RS 485 B



Double Shielded Cable

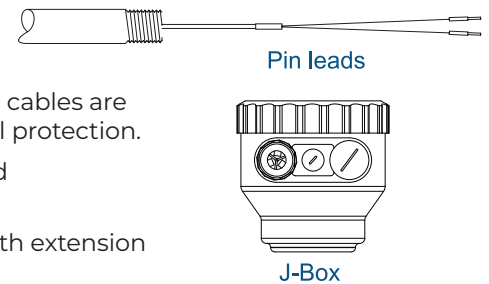
Cable Options

The ProCon® series offer complete flexibility of cabling options throughout the range. All cables are shielded against spurious EMF and are potted inside the sensor ensuring environmental protection.

The standard cable length for most sensors is 5m (15 ft). However, cables can be supplied as any continuous size up to 20m (66 ft).

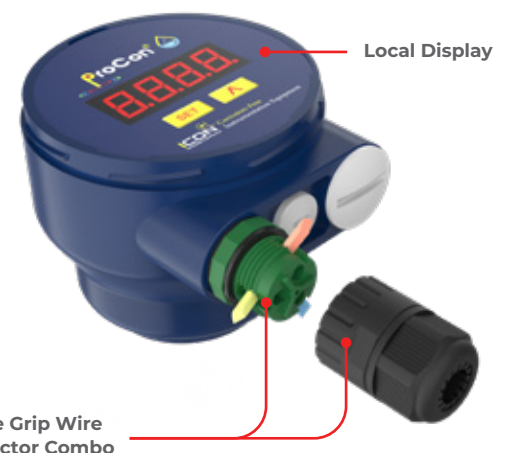
Standard accessories include junction boxes and submersion couplers, typically used with extension cables for direct connection to the ProCon® Controllers.

Extension cables also permit distances between sensor and instrument of up to 30 m (100 ft.) without external preamplifier.



Blind or Local Display

No tools required



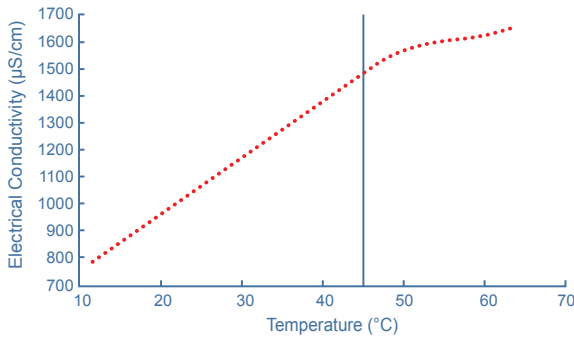
Cable Grip Wire Connector Combo

C450

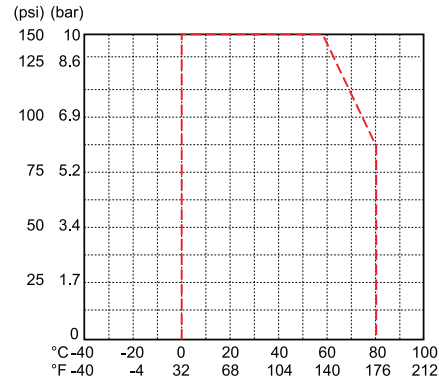
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Temperature Effects

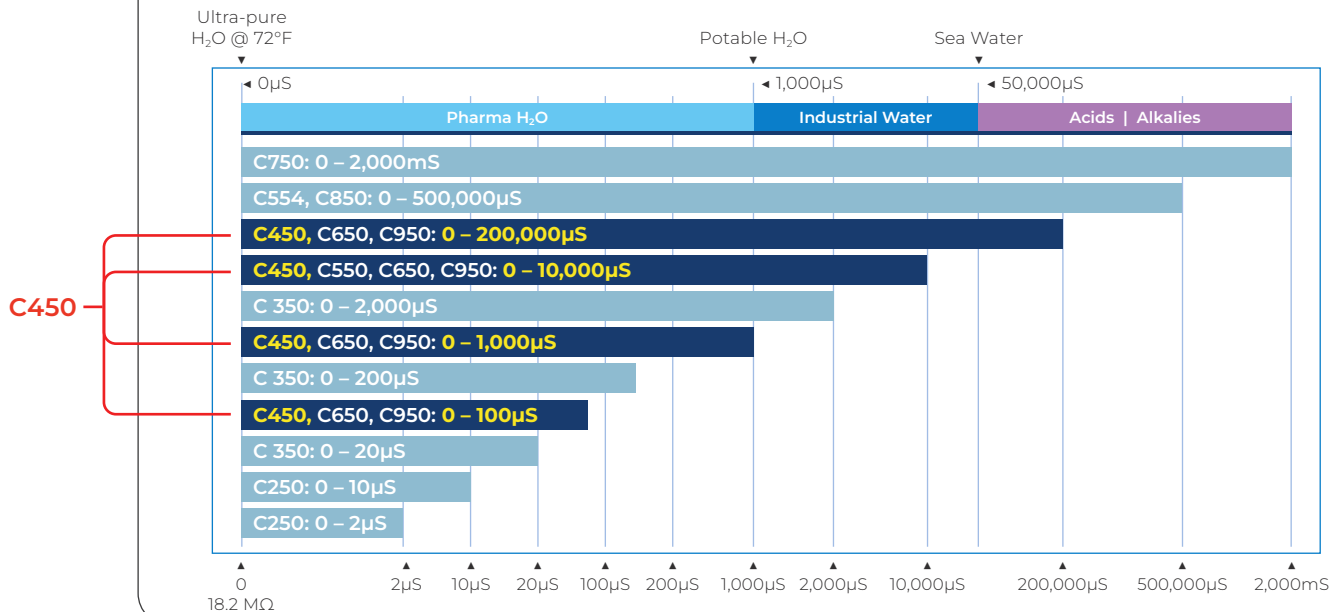


Temperature vs. Pressure



Factory Calibrated

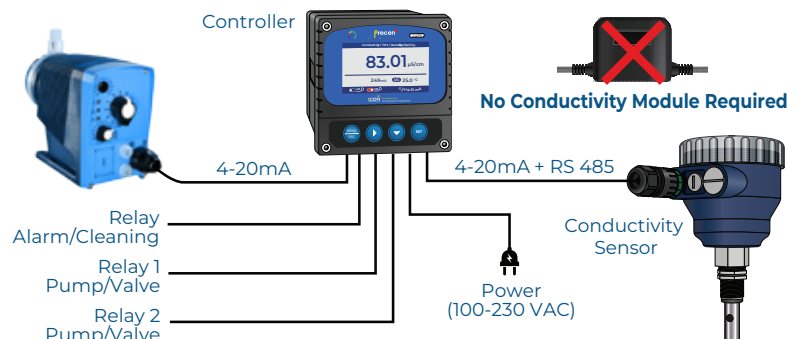
ProCon® conductivity sensors come with a factory default that covers the range of the sensor



Industrial GP Purpose

Cell	Models	Range
Cell 0.01	C250	0 – 2µS
Cell 0.01	C250	0 – 10µS
Cell 0.1	C350	0 – 20µS
Cell 0.01	C450, C650, C950	0 – 100µS
Cell 0.1	C350	0 – 200µS
Cell 0.1	C450, C650, C950	0 – 1,000µS
Cell 0.1	C350	0 – 2,000µS
Cell 1.0	C450, C550, C650, C950	0 – 10,000µS
Cell 10	C450, C650, C950	0 – 200,000µS
Cell 0.4	C554, C850	0 – 500,000µS
Toroidal	C750	0 – 2,000mS

Typical Application



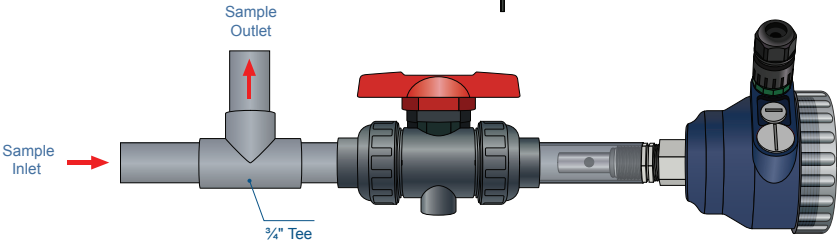
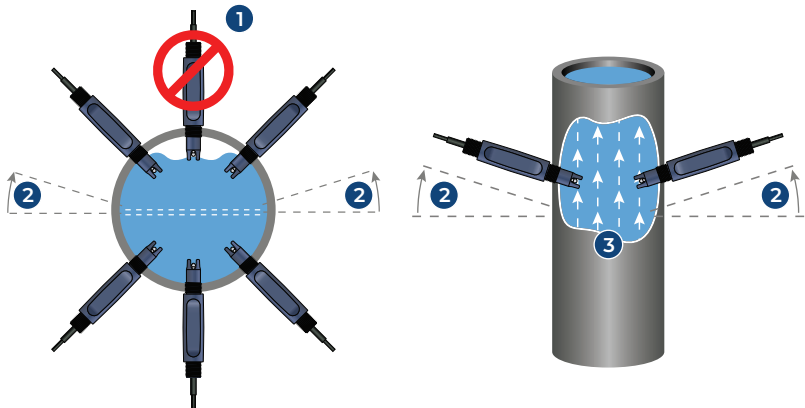
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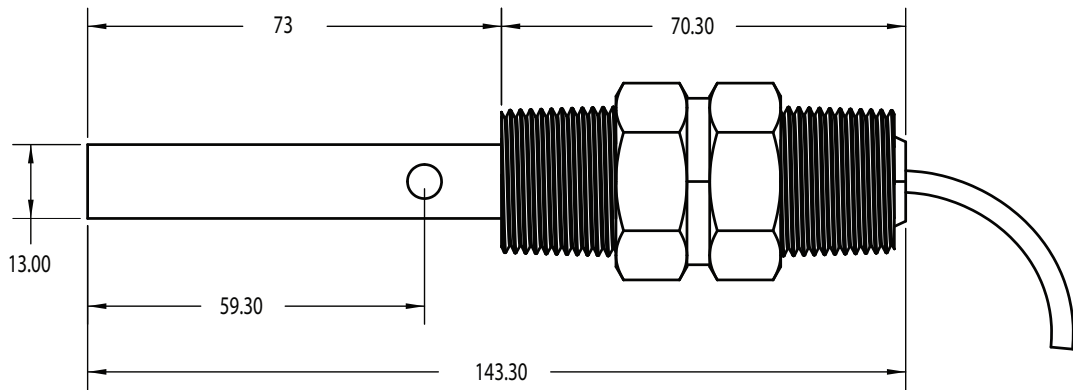


In-line Mounting

- 1. If air is present, avoid vertical installation (okay if pipe is full).
- 2. Optimum installation 15° above horizontal.
- 3. Process liquid should flow upward. (for downward flow ensure backpressure is present in order to avoid air within pipe)



Dimension



Model Selection

C450 - G - M - 1 - D

Cell Constant	Output	Electrode	Connection
G: 0.01, 0 – 100µS J: 0.1, 0 – 1,000µS M: 1.0, 0 – 10,000µS P: 10, 0 – 200,000µS	M: 4-20mA (2-wire, std) D: 4-wire (for ProCon® display) S: RS485 + 4-20mA	1: PT1000 (std) 2: PT100	D: Display (J-Box) B: Blind (J-Box) F: Flying Lead