Adaptive Bed Sensor

ABS

Description

For use as a bed occupancy sensor, either between the mattress and bedding, or under the mattress.

Theory of Operation

Most bed occupancy sensors have a binary output, either occupied or unoccupied. The distinction between the two states is whether the force applied to the bed occupancy sensor is greater than or less than a preset activation pressure. This presents a problem when the bed occupancy sensor is desired to be installed under the mattress. It is difficult to make a universal product that will reliably work under all of the various kinds and weights of mattresses.

The Adaptive Bed Sensor is able to measure the force applied to it. Thus it can measure the weight of the mattress, and compensate for it. After installation, the Adaptive Bed Sensor is calibrated as installed in an unoccupied bed. It uses this calibration value to set a threshold for determining whether the bed is occupied or unoccupied. After calibration, the Adaptive Bed Sensor continuously refines the threshold value and can automatically adapt to changes in the environment.

The signal to the owners monitoring system is similar to that of a conventional bed occupancy system. The Adaptive Bed Sensor provides an electronic switch to indicate occupancy/vacancy. The switch is closed in the occupied state, and open in the vacant state.

Additional Features

Constructed from a waterproof, anti-microbial (upper) material, and a waterproof, anti-slip (lower) material. The connection to the switch is via a supplied cable, a cable connector/jack, or a wireless transmitter, depending on the model of the Adaptive Bed Sensor SmartBox.

Telehealth Sensors Inc.
info@telehealthsensors.com
630-879-3101
www.telehealthsensors.com

Telehealth Sensors

Adaptive Bed Sensor

ABS

Construction

Parameter	Description
Top Material	PVC coated nylon cloth
Bottom Material	PVC coated polyester cloth
Interface	Normally open momentary contact, electronic switch
Cable	4-conductor, 24AWG, PVC shielded

Specifications

Parameter	Typical Val	Unit
Length	30	in
Width	11	in
Height	0.3	in
Max Operating Current	500	mA
Max Operating Voltage	24	V
Min Activation Force	50	lbs

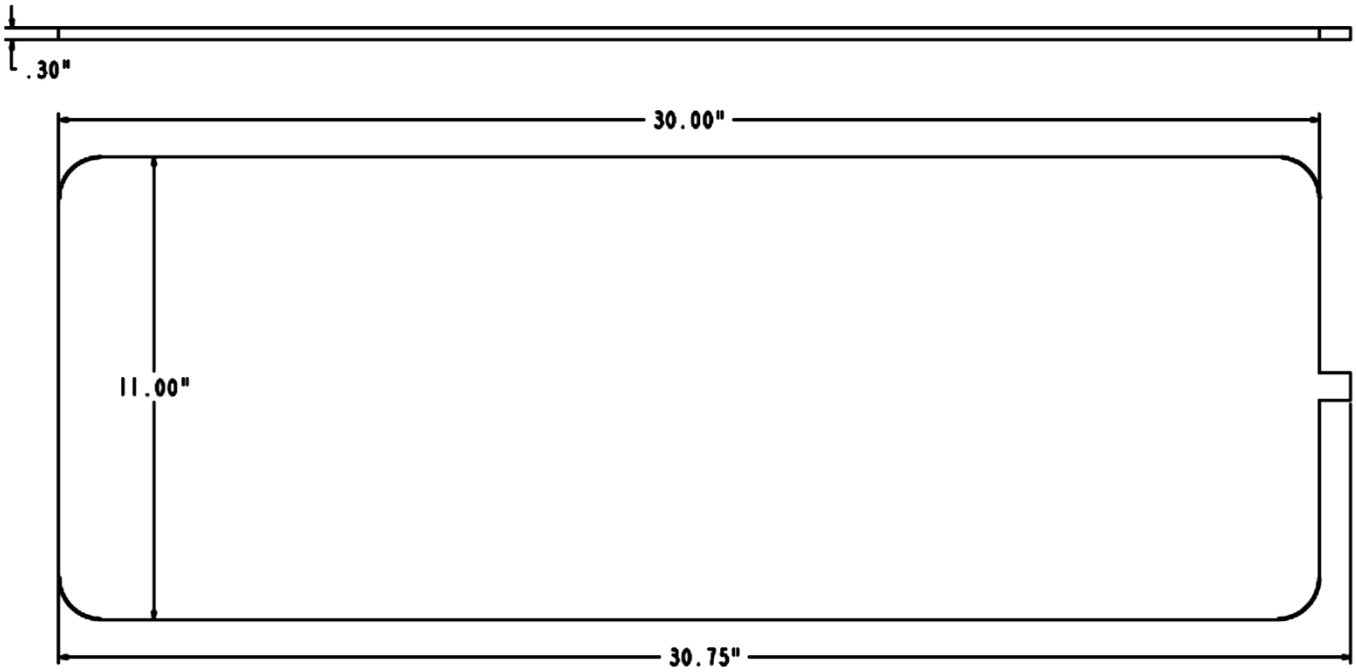
Telehealth Sensors Inc.
info@telehealthsensors.com
630-879-3101
www.telehealthsensors.com

Adaptive Bed Sensor

ABS

Physical Dimensions

Front View



Top View

Telehealth Sensors Inc.
info@telehealthsensors.com
630-879-3101
www.telehealthsensors.com