

# ENDURANCE™ Senzori de conductivitate

Pentru informații suplimentare, vă rugăm să vizitați pagina noastră de internet la:  
[www.emersonprocess.com/raihome/liquid/](http://www.emersonprocess.com/raihome/liquid/).

## ⚠ ATENȚIE SENZOR/PROCES APLICARE COMPATIBILITATE

Materialele senzorului care intră în contact cu procesul pot să nu fie compatibile cu alcătuirea acestuia și cu condițiile sale de operare. Compatibilitatea aplicației reprezintă în totalitate responsabilitatea utilizatorului.

## ⚠ AVERTISMENT

Înainte de îndepărtarea senzorului, asigurați-vă că presiunea procesului este redusă la 0 psig și că temperatura procesului este coborâtă la un nivel de siguranță!

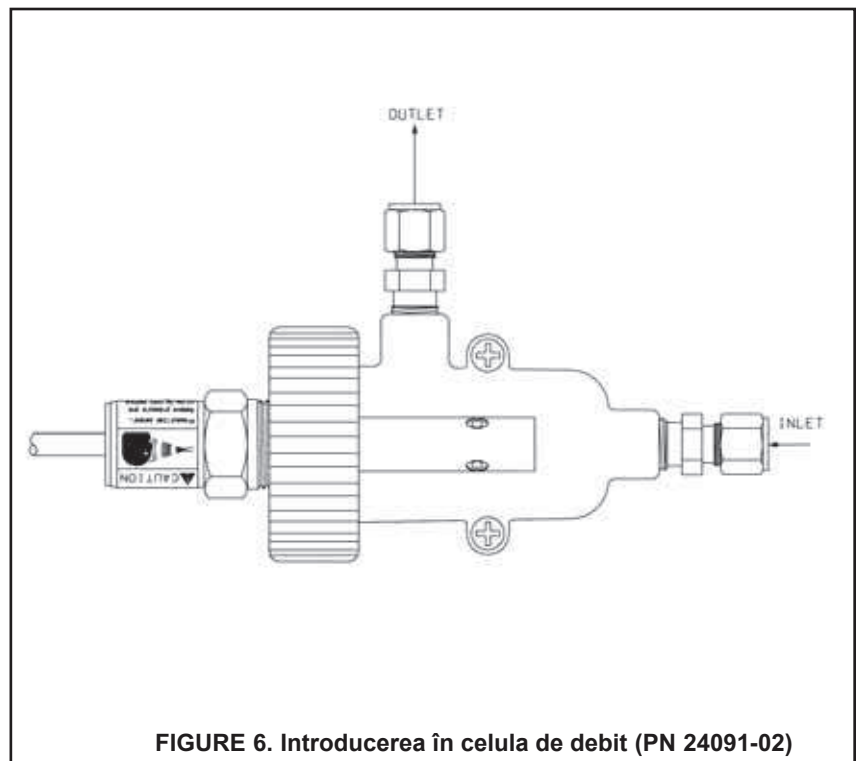
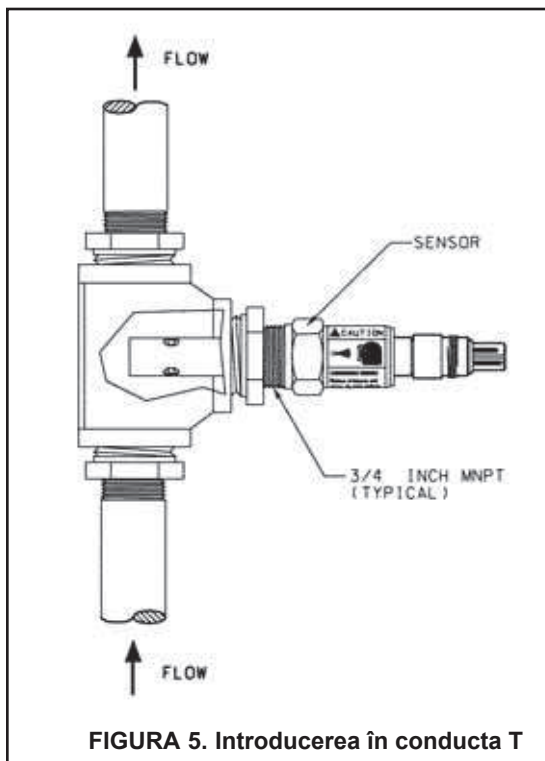
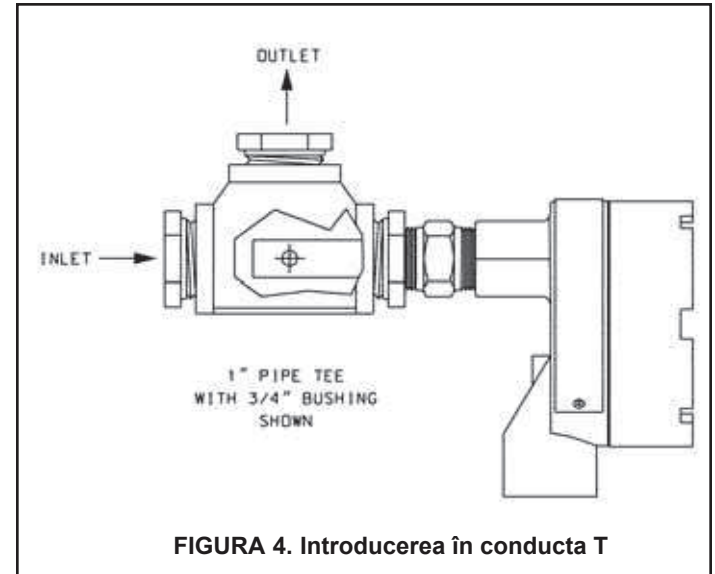
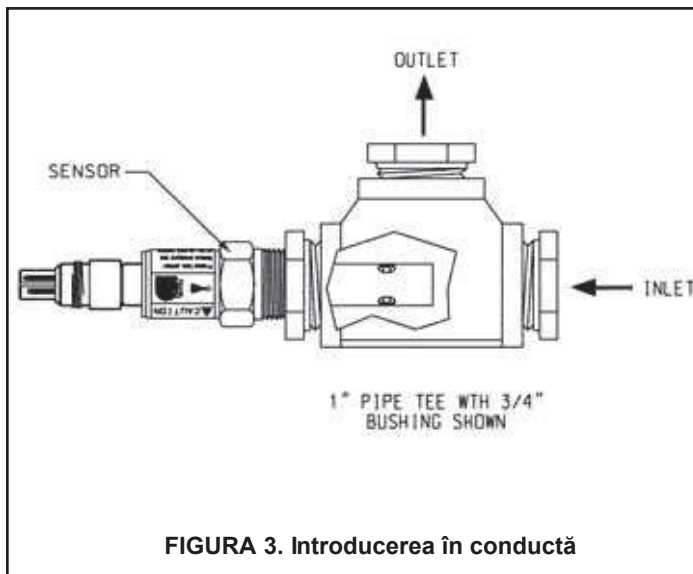
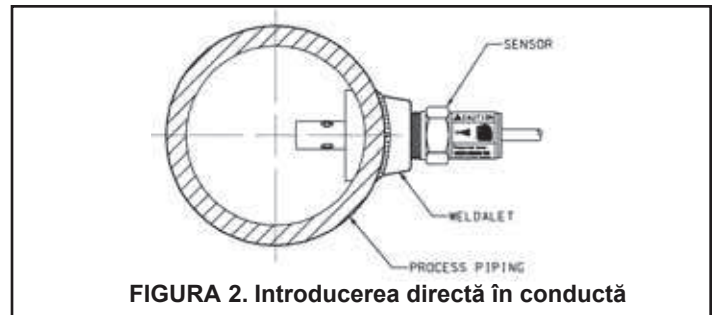
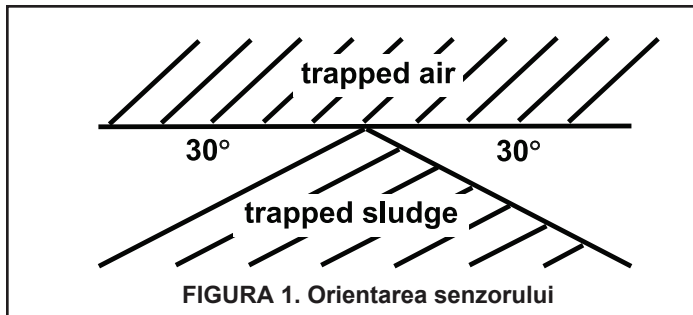
## SPECIFICAȚII SENZOR

SPECIFICATII	MODEL 400	MODEL 400 VP	FLOW CELL PN 24091-02
<b>Materiale hidrofile</b>	titan, PEEK (umplut cu sticlă), 316 SST, EPDM	titan, PEEK (umplut cu sticlă), 316 SST, EPDM	policarbonat, poliester, 316 SST, silicon
<b>Interval de temperatură</b>	std: 32-221°F (0-105°C) -60: 32-392°F (0-200°C) (necesită un senzor montat pe cutia de jonctiune)	32-221°F (0-105°C)	32-158°F (0-70°C)
<b>Presiunea maximă</b>	250 psig (1825 kPa abs)	250 psig (1825 kPa abs)	90 psig (722 kPa abs)
<b>Vacuum Service</b>	7.3 psia (51 kPa abs)	7.3 psia (51 kPa abs)	

## INSTALARE

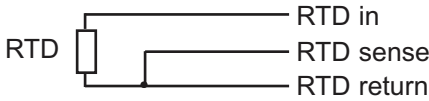
Mențineți 1/4 in. (6 mm) spațiu între electrozi și tubulatură. electrozii trebuie să fie complet scufundați în procesul lichidului, i.e., până la nivelul imbinării filetate. A se consulta figurile 1 - 6 pentru orientare și instalarea recomandată. Modelele de senzori 400 și 400VP cu elemente constante de 0.1 și 1.0/cm pot fi conectate la conducte în T de 3/4-inch. Toate modelele de senzori 400 și 400VP pot fi conectate la conducte în T de 1-inch cu mufă de 3/4-inch.

Dacă senzorul este instalat într-un racord în formă de T sau într-o celulă de măsurare cu o probă de drenare pentru deschidere la aer, se pot acumula bule pe electrozi. Bulele astfel prinse vor cauza erori. Pe măsură ce se acumulează bule, conductivitatea citirii va fi deviată, în mod obișnuit, în jos. În celula de debit din plastic, bulele sunt vizibile. Pentru controlul formării bulelor, aplicați o cantitate mică de contrapresiune în celula de debit sau în racordul în formă de T.

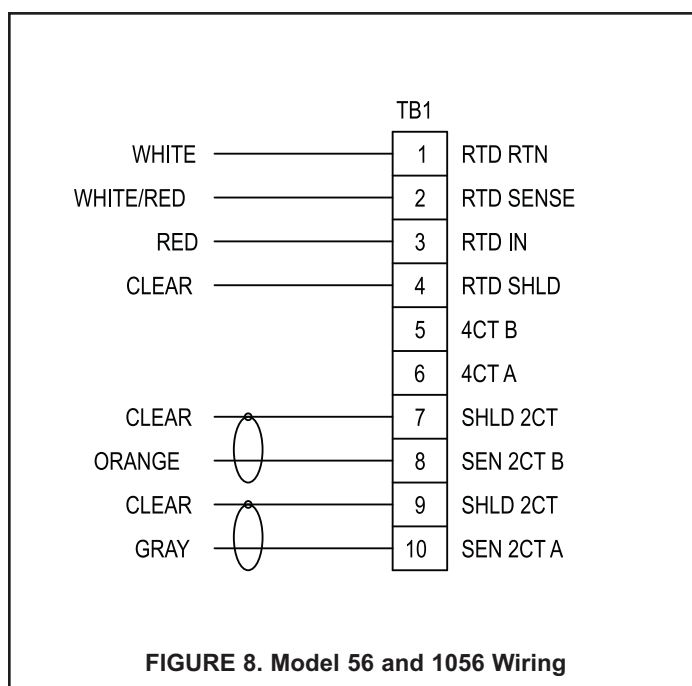
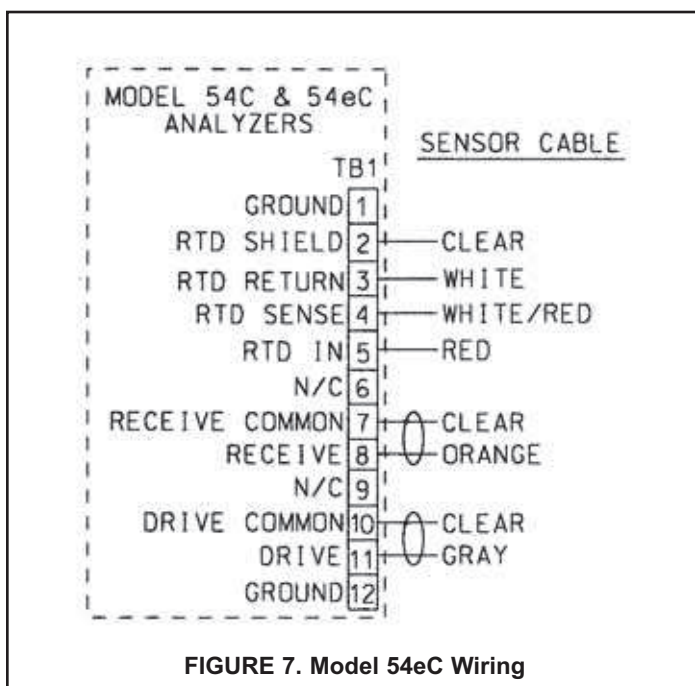


## CONEXIUNI

### CULORILE CONEXIUNILOR ȘI CONECTORII LA SENZORI

CULOARE	FUNCȚIE
Gri	Se conectează cu electrodul din exterior
Transparent	Coaxial shield for gray wire
Porocaliu	Connects to inner electrode
Transparent	Coaxial shield for orange wire
Roșu	
Alb cu dungii roșii	
Alb	
Transparent	Shield for all RTD lead wires

## WIRING DIAGRAMS



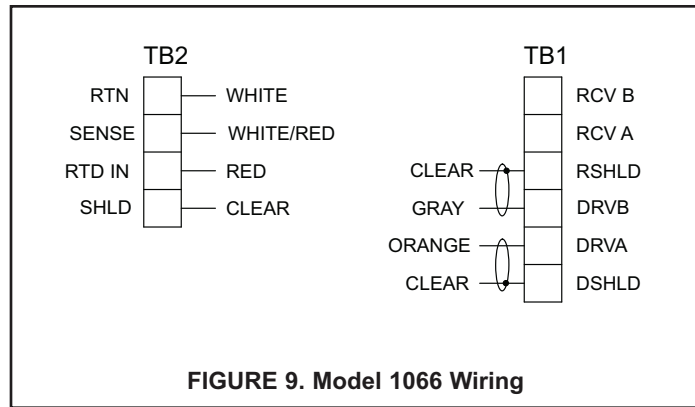


FIGURE 9. Model 1066 Wiring

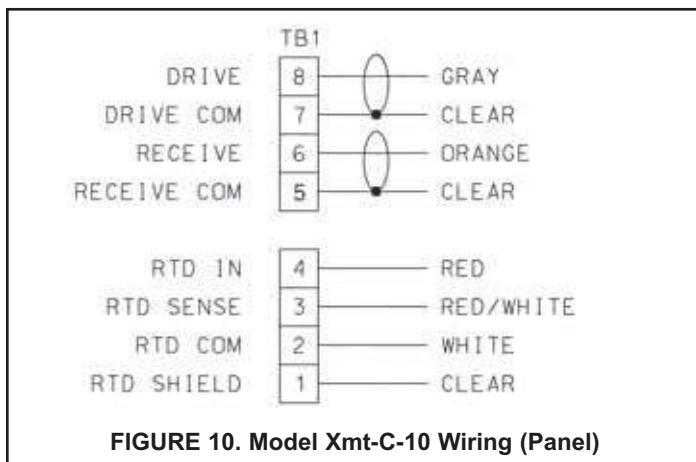


FIGURE 10. Model Xmt-C-10 Wiring (Panel)

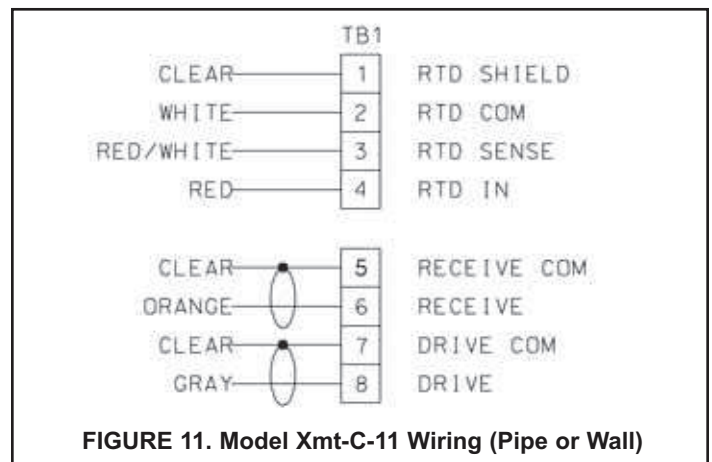


FIGURE 11. Model Xmt-C-11 Wiring (Pipe or Wall)

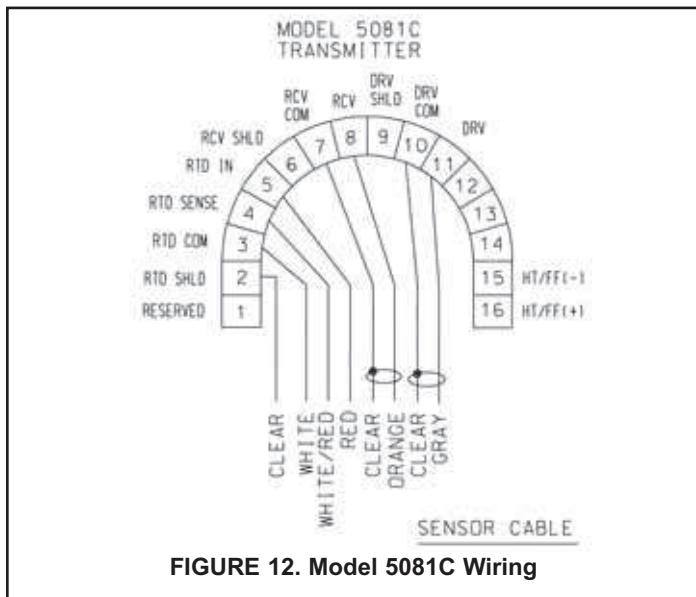


FIGURE 12. Model 5081C Wiring

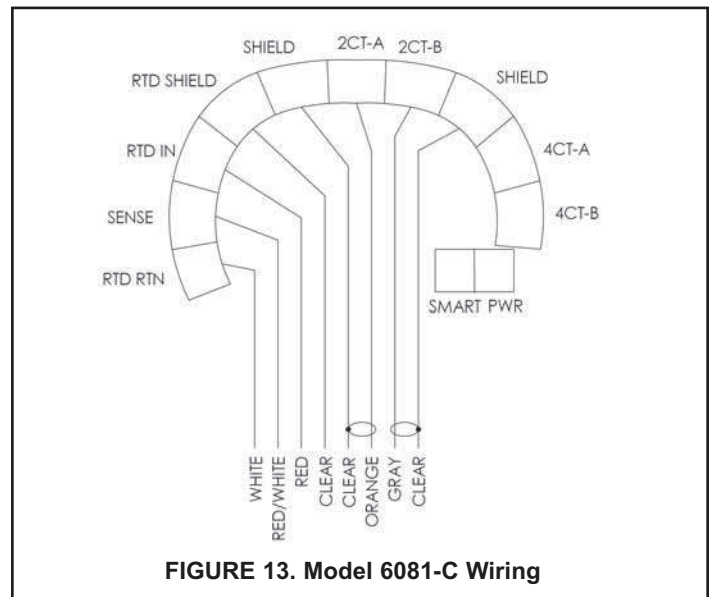
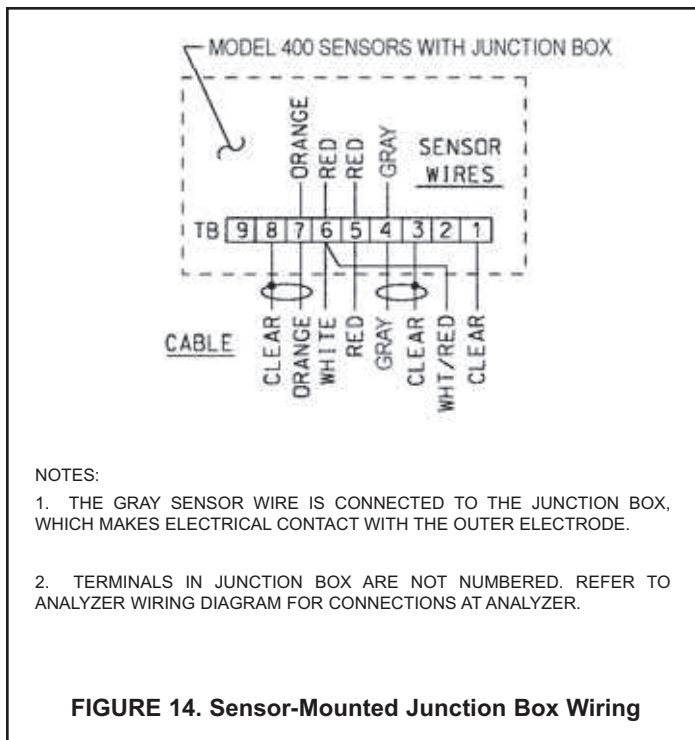


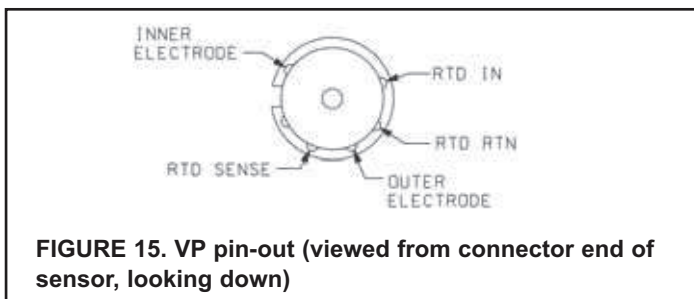
FIGURE 13. Model 6081-C Wiring

### WIRING THROUGH A JUNCTION BOX

Model 400-60 sensors have a junction box mounted on the end of the sensor. See Figure 14 for wiring instructions. If wiring connections are made through a remote junction box (PN 23550-00), wire point-to-point. Use cable 23747-00 (factory-terminated) or 9200275 (raw cable).



### PIN OUT DIAGRAM FOR 400VP



## CLEANING THE SENSOR

Use a warm detergent solution and a soft brush or pipe cleaner to remove oil and scale. Isopropyl alcohol (rubbing alcohol) can also be used to remove oily films. Avoid using strong mineral acids to clean conductivity sensors.

## CALIBRATION

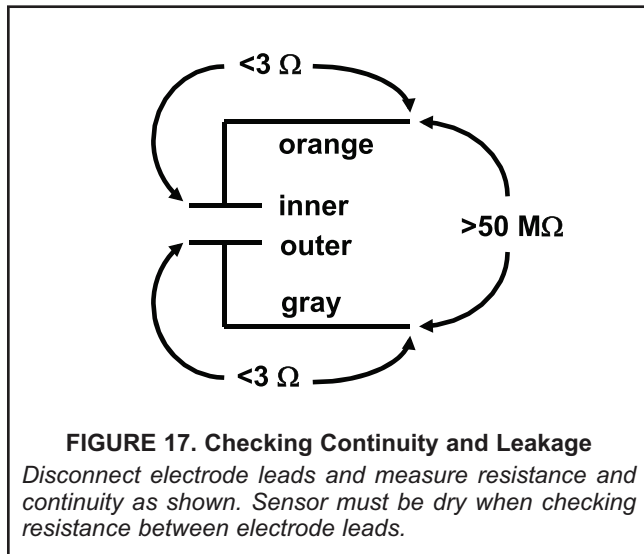
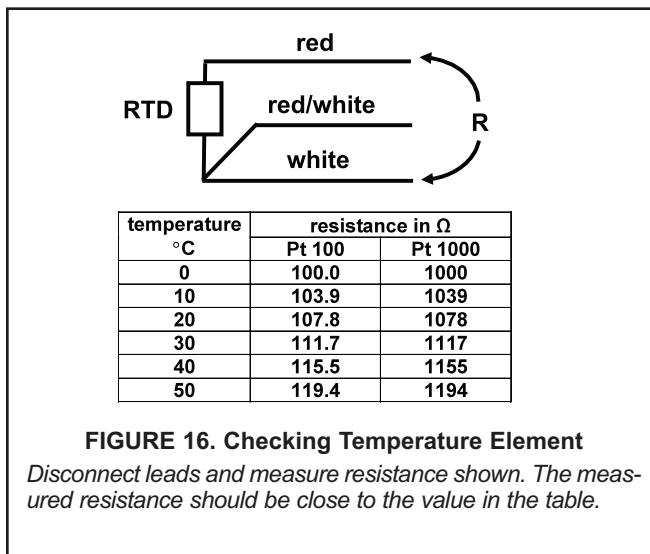
ENDURANCE conductivity sensors are calibrated at the factory and do not need calibration when first placed in service. Simply enter the cell constant printed on the label into the analyzer.

After a period of service, the sensor may require calibration. The sensor can be calibrated against a solution having known conductivity or against a referee meter and sensor. If using a standard solution, choose one having conductivity in the recommended operating for the sensor cell constant. Refer to the analyzer manual or product data sheet for recommended ranges. Do not use standard solutions having conductivity less than about 100 uS/cm. They are susceptible to contamination by atmospheric carbon dioxide, which can alter the conductivity by a variable amount as great as 1.2 uS/cm (at 25°C). Because 0.01/cm sensors must be calibrated in low conductivity solutions, they are best calibrated against a referee meter and sensor in a closed system.

For more information about calibrating contacting conductivity sensors, refer to application sheet ADS 43-024, available on the Rosemount Analytical website.

## TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
Off-scale reading	Wiring is wrong.	Verify wiring.
	Temperature element is open or shorted.	Check temperature element for open or short circuits. See Figure 16.
	Sensor is not in process stream.	Be sure sensor is completely submerged in process stream.
	Variopol cable is not properly seated.	Loosen connector and reseal.
	Sensor has failed.	Perform isolation checks. See Figure 17.
Noisy reading	Sensor is improperly installed in process stream.	Be sure sensor is completely submerged in process stream.
	Variopol cable is not properly seated.	Loosen connector and reseal.
Reading seems wrong (lower or higher than expected)	Bubbles trapped in sensor.	Be sure sensor is properly oriented in pipe or flow cell. See Figure 1. Apply back pressure to flow cell.
	Wrong temperature correction algorithm.	Check that temperature correction is appropriate for the sample. See analyzer manual for more information.
	Wrong cell constant.	Verify that the correct cell constant has been entered in the analyzer and that the cell constant is appropriate for the conductivity of the sample. See analyzer manual.
Sluggish response	Electrodes are fouled.	Clean electrodes.
	Sensor is installed in dead area in piping.	Move sensor to a location more representative of the process liquid.



## NOTES



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