VusionGroup

E300

Product Specification

Read all documents and system instructions carefully to minimize the risk of injuring persons and to avoid damage to the system or damage to the environment. Always keep all documents and guidance accessible.

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If necessary, the content of this document will be updated. You can request the latest version of the document via pdm.hardware@vusion.com.

About ESLs

An electronic shelf label is a device that shows article data and price information on its display. In comparison to printed labels the information is automatically updated if price or article data changes.

In this product specification the focus is set on the product family E300. With its new Bluetooth LE wireless signal range it is a new product range, and the line-up has the display sizes 1.5”, 2.1”, 2.6”, 4.2”, 6.0”, 7.4” and 9.7”.

General Key Features

- Bluetooth LE radio protocol standard
- Radio coverage: up to 30 meters
- Bi-directional communication
- 40 available communication channels and 3 advertisement channels
- Ultra-low power consumption
- Full graphical e-Ink display with paper-like readability
- Super wide viewing angle (nearly 180 degrees)
- Flexible mounting options available
- May be used in landscape and portrait mode
- Fast response time
- 128-bit AES encryption
- Multiple pages support with preloading and fast page switching
- Integrated indirect NFC tag

The installation instructions are intended for trained electricians who can exhibit the following qualifications:

- Knowledge of the use of tools and work instructions.
- Knowledge of the usable conditions of the tool.
- Knowledge of electrical safety instructions.
- Knowledge of the electrical building regulations.
- Knowledge of the relevant standards.
- Knowledge of the assembly schedule.

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Overview about E300 Bluetooth LE labels

Product name	Model	Resolution	DPI	Display colors	Usable pages	Battery Type	IP rating
E300 1.5	EDB2-0150-A	200x200	186	b/w/r/y	4	Coin Cell (CR2450)	IP53
E300 2.1	EDB2-0210-A	248x128	135	b/w/r/y	4	Coin Cell (CR2450)	IP53
E300 2.1 WP	EWB2-0210-A	248x128	135	b/w/r/y	4	Coin Cell (CR2450)	IP68
E300 2.1 F BW	EDB2-0210-A	248x128	135	b/w	4	Coin Cell (CR2450)	IP53
E300 2.6	EDB2-0260-A	296x152	125	b/w/r/y	4	Coin Cell (CR2450)	IP53
E300 4.2	EDB2-0420-A	400x300	120	b/w/r/y	4	Coin Cell (CR2450)	IP53
E300 4.2 WP	EWB2-0420-A	400x300	120	b/w/r/y	4	Coin Cell (CR2450)	IP68
E300 6.0	EDB2-0600-A	600x448	132	b/w/r/y	4	Coin Cell (CR2450)	IP53
E300 7.4	EDB2-0740-A	480x800	126	b/w/r/y	4	Coin Cell (CR2450)	IP53
E300 9.7	EDB2-0970-A	960x672	121	b/w/r/y	4	Coin Cell (CR2450)	IP53

General remarks

The SES-imagotag E300 Labels must be installed according to the mounting instructions of the producer. In rare cases it may occur that the usage of wireless appliances is restricted by the building owner (e.g. Airport or Hospital). Please contact the appropriate authorities before installing the SES-imagotag E300 Labels.

Environmental

General

E-Paper displays are moisture and UV sensitive. Exposing the E-Tags to direct UV sources should be avoided seeing as those can impact the casing quality as well as image clarity. The absolute rating operating environments describes the boundary conditions for updating the display while the absolute rating (see storage and warehousing) describes the boundary conditions for a display not updating.

	BWRY	BW (Freezer)
Operating temperature	0° C to +40° C	-25°C - 10°C

Cleaning Instructions

Clean the electronic label with the help of a damp cloth. Use only common pH-neutral household cleaners and no other aggressive cleaning agents. Do not clean the label with alcohol, solvents and / or abrasive cleaning products as the can react with the used materials and alter the product appearance and functionality.

Note: Do not use liquid or aerosol cleaners and keep it away from water.

Temperature and Humidity Conditions

High humidity combined with low temperature is not recommended
Overall, an operation outside of the above given ranges are not covered and hence not recommended to use the ESL outside of this range
Temperatures differing room temperature may have an impact on battery lifetime (excl. Freezer)

Storage and warehousing

While displays are rated to perform according to the specifications for the warranty period at the specified absolute operating environment the storage conditions prior to installation also need to be considered. Testing showed that the storage conditions close to the operation conditions of the E-Paper displays performed better than if it is stored outside of the storage conditions mentioned in the table below. Like other moisture and UV sensitive components, we recommend that our labels be stored in temperature- and humidity-controlled

environments, and whenever possible, under below defined “Optimal Storage Conditions”, away from sunlight, to optimize their performance.

It is strongly recommended to observe the following points to ensure the best operation, functioning and battery lifetime:

Storage temperature and humidity

	BWRY	**BW**
Storage temperature	-20° C to +50° C	-20° C to +50° C
Storage humidity	40% - 70%	40% - 70%

Intended Use

The E300 electronic shelf label family is exclusively designed to connect to Access Points of VusionGroup or acknowledged partners via radio.
The device may only be used in areas where the environmental fulfill the requirements described in the chapter **“Environmental”**.

NFC Usage

The majority of VusionGroup Electronic Shelf Labels can be ordered to have an integrated NFC functionality. As the NFC-functionality requires specific testing we can confirm that VusionGroup Electronic Shelf Labels NFC complies with ISO 14443. Where the NFC operating frequency is 13,56 MHz.

NFC Functionality

Placing your NFC reader on a label with an integrated NFC chip will automatically redirect you to the following URL:
https://nfc.ses-imagotag.com/<Label-ID>
This URL/information can then be used for the following cases:

- You can use it for your own developed application
- or redirection/forwarding to a specific URL.

To ensure NFC communication between the reader and the label, align the NFC antennas of both devices as closely as possible. The following overview shows the NFC antenna position for each label size.

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NFC application

A mobile application can extract the label ID information from the NFC tag. Based on the label ID, the application can receive further details about the matched article and e.g. show these details via a dedicated push message. The required application needs to be developed by the customer if this functionality is required since the “VUSION Link” application only provides the matching information of the ESL.

Example - Digital camera accessories

A customer starts the mobile application and puts his/her smartphone next to the label with an integrated NFC chip which is associated with a product such as a digital camera. The developed application retrieves the product information data from the ESL system and pushes matching accessories for this digital camera model to his/her smartphone.

Example - Recipe information

A customer starts the mobile application and puts his/her smartphone next to the label with an integrated NFC chip which is associated with pasta. The developed application retrieves the product information data from the ESL system and pushes corresponding recipes to his/her smartphone.

Redirection/Forwarding (for demo purposes only)

If you don't want to develop your own application to handle NFC readings, there's the possibility to request a redirection for your specific NFC label range to a URL of your choice. This functionality is just for demo purposes.

Example - Customer's website

You have bought several NFC tags and want to redirect to its website when reading the tags. Write an email with your forwarding request (relevant labels, customer, URL) to:

- EMEA: support@vusion.com
- AMERICAS: support.na@vusion.com
- ASIA: support.asia@vusion.com
- CEE: support.cee@vusion.com

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The support team will manage the request and give you feedback as soon as the forwarding works.

Improper use

VusionGroup® shall not be responsible for defects resulting:

- from use or storage which is harmful to the proper working of the product (e.g. abnormal use, incorrect maintenance and/or storage) and/or non-compliance with the applicable product environment specifications
- from a use of the product which does not comply with the recommendations and specifications of VusionGroup®
- from use or installation which is not compliant with the applicable functional description, or any other technical specifications provided by VusionGroup®

Please note the following handling instructions, non-compliance is considered improper use:

- Never open or disassemble the electronic device, only the battery may be replaced by trained users.
- Don’t use the electronic device if it is defective. If the screen is defective, the ESL shall be replaced.
- Unauthorized changes or modifications to the electronic device and their components without the consent of VusionGroup® are not allowed.
- Don’t use the electronic device with spare parts and accessories which are not tested and approved by VusionGroup®.
- **WARNING**: Contains lithium pouch or cell batteries
- NEW AND USED BATTERIES CAN BE HAZARDOUS, KEEP THEM OUT OF REACH OF CHILDREN
- Swallowing or placing batteries inside any part of the body may lead to severe or fatal injuries within 2 hours, due to chemical burns and potential perforation of the oesophagus.
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.
- **CAUTION**: The battery used in this device may present a risk of fire or chemical burn hazard if mistreated. Do not recharge, short-circuit, disassemble, heat above 100°C (212°F), incinerate or bend the battery.
- Do not use labels above the lifetime/usage information (Display updates, LED usage, etc.) which was committed by contracts or given per datasheet.
- Do not use labels out of specification / datasheet, e.g., use in ESLs in freezer area which – per datasheet – are not designed for such environment.
- Please handle the ESL carefully.
- Prevent damage by water and intrusion of liquids into the label. Direct contact to water shall be prevented if the ESL is not declared as IP68.
- Don't drop the label to the floor. If an ESL is dropped, check whether the label is still working or has any visible damages.
- Apply as little pressure as possible when inserting the ESL into the rail or when moving in the rail. Apply pressure only on the edge of the screen and at the level of the battery compartment, not on the screen itself. If the ESL

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is equipped with Easylock, only remove the ESLs from the rail with the provided tool for this purpose.
- Strictly avoid direct contact with groceries.
- Do not use harsh detergents containing alcohol or abrasive additives to clean the ESL
- We assume no liability for stolen labels.
- Keep the product and its batteries away from children.
- Examine devices and make sure the battery compartment is correctly closed. Do not use the product if the compartment is not secure.
- Don't throw the batteries into the garbage. Give them to a recycling company or contact VusionGroup® for handling advice.
- Don't throw the electronic device into the garbage. Give them to a recycling company or contact VusionGroup® for handling advice.
- Preferably transport all ESLs upright like in the original packaging. Never transport loosely packed labels

Certificates

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION TO USERS

Changes or modifications not expressly approved by the party responsible for compliance could void the user`s authority to operate the equipment.

FCC rules apply to the following products: E300 1.5 (EDB2-0150-A); E300 2.1 (EDB2-0210-A); E300 2.1 WP (EWB2-0210-A); E300 2.6 (EDB2-0260-A); E300 4.2 (EDB2-0420-A); E300 4.2 WP (EWB2-0420-A); E300 6.0 (EDB2-0600-A); E300 7.4 (EDB2-0740-A); E300 9.7 (EDB2-0970-A)

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