



ZORN

**SMART BIRD LASER**



BIRD DETERRENT SYSTEM

Installation manual V1.9

## 1. History of changes

---

V1.9	Feb 22 <sup>nd</sup> 2022	Added declaration of conformity
V1.8	Jan 6 <sup>th</sup> 2022	Product rename on first page and labels
V1.7	Nov 19 <sup>th</sup> 2021	Front page name update. Initial English version
V1.6	Nov 10 <sup>th</sup> 2021	The document is divided into two parts. Separate instructions for starting the device from the installation instructions. Added chapters: maintenance, labels and transport
V1.5	Nov 03 <sup>rd</sup> 2021	Changing images and adding text, changing IP and laser classification
V1.4	Sep 27 <sup>th</sup> 2021	Increased font-size of safety texts added statement for connection and change of statement for limited use. Added software setup instructions
V1.3	Sep 22 <sup>nd</sup> 2021	Security labels and texts added
V1.21	Sep 01 <sup>st</sup> 2021	Grammatical corrections
V1.2	Aug 31 <sup>st</sup> 2021	Update for a new version of REVC2 (images, graphics, specifications)
V1.1	May 19 <sup>th</sup> 2020	Document update
V1.0	Mar 10 <sup>th</sup> 2020	First edition

## 2. Table of contents

---

1. History of changes .....	1
2. Table of contents.....	2
3. Document .....	3
3.1. Interpretation of symbols.....	3
4. Safety instructions.....	4
4.1. General .....	4
4.2. Laser safety instructions .....	5
4.3. Waste electronic equipment .....	5
5. Safety instructions for use.....	6
6. Markings and labels on the device and power supply .....	6
7. Installation .....	7
7.1 Adjustable mounting .....	7
8. Electrical connection .....	8
9. Work area.....	9
10. Before first use .....	10
11. Maintenance, transport and storage .....	10
11.1 Maintenance.....	10
11.2 Transport .....	10
11.3 Storage.....	10
12. Operating areas, transport and storage of the device.....	11
13. Technical specifications.....	11
14. Declaration of Conformity.....	12

### 3. Document





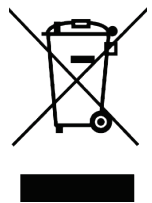
---

This document is part of the product and contains information and safety instructions for use of the device that must be followed.

To use the device correctly and safely, read the instructions in advance and save them properly. The documentation is intended for persons who perform the installation, electrical connection and start-up of the device.

#### 3.1. Interpretation of symbols

For your safety, it is important to read and fully understand the table below, which describes the signal words and their meanings! Alerts can contain added safety information in the form of symbols and additional text.

 <b>WARNING</b>	A warning symbol indicates danger. Caution should be exercised when handling the product. Failure to follow the instructions could result in serious injury.
 <b>DANGER</b>	Electric shock hazard symbol.
 <b>ATTENTION</b>	The warning symbol indicates the risk of injury from laser beams.
 <b>INFORMATION</b>	Important information and instructions for use.
	Symbol for waste electronic equipment.

## 4. Safety instructions

---

### 4.1. General

- Before working in a hazardous environment, near power lines, or similar circumstances, the person responsible for the device should consult your local authorities or safety experts.
- Before installing the device, make sure that it contains all the necessary parts for operation.
- The person responsible for the device must understand the safety instructions. He or she must ensure that all users understand and follow these instructions.
- Prevent unauthorized personnel from accessing the product.
- If the device is damaged, consult your dealer.



- Due to the risk of electric shock, only an authorized and qualified person should connect the device.
- To reduce the risk of electric shock, never service, install, or remove the device while it is energized.
- Before using the device, make sure that the line voltage corresponds to the voltage specified on the device.
- Use the device only with the supplied external power supply.



- The device must not be used by children under the age of 18 and persons with reduced physical, sensory or mental capacity, lack of experience and knowledge. The device is intended for professional use only.
- Children should not play with the appliance. Children should not perform cleaning and user maintenance without supervision.



- The device must be equipped with means for disconnection from the mains by separating the contacts on all poles, ensuring a complete disconnection in the conditions of category III overvoltage, and these means must be installed in the fixed wiring in accordance with the wiring rules.



#### 4.2. Laser safety instructions

- The device produces visible laser beams that are released from the instrument.
- The product belongs to class 1, which means the laser beam is safe in all conditions of normal use.

CLASS 1 LASER PRODUCT

- Staring directly into the beam with optical aids (e.g., telescopes, binoculars) can be dangerous.
- Staring at a laser beam can damage the eyes.



#### 4.3. Waste electronic equipment

##### **WARNING:**

- The appliance must not be disposed of with household waste. Dispose the used device properly and in accordance with the regulations which apply to your country.
- By irresponsibly disposing of an obsolete device, you may allow unauthorized persons to use the device in violation of regulations, exposing themselves and other people to the risk of serious injury and damage to the environment.



## 5. Safety instructions for use

---

### Intended use:

- The device uses a laser beam to scare away birds out of the buildings where they are retaining.
- The laser can only travel within the set selected areas.
- In the set area the device itself detects where the birds are staying and triggers the laser.
- It shuts down automatically.

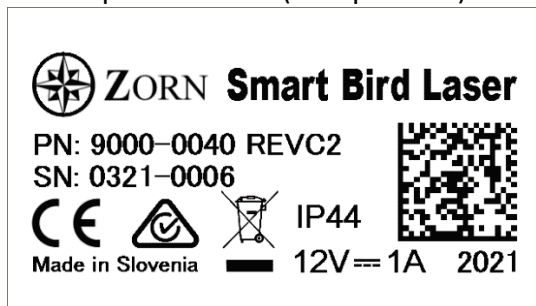
### Improper use:

- Use without instructions.
- Off-site use and restrictions.
- Disabling embedded security systems.
- Removing type labels and hazard warning labels.
- Opening the device, except as permitted during installation or service.
- Changing and redesigning the device.
- Use of the device with recognizable damage or malfunctions.
- Intentionally blinding other people.

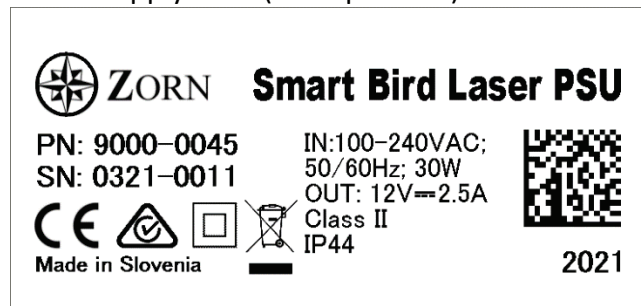
## 6. Markings and labels on the device and power supply

---

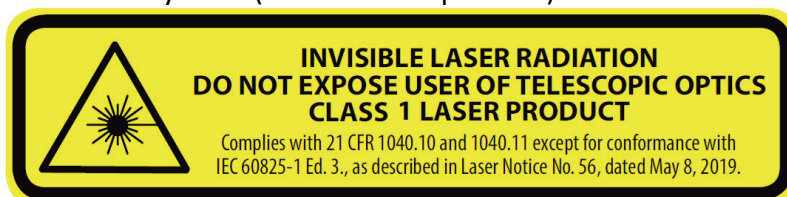
Device product label (rear position)



Power supply label (front position)



Device safety label (bottom front position)



# 7. Installation

Standard brackets for security cameras can be used for the installation, allowing a variety of mounting methods.



## 7.1 Adjustable mounting

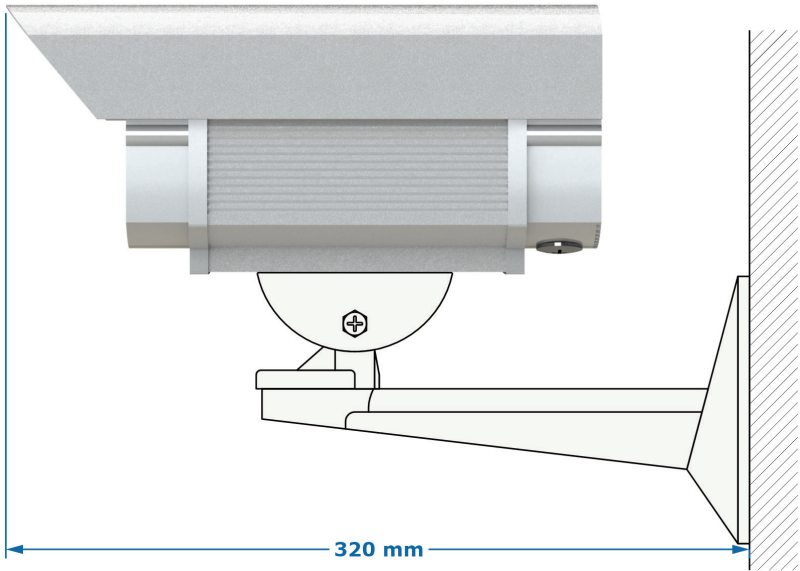


Figure 1: Distance of the front edge of the device when mounted on the wall

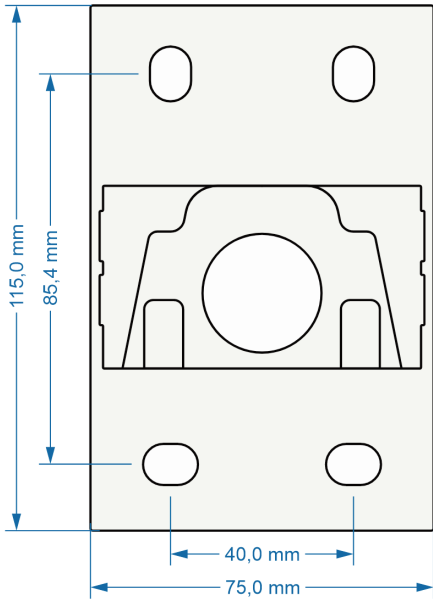


Figure 2: Position of holes for mounting on the wall

## 8. Electrical connection

The device is powered via the included power supply with a mains voltage of 100-240VAC 50/60Hz. The power supply is in a separate housing measuring 115x65x40mm. The device and power supply comply with IP44 protection. The power supply can be mounted in a support pole, an existing lighting pole or screwed to a wall. A fine-wire conductor type H05VV-F or H07VV-F, cross section 2 x 0.5mm 0.75mm<sup>2</sup> (diameter of the supply conductor can be between 3 and 6.5mm) should be used for connection to the power supply. The included connecting cable from power supply to the device is 6m long.

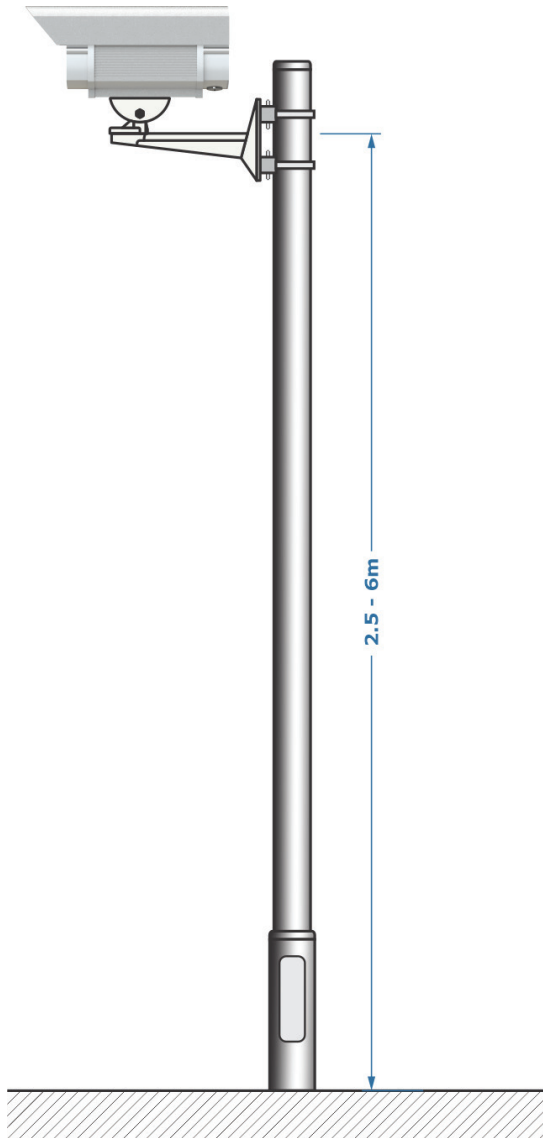


Figure 3: Example of mounting on a lighting pole



Figure 4: Connection terminals for connection to the mains voltage in the supplied power supply

The main body of the device must be installed at least 2.50m above the ground.

If the distance between the power supply and the device is shorter, the excess cable may be twisted or cut and shortened on the power supply side. It is necessary to first remove the filter on the conductor and reinstall it after shortening.

# 9. Work area

The device has a working range of 55 ° along the X and 45 ° along the Y axis. With a sufficient distance, areas up to 104x92m can be covered in night mode without a camera and 50x45m during the day with active bird detection.

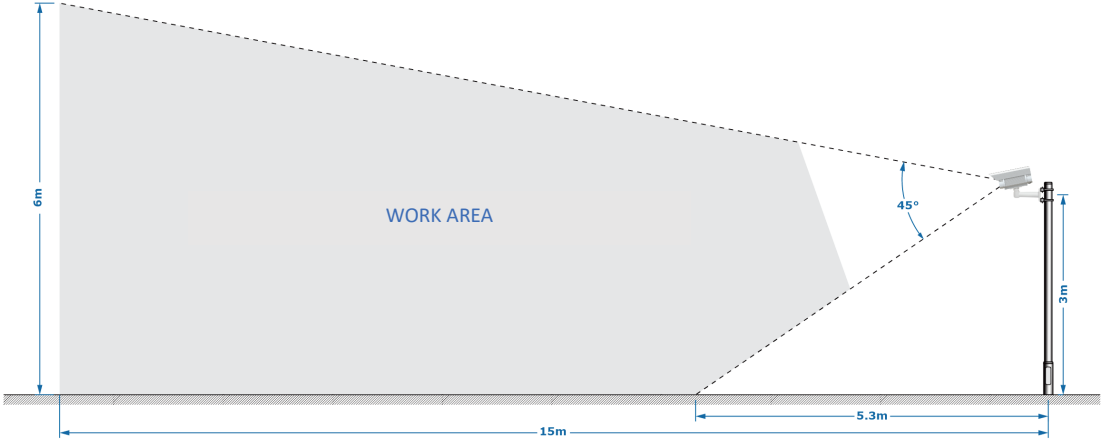


Figure 5: Example of a working area up to 15m with placement on a 3m high pole

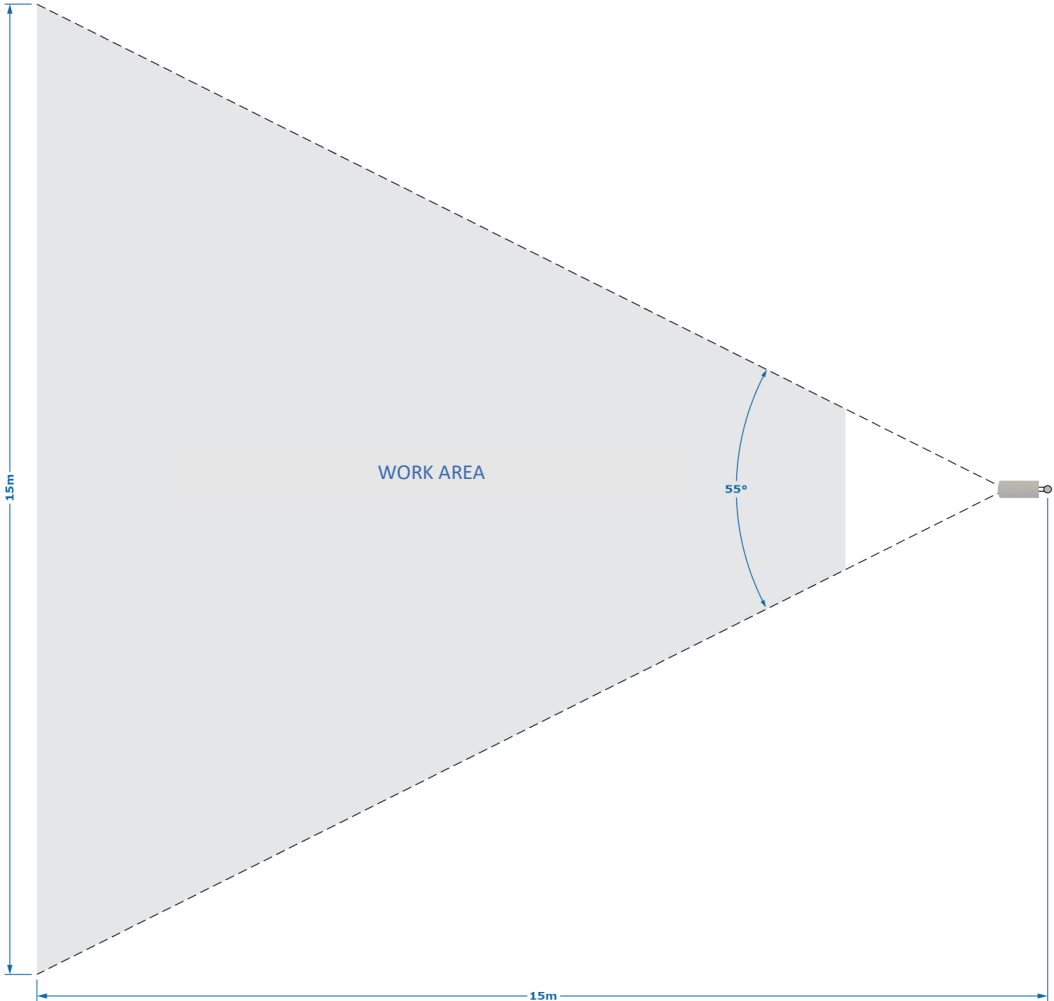


Figure 6: Example of working area width at 15m installation distance

## 10. Before first use

---

Make sure the device is properly attached and facing the object from which you want to scare away the birds. Check that the power cord is securely connected, and then turn on the fuse.



## 11. Maintenance, transport and storage

---

### 11.1 Maintenance

You can clean the outer casing with a damp, clean, soft cloth to clean dirt.

Clean the glass with a damp, clean, soft cloth. You can use ethanol.

Clean the power supply and power cord with a damp, clean, soft cloth.

### 11.2 Transport

Use the original packaging in which the device was packaged or in equivalent packaging to transport and ship the device.

### 11.3 Storage

Observe the temperature limits specified in the technical specifications when storing the device.

Never store the device wet. Allow to dry before storing.

If the device is stored for a long time or the device is transported for a long time, inspect the device before using the product.

## 12. Operating areas, transport and storage of the device

---

Minimum installation height: 2.5m

Temperature range: -10 - + 50 ° C

Relative humidity: 10 - 90% (no condensation)

Elevation: up to 2000m

Air pressure: The device is suitable for use in an atmosphere suitable for permanent human habitation; not suitable for use in aggressive or explosive atmospheres.

## 13. Technical specifications

---

Working area: Horizontal 55 °, Vertical 45 ° (104 x 82m at a distance of 100m)

Maximum working distance: 100m night mode, 50m day mode with active bird detection

Connectivity: Wi-Fi IEEE 802.11b/g/n

Power supply: 100-240VAC 50/60Hz

Connected power: 30W

Power consumption: 10W (Chase), 5W (Observation)

Laser source: 532nm, Class 1, (dot size ~ 1cm at 5m)

IP protection level: IP44

Temperature range: -10 - + 50 ° C

Device size: 258 x 115 x 120mm (L x W x H)

Power supply size: 115 x 65 x 55mm (L x W x H)

Weight: 1.2kg (Device), 0.3Kg (Power Supply)

Mount: Standard bracket for outdoor cameras

Distance of the device from the power supply: 1-6m (6m cable included)

## 14. Declaration of Conformity



### Certificate of Conformity

**Number:** C223-0003/22 **Project file:** C20211501

**Product:** Bird deterrent system

**Type reference:** Bird Laser  
Smart Bird Laser

**Trademark:**  ZORN

**Applicant:** ZORN PLUS d.o.o.  
Stegne 23a, SI-1000 Ljubljana, Slovenia

**Manufacturer:** ZAŠČITE d.o.o.  
Stegne 23a, SI-1000 Ljubljana, Slovenia

**Place of manufacture:** ZAŠČITE d.o.o.  
Stegne 23a, SI-1000 Ljubljana, Slovenia

This certificate is granted subject to the SIQ's rules on product certification. SIQ certifies the conformity of the products with the requirements of the listed standards.

**Ratings:** Supplied from external AC/DC power supply unit:  
Input: 100-240 V~; 50/60 Hz; Class II  
Output: 12 Vdc; 2,5 A; 30 W

**Standard:** EN 60825-1:2014

**Test report:** T223-0559/21 (2022-01-10)

**Remarks:** This certificate shall apply to the products identical to the tested sample and shall remain valid for the period of 3 years until 2025-02-09 or until the validity date of the listed standards, whichever occurs earlier.

**Date:** 2022-02-09

**Authorized signature:** Bojan Pečavar

*Only integral publication of this certificate is allowed. This certificate may only be reproduced in its entirety and without any changes. On request SIQ will give information about the validity of the certificate.*

**SIQ Ljubljana**, Mašera-Spasičeva ulica 10, SI-1000 Ljubljana, Slovenia  
T +386 1 4778 100, F +386 1 4778 444, info@siq.si, www.siq.si

CN500E-01



ZORN PLUS d.o.o., Stegne 23a, 1000 Ljubljana, Slovenija, EU

**Konformitätserklärung – Declaration of Conformity – Déclaration de conformité**

**The undersigned, representing:**

ZORN PLUS d.o.o.  
Stegne 23a, SI-1000 Ljubljana, Slovenija  
email: [info@zornplus.si](mailto:info@zornplus.si) [www.zornplus.si](http://www.zornplus.si)

**Herewith declares, that the product:**

**Smart Bird Laser**

Product number: 9000-0040 and 9000-0045  
SIQ certification project file: C20211501

The electrical equipment described above is in conformity with the relevant European Union (EU) harmonisation legislation:

2014/30/EU – Electromagnetic compatibility (EMC) – from April 20, 2016
2014/35/EU – Low voltage directive (LVD) – from April 20, 2016

References to the relevant harmonised standards used in relation to which conformity is declared:

<b>EMC - Electromagnetic compatibility</b> EN 303 446-1 V1.2.1 ElectroMagnetic Compatibility (EMC) standard for combined and/or integrated radio and non-radio equipment; Part 1: Requirements for equipment intended to be used in residential, commercial and light industry locations SIQ report: T251-0617/21	EN 301 489-1 V2.2.3
	EN 301 489-17 V3.2.4
	EN IEC 61000-6-3:2021
	EN IEC 61000-6-1:2019
	EN IEC 61000-3-2:2019
<b>LVD - Safety for electrical Appliances</b> IEC 60335-1 SIQ report: T211-1079/21	EN 61000-3-3:2013 + A1:2019
	IEC 60335-1:2010 + A1:2013 + A2:2016
	EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A2:2019 + A14:2019
<b>Ingress and vibration testing</b> IEC 60529 and IEC 60721-3 SIQ report: T211-1021/21	EN 62233:2008
	IEC 60529:1989 + A1:1999 + A2:2013 - IP44; IEC 60721-3-3:2019 - Clause 5.7
<b>Safety of laser products</b> IEC 60825-1 SIQ report: T223-0559/21	IEC 60825-1:2014

Concerning safety aspects, the general and the specific product warnings and safety instructions in the product accompanying documents must also be regarded!

This declaration is based upon the respective technical documentation held by the manufacturer.



Place and date of issue:

17.02.2022

Signed for and on behalf of:

 ZORN PLUS d.o.o.  
1000 LJUBLJANA, Stegne 23/a  
Dr. Oskar Zorn, CEO

