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Manufactured by:

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Yangzhou City, Jiangsu Province, 225009, P.R.China

on behalf of

Charder Electronic Co., Ltd.

No.103, Guozhong Rd., Dali Dist.,

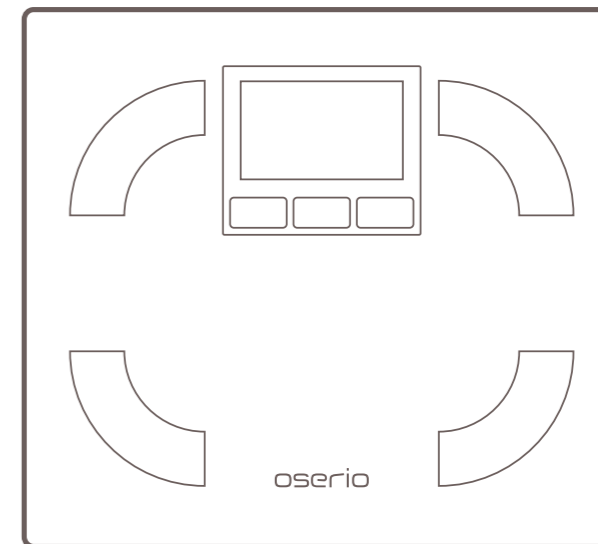
Taichung City, 41262, Taiwan (R.O.C.)

CD-PA-00067 REV 001 06/2020

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Health is Beautiful







Body Fat Scale

User Manual – FSC-330



Please keep the instruction manual at hand all the time for future reference.

## Explanation of the Graphic Symbols

SN-135-00001	Designation of the serial number of every product, applied at the product. (Number as an example)		Dispose of old appliances separately from your household waste! Instead, take them to communal collection points.
	"Please note the accompanying documents" or "Observe operating instructions"		Carefully read this operation manual before setup and commissioning, even if you are already familiar with oserio scales.
	Identification of manufacturer of medical product including address		Manufacturing date.
	"Electro-medical appliance" with attachment for type BF	<b>LOT</b>	Lot number or batch number.

**Warning**

During measurement, this product will send a low level imperceptible electrical current throughout the body. Individuals with implanted medical devices, such as:

1. Pacemakers
2. Electronic lungs and other electronic medical life support equipment
3. ECG products

must not use this product, as the electric current may affect the implanted device.

This product is not a medical device and should not be used for diagnosis or treatment.

**Copyright Notice**

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## 1.1 General Information

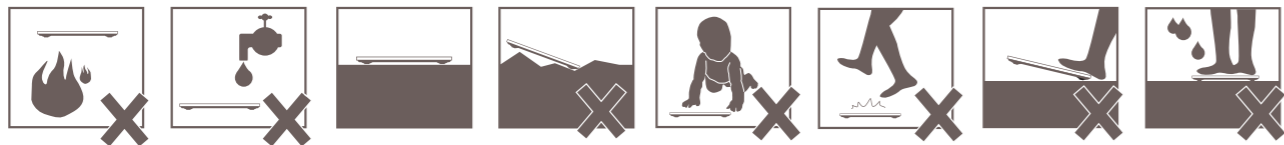
Thank you for choosing this oserio product. Before use, please read this user manual carefully, and keep it in a safe place for reference. It contains important instructions regarding proper usage.

### Intended Use

This product is intended to measure the weight and bioelectrical impedance of children or adults who can stand unassisted, using input data to calculate subject's body composition.

### General Handling

- Product should be placed on stable, flat, solid, non-slippery surface.
- Place the product in an area free from direct sunlight, heating equipment, high humidity, or extreme temperature change.
- Never submerge in water.
- Usage on soft surfaces (ex: carpet) may result in inaccurate results.



## 1.1 General Information

### Disposal

- All batteries contain toxic compounds; batteries should be disposed of via designated competent organizations. Batteries should not be incinerated.
- This product is not to be treated as regular household waste, but should be taken to a designated collection points for electronics. Further information should be provided by local waste disposal authorities.

### Usage of Results

- The FSC-330 is not a diagnostic product.
- BIA results are calculated based on impedance values validated with representative population studies and statistical analysis. As such, the technique is best suited for tracking progress for an individual over a period of time, or for categorizing large groups of people, rather than used as a one-time analysis. Accuracy of results is highly dependent on proper measurement procedure. Please follow instructions carefully for best results.
- Pregnant women should use the weight function only. Body composition calculations may be of limited accuracy.

### ⚠ Warning

During measurement, this machine will send a low level imperceptible electrical current throughout the body. Individuals with implanted medical products, such as:

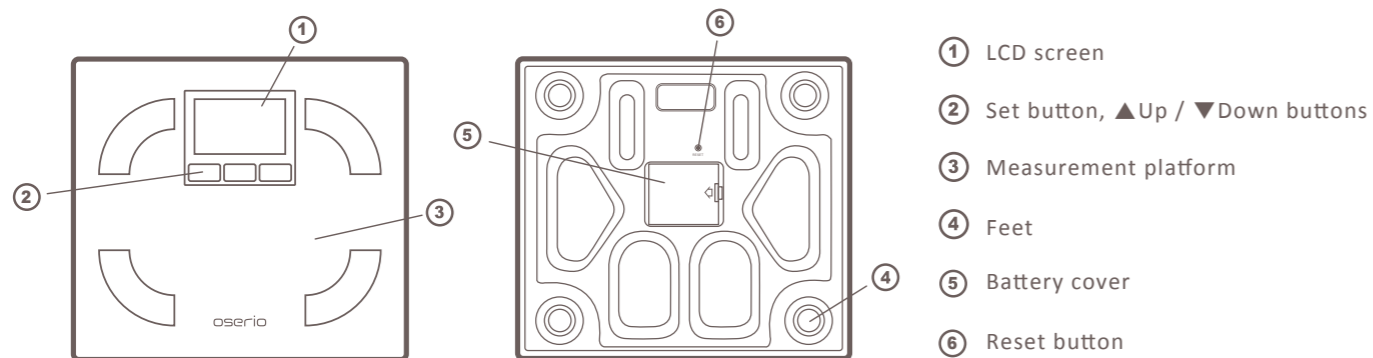
- Pacemakers. ■ ECG products.
- Electronic lungs and other electronic medical life support equipment.

should not use this product, as the electric current may affect the implanted product.

# 2

## Product Description

### 2.1 Overview



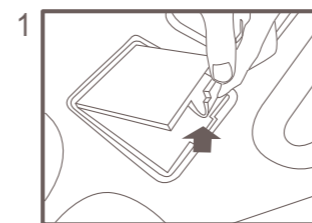
**NOTE:**

pressing and holding RESET for 3 seconds will delete all measurement data from product.

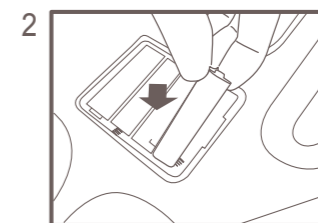
# 2

## Product Description

### 2.2 Inserting Batteries



Press tab to lift and open battery housing cover.



Insert 4 AA batteries.

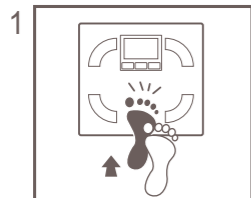
**NOTE:**

Ensure batteries are inserted in correct orientation. If batteries are inserted incorrectly, product will not function. If product will not be used for a long period of time (> 3 months), remove the batteries before storage.

# 3

## How to Use

### 3.1 Weight measurement

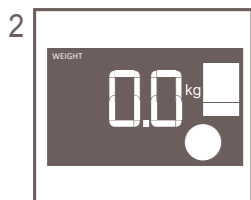


1

Place product on stable, flat, solid, non-slippery surface (no carpet).

Tap the measurement platform to turn on product. Welcome message will be displayed, as product conducts self-calibration.

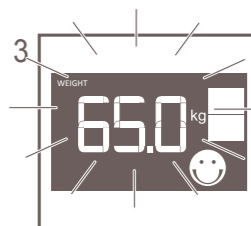
Do not step on measurement platform during this time.



2

When "0.0" appears on display, step onto measurement platform.

Try and stand as still as possible.



3

Body weight result will appear on screen once measurement is completed.

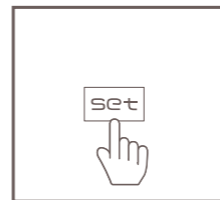
Product will automatically shut down after 20 seconds. Press and hold SET button to turn off manually.

# 3

## How to Use

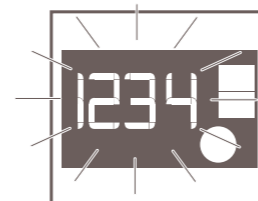
### 3.2 User data setup

#### New User

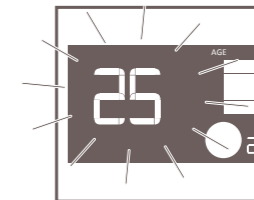


Place product on stable, flat, solid, non-slippery surface (no carpet). Tap to turn on device.

Press SET button.



Use ▲▼ to select user ID. Press SET to confirm selection.



#### Input Age

Input age using ▲▼ buttons. (press and hold buttons to advance at a faster speed)

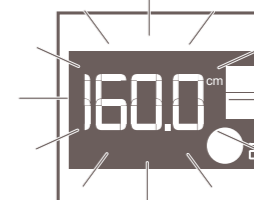
Press SET to confirm.



#### Select Gender

Male / Female

Press SET to confirm.

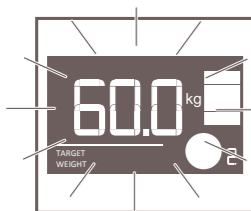


#### Input height

Input height using ▲▼ buttons. (press and hold buttons to advance at a faster speed)

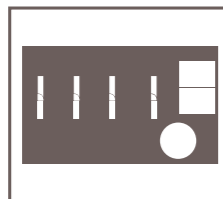
Press SET to confirm.

## 3.2 User data setup

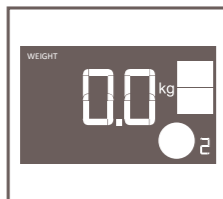
**Input target weight**

Input target weight using ▲▼ buttons. (press and hold buttons to advance at a faster speed)

Press SET to confirm.

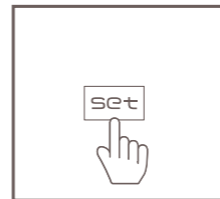


Device will perform self-adjustment. Do not step on measurement platform during this time.



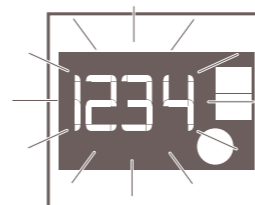
When "0.0" appears on display, product is ready for use.

## 3.2 User data setup

**Existing User**

Place product on stable, flat, solid, non-slippery surface (no carpet). Tap to turn on device.

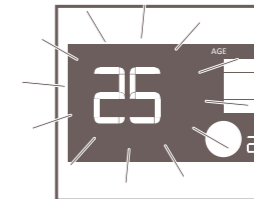
Press SET button.



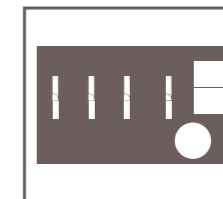
Use ▲▼ to select user ID. Press SET to confirm selection.

**NOTE:**

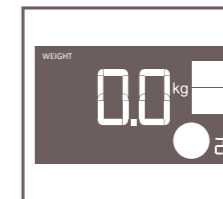
if you do not press any buttons for 60 seconds, product will automatically shut down. Press and hold SET button to turn off manually.

**Confirm user data**

Screen will display personal details for selected ID. To change user data, please press SET before "0.0" appears on screen. If changes are made, product will ask if you wish to clear history results. Select Yes or No.



Device will perform self-adjustment. Do not step on measurement platform during this time.

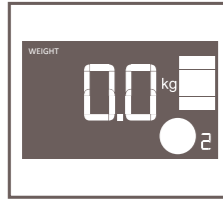


When "0.0" appears on display, product is ready for use.

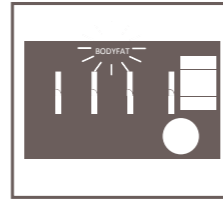
# 3

## How to Use

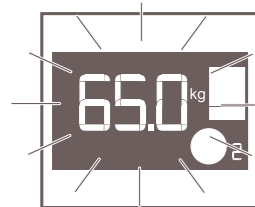
### 3.3 Conducting Body Fat Measurement



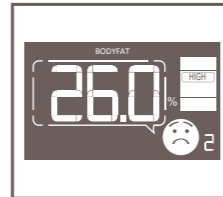
Remove shoes and socks, and ensure soles of feet are clean. Stand on measurement platform.



Product will begin body composition analysis. Stand still and do not step off from measurement platform until Body Fat percentage is displayed on screen.



Weight result will be displayed on screen.

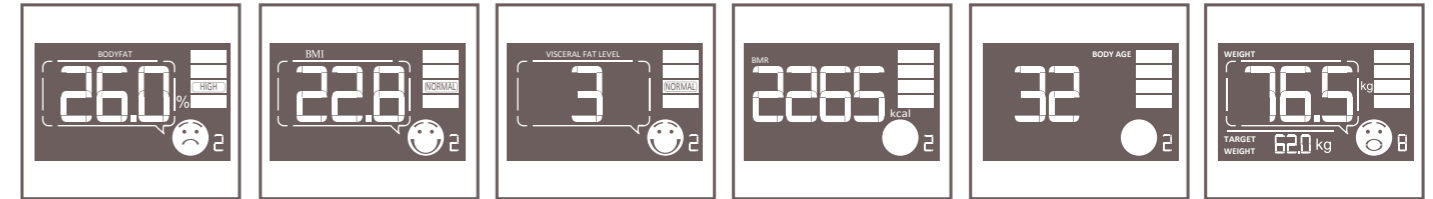


Once measurement is complete, Body Fat percentage will be displayed on screen.

# 3

## How to Use

### 3.3 Conducting Body Fat Measurement



3 seconds

1. Body Fat Percentage
2. Body Mass Index (BMI)
3. Visceral Fat Level
4. Basal Metabolic Rate (BMR)
5. Body Age
6. Body Weight & Target Weight

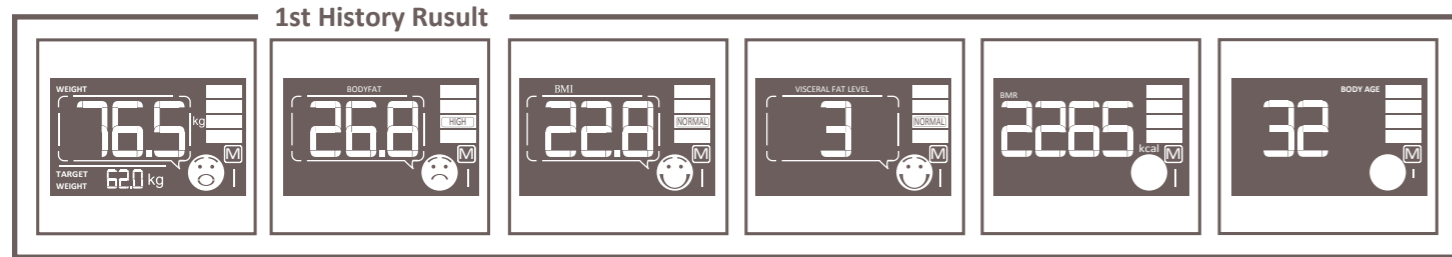
#### NOTE:

- Each result will be displayed for 3 seconds
- Use the ▲▼ buttons to manually toggle between results.
- Product will shut down automatically if no buttons are touched for 30 seconds.

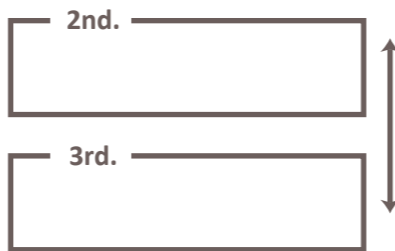


## 3.4 Viewing history results

After conducting measurement, press SET to view history results.



Press ▲▼ buttons to switch between last 7 history results.



## 3.5 Measurement Results Explained

Results will be categorized into "low", "normal", "high", or "very high".

**Body Mass Index (BMI)**

BMI is a commonly used index by the World Health Organization (WHO), utilizing height and weight to classify underweight, normal, over, and obesity in adults.

**Body Fat Percentage**

Body fat percentage is useful in determining the specific cause of weight loss or gain. Average percentages differ according to specified groups and categories, most significantly by gender. Although no universally accepted published ranges or cut-off points for body fat percentage currently exist, it is still an important value in assessing change in body composition and health.

**Visceral Fat Level**

Abdominal fat can be divided into visceral and subcutaneous fat. Visceral obesity can occur even if your weight or BMI is within normal standards. It's possible to be thin on the outside, but fat on the inside<sup>1</sup>. Visceral fat level has high correlation with risk of a variety of obesity-related diseases.

**Basal Metabolic Rate (BMR)**

Basal metabolic rate is the minimum required energy to sustain the body's vital functions while at rest. These functions include breathing, blood circulation, regulation of body temperature, cell growth, brain function, and nerve function. BMR tends to decrease with age or reduction in weight, and is positively correlated with increase in muscle.

**Body Age**

Your calculated metabolism is compared to average BMR for your age and gender group.

<sup>1</sup> Dudeja V, Misra A, Pandey RM, Devina G, Kumar G, Vikram NK. BMI does not accurately predict overweight in Asian Indians in northern India. *Br J Nutr.* 2001;86:105-112

### 3.6 About Bioelectrical Impedance Measurement

The FSC-330 uses Bioelectrical Impedance Analysis (BIA) to calculate body composition. At its core, BIA operates by treating the human body as an electrical conductor within an alternating current circuit, from which the alternating current resistance and impedance is measured.

#### Impedance

The measurement current flows from one lower limb through the lower abdomen and then into the other lower limb, and the bioelectrical impedance is measured. For reference, the impedance measurement methods for the legs are shown in the diagram. Using a combination of existing population data and in-house research, body composition analysis formulas can calculate results based on the Impedance, Height, Gender, Age, and Weight of the subject. These algorithms are formulated with reference to "gold standard" measurements such as Dual-Energy X-ray Absorptiometry (DXA) to confirm viability and accuracy.



#### Measurement Rules

For best results, body composition analysis via BIA should be conducted under specific conditions. Inconsistent measuring conditions will affect the accuracy and validity of BIA results, and interpretation of body composition. The information below regarding the effect of various factors on measurement results is largely sourced from related research by Kushner et al.<sup>2</sup>

#### Before measurement, please take note of the following:

1. Do not exercise or perform strenuous physical tasks before measurement.

Strenuous physical tasks and exercise can result in a temporary change in body composition measurements. As BIA analyzes electrical impedance in the body, activities that might affect impedance (e.g. increased perspiration, dehydration, blood circulation) may affect measurement accuracy.

<sup>2</sup> Kushner RF, *Clinical characteristics influencing bioelectrical impedance analysis measurements*, 1996

### 3.6 About Bioelectrical Impedance Measurement

2. Affect of food and drink on measurement results.

Ingestion of food and drink can affect impedance and weight, and thus analysis results. This change generally lasts 2-5 hours after each meal. For most accurate results, BIA measurements should ideally be conducted in a fasting state (e.g. before breakfast)<sup>3</sup>.

3. Do not shower or bathe directly before measurement.

Perspiration can result in a temporary change in body composition measurements, as the accuracy of BIA depends largely upon interpretation of measured impedance values, which are affected greatly by hydration levels.

4. Perform the measurement under normal temperature conditions (24-28°C)

Extreme temperatures (both hot and cold) can result in temporary physiological changes. For example, excessive sweating due to heat can cause increased impedance measurements, resulting in a higher fat calculation. For best results, measurements should be conducted in an environment between 24-28°C.

5. Remove shoes and socks before measurement.

Shoes and socks will interfere with the electric current, making measurement inaccurate or in some cases, impossible.

6. Avoid physical contact with other people during measurement.

Because BIA measures the impedance encountered as the electric current travels through the subject's body, if another individual is touching the subject, the electric current may pass through the other individual, causing inaccuracy in measurement results.

7. Measure height accurately.

Inaccurate height input will affect estimation of body composition.

8. Perform the measurement in the morning.

As a general rule, BIA measurements should be performed in the morning to minimize the influence of activity throughout the day on measurements.<sup>4</sup>

<sup>3</sup> R Gallagher, M & Walker, Karen & O'Dea, K. *The influence of a breakfast meal on the assessment of body composition using bioelectrical impedance*. *European journal of clinical nutrition*. 52. 94-7.

<sup>4</sup> Oshima Y & Shiga T. *Within-day variability of whole-body and segmental bioelectrical impedance in a standing position*, *European Journal of Clinical Nutrition* 2006, 60, 938-941

# 4

## Caring for your product

### 4.1 Use & Storage

1. Product should be stored in clean, cool, dry location when not in use, away from direct sunlight and extreme temperatures.
2. This product is not a toy. Children should not be allowed to play with it.
3. Avoid corrosive liquids and materials. Do not use detergents or cleaners to clean the product. This may damage the coating protecting the electrodes used for body composition measurement.
4. Wipe the platform and display using clean soft cloth. Avoid rough, sticky cloth, to prevent scratching the measurement platform and screen panels.



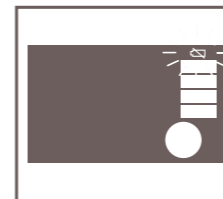
### 4.2 Service and maintenance

The FSC-330 does not contain user-maintained parts. Service and maintenance not described in this user manual should be performed only by authorized technicians.

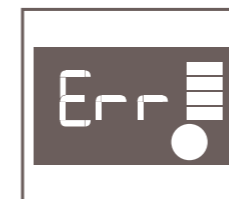
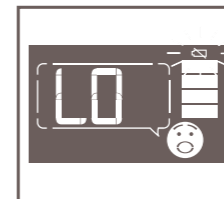
# 5

## Troubleshooting

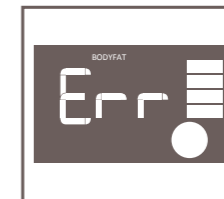
### 5.1 Error Messages



**Low battery warning**  
Replace batteries



**Overload or unstable weight**  
Total load exceeds product's maximum capacity. Stay still and avoid movement during measurement.



**Measurement error**  
Calculated body fat exceeds maximum capacity; measurement cannot be completed.



**Measurement error**  
Calculated visceral fat level exceeds maximum capacity; measurement cannot be completed.

## 6.1 Product Information

<b>Model</b>	FSC-330 Body Fat Scale	<b>Capacity / Graduation</b>	5~150 kg x 0.1 kg
<b>Battery</b>	4 AA batteries	<b>Measurement Sensors</b>	4 weight sensors Bioelectrical Impedance Analysis
<b>Product Weight</b>	1.3 kg	<b>Measurement Output</b>	Weight Target Weight Body Mass Index (BMI) Body Fat Percentage Visceral Fat Level (1~50) Basal Metabolic Rate Body Age
<b>Dimensions</b>	Product: 285(W) x 315(D) x 45(H) mm Screen: 86(W) x 52(D)		
<b>Operation Environment</b>	Temperature: 5°C~35°C Relative Humidity: 30%~85%		
<b>Storage Environment</b>	Temperature: -20°C~60°C Relative Humidity: 10%~95%		

**Model Variants:**

FSC-330B, FSC-330BK, FSC-330BW, FSC-330P, FSC-330Y, FSC-330R, FSC-330G, FSC-330LB

## 6.2 EMC Guidance and Manufacturer's Declaration

<b>Guidance and manufacturer's declaration-electromagnetic emissions</b>			
The FSC-330 Body Fat Scale is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.			
<b>Emission test</b>	<b>Compliance</b>	<b>Electromagnetic environment-guidance</b>	
RF emissions CISPR 11	Group 1	The product uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.	
RF emissions CISPR 11	Class B	The product is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.	
Harmonic emissions IEC 61000-3-2	Class A		
Voltage fluctuations/flicker emissions IEC 61000-3-3	Compliance		
<b>Guidance and manufacturer's declaration-electromagnetic emissions</b>			
The FSC-330 Body Fat Scale is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.			
<b>Immunity test</b>	<b>IEC 60601 test level</b>	<b>Compliance level</b>	<b>Electromagnetic environment-guidance</b>
Electrostatic discharge(ESD) IEC 61000-4-2	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%
Electrical fast transient/burst IEC 61000-4-4	± 2kV for power supply lines + 1kV for input/output lines	± 2kV for power supply lines + 1kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.

## 6.2 EMC Guidance and Manufacturer's Declaration

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Electrostatic discharge(ESD) IEC 61000-4-2	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%
Electrical fast transient/burst IEC 61000-4-4	± 2kV for power supply lines + 1kV for input/output lines	± 2kV for power supply lines + 1kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1kV line(s) to line(s) ± 2kV line(s) to earth	± 1kV line(s) to line(s) ± 2kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage Dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% UT for 0,5 cycle 0% UT for 1 cycle  70% UT(30% dip in UT) for 25 cycles  0% UT for 5 s	0% UT for 0,5 cycle 0% UT for 1 cycle  70% UT(30% dip in UT) for 25 cycles  0% UT for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the product requires continued operation during power mains interruptions, it is recommended that the product be powered from an uninterruptible power supply or a battery.
Power frequency(50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	The product power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
<b>NOTE UT is the a.c. mains voltage prior to application of the test level.</b>			

## 6.2 EMC Guidance and Manufacturer's Declaration

Guidance and manufacturer's declaration-electromagnetic emissions			
The FSC-330 Body Fat Scale is intended for use in the electromagnetic environment specified below. The customer or the user of the product should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 KHz to 80 MHz	3 Vrms 150 KHz to 80 MHz	Portable and mobile RF communications equipment should be used no closer to any part of the product including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.  <b>Recommended separation distance:</b> d = 1,2 √P    d = 1,2 √P 80MHz to 800 MHz d = 2,3 √P 800MHz to 2,5 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).  Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol:
Radiated RF IEC 61000-4-3	6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz  3 V/m 80MHz to 2,7 GHz	6 V in ISM bands between 0,15 MHz and 80 MHz 80 % AM at 1 kHz  3 V/m 80MHz to 2,7 GHz	



## 6.2 EMC Guidance and Manufacturer's Declaration

NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz d=1,2√P	80 MHz to 800 MHz d=1,2√P	800 MHz to 2,5 GHz d=2,3√P
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where p is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

**NOTE1** At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

**NOTE2** These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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