

MODEL 450 CONDUCTIVITY TRANSMITTER Specification

Physical Data	
<i>PROPERTY</i>	<i>CHARACTERISTIC</i>
Display	Four and one half LCD digits, 1.5 cm (0.6 in) displays for conductivity, temperature, error codes, prompts and diagnostic information
Display Ranges	Conductivity: 0 μ S/cm to 9,999 μ S/cm and 0 mS/cm to 9,999mS/cm TDS: 0 to 9,999 ppm (parts per million) or mg/L and 0 to 9,999 ppt (parts per thousand) or g/L Temperature: -10.0 °C to 210 °C (14.0 °F to 410 °F)
Keypad	4 pushbutton entry keys
Case Dimensions	10 cm \times 10 cm \times 10 cm (4 in \times 4 in \times 4 in)
Surface Mounting Dimensions	Horizontal: 5.4 cm (2 1/8 in) Vertical: 11.7 cm (4 5/8 in)
Weight	0.9 kg (2.0 lb)
Shipping Weight	1.4 kg (3.0 lb)
Shipping Dimensions	30 cm \times 23 cm \times 23 cm (12 in \times 9 in \times 9 in)
Environmental Data	
<i>PROPERTY</i>	<i>CHARACTERISTIC</i>
Temperature	Operational: 5.0 °C to 45 °C (41.0 °F to 113 °F) Storage: -10.0 °C to 55 °C (14.0 °F to 131 °F) Relative Humidity: 80 % maximum; non-condensing
Enclosure Ratings	IP65 (NEMA 4X)
Electrical Ratings	24 VDC (min. 17 VDC, max. 36 VDC); lift off voltage 17 VDC. 4 to 20 mA.
Electrical Requirements	17 VDC to 36 VDC, 24 VDC nominal. Quality ground required for microprocessor.

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Operational Data										
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Accuracy	Conductivity: $\pm 0.5\%$ of measured range Temperature: $\pm 0.3\text{ }^{\circ}\text{C}$									
Precision	Conductivity: ± 1 digit (0.01 $\mu\text{S/cm}$) Temperature: ± 1 digit (0.1 $^{\circ}\text{C}$)									
TDS (total dissolved solids) measurement	calculated by multiplying conductivity at 25 $^{\circ}\text{C}$ by solids contact factor (SCF) of 0.7; SCF adjustable within range of 0.5 to 1.1.									
Response Time	90% within 5 s (default), function of flow and temperature. Damping adjustment: 0 s to 60 s									
Temperature Compensation	Automatic 1000 Ω RTD Auto: -10.0 $^{\circ}\text{C}$ to 210 $^{\circ}\text{C}$ (14.0 $^{\circ}\text{F}$ to 410 $^{\circ}\text{F}$) Manual: -10.0 $^{\circ}\text{C}$ to 210 $^{\circ}\text{C}$ (14.0 $^{\circ}\text{F}$ to 410 $^{\circ}\text{F}$) <table border="1" data-bbox="527 972 1312 1089"> <thead> <tr> <th><i>Function</i></th> <th><i>Compensation Type</i></th> <th><i>Characteristic</i></th> </tr> </thead> <tbody> <tr> <td>Default</td> <td>Linear</td> <td>2 % per $^{\circ}\text{C}$</td> </tr> <tr> <td>Adjustable</td> <td>Linear</td> <td>0.1 % to 5.0 % per $^{\circ}\text{C}$</td> </tr> </tbody> </table>	<i>Function</i>	<i>Compensation Type</i>	<i>Characteristic</i>	Default	Linear	2 % per $^{\circ}\text{C}$	Adjustable	Linear	0.1 % to 5.0 % per $^{\circ}\text{C}$
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Default	Linear	2 % per $^{\circ}\text{C}$								
Adjustable	Linear	0.1 % to 5.0 % per $^{\circ}\text{C}$								
Cell Constant Range	0.01/cm to 100.0/cm									
Output	One continuous, programmable 4 mA to 20 mA output; isolated, max. load 250 Ω . Convertible to 1 VDC to 5 VDC.									