

# 2-Wire Dissolved Oxygen Transmitter

## Operating Instructions



### 1 Preface

Thank you for purchasing the Eutech 2-wire Dissolved Oxygen 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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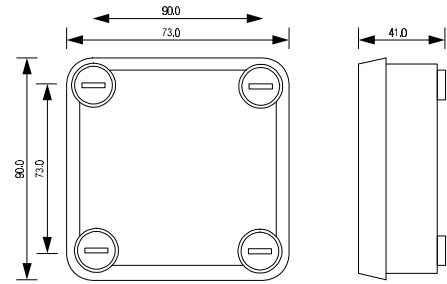
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### 2 Introduction

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:

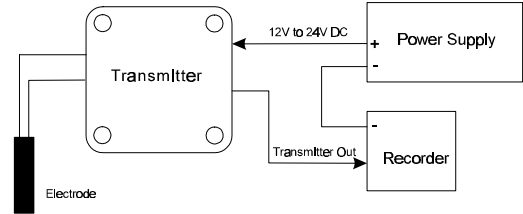


Figure 1 - Operating with 1 Transmitter

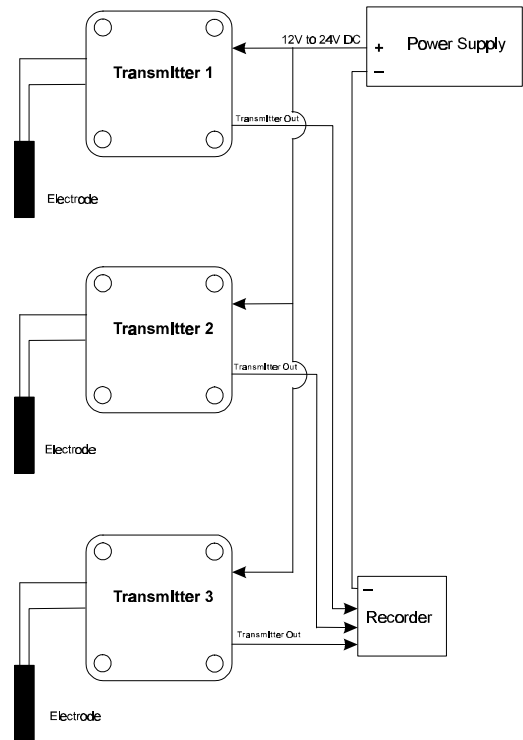
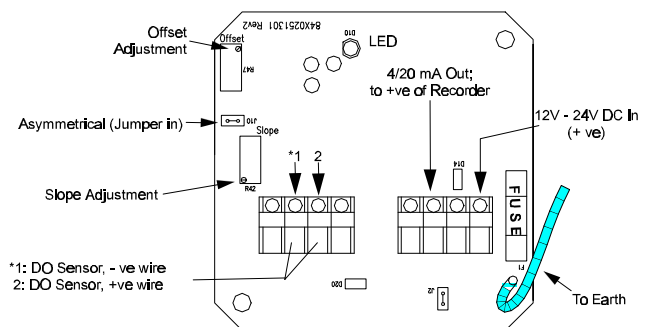


Figure 2 - Operating with several transmitters

### 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 Dissolved Oxygen Transmitter Calibration

- 1) Short Dissolved Oxygen input and observe Amp meter display;
- 2) Amp meter should read 4mA; if not, calibration is necessary;
- 3) **Locate "Offset adjustment" trimmer; Using a fine screwdriver, slowly turn trimmer till Amp meter reads 4mA;**
- 4) For greater accuracy, adjust the slope using Air as a reference;
- 5) Hold the dry probe in Air;
- 6) **In 100% Saturation (in Air), output is 12 mA;**
- 7) **In 200% Saturation, output is 20 mA;**
- 8) Using a fine screwdriver, slowly turn trimmer, marked 'Slope', till Amp meter reads correct mA value with respective Oxygen Saturation levels.
- 9) Remember to disconnect Amp meter and close cover.

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

$$mA = \{(16/200) \times \% \text{ Saturation of Dissolved Oxygen}\} + 4mA$$

## 8 Specifications

Model	ECDOXTR
Range	0 to 200%
Accuracy	± 1.5% Full Scale
Calibration	1 point (100% air saturation)
Input	Only with Galvanic DO probe – 2 wires
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

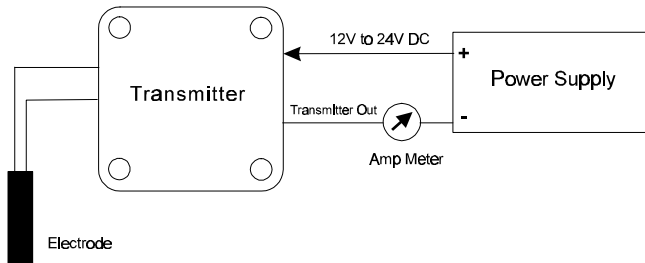


Figure 3 - Method One

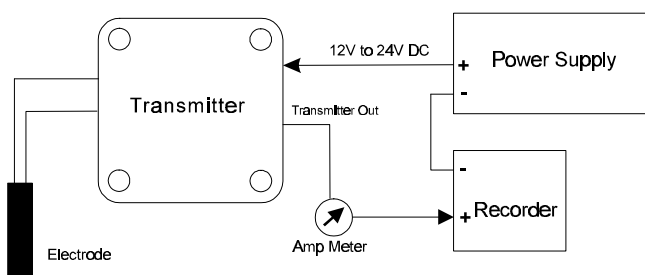


Figure 4 - Method Two

## 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	ECDODEN
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	ECHTPPTSO05B
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