



**PATHFINDER**  
INSTRUMENTS

## OPERATING MANUAL

### Pathfinder Model CT-1000 Transmitter



### Description

The Model **CT-1000** miniature transmitter is a 2-wire, 4-20 mA / 1-5 VDC conductivity transmitter featuring epoxy encapsulated construction, high performance, RoHs compliance and small physical size. This transmitter converts the Conductivity probe signal to a usable 4ma to 20mA current (1-5 VDC using a load resistor) signal proportional to the conductivity level. Any DC power supply from 12 to 36V may be used. There are two adjustments “ZERO” and “SPAN” that are used for calibration. The output can be monitored or used as a process variable with a loop powered meter, recorder or PLC.

### Specifications:

<b>Input</b>	Conductivity Probe any K Factor
<b>Analog Output</b>	4-20mA/ 1-5VDC
<b>Operating Power Supply</b>	12 to 36VDC
<b>Load Resistor</b>	250ohms
<b>Linearity</b>	±.02 PPM units
<b>Operating Temperature Range</b>	-25° to +70°C
<b>Temperature Compensation</b>	Automatic
<b>Reverse Polarity Protection</b>	Internal diode
<b>Dimensions</b>	2" X 1.5" X 1"

## Installation

1. There are two #6-32 mounting holes on 3/4" centers are provided on the back of the transmitter. The transmitter can be mounted in an electrical box, weather-proof box, or Din rail.
2. The output wires must be isolated from ground; connections are made to the terminal strip observing polarity to the terminals label as "+, -". These wires are to be connected to a D.C. power supply through a load resistor or a loop device. The wires can be as long as necessary. Connect the ground terminal to earth ground. Connect probe wires as labeled.
3. The loop device or load resistor can be either in the positive or negative power supply lead.
4. Once installation is complete turn on supply voltage and calibrate. With the probe dried and in air, adjust "ZERO" for an output current of 4.00mA.
5. Put the conductivity probe in a Full Scale solution and adjust "SPAN" for an output current of 20.00mA.  
If you do not have the full scale solution, use equation of Known Solution/Full scale of transmitter x 16 + 4 to calibrate "SPAN"

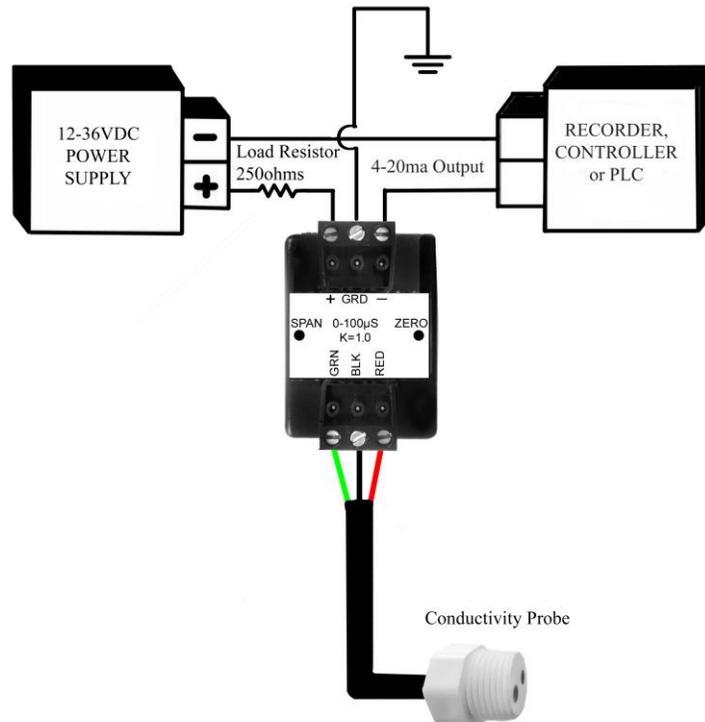
## Probes available for the CT-1000

### Part Numbers and Description:

Pathfinder - CS-100 - 0 To 100  $\mu\text{S}$  / K=0.1

Pathfinder - CS-1000 - 100 To 2000  $\mu\text{S}$  / K=1.0

Pathfinder - CS-5000 - 2000 To 10,000  $\mu\text{S}$  / K=2.5



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