

# 2-Wire Conductivity Transmitter

## Operating Instructions



### 1 Preface

Thank you for purchasing the Eutech 2-wire Conductivity Transmitter.

This manual serves to explain the correct installation and operations of the XTR Transmitters. Other Transmitters available individually are: pH, ORP (REDOX), Conductivity, Dissolved Oxygen and Temperature.

- EC-PH-XTR;
- EC-ORP-XTR;
- EC-CON-XTR;
- EC-DO-XTR; and
- EC-TEMP-XTR.

The information presented in this manual is subject to change without prior notice, as improvements are made to the product. While Eutech will endeavor to try its best to inform the market, this does not represent a commitment on the part of Eutech Instruments Pte Ltd.

Eutech Instruments does not accept any responsibility for damage or malfunction of the unit due to improper installation or operation of the Transmitter.

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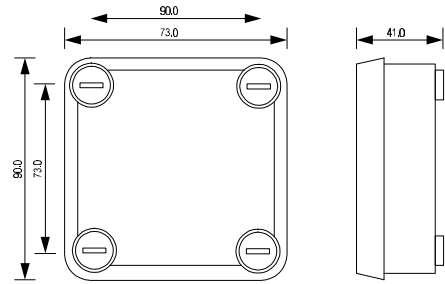
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### 2 Introduction

The Transmitter is used for the continuous measurement of pH, ORP (REDOX), Conductivity, Dissolved Oxygen or Temperature, in conjunction with an appropriate sensor. Data output is via 4-20 mA current output.

The Transmitter is housed in a IP65 enclosure, with openings for input and 4-20mA output.

### 3 Diagram and Dimensions (in mm)



### 4 Installation

Operating with one or several Transmitters:

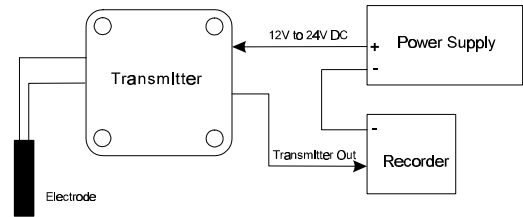


Figure 1 - Operating with 1 Transmitter

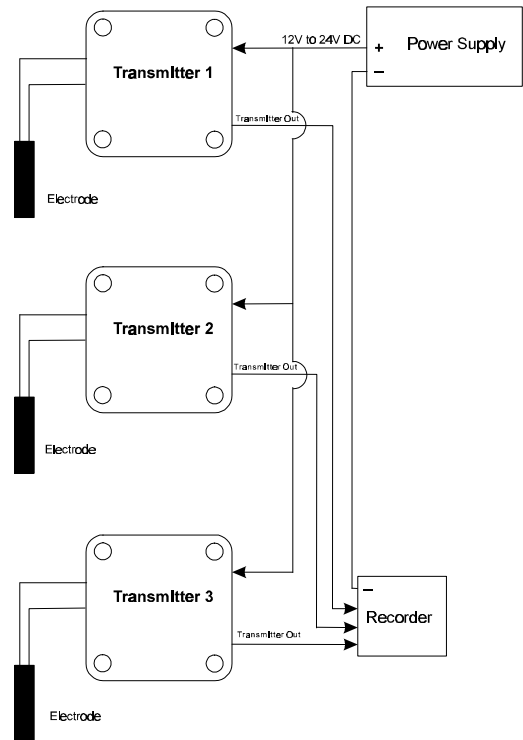
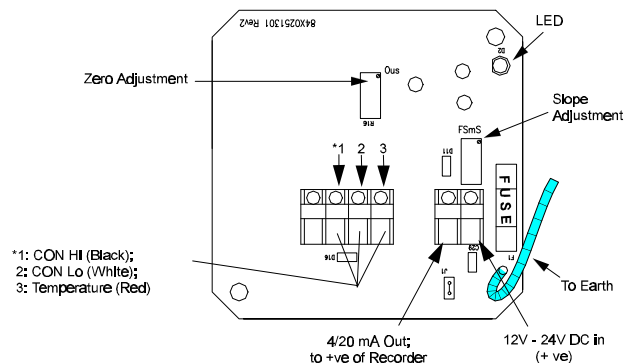


Figure 2 - Operating with several transmitters

### 5 Electrical Connections



## 6 Before Calibration

Remove cover of Transmitter and ensure that electrode is correctly connected as above. Connect Amp meter to the 4/20mA output of Transmitter (Appendix 1).

## 7 Conductivity Transmitter Calibration

Prepare fresh Calibrating solutions.

- 1) Hold electrode in air (electrode MUST be dry) and Amp meter should read 4mA; if not, calibration is necessary;
- 2) **Locate "Zero adjustment" trimmer; Using a fine screwdriver, slowly turn trimmer till Amp meter reads 4mA;**
- 3) For greater accuracy, adjust the slope with Standard calibrating solutions;
- 4) Rinse probe in de-ionised water and immerse in standard solution;
- 5) **In 1413  $\mu$ S solution, the output is 5.1304 mA;**
- 6) **In 2764  $\mu$ S solution, the output is 6.2112 mA;**
- 7) **In 12.88 mS solution, the output is 14.304 mA;**
- 8) Using a fine screwdriver, slowly turn trimmer, marked 'FSMS', till Amp meter reads correct mA value with respective Standard solutions.
- 9) Remember to disconnect Amp meter and close cover.

NB: For other Standard values, expected current output is based on:

$$mA = \{(16/20) \times \text{Conductivity value of Standard soln}\} + 4mA$$

## 8 Specifications

Model	ECCONXTR
Range	0.00 TO 20.00 mS
Accuracy	2% Full Scale
Calibration	2 pts
Input	3-wire (2-wires for Conductivity cell; 1 wire for Thermistor)
Output	4-20 mA
Operating Voltage	DC 12 V to 24 V
Load	100 Ohms max. for 12 V; 600 Ohms max. for 24V
Housing	77 x 77 x 28 mm, field mountable

## 9 Appendix 1

Connecting Amp Meter for Calibration

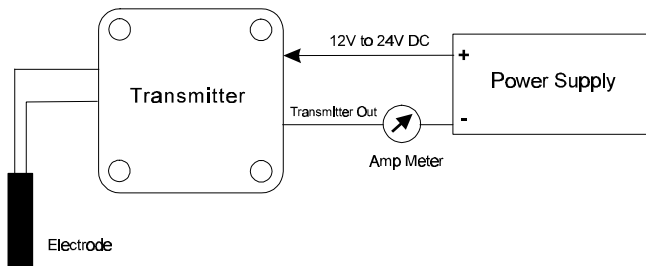


Figure 3 - Method One

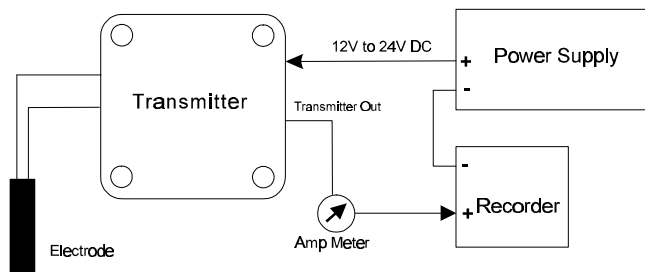


Figure 4 - Method Two

## 10 Ordering Information

### pH

Item	Cat Code
pH Transmitter	ECPHXTR
Combination pH Electrode, General, integral 5m cable	ECARTSO05B
Combination pH Electrode, w/PMP, integral 5m cable	ECARGTSO05B

### Dissolved Oxygen

Item	Cat Code
Dissolved Oxygen Transmitter	ECDOXTR
General Purpose D.O. probe, 0.5 – 40 ppm, Industrial, integral 5m cable	ECDODGEN
General Purpose D.O. probe, 0 – 10 ppm, Industrial, integral 5m cable	ECDOTPII

### ORP

Item	Cat Code
ORP Transmitter	ECORPXTR
Combination Platinum ORP Electrode, w/PMP, integral 5m cable	ECHPTTTSO05B
Combination Gold ORP Electrode, w/PMP, integral 5m cable	ECHTAUTTSO05B

### Conductivity

Item	Cat Code
Conductivity Transmitter	ECCONXTR
2-Pin SS,k=1.0, integral 3m cable	ECCONSEN46

### Temperature

Item	Cat Code
Temperature Transmitter	ECTEMPXTR
Pt 100 probe, SS316	ECPT10001M or ECPT10005M

### Power Supply

Item	Cat Code
120V Power Supply	EC-120-XTR
220V Power Supply	EC-220-XTR