AM SCAN

INSTRUCTION MANUAL

Enso electronics
ELECTRONICS FOR HEALTH

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NOTE: According to art. 2 para. 38 of the May 20, 2010 Law on Medical Devices, the AMSCAN device is not a medical device.

1 GENERAL GUIDELINES

1.1 This manual applies to the diet and cosmetics selection instrument "AM Scan" (hereinafter referred to as the Device) and its operation, and to familiarize yourself with its design, to learn the principles of its use (use for its intended purpose, maintenance, service, protection and transportation), and to understand the basic characteristics and operating parameters guaranteed by the manufacturer.

The manual should be kept for the lifetime of the Device. Please read the manual carefully before starting to operate the Device.

2 PURPOSE OF THE DEVICE

2.1 The instrument "AM Scan" is intended for general use and can be helpful in the work of nutritionists and cosmetologists for assistance in the selection of diet and cosmetics using the change of electroconductivity of acupuncture points.

The instrument can be used in beauty salons and diet clinics. See the LEGAL NOTICE section.

3 TECHNICAL PARAMETERS

3.1 The device is included in the range of products with an external power source.

3.2 A USB port of a personal computer with a voltage of 4.8 to 5.2 V is used as a power source.

3.3 During operation, the instrument shall be resistant to the effects of climatic factors and shall operate without failure:

- in the ambient temperature range from +10° C to +35° C;
- relative humidity of 80% at 25° C.

3.4 The voltage on the non-contacted electrodes should not be greater than 3.3 V.

3.5 The maximum current in the circuit that forms the body of the "test person" with the Device should not exceed 12 μA.

3.6 The consumption current shall not be greater than 30 mA.

3.7 The average time of failure-free operation of the device is a minimum of 1000 hours.

3.8 The full average operating time is not less than 5 years.

3.9 The establishment time of the working mode is not more than 5 seconds.

3.10 The continuous trouble-free operation time of the instrument is not less than 8 hours.

3.11 Electrode material: brass.

3.12 The overall dimensions do not exceed in mm:

- instrument 210x175x80 mm
- passive electrode 100x22x20 mm,
- active electrode 150x20x20 mm.

3.13 The weight in kg does not exceed

- of the instrument 0.8 kg,
- supplementary components 0.6 kg.

4 CONTENTS

(The following items should be in the box)

- "AM Scan" device 1 piece.	
- Passive hand electrode (brass)	3 pcs.
- Cable with active electrode / Pointoscope	1 pcs.
- Cable for electrodes (hand/feet)	1 pcs.
- Foot electrode	2 pcs.
- Frontal electrode / cable wrap	1 pcs.
- USB power cable	1 pcs.
- User manual	1 pcs.

Rys. 1 – AMSCAN KIT COMPONENTS

5 CONSTRUCTION AND WORKING PRINCIPLES

5.1 The casing of the Instrument is made of impact-resistant (resistant to impact and mechanical trauma) ABS (acryobutadienstyrene) polystyrene. The external appearance of the front and rear panels of the Instrument is shown in Figure 3 (on page 8/9).

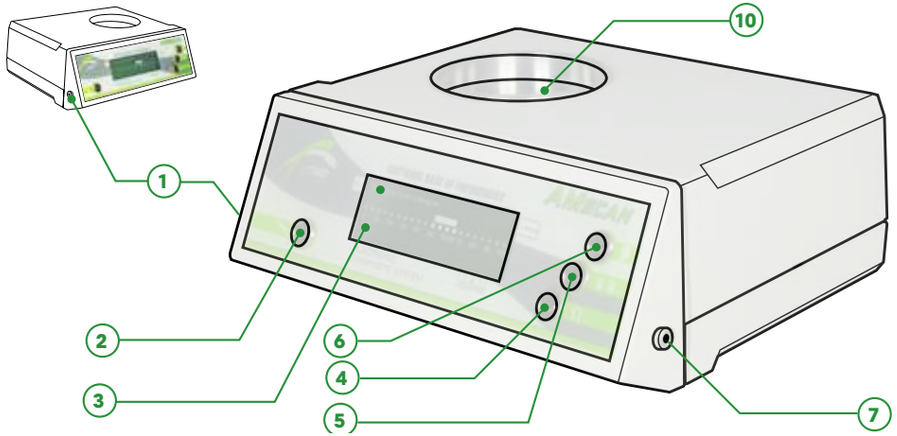
Sockets, lights and indicators:

1. – socket for connecting external devices
2. – Socket for connecting the active and passive electrode cable
3. – liquid crystal display
4. – socket for connecting foot electrodes
5. – socket for connecting hand electrodes
6. – socket for connecting the front electrodes
7. – selector output socket
8. – USB power socket
9. – power source switch
10. – Resonator / container for testing food, cosmetics

The manufacturer reserves the right to make changes to the configuration of the panel, which do not entail a deterioration in the quality and convenience of operation of the Device.

AM SCAN

DEVICE CONSTRUCTION FRONTAL, OBLIQUE VIEW

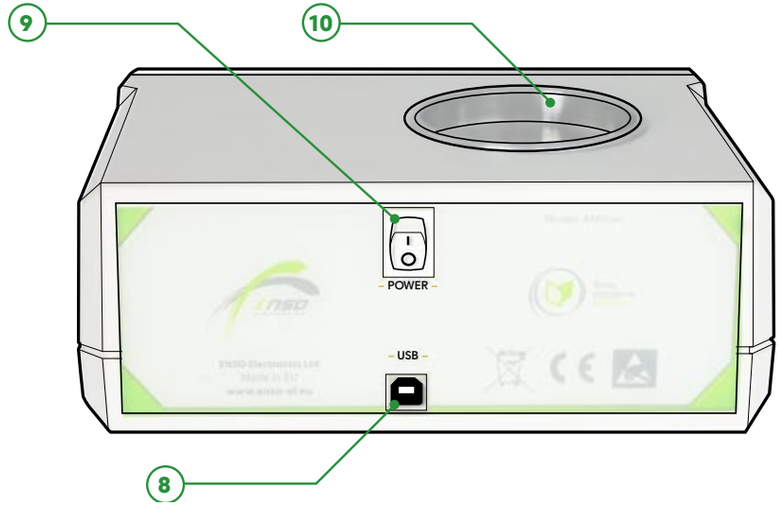


Rys. 3 – CONSTRUCTION DIAGRAM

LEGEND:

1 – input socket for connecting external devices, **2** – Socket for connecting active and passive electrode cable, (Voll, Vegatest) **3** – liquid crystal display, **4** – socket for connecting foot electrodes, **5** – socket for connecting hand electrodes, **6** – socket for connecting the front electrodes, **7** – selector output socket, **8** – USB power and communication socket, **9** – power source switch, **10** – resonator / container for testing food, cosmetics

DEVICE CONSTRUCTION REAR VIEW



LEGEND:

8 – USB power socket, **9** – power source switch, **10** – resonator / container for testing food, cosmetics

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5.2 The block diagram of the Device is shown in Figure 2 (block diagram).

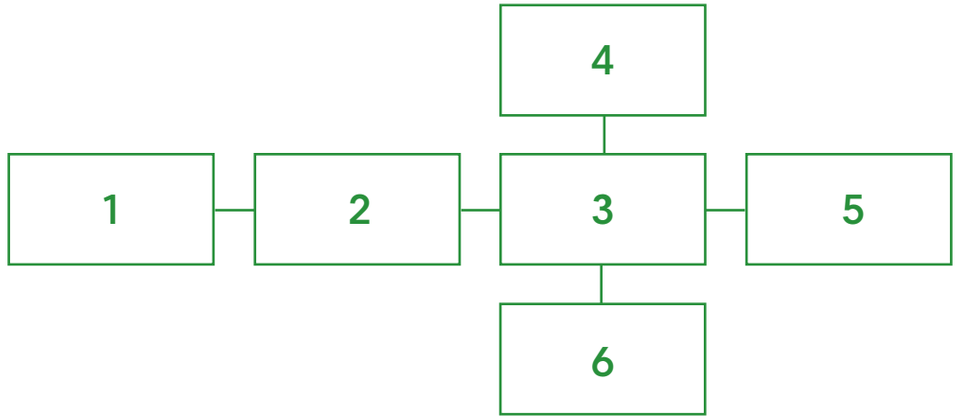

FIGURE DESIGNATIONS:

1 – Input module including protection against electrostatic energy, **2** – analog-to-digital converter; **3** – microcontroller; **4** – liquid crystal display; **5** –moduł zasilania USB;, **6** – programming module (to be used only during production).

Rys. 2 – FLOW CHART

Active and passive electrode are connected to the input module ❶, Which is responsible for the electrical parameters of the Device. The signal from the electrodes runs to the analog-to-digital converter module ❷, which is a component of the microcontroller ❸. The program, which is written in the microcontroller according to a special algorithm, changes the received signal to the corresponding values from 0 to 100 contract units and reflects them with the help of the display ❹. Program module ❻ is used only at the stage of production of the Device and its service in specialized services. Module ❺ provides a connection to the computer's USB port to distribute signal and power circuits.

6 SAFETY CONSIDERATIONS

6.1 The instrument should comply with the general demands of electrical safety.

6.2 Electrically safe instrument, grounding is not affected.

6.3 It is not recommended to connect and disconnect the electrode, while the Instrument is operating.

6.4 Avoid using the device during storms. Do not put heavy things on the device.

6.5. IT IS CATEGORICALLY PROHIBITED TO

- carry out testing on an inoperative Instrument;
- carry out service work with the Instrument switched on.

6.6 The user should undergo appropriate preparation/training.

6.7 Work with the Instrument begins only after reading the User's Manual and electrical safety rules

6.8 In the event of a malfunction, immediately turn off the Instrument.

7 PREPARATION FOR WORK

7.1 Remove the Instrument from its packaging and make sure that the device has no mechanical damage. Check the completeness of the Instrument.

7.2 After transport or storage at sub-zero temperatures, store the instrument under normal conditions for about 4 hours.

7.3 Before using the electrodes for each person, disinfect the electrodes with a 3% solution of hydrogen peroxide (hydrogen peroxide water) or spirit.

7.4 To work, set the instrument in a comfortable position.

7.5 Connect the cable with the active electrode to the socket ❶ (Figure 1).

7.6 Plug the USB cable from the back of the utensil into the socket ❹ (Figure 1), the other end to the corresponding USB socket on the computer.

7.7 When using the software for the first time, install the device driver. If this process has not occurred automatically, it should be done in manual mode.

Carry out all connections with the Device and computer power disconnected.

8 ORDER OF WORKING WITH THE DEVICE

8.1 Turn on the instrument with the switch ❾ (Figure 1). On the liquid crystal display ❸ should appear inscriptions corresponding to the operating modes of the device.

8.2 When the device is ready to work, the active and passive electrodes should be shorted to each other and see if the device has entered the testing mode. The device works in four modes depending on the version. The following modes are available: VOLL, VEGA test, EXPRESS and selector mode.

8.3 When finished working The instrument is switched off with the switch ❾.

9 MAINTENANCE

9.1 Maintenance and inspection of the fitness for operation of the device should be carried out by the user at least once a week.

9.2 Protect the Device from excessive humidity and from varying temperature amplitudes, as well as shocks and impacts, which may cause damage to the Device.

9.3 To clean the electrodes, ordinary hygiene and disinfection agents or 3% hydrogen

peroxide are used. If cleaning is not possible, it is permissible to use very fine sandpaper.

10 OPERATING CONDITIONS

10.1 In order to receive reliable results when organizing a workspace, it is important to meet the following rules.

10.2 It is not recommended to use the Instrument in rooms where:

- X-ray apparatus is working;
- apparatuses that radiate, for example: high-frequency, microwave and ultrasonic devices are working;
- where there may be the influence of ozone or ultraviolet radiation;

There should be no metal elements in the room acting as antennas or shielding influence.

10.3 At the workplace, the network should be grounded and shielded.

10.4 Halogen lamps should be at a height of not less than:

- 1.5 m daylight lamps,
- 2 m heating devices,
- 2 m from the workstation.

10.5 High electrostatic load can lead to the cessation of proper operation.

10.6 The surfaces of floors and chairs should not have electrostatic charges. To avoid

discharges, it is best to use wooden surfaces.

10.7 Keep out of the reach of children.

11 WARRANTY CONDITIONS

The manufacturer guarantees the compliance of the Apparatus with the requirements of the technical conditions, with the observance by the user of the operating rules established in this manual.

11.1 The warranty period for the operation of the instrument is 24 months from the date of purchase.

The warranty is granted only for the Device with the seal intact and with the attached and signed "Manual - Warranty Card".

If the seal is broken, the warranty is not recognized.

"Manual - Warranty Card" must have a clear date of sale.

The manufacturer Enso Electronics shall not be held liable for improper use of the device and failure to follow additional instructions.

Repair of the Device shall be carried out by the manufacturer at the owner's expense, in cases of:

- operation of the Device in violation of the requirements of these operating instructions,

- violation of the manufacturer's seals,
- deterioration in the post-warranty period.
- The warranty is also not subject to external wiring.

For defects caused by violations of the rules of storage, improper use of the Device in the trade and at the user, the Manufacturer is not responsible.

12 DETAILS FOR COMPLAINTS

In case of malfunction of the Device during the warranty period, describe the type of damage, add the warranty card and send to the service address by registered mail or courier. In the case of a claim under the terms of the warranty DOOR TO DOOR / BUSINESS, you only need to prepare the device and make a request for shipment. A service number will then be assigned.

13 WARRANTY CARD

Included with the instructions on page 24.

14 LEGAL NOTICE

This legal notice is a legal regulation of the use of the information contained in the manual and the website www. ensoel.pl

15 INTELLECTUAL PROPERTY

AMScan device distributed by ENSO Electronics sp. z o.o. presented, among others, on www. ensoel.pl are developed and built based on experience and according to the recommendations of ENSO Electronics sp. z o.o. as to the idea of construction and current appearance, although as to functionality they are constructed according to the recommendations of their inventors. According to the above, any copying, modification, improvement or use of the program or use of the present appearance of the devices for own or commercial production or applications is forbidden. Any reproduction, including copying, use or other public distribution of the above-mentioned materials requires written permission under pain of invalidity, subject to non-commercial use for personal use.

The trade name, AMScan device, or other designations appearing in this manual including Enso Electronics or www. ensoel.pl are registered trademarks and are subject to protection pursuant to the provisions of the Industrial Property Law of June 30, 2000 (Journal of Laws No. 49 item 508 as amended). The general principles of using the information contained in the materials contained on the website www.ensoel.pl or in this manual are for informational purposes only. Use of the AMScan device requires reading the contents of the instruction manual supplied with each device, the contents of which take precedence over the information contained herein. Enso Electronics reserves the right to make changes and corrections to the information contained on the website or in this manual, at any time and to any extent without prior notification to users.

16 DECLARATION OF CONFORMITY

Enso Electronics hereby declares that AmScan complies with the requirements of the Electromagnetic Compatibility Act of April 13, 2007 (Journal of Laws 07.82.556) and with the provisions of the EMC Directive 2004/108/ EC - a copy of the "Declaration of Conformity" can be found at www.ensoel.pl.

For details on AMScan's weight, visit www.ensoel.pl. For more details, please refer to the Declaration of Conformity or country-specific information, which can be found at www.ensoel.pl Information for users on the disposal of electrical and electronic equipment (applicable to households).

This Device is marked in accordance with the European Directive 2002/96/EC and the Polish Law on Waste Electrical and Electronic Equipment with the symbol of a crossed-out waste container. The symbol shown on the products or the documentation attached to them informs that faulty electrical or electronic equipment must not be disposed of together with household waste. The correct thing to do when disposal, reuse or recovery of components is to take the device to a specialized collection point, where it will be accepted free of charge. In some countries, the product can be given to a local distributor when purchasing another device. By disposing of the device properly, you can conserve valuable resources and avoid negative health and environmental impacts that may be threatened by improper waste handling. Check with your local authorities for details of the nearest collection point. Improper disposal of waste is at risk of penalties under relevant local regulations. If you need to dispose of electrical or electronic equipment, please contact your nearest dealer or supplier, who will provide additional information..

NOTE: In accordance with Art. 2 para. 38 of the law of May 20, 2010 on medical devices AM-Scan device is not a medical device

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DECLARATION OF CONFORMITY NR 01/2009

The undersign representing the following manufacturer:

Company "ENSO Electronics" sp. z o.o.

hereby declares with full responsibility that the device:

AMscan

conforms with the requirements in accordance with The Electromagnetic Compatibility Act of 13.04.2007 (Dz. U. 07.82.556) which implements provisions of the directive **EMC 2004/108/WE**.

The harmonized norms listed below have been applied to accomplish the conformity assessment:

EN 55022:1998 + A1:2000 + A2:2003
EN 61000-3-2:2000 + A2:2005
EN 61000-3-3:1995 + A1:2001 + A2:2005
EN 61000-4-2:1995 +A1:1998 + A2:2001
EN 61000-4-3:2006
EN 61000-4-4:2004
EN 61000-4-5:2006
EN 61000-4-6:1996 + A1:2001
EN 61000-4-8:1998 + A1:2003
EN 61000-4-9:1998 + A1:2003
EN 61000-4-11:2004

The laboratory where the testing of the device took place:

Institute of Logistics and Warehousing in Poznań
ul. Estkowskiego 6, 61-755 Poznań
Tel: 061 850 48 90, fax: 061 852 63 76

Warsaw 22.10.2009

17 COPYRIGHTS AND TRADEMARKS

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18 NATURE-FRIENDLY COMPANY

As a company that cares about the environment and its protection, we have been certified as a nature-friendly company and participate in the green corporate responsibility program.

19 RELIABLE COMPANY

The company has a certificate of reliability. Reliable company - a program under the auspices of the KRD - National Debt Register.

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RZETELNA Firma

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WARRANTY CARD

No.	Date of application	Collection date	Repair details	Employee's signature
1.				
2.				
3.				
4.				