TSS-800/900 ThermoSENSOR^{TM} Wireless Temperature Sensor

User Guide

Federal Communications Commission (FCC) Statement

15.21
You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

Operation is subject to the following two conditions:
1) this device may not cause interference and
2) this device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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Introduction

The TSS-800/900 ThermoSENSOR^{TM} is a wireless temperature sensor for measuring a patient's body temperature. It is part of the SmartSense Wireless Integrated Sensing System – a system designed for monitoring of vital signs, tracking of the location of people and equipment, contact-tracing between people, and providing alert notification of people or equipment that has arrived at designated locations.

The ThermoSENSOR^{TM} is to be attached to patients' body, at the lower abdomen area, with the use of a comfortable and hypoallergenic dressing, such as the 3M Tegaderm, to continuously measure patient's body temperature.

Every 30 seconds, the sensor will take a temperature measurement and transmits the measured temperature to the SMN-800/900 SmartNODE.

Features

- Each ThermoSENSOR^{TM} has a unique ID
- Measures patient's body temperature by contact with patient's skin
- Wirelessly transmits ID and temperature data to the SMN-800/900 SmartNODE
- Sensor is activated or deactivated using SSW SmartSWITCH
- Sensor has a lifespan of up to 12 months of continuous usage (based on 30 seconds transmit interval)
- Water-resistant enclosure that allows cleaning using water or alcohol

Instruction for use

Identify an area for ThermoSENSOR™ to be pasted.

1. Place 3 fingers down from the navel.
   Refer to diagram.

2. Place the first layer of adhesive dressing about half the distance from the center to the side of the body.
   Refer to diagram.

3 fingers down
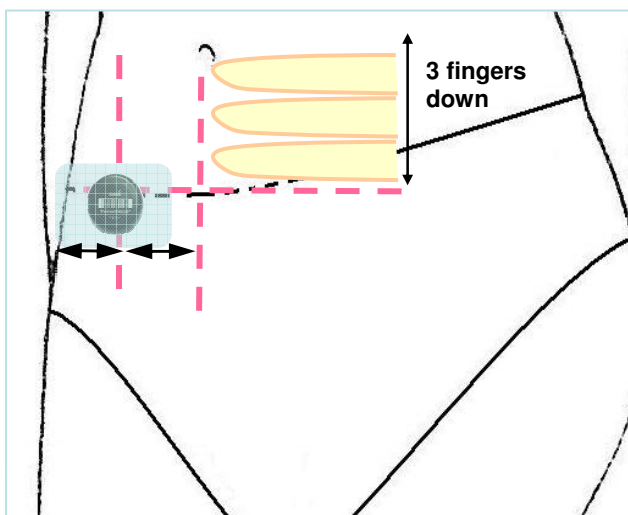
3. Place ThermoSENSOR™ on another layer of adhesive dressing*.
   The second layer of dressing should be pasted over the front of the sensor. Do not paste the dressing on the metal part of the sensor. You may use any suitable medical adhesive dressing e.g. 3M tegaderm

4. Place ThermoSENSOR™ (with the second layer of adhesive dressing) over the first layer of adhesive dressing.

5. For cleaning before use, wipe the ThermoSENSOR™ with an alcohol swab.

- Cadi Scientific recommends 3M Tegederm dressing for use with the ThermoSENSOR as it has been tested to have no adverse effect on the user/ThermoSENSOR.

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Specifications

Technical Data	
General	
Unique Sensor ID	24 bits
Thermistor accuracy	+/- 0.2^{o}C (32.0 to 42.0^{o}C)
Transmission Rate	
Data transmission rate	Every 30 seconds (on average)
RF	
RF Frequency	US (TSS-9xx): 919.8MHz or 925MHz
	Europe (TSS-8xx): 868.4MHz
Transmit Power	Less than -2dBm
Power Source	
Power source	Internal 3V lithium cell
Estimated battery life	12 months (@30 sec transmit interval)
Environment	
Operating temperature range	10 – 50°C
Water resistant	Yes
Physical	
Dimension	36mm DIA, 11.6mm HT
Weight	12g
Compliance	
Certification	CE, FCC
RF Compliance	ETSI EN 300 220
EMC Compliance	ETSI EN 301 489