

OPERATING MANUAL

Pathfinder Model EMIT-ORP Transmitter



Description

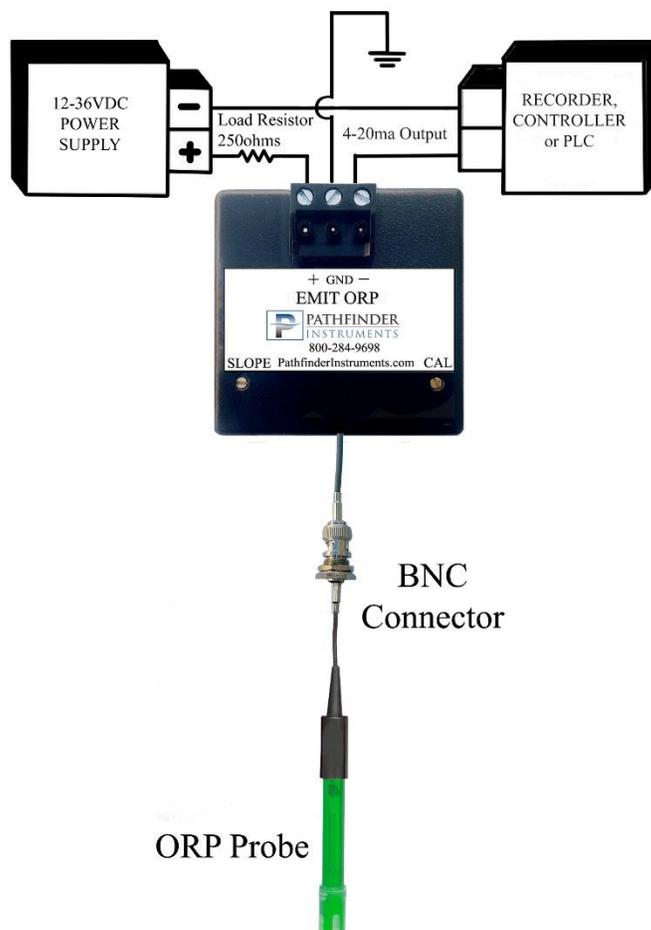
The **Model EMIT-ORP** (encapsulated miniature isolated transmitter) is a 2-wire, 4-20 mA/ 1-5 VDC ORP transmitter featuring input to output isolation, high performance and small size. The transmitter accepts as its input any ORP probe via a BNC coaxial connector. It transforms the probe signal to a 4 to 20mA current (1-5 VDC using a load resistor) proportional to the ORP level. This output may be transmitted over two wires to a control location, the same 2 wires provide power to the transmitter. Any D.C. power supply from 12 to 36V may be used. There are two adjustments on the transmitter to calibrate probes for "SPAN" and "ZERO". The output can be monitored or used as a process variable with a loop powered meter, recorder or PLC.

Specifications

Input:	-1000 to +1000mV
Analog Output	4-20mA / 1-5VDC
Power Supply	12 to 36VDC
Load Resistor	250Ω for 1-5VDC
Linearity	± 2mV
Input to Output Isolation	1000V RMS
Operating Temperature Range	-25° to +70°C
Reverse Polarity Protection	Internal diode
Dimensions	2" × 2" × 1.5"

Installation

- A. Upon receiving your order of the EMIT-ORP transmitter check to verify that the part number and quantities agree with the enclosed packing slip. If any discrepancies exist, be sure to contact Pathfinder Instruments immediately. Inspect all transmitters for damage that may exist due to improper handling. If such a case exists save the shipping carton and shipping material and contact your shipping agent immediately.
- B. There are two #6-32 mounting holes. The transmitter can be mounted in an electrical box, weather-proof box, or DIN rail.
- C. The input probe connector is a BNC jack. Use only a coaxial cable that has insulation around the shield. The shield is isolated from ground, and this isolation should be maintained for proper operation. For best results, the probe cable should not be longer than 25 feet. Long cables result in a slow response because the probe must charge the cable capacitance through the high probe source resistance.
- D. The output wires are isolated from ground; connections are made to the terminal strip observing polarity to the terminals marked +, - out. These wires can be connected to a D.C. power supply through a load resistor for a VDC output. The wires can be as long as necessary. Connect the ground terminal to earth ground.
- E. To calibrate the transmitter use a millivolt source of known accuracy. Apply -1000mVDC to the input connector and adjust the "ZERO" pot for 4.00mA draw, reverse the input connections and apply +1000mVDC to the input, adjust the "SPAN" pot for 20.00mA. Repeat the process until the "ZERO" and "SPAN" end points are set (there is some interaction between the adjustments)



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