ETCO2 Sensor
Manual

1 Performance Index：

1.1 Standard： Obey 61326-1/61326-2-6 ； 61010-1

1.2 CO2 Concentration Measuring Range：

0 – 150 mmHg

0 – 19.7 %

0 – 20 kPa

1.3 CO2 Concentration Measuring Accuracy

Concentration Range	Accuracy
0-40mmHg	±2 mmHg
41- 70 mmHg	±5% of reading
71 – 100mmHg	±8% of reading
101-150mmHg	±10% of reading

1.4 CO2 Concentration Measuring Resolution：

0.1mmHg

1.5 Respiration Rate Measuring Range：

3 - 150 BPM Accuracy：±1 BPM

1.6 Calibration Requirements：

Not required frequency calibration by user

1.7 Adjustable Compensation Parameters：

Pressure Compensation Range：450 -850mmHg

Oxygen Compensation Range：0-100%

Balance Gas Compensation N2O, He

1.8 Voltage Requirements：

5.0VDC ±5%，600mA (Sensor Average Power Consumption Less than 1W)

1.9 Temperature and Humidity：

Operating: 0º to 40°, 10 to 90% RH

Storage: -40º to 70ºC, <90% RH

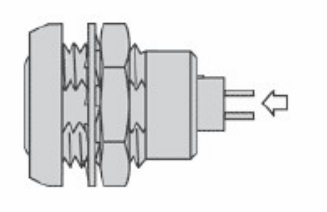
2 Hardware Definition：

2.1 Sidestream CO2 Sensor：

图 2.1

2.1.1 Connector Definition：

Sidestream CO2 Sensor use 8 Pin Double Cut Plug, Its PIN Definition as follows:



Pic 2.2Welding

Pic2.3 PIN1-PIN8

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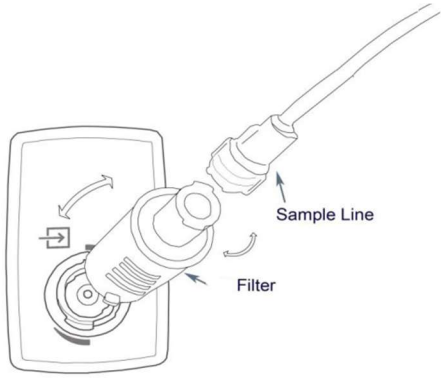
PIN	Definition	Description
PIN1	VA	5.0V
PIN2	AGND	GND
PIN3	DGND	GND
PIN4	VDD	5.0V
PIN5	TXD	CO2 Sensor Data SEND
PIN6	RXD	CO2 Sensor Data RECEIVE
PIN7	AGND	GND
PIN8	SYNC	Communication

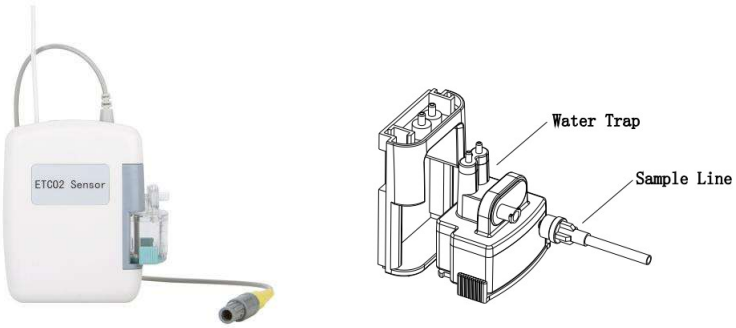
2.2 Connecting Method

2.2.1 Sidestreram CO2 Sensor Connect with Filter



Pic 2.4

2.2.2 Connecting with water trap (see pic 2.5)



Pic 2.5

3 Notes：

3.1 Calibration Zero

In order to make sure the sensor can up to the best measuring accuracy, the user is advised to calibrate zero sensor each time before measure.

However, this operation is not necessary.

During calibrating zero operation， the user has to make sure that the gas for sample should be air. When Apnea alarm(“no breath” or “Apnea”) show on display, the user has to make sure it is not use sample patient’s CO2 gas, then the user can calibrating zero

3.2 When showing “Check adapter” alarm on display, the user need to check whether the adapter is connected, if not connect the adapter and show the alarm, please connect the adapter.

3.3 When the sensor get Power Supply, if the user did not doing any related compensation settings, then “compensation not set” alarm may show on the display.

Enter Set Menu，Modify setting to related Compensation Parameters, the user can also keep default setting, this time the “compensation not set” would disappear from the display. The settings for sensor would not be saved when power off. The User should reset when next time power on. The user can also modify another compensation such as atmospheric pressure, N2O, and O2.

3.4 For Sidestream Sensor, please keep Air way connector in correct location, when the dewater accessories are useless resulted from the water gas too much or dewater accessories over lifetime. The following situation would appear:

A:water gas is too much and jam the air way, would showing ”check sampling line” alarm on display.

B:water gas is too much and flow into the inside sensor, would show ”zero required” or ”check adapter” alarm on display.

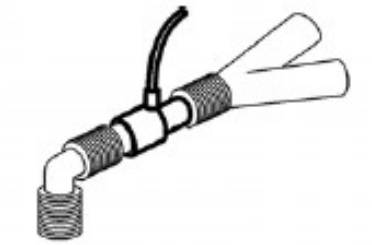
For “Zero required” alarm， the user just need to Zero Calibrating to make it disappear.

For ”check adapter” alarm. the user should get the dried air for the sensor, clean the

water gas from the sensor. If alarm continue, the sensor still can not work normally, please contact the manufacturer for maintenance.

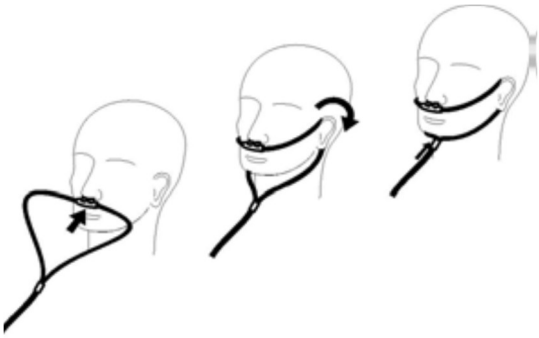
Connecting Method：

4.1.1 Connect to Ventilator or Anaesthesia machine air way (through air way adapter and sample line),see Pic 5:



Pic 5

4.1.2 Connect to nostrils of the Monitoring Objects (use nasal line),see pic6



Pic 6

Apex1：Accessories

Apex Pic 1. Water filter

Apex Pic 2. Sample Line

Apex Pic 3. L-connector and nafion line