

ProCon® — C554 Series Conductivity Sensor Transmitter



- ✓ Eliminate Costly Conductivity Module
- ✓ Direct 4-20mA & RS485 Outputs
- ✓ Temperature Compensated
- ✓ High Accuracy
- ✓ 3/4" NPT Connection
- ✓ Factory Calibrated
- ✓ 4-Electrodes
- ✓ Conductivity | TDS | Salinity | Resistivity
- ✓ Optional Local Display c/w High/Low Alarm Set-points

Four graphite + PPMA electrodes in one tough sensor — High performance with industrial strength

The ProCon® C554 series quadruple electrode conductivity sensor has been proven to operate seamlessly in industrial applications up to 500,000µS/cm.

Industrial environments can be harsh, featuring corrosive substances and fluctuating temperatures. The ProCon® C554 series conductivity sensor transmitter is built with durability in mind. Constructed from rugged materials such as graphite, PPMA, corrosion-resistant plastics and double shielded cable, this robust build ensures longevity and reliability. Pair it with a ProCon® conductivity controller (featuring SimplCal®) for a truly seamless experience.

The ProCon® line of analytical sensor transmitters 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.

Always ask for **ProCon® C554** by name to be sure you are getting a genuine **Icon Process Controls** product.

Specifications

| | |
|---------------------------|--|
| Power Supply | 9 – 36VDC |
| Sensor Electrode Material | Graphite + PPMA |
| Housing Material | PP |
| IP Rating | IP68 |
| Measurement Range | 0 – 500,000µS |
| Accuracy | ±1% of Reading |
| Pressure Resistance | 100 Psi |
| Temperature Compensation | PT1000 (Std) |
| Temperature Range | 14 – 176°F -10 – 80°C |
| Calibration | Factory Calibrated |
| Connection Methods | <ul style="list-style-type: none"> • 4-20mA 2 wire • 4-Wire (direct to ProCon® controller) • 4-20mA + RS485 |
| Cable Length (w/o J-Box) | M12: 5m cable can be extended to 100m |
| Installation Thread | NPT 3/4" |



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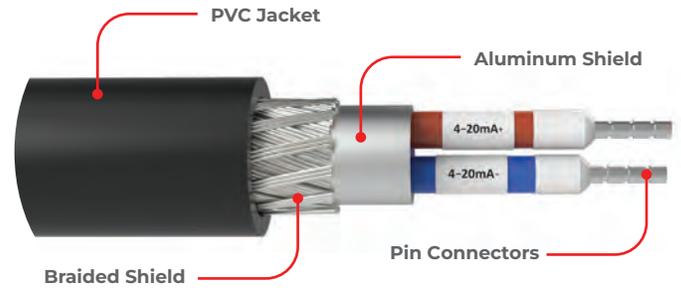


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Wiring



RS-485
Modbus RTU

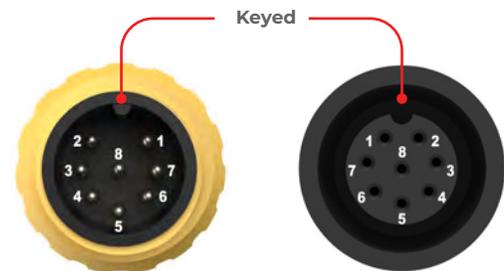


Double Shielded Cable



4-20mA+RS485
Direct Sensor Output

Advanced electronic circuitry for automatic sensor recognition ensuring trouble-free calibration when connected to the ProCon® controller



M12 Connection (No Internal Wiring Required)

Cable Options

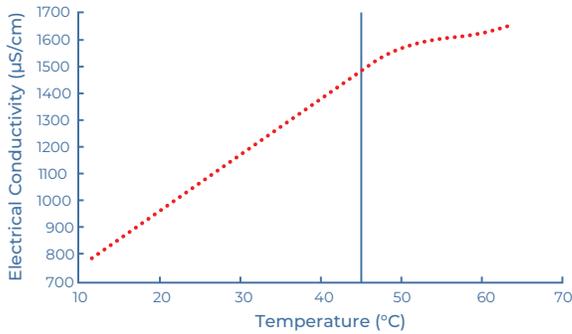
The ProCon® series offer complete flexibility of cabling options throughout the range. All cables are shielded against spurious EMI and are potted inside the sensor ensuring environmental protection.

The standard cable length for most sensors is 5m (15 ft). However, cables can be supplied as any continuous size up to 100m.

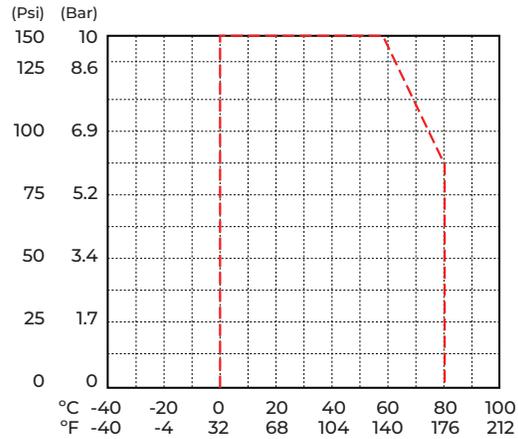


IO-Link (No Internal Wiring Required)

Temperature Effects

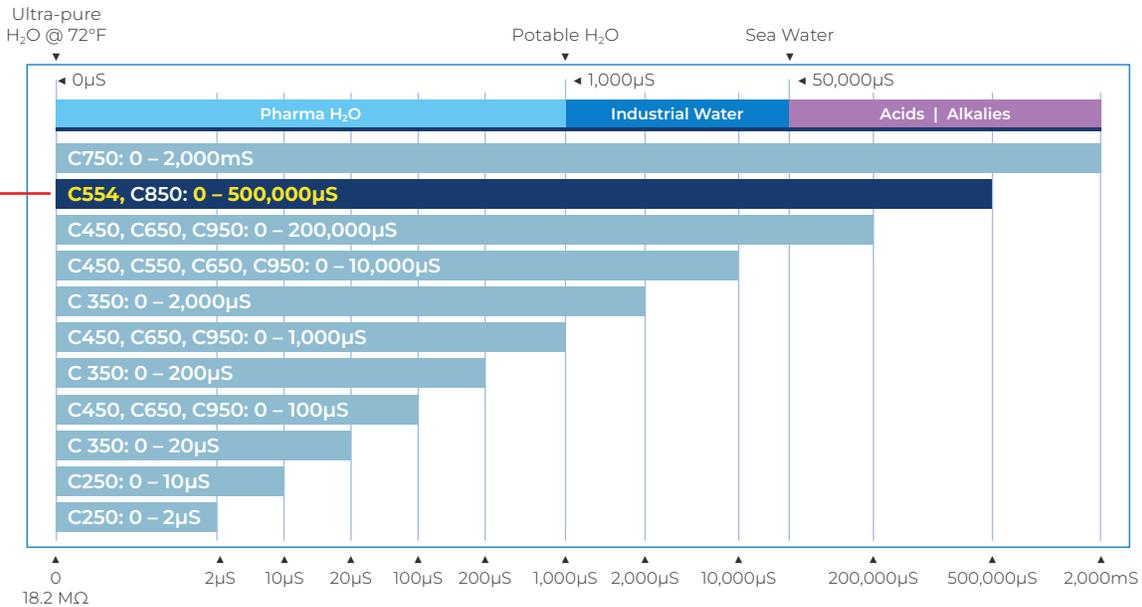


Temperature vs. Pressure



Factory Calibrated

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



C554

Industrial GP Purpose

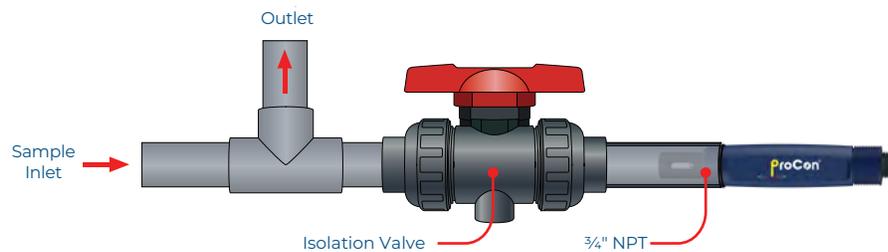
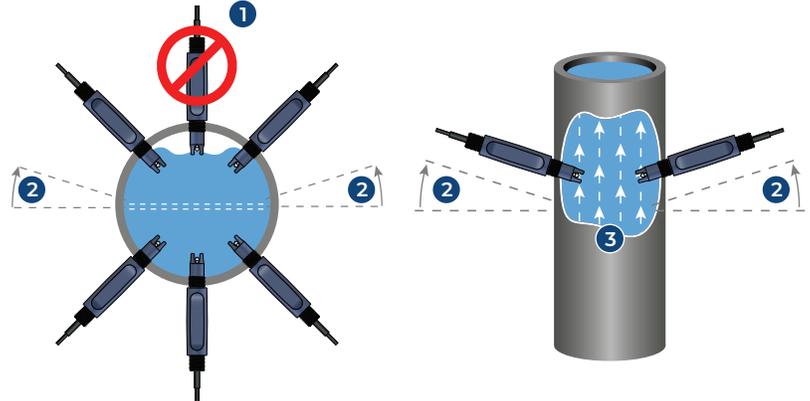
| Cell | Models | Range |
|-----------------|------------------------|----------------------|
| Cell 0.1 | C250 | 0 – 2µS |
| Cell 0.1 | C250 | 0 – 10µS |
| Cell 0.1 | C350 | 0 – 20µS |
| Cell 0.01 | C450, C650, C950 | 0 – 100µS |
| Cell 0.1 | C350 | 0 – 200µS |
| Cell 0.1 | C450, C650, C950 | 0 – 1,000µS |
| 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 Applications

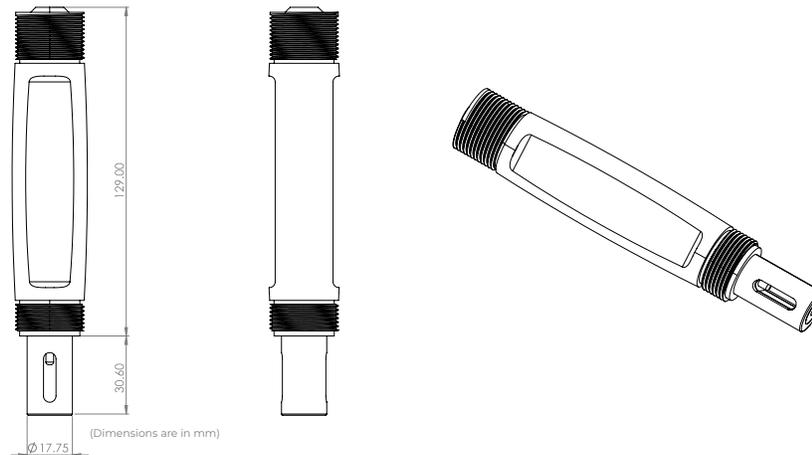
- ✓ High Purity Water
- ✓ Water Treatment
- ✓ Pharmaceutical
- ✓ Food and Beverage
- ✓ Interface Detection
- ✓ Desalination
- ✓ Chemical Plants
- ✓ Aquariums
- ✓ Agricultural Industries

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

C554 — 4-Pole Graphite Conductivity Sensor

| Part Number | Material | Output | Cell Constant | Range | Connection |
|--------------|----------------|------------------------------|---------------|-------------|------------|
| C554-R-D-1-M | Graphite, PPMA | 4-wire (for ProCon® Display) | 0.4 | 0-500,000µS | M12 |
| C554-R-M-1-M | Graphite, PPMA | 4-20mA (2-wire, std) | 0.4 | 0-500,000µS | M12 |
| C554-R-S-1-M | Graphite, PPMA | RS485 + 4-20mA | 0.4 | 0-500,000µS | M12 |

Last digit: "M" for M12 Connection (std), "F" Flying Lead - consult factory for pricing

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Fittings

Easy Install Clamp On Pipe Saddles

| Part Number | Material | Size | Seal | Thread | Connection |
|-------------|----------|------|------|--------|------------|
| PSA-2 | PVC | 2" | FPM | ¾" NPT | PVC |
| PSA-3 | PVC | 3" | FPM | ¾" NPT | PVC |
| PSA-4 | PVC | 4" | FPM | ¾" NPT | PVC |
| PSA-6 | PVC | 6" | FPM | ¾" NPT | PVC |
| PSA-8 | PVC | 8" | FPM | ¾" NPT | PVC |



True Union Tee Fitting

| Part Number | Material | Size | Seal | Thread | Connection |
|-------------|----------|--------|------------------|--------|--------------|
| TUPA-PV-5 | PVC | 1/2" | FPM (std) EPDM | ¾" NPT | Socket NPT |
| TUPA-PP-5 | PP | 1/2" | FPM (std) EPDM | ¾" NPT | Butt NPT |
| TUPA-PF-5 | PVDF | 1/2" | FPM (std) EPDM | ¾" NPT | Butt NPT |
| TUPA-PV-7 | PVC | 3/4" | FPM (std) EPDM | ¾" NPT | Socket NPT |
| TUPA-PP-7 | PP | 3/4" | FPM (std) EPDM | ¾" NPT | Butt NPT |
| TUPA-PF-7 | PVDF | 3/4" | FPM (std) EPDM | ¾" NPT | Butt NPT |
| TUPA-PV-1 | PVC | 1" | FPM (std) EPDM | ¾" NPT | Socket NPT |
| TUPA-PP-1 | PP | 1" | FPM (std) EPDM | ¾" NPT | Butt NPT |
| TUPA-PF-1 | PVDF | 1" | FPM (std) EPDM | ¾" NPT | Butt NPT |
| TUPA-PV-15 | PVC | 1 1/2" | FPM (std) EPDM | ¾" NPT | Socket NPT |
| TUPA-PP-15 | PP | 1 1/2" | FPM (std) EPDM | ¾" NPT | Butt NPT |
| TUPA-PF-15 | PVDF | 1 1/2" | FPM (std) EPDM | ¾" NPT | Butt NPT |
| TUPA-PV-2 | PVC | 2" | FPM (std) EPDM | ¾" NPT | Socket NPT |
| TUPA-PP-2 | PP | 2" | FPM (std) EPDM | ¾" NPT | Butt NPT |
| TUPA-PF-2 | PVDF | 2" | FPM (std) EPDM | ¾" NPT | Butt NPT |



by **ICON™** Corrosion-Free
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