

Accurate Spot Check User Friendly Interface Emergency Companion Connectivity

Prime Innovation for Medical Application

SAT TIP®
SERIES

FINGER PULSE OXIMETER

ZUG®
MEDICAL SYSTEMS



OVERVIEW

SatTip device is a life-saver portable pulse oximeter. It displays highly accurate readings of SpO2, Pulse Rate, Perfusion index and Respiration Rate. Ideal for all medical setups (hospital, clinics, EMS) and homecare related applications where prompt and precise measurement of vital signs is required. With SatTip, monitoring of persistent respiratory diseases, long-term geriatric illnesses and patient transport is done with ease and precision.

SATT-S200 digital finger pulse oximeter is the basic model of SatTip Series that offers the features of a conventional oximeter in a compact, user friendly, portable configuration. With its dual wavelength detection, it accurately measures blood oxygen saturation levels (SpO2) and pulse rate (PR) on LED display.

The SATT-S400 variant has additional features of measuring perfusion index (PI), Respiration Rate (RR) and Optional Bluetooth connectivity along with a highly accurate SpO2 bar graph and plethysmogram on an easy-to-read organic light-emitting diode (OLED) display. It also supports multiple languages (English, French, Italian, Spanish, Portuguese, Russian).

SATT-S200



- > LED Display
- > SPO2
- > Pulse Rate
- > Pulse Bar

SATT-S400



- > OLED Display
- > SPO2
- > Pulse Rate
- > Perfusion Index
- > Respiration Rate
- > Pleth / Pulse Bar
- > Adjustable Brightness
- > Optional Bluetooth

FEATURES

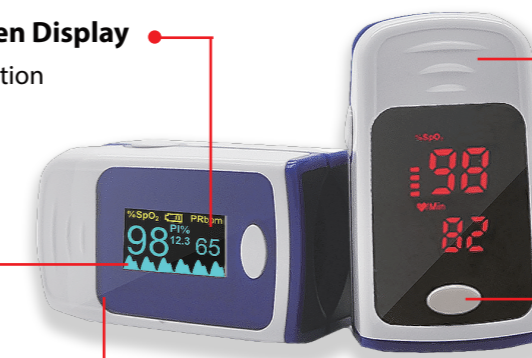
- Each device is Individually tested for accuracy and undergoes rigorous testing
- The only LED pulse oximeter that can read and display up to 100% for SpO2 value
- Lightweight, compact, attractive makes it easier to carry, and simple operations
- SpO2 and PR High & Low Alarm settings.
- Very low power consumption with power indicator; two AAA batteries can power the SatTip Oximeters continuously for up to 6 hours
- Multi colors OLED display with Adjustable brightness
- Displays SpO2, PR, SpO2 waveform (pleth or line)
- Calculation of Respiration Rate based on SpO2 signal
- Displays signal strength
- Beep on Pulse (on/off) and Demo mode.
- Automatically powered off when not in use for longer than 8 seconds
- Four directional display modes, convenience to overview the data
- Accommodates widest range of finger sizes from pediatric to adult

Multi-directional Screen Display

Manual screen rotate function

Plethysmographic Waveform

Provides high-resolution display of the patient's pleth waveform



Durable, Lightweight Design

For use in clinical and homecare environments.

Classic Operation Button

A small button integrates all functions, avoids tedious operations, and brings customers an immersive consumer experience.

A Variety Of Model Color Matching

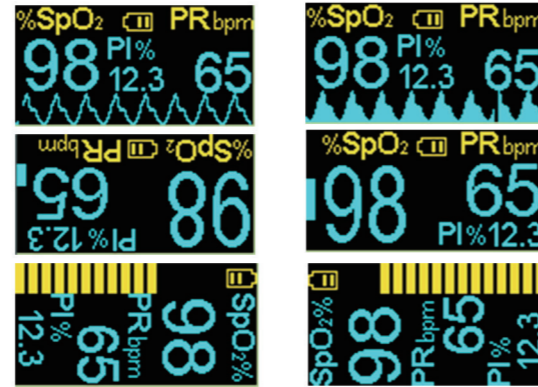
Available in Five colours: Green, Yellow, Pink, Blue and Black

DISPLAY TYPES

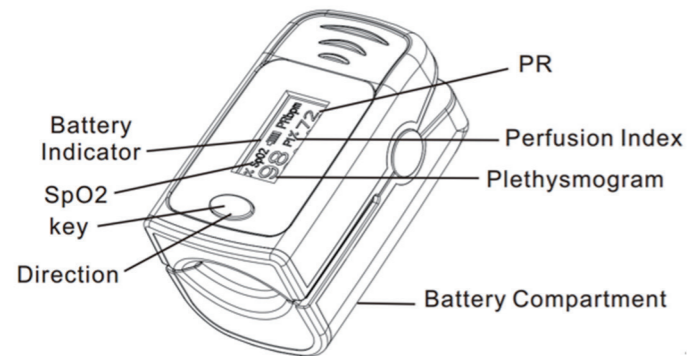
- > SATT-200 has a 1.5-inch Red LED Segment Display. It can monitor Pulse Rate, SPO2 level, and display a Pulse bar.
- > SATT-400 has a 0.96-inch OLED Color Display. It can monitor Pulse Rate, SPO2 level, Perfusion index, Respiration Rate and Pleth, Pulse Bar.

DISPLAY ORIENTATION

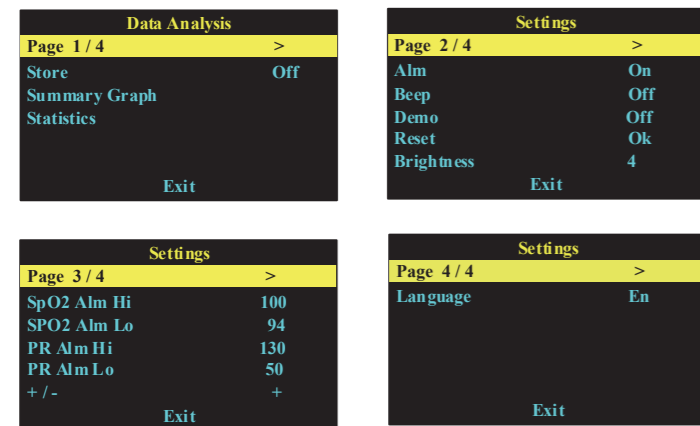
- > The front view of SATT-S400 includes screen display and a function key. The screen display measurement information concerning parameters and waveforms. The function of the keys is to control the boot, switch the screen orientation and enter or exit the function menu.
- > Each time one presses the button for less than 0.5 seconds, one can switch between 6 different display interfaces. As shown in the pictures on the right.



MENU SELECTION



- > The button allows 2 modes according to the pressing time:
 - Short-press (below 0.5sec) is used to select an item by moving a highlight bar to the next item,
 - while a long-press (above 0.5sec) is used to change the item's value, status or open a new page.



- > Long-press on the power button in sequence, the oximeter will open the Menu page as shown in Figures.

When the bar is on the second row, a long-press makes the screen switch to the next page.

DATA ANALYSIS FUNCTION



Data Analysis Setup

Long-press the button, select "store" on Figure A, then the display is shown as Figure B. Select "OK", the status of "Store" will change to "On" (Figure C). Then put the finger into rubber hole of the oximeter to start a new continuous measurement. The maximum recording time is 8 hours. When the measurement is finished, take off the oximeter. Long-press the button change the status of "Store" to "Off" or turn on the oximeter again and then the status of "Store" also display "Off" as shown on Figure D.

RESULTS ANALYSIS DISPLAY



Results Analysis Viewing

Once the "Store" status is off and "Summary Graph" and "Statistics" are OK, select "Summary Graph" with a long press to open the graph page as shown in Figure E. Each full page display 15 minutes. Select "<" or ">" and long press to see the previous or next page. Select "<<" or ">>" and long press to see the first or last page. Select Return Arrow to return to Figure D. Select "Statistics" and long press to open the Statistics page as shown Figure F.

	SATT-S200	SATT-S400
Parameters		
SpO2 (Oxygen Saturation)	✓	✓
PR (Pulse Rate)	✓	✓
Pi (Perfusion Index)		✓
RR (Respiration Rate)		✓

TECHNICAL SPECIFICATIONS

Operating Environment

Operating Temperature	0 to 40°C
Operating Humidity	15% to 95% RH (non-condensing)
Atmospheric pressure	70.0 kPa to 106.0 kPa

Storage Environment

Storage Temperature	-20 to 60°C
Storage Humidity	10% to 95% RH (non condensing)
Atmospheric pressure	57.3 kPa to 106.0 kPa

SPO2 Measurement

Range	0 ~ 100%
Display Resolution	1%
Accuracy	For 70 ~100% : +/-2%. For 0 ~ 69% : unspecified

Pulse Rate Measurement

Range	25 ~ 250 bpm
Display Resolution	1 bpm
Accuracy	+/-3 bpm

PI

Measurement range	0~20%
Measurement accuracy	Undefined
Measurement resolution	0.001%

RR

Measurement range	5~150bpm
Measurement accuracy	±2bpm

Display Screen

Type	Red LED Segments or OLED
Size	For OLED Model: 0.96inch
Resolution	128 x 64 dots



Physical Characteristics

Size	64.5 x 38.2 x 35mm (L x W x H)
Weight	44g

Battery & Regulatory Compliance

Operating Batteries	Two 1.5 Volt AAA Batteries
EMC	EN 60601-1-2:2015
EMC Type	Class A
Anti-Electroshock Type	Class II Oximeter And internal Powered Oximeter
Anti-Electroshock Degree	BF Type
Waterproof Class	IPX2
Pulse Oximetry Standard	ISO 80601-2-61: 2017, COR1: 2018

ORDERING

Part Number	Designation		Included with device
SATT-S200 or SATT-S400	SatTip module	1	
SATT-L	Lanyard	1	
SATT-M	Instructions Manual	1	
SATT-B	AAA battery	2	(not provided)