

Conductivity Transmitter Model 453-9 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 1 μ S/cm; 0 μ S/cm to 1,000 μ S/cm, and 0 mS/cm to 1,000 mS/cm Temperature: -10.0 $^{\circ}$ C to 210 $^{\circ}$ C (14.0 $^{\circ}$ F to 410 $^{\circ}$ F)
Operation	Via intrinsically safe infra-red remote control.
Enclosure	Explosion proof, barrel housing
Mounting	Any 90 degree increment from standard; supplied with 2 in pipe mounting kit (<i>may be used to surface mount</i>).
Weight	3.5 kg (7.7 lb)
Shipping Weight	4.1 kg (9.0 lb)
Shipping Dimensions	46 cm \times 30 cm \times 23 cm (18 in \times 12 in \times 9 in)
Environmental Data	
<i>PROPERTY</i>	<i>CHARACTERISTIC</i>
Temperature	Operational: 5.0 $^{\circ}$ C to 40 $^{\circ}$ C (41.0 $^{\circ}$ F to 104 $^{\circ}$ F) Storage: -10.0 $^{\circ}$ C to 55 $^{\circ}$ C (14.0 $^{\circ}$ F to 131 $^{\circ}$ F) Relative Humidity: 80 % maximum; non-condensing
Enclosure Ratings	-Class 1 Groups B, C & D; Class 2 Groups E, F & G rating. -NEMA 4, watertight, dustile rating. -NEMA 7, hazardous; for indoor use Class 1, Groups A, B, C & D as defined by NEC. -FM Approved. -CSA certified. -Cenelec Certified, EExd IIC, IP66.
Electrical Ratings	24 VDC (min. 16 VDC, max. 40 VDC); lift off voltage 16 VDC; 4 mA to 20 mA.
Electrical Requirements	16 VDC to 40 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 $\mu\text{S}/\text{cm}$) Temperature: ± 1 digit (0.1 $^{\circ}\text{C}$)	
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: $-10.0\text{ }^{\circ}\text{C}$ to $210\text{ }^{\circ}\text{C}$ ($14.0\text{ }^{\circ}\text{F}$ to $410\text{ }^{\circ}\text{F}$) Manual: $-10.0\text{ }^{\circ}\text{C}$ to $210\text{ }^{\circ}\text{C}$ ($14.0\text{ }^{\circ}\text{F}$ to $410\text{ }^{\circ}\text{F}$)	
	<i>Compensation Type</i>	<i>Function</i>
	Linear	Default Adjustable
		<i>Characteristic</i> 2 % per $^{\circ}\text{C}$ 0.1 % to 5.0 % per $^{\circ}\text{C}$
Auto-Range Multipliers	Cell constant $\times 100$, $\times 1000$, $\times 10,000$, or $\times 100,000$	
Cell Constant Range	0.001/cm to 100.0/cm	
Output	One continuous, programmable 4 mA to 20 mA output; isolated, max. load 500 Ω . Convertible to 1 VDC to 5 VDC.	