

# AWL-V-1 VEHICLE TAG

## User manual

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**Important! Read carefully before use.  
Keep for future need.**

Default user manual.

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This manual is to be considered a part of the device.





Carefully read manual before first use. Attend to all HSE requirements, all work safety related requirements and all HSE requirements related to the specific workplace. Caution is the best way to avoid any safety risk.

# EU DECLARATION OF CONFORMITY

Manufacturer: ALIS Tech s.r.o., Tuřanka 1222/115, Slatina, 627 00 Brno, The Czech Republic  
Company registration number: 06728103

Issues the following statement at its own risk:

Product name: **Vehicle tag**  
Type label: **AWL-V-1**

Application: Vehicle tag is used to transmit signals, according to which the position and distance from reading devices, other tags and personal locators are determined. In the event of danger, it triggers an alert or other defined action.

We declare that the subject of the declaration described above is in accordance with harmonization regulations of European Union: Directive of the European Parliament and Council 2014/30/EU on the harmonization of legislation of the Member States regarding electromagnetic compatibility, as amended by European Parliament and Council (EU) 2018/1139; Directive of European Parliament and Council 2014/53/EU on harmonization of legislation regarding of Member States regarding supply of radio equipment on the market and repealing directive 1999/5/ES, as amended by Regulation of European parliament and Council (EU) 2018/1139; Directive of European Parliament and Council 2011/65/EU regarding restriction of the use of certain hazardous substances in electrical and electronic equipment, as amended; Regulation (EC) No 1272/2008 of the European Parliament and Council regarding classification, labeling and packaging of substances and mixtures, as amended; Regulation (EC) NO 1907/2006 of European Parliament and Council regarding registration, evaluation, authorization and restriction of chemicals, as amended.

We declare that the subject of the declaration described above is in accordance with the relevant provisions of legal and other regulations of the Czech Republic: Government decree No. 117/2016 Coll. Regarding the assessment of conformity of products with regard to electromagnetic compatibility when placed on the market; Government decree No. 426/2016 Coll. Regarding conformity assessment of radio equipment when placed on market; Government decree No. 481/2012 Coll. Regarding restriction of use of certain hazardous substances in electrical and electronic equipment, as amended by Government Decree No. 391/2016 Coll., Government Decree No. 101/2018 Coll. and Government decree No. 146/2019 Coll., Government decree No. 121/2020 Coll. and Government decree No. 344/2020 Coll. ; EN 62368-1 / AC: 2015 as stated in ĀSN EN 62368-1: 2015 / All: 2017 / Opr. 2: 2018 / ZI: 2020; EN 62311: 2008 as stated in ĀSN EN 62311: 2009 / ZI: 2020; EN 55032: 2015 as stated in ĀSN EN 55032 ed. 2: 2017 / Opr. 1: 2018 / All: 2020; ETSI EN 301489-1 V1.2.1: 2000 as stated in ĀSN ETSI EN 301489-1 V2.1.1: 2001; ETSI EN 301489-33 V1.1.1: 2009 as stated in ĀSN ETSI EN 301489-33 V1.1.1: 2009; ETSI EN 301489-33 V2.1.1: 2017 as stated in ĀSN ETSI EN 301489-33 V2.1.1: 2017; ETSI EN 302 065-1 V2.1.1: 2016 as stated in ĀSN ETSI EN 302 065-1 V2.1.1: 2017; ETSI EN 302 065-2 V2.1.1: 2016 as stated in ĀSN ETSI EN 302 065-2 V2.1.1: 2017; EN 60950-1: 2006 as stated in ĀSN EN 60950-1 ed. 2: 2006 / All: 2009 / AI: 2010 / A12: 2011 / Opr. 1: 2012 / A2: 2014 / Z2: 2018.



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In Brno, 1.6.2021

Ing. Jakub Snřizek  
(CEO)

# FOREWORD

## Safe manipulation



Using systems connected to AWL-V-1 is advised to be done according to their respective user manuals. This user manual describes correct way to use AWL-V-1. Check the product condition before use.

To avoid any damage done and losing warranty rights due to unqualified assembly or use:

- use the product only based on this manual;
- comply with all the information regarding safety and maintenance;

You should only let qualified and experienced people use this product and its accessories.

- keep the manual at a place accessible for the user;
- comply with applicable standards;

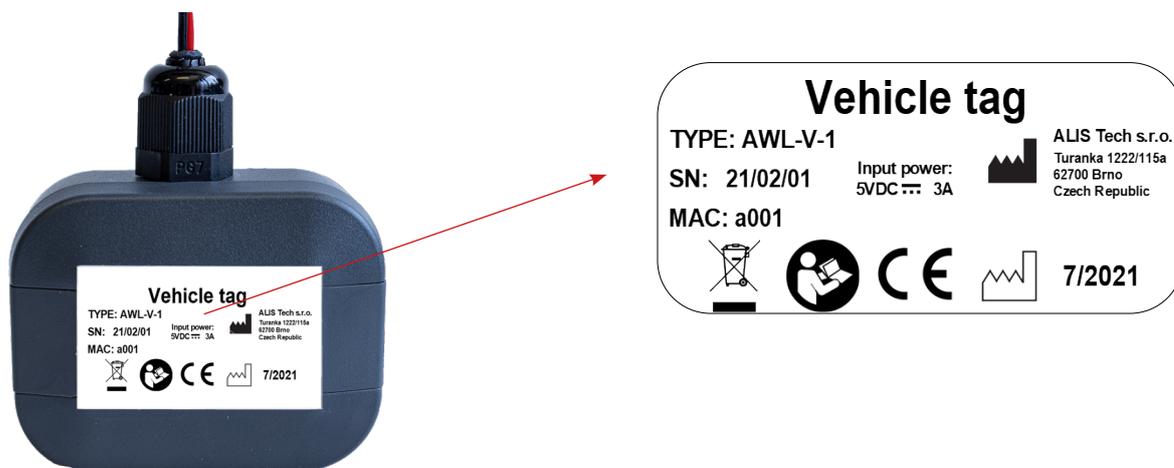
Never install this product in places:

- with high oxygen concentration;
- with oxidizing agents (for instance nitrous oxide (N<sub>2</sub>O));
- with flammable fluid;
- with excessive humidity;

## User's Qualification

Person using this device should be able to use common electronic devices and should be trained to use AWL-V-1 in accordance with this user manual.

## PLACEMENT OF PRODUCTION LABEL



Information contained in this document can be changed without prior notice. ALIS Tech s.r.o. (further mentioned only as “ALIS Tech”) does not take any responsibility for inaccuracies, missing information, loss, personal or other risk due to wrong use of the device not in accordance with content of this document.

## WARRANTY CONDITIONS

Warranty period for this device is 12 months from the date of purchase. Using this device in violation with contents of this document denies any warranty rights.

## CUSTOMER SUPPORT

ALIS Tech reserves the right to perform any maintenance on this device.

## ASSUMED USE AND BRIEF DESCRIPTION

The device is used to transmit signals, based on which the position and distance from the reading devices is determined. In the event of a threat, it triggers an alert or other defined actions.

## Functionality

The device transmits signals, based on which the position and distance from the reading devices is determined. It triggers an alarm or other defined action at predefined distance from surrounding devices. Based on its position, the AWL-V-1 sends a signal to trigger a LED projector or other audio visual warning device at a predetermined distance.



## PREPARATION AND INSTALLATION

If the following regulations are not observed, the manufacturer takes no responsibility for any damage.

When assembling and using this product please comply with:

- National installation and operating regulations.
- National regulations on fire and explosion protection.

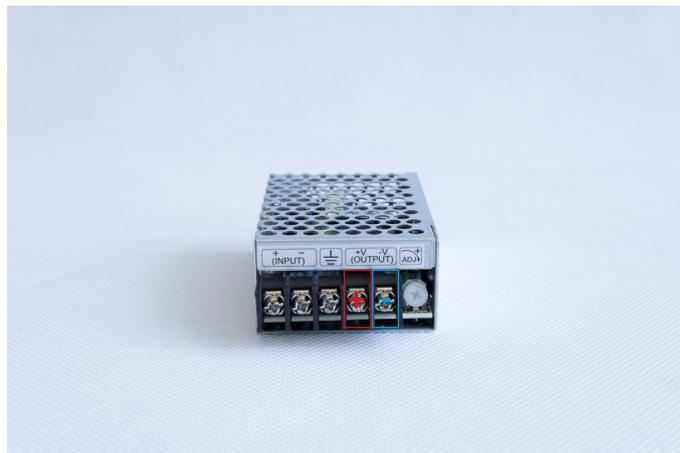


For user safety, it is necessary to make sure that the network cable is intact. In many cases, a faulty connection or an unconnected wire will not be recognized right away.

# Installation

## AWL-V-1 connection to converter

<b>Black</b>	V - (OUTPUT)
<b>Red</b>	V + (OUTPUT)



## Forklift connection

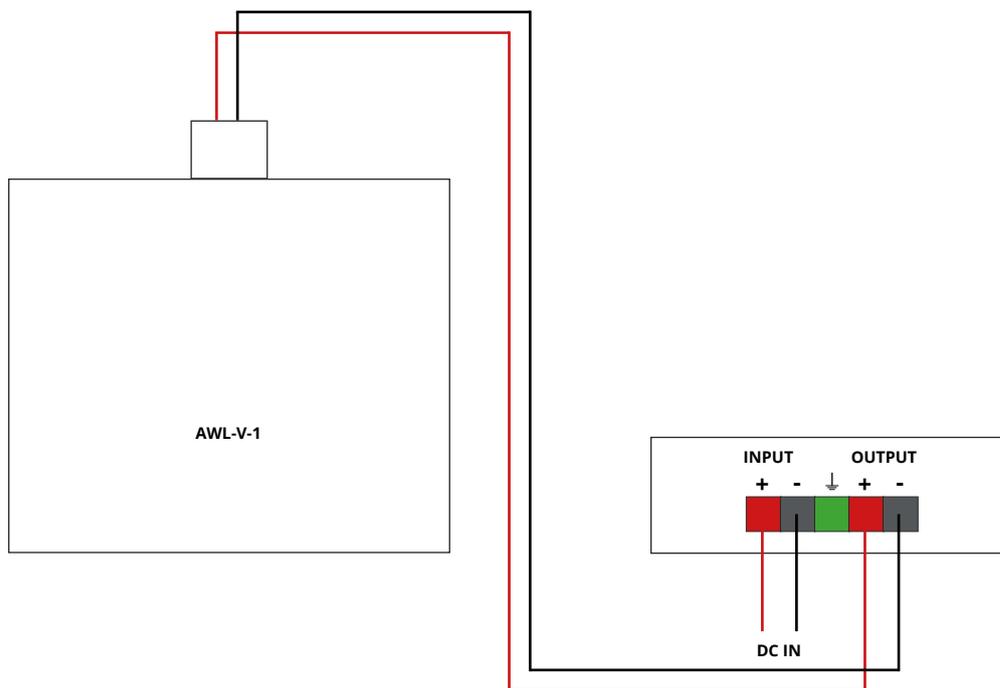
<b>INPUT (+)</b>	1. forklift connection with relay contactor which is activated after starting up the forklift;
<b>INPUT (-)</b>	2. forklift connection to GND.

## Correct installation point

Install the AWL-V-1 to the highest point of the vehicle – on the roof of the vehicle.

# Schematic connection

DC/DC converter



# SAFETY

## General safety requirements

- The degree of protection of electrical equipment provided by the cover preventing foreign objects and water from entering the device given by IP code (ČSN EN 60529:1993) must correspond to the specific installation of the electrical device, must be stated in the user manual and on the nameplate of electrical device. The IP code of the device (IP 67) can be found in the operating instructions in the technical data and on the production label.
- Conditions for operation of devices relating to the use of radio frequencies and operation of short-range radio transmitting devices by natural or legal persons are laid down in Act. No. 127/2005 Coll., as amended, and General Authorization No. VO-R / 10 / 05.2014-3 for the use of radio frequencies and for the operation of short-range devices pursuant to section 10, paragraph 1 of Act No. 127/2005 Coll.
- Technical requirements for radio equipment are set by NV No. 426/2016 Coll.
- Technical requirements for protection in terms of electromagnetic compatibility are set by the Government Decree No. 117/2016 Coll.

## Safety instructions

- Keep the device dry and clean.
- Do not place the device on excessively hot or cold surface.
- Clean the device with damp and clean cloth.
- Do not paint the device.
- Do not disassemble or repair the device.
- Do not use the device in places where it could interfere with the operation of other devices, such as air traffic, integrated rescue system, etc.
- Only use accessories supplied by the manufacturer.

# REPAIR AND MODIFICATION

The device and its accessories do not contain any parts repairable by the user.



Do not disassemble, modify or repair the device as this can result in harming user, damaging device and its functionality and compromising warranty rights.

This device can only be repaired by manufacturer's or supplier's technician. Manufacturer is not responsible for any injury or damage caused by repair done by anybody else than mentioned above.

# MAINTENANCE

## Cleaning

Clean the product only by manual rubbing of its surface.

Never submerge the product in liquid. Do not rinse with pressurized water.



Risk of electric shock and fire!  
Risk of damage or destruction of the product during machine cleaning.  
Do not use any flammable or explosive cleaning or disinfecting agents.

## Control

Each control unit is tested by the manufacturer for its functionality. After installation of the device, the manufacturer's technician, supplier's technician or technician under the supervision of the manufacturer tests it. The customer confirms the correct functionality by signing the hand-over protocol.

The manufacturer reserves the right to change the inspection method.

# TECHNICAL SERVICE

For service and repair inquiries, contact your supplier or the manufacturer directly.

# SPECIFICATIONS

## Product specifications

Product name	Vehicle tag
Vibration	yes

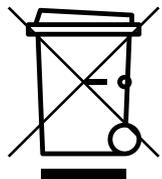
## Technical specifications

Dimensions (mm)	52 × 65 × 27
Weight (g)	150
Standard	802.15.4a
Power voltage	DC 5 V
Power rating	15 W
Frequency range	3.25 GHz – 6.75 GHz
Output power	-21 dBm/MHz
Effective range	100 m
Accuracy	5-10 cm
Operating mode	TDoA, TWR

## External conditions

Operating temperature(°C)	-10 – +50
Humidity (RH %)	0 – 90 (without condensation)
Degree of protection	IP 67
RoHS	yes

## PROPER DISPOSAL OF THE PRODUCT



Disposal of electrical and electronic equipment. This symbol on the product or in its documentation indicates that this product shall not be treated as household waste at the end of its working life. To avoid possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle them with respect to the sustainable reuse of material resources. Non-commercial users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can safely recycle this item. This product must not be mixed with other industrial products.

## SAFETY MARKING



<b>Meaning:</b>	<b>CAUTION!</b> Clean the transmitter elements before use.
<b>Type:</b>	Marking with safety instruction.
<b>Regulations / standards:</b>	NV No. 176/2008 Coll. and NV No. 378/2001 Coll.
<b>Dimensions [mm]:</b>	35 × 12 mm
<b>Location:</b>	On device.
<b>Amount:</b>	1

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