ICARUS blue

USER MANUAL

(90010000 STANDARD)

ABOUT THIS USER MANUAL

This user manual has been created according to „NEN 5509:2016 (nl) User manuals", concerning contents, structure, formulation and presentation and is intended for end-users and installers of these receivers.

The purpose of this manual is to provide the user with all necessary information to ensure a correct, efficient and safe use of the product (during its lifetime), even in the event of a reasonably foreseeable misuse.

This manual is designed to facilitate the installation, commissioning, use, maintenance and disposal of the non-return modules.

This manual is intended to be carefully read by the user and should be completely understood, not leaving any uncertainties, before use and installation of the product.

INTRODUCTION

The product's purpose is to switch electric loads ON and / or OFF. The end user is able to switch a load ON and / or OFF by using a mobile iOS or Android App, which connects the smart device via Bluetooth to the ICARUS blue receiver.

By touching the buttons in the main screen of the mobile app, the corresponding output will be activated or deactivated.

The product is designed to work with 12 and 24 Volt systems and has a maximum current capacity of 4.7 Amps per output. The load of the whole system may never result in exceeding a total maximum current of 10 Amps.

The ICARUS blue receiver has an internal memory to store the app settings. When another user connects his / her smart device to the receiver, the saved settings will be loaded automatically.

CONTENTS OF THE PACKAGE

Please check the completeness of the box's contents:

- ☑ ICARUS blue device
- ☑ Connection cable
- ☑ Quick start guide

SYMBOL DESIGNATION

Attention / Danger

Separate from waste processing after expiration of the service life.

Product produced in accordance with EU directives.

Before use, read the user manual.

SAFETY REGULATIONS

General

The user should have read this user manual before using the device for the first time and its content should have been understood. If there are questions and / or uncertainties before the first use, you need to contact your supplier for clarification.

This user manual must also be included when this device is used by any third party.

Therefore:

- Losses incurred as a result of not going through the safety-requirements is not covered under warranty. We accept no liability for any consequential damages.
- We have no liability for property damage or personal injury caused by improper use or non-compliance with safety regulations. In such cases, the warranty will expire.
- This product is not a toy and is NOT intended for use by children.
- DO NOT leave packaging material lying around. This can be hazardous material for children.
- DO NOT open and / or disassemble and / or alter the device. This will expire the warranty.
- DO NOT put the device under mechanical pressure.
- The user must always comply with the safety and operating instructions, also from all other devices and / or applications associated with the product.
- When installing the device, make sure the cable is not crushed, kinked or damaged in any way, for instance by sharp edges.
- Consult an expert if you are unsure about the proper use, safety or connection of the device.

Operating

- Only use the device after having read the user manual thoroughly and having complete understanding, without any uncertainties, concerning the use and operation of the application where it is used in or for.
- **DO NOT** operate the device in an environment with lots of dust, flammable gases, vapours or solvents. This increases the risk of fire and explosions.
- When using and operating the app, the user must have complete overview of the work area.
- **DO NOT** use the device if it is damaged. In this case, discard the product in an environmental friendly manner.
- Safe operation is not possible anymore when :
  - The product has sustainable visible damage.
  - The product is operating poorly or not functioning at all.
  - Smoke, burning smell, discoloration of the product.

Power supply

- Only use the product within a range of 9 to 36 Volt dc.

Overload

- Make sure the product is neither mechanically nor electrically overloaded. This may damage the device and cause fire or electric shock.

TABLE OF CONTENTS

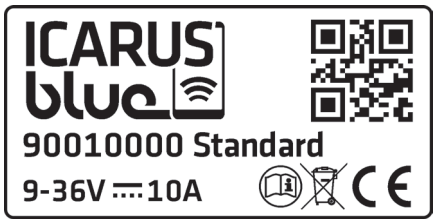
1. TECHNICAL SPECIFICATIONS

Wireless communication	Bluetooth 4.0 (IEEE 802.15.1 standaard)
Frequency	2,4 GHz
Transmission power	7,5 dBm
Operating range	up to 75m (free-field)
Power consumption	~4mA on 12V
Supply voltage	9-36 Vdc
Outputs	4 (min. 3.7A, nominal 4.7A each)
Total current	max. 10A
Dimensions	79mmx 87mm x 26mm (L x W x H)
Weight	138g
Casing	moulded casing (IP66)
Temperature range	-40°C to +80°C
Optical feedback	Dual colour LED (red / green)
Platform	Android and iOS
Max. number of paired devices	24
Min. system requirements	Android 4.3 and Bluetooth 4.0
	iOS 8, iPhone 4s / iPad, 3rd gen. / iPod Touch, 5th gen.

2. PRODUCT TYPE IDENTIFICATION

Each ICARUS blue receiver is labelled (on the rear side) with a sticker containing the product name icon, a QR-code having an unique production / serial number, the product type identification, the supply current and some symbol designations.

An example of a device label is given below.



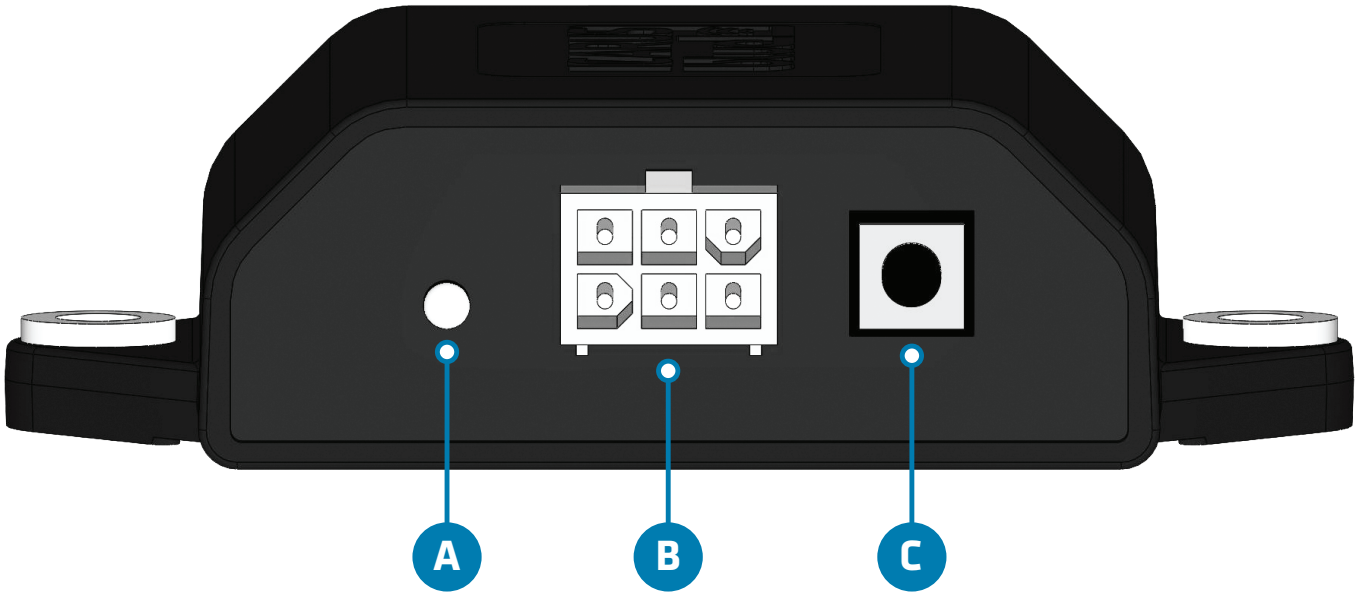
3. THE PRODUCT'S PURPOSE (AND USABILITY)

ICARUS blue is an app-controlled Bluetooth receiver, with impressive features such as a compact and sturdy design, a legion of universal application possibilities and a low purchase price.

In conjunction with the free „ICARUS blue" app (for Android and iOS), the user is able to control a maximum of four separate outputs (per ICARUS blue receiver) from a mobile smart device and configure them in different ways

Whether it comes to the control of winches, gates, dumper truck covers, doors, lighting, extending and slide-in systems, various hydraulic applications or electric motors of any kind - there is almost no limit to your ideas as long as used within the boundaries of the system specifications.

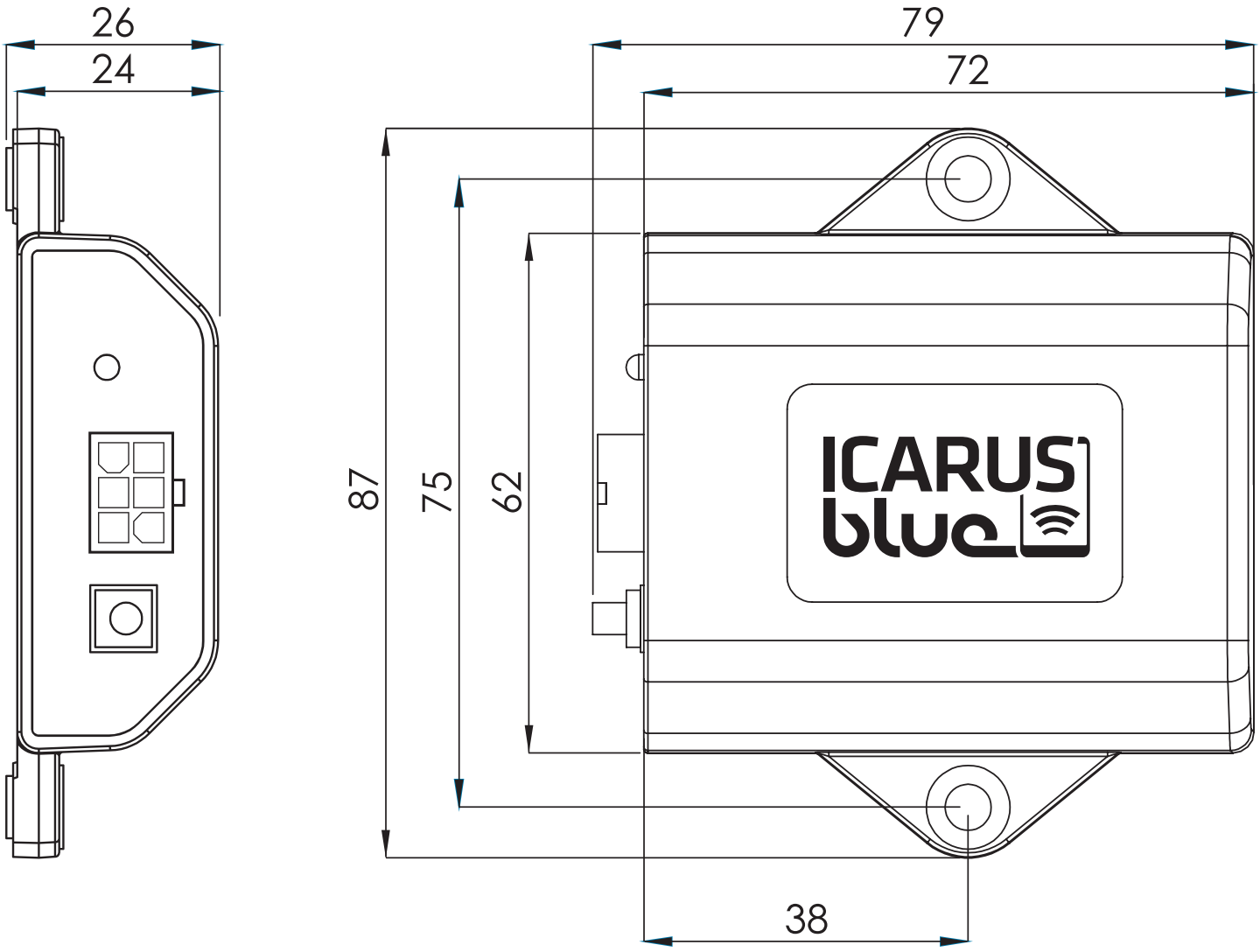
4. ICARUS BLUE RECEIVER



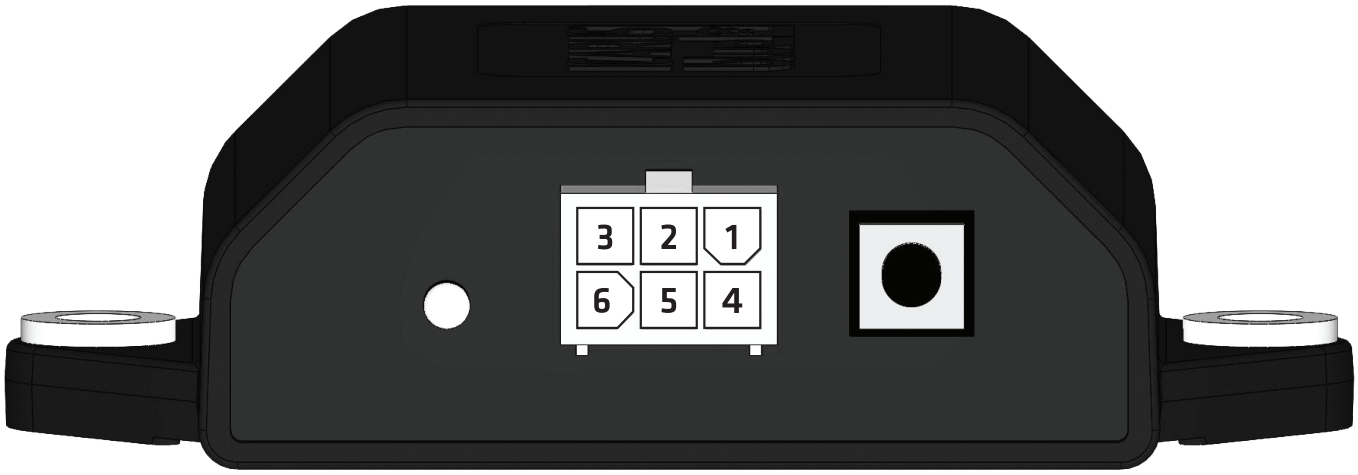
- **A** **STATUS LED:** Displays the status of the receiver.
- **B** **CONNECTION PLUG:** Connections for power supply and outputs.
- **C** **TEACH-IN BUTTON:** Sets the receiver into pairing-mode.

4.1 INSTALLATION REQUIREMENTS

- Always make sure you are using a clean, tidy and dry working surface.
- Unplug the ICARUS blue receiver before installation and assembly from a connected power source.
- Install the ICARUS blue receiver in sight of the user, if possible.
- DO NOT install the ICARUS blue receiver in the immediate vicinity of motors, relays or power cables.
- DO NOT install the ICARUS blue receiver on the inside of a metal casing (this limits the connection range).
- Always complete a supplied wiring diagram before use.
- Use sufficiently thick and proper insulated cables for the conditions where it is used in or for.
- Interconnect the wires with proper cable connectors, and DO NOT only use insulation-tape for this purpose. Improper connections can cause fire and / or electric shock and lead to personal injuries and may damage the product.
- The ICARUS blue receiver has to be fixed with two screws / bolts (use M5 and length at will).
- Always comply with the applicable safety regulations.
- Install the ICARUS blue receiver with the connector facing down for max. water resistance!



4.2 CABLE CONNECTIONS



Function	Pin	Wire-Colour
0Vdc	4	Black
9-36V	1	Red
Output 1	2	Green
Output 2	5	Yellow
Output 3	3	Purple
Output 4	6	Grey

4.3 STATUS LED

„Start-up“ mode

Green 

Red 

„Not connected“ mode

Green 

Red 

„Connected“ mode

Green 

Red 

„Pairing“ mode

Green 

Red 

Example:

Green 

Red 

0 0.5 sec 1.0

Explanation

= **ON** = **OFF**

For the above example this means:
Green light **ON** for 0.5 seconds while red light is off
-> Green light turns **OFF** while red light turns **ON** for 0.5 seconds.

Error codes

Example three times:

Green 

Red 

Blinking	Description
3 x	Undervoltage (<6,5V for 1,5s)
4 x	Overvoltage (>36V for 60ms)
5 x	Sum of separate currents too high (>10A; e.g. short circuit)
6 x	Overcurrent input 1
7 x	Overcurrent input 2
8 x	Overcurrent input 3
9 x	Overcurrent input 4

4.4 TEACH-IN BUTTON

The teach-in button is intended to activate the pairing functionality of the receiver.

- By pressing the button three times succesfully and within 4 sec., the „pairing“ mode of the receiver is activated.
- By pressing it once, the „pairing“ mode is deactivated again, if it was activated.

5. ICARUS BLUE APP

Android
Start by downloading the dedicated mobile app. The app is available in the Google Play Store.
Search for „Icarus Blue“ (by ICP Group) to find the app. Install the app on your Android smartphone or tablet.

iOS
Start by downloading the dedicated mobile app. The app is available in the Apple App Store.
Search for „Icarus Blue“ (by ICP Group) to find the app. Install the app on your iOS smartphone or tablet.

After installation
Start the app. First, the user is prompted to turn Bluetooth ON, if it is not already enabled. After that, the user is asked to accept the general terms of usage.
If no ICARUS blue receivers have been paired to the device before, the app will show a short instruction for new users. Read the instructions to teach-in a new receiver on the device.

5.1 MAINFUNCTIONS

Once you have paired and connected a receiver to your smart device, you can control and configure the buttons / outputs as you wish with the ICARUS blue app. Please open the main menu of the app (top left corner) and select the „settings“ menu item. By pressing the „gear wheel“-icon of the respective button, you will get the following four basic setting options:

„No Function“
When this option is selected, the associated screen button is disabled and does not appear on the main screen.

„Button“
When this option is selected, the associated screen button operates as a push button. When the screen button is pressed, the output remains active. If the screen button is released, the output is deactivated.

„Switch“
When this option is selected, the associated screen button operates as a switch. When the screen button is pressed, the output is activated and remains on until the screen button is pressed again.

„Safety function“
With the safety function activated, the corresponding output of the ICARUS blue receiver is turned off after the app has lost focus or the bluetooth connection is interrupted. If you deactivate this check box, the associated output of the ICARUS blue receiver remains active under all circumstances. Thus, the selected screen button / output can not perform any safety-relevant functions.

After selecting one of the above options, please press the „save“-button.

5.2 ADVANCED OPTIONS

The ICARUS blue app offers a variety of advanced options for every button / output. So for example you can choose between various timer functions (switch-on / switch-off delay, impulse), which output(s) you want to control with the respective button, whether the button should be interlocked with other buttons or not and whether the button should be visible or not. For further details and explanations of the respective functions, simply press the „i“-icon behind each function or take a look at our **„How to“-Videos on www.icarus-blue.com.**

6. USING THE DEVICE

Improper operation, by NOT having read the user manual and having full understanding of it as well as how to use the device, can bring the operator, bystanders and other matters in danger, depending on its application, and may cause personal injury and / or damage to personal possessions as well as to the device.

7. MAINTENANCE AND CLEANING

The product is maintenance-free for the user. Maintenance and repairs must be done by a specialist.
The device should be cleaned only with a damp cloth and without chemicals. Doing otherwise may damage the product.

8. SOLVING OF DTC'S (DIAGNOSTIC TROUBLE CODES)

Blinking 3x - Undervoltage

This error appears if the supply voltage of the receiver drops under 6,5V for at least 1,5sec. A pop-up will be shown in the ICARUS blue app. To reset the error raise up the supply voltage over 6,5V again and click on „reset error" in the app.

Attention: Undervoltage can be triggered by heavy loads (large powerful motors).

Blinking 4x - Overvoltage

This error appears if the supply voltage of the receiver raises over 36V for at least 60ms. A pop-up will be shown in the ICARUS blue app. To reset the error lower the supply voltage under 32V again and click on „reset error" in the app.

Attention: Overvoltage can be a result of defect components in the system or external voltage sources which are connected to the system (e.g. battery charger). Make sure that those sources are removed before resetting the error.

Blinking 5x - Overcurrent of all outputs combined

This error appears if the total current of the receiver is too high. To reset the error, a smartphone needs to be connected. After connecting, a pop-up will be shown in the ICARUS blue app and the error can be resetted by clicking on „reset error". The error won't be resetted by a current drop.

Attention: Overcurrent can be a result of connecting to many loads to the receiver. Make sure those loads won't exeed a total maximum current of 10A.

Blinking 6x - 9x - Overcurrent of a single output

This error appears if the current of one of the outputs is too high. To reset the error, a smartphone needs to be connected. After connecting, a pop-up will be shown in the ICARUS blue app and the error can be resetted by clicking on „reset error". The error won't be resetted if the current will drop down again.

Attention: Overcurrent of an output can be a result of connecting the output to a component which needs to much current. Make sure the current won't exeed the maximum current of 3,7A per output.

Overcurrent of an output can also be a result of a short circuit in the wiring. Make sure that all short circuits are removed before resetting the error.

9. DISPOSAL

Electronic devices are recyclable waste and DO NOT belong in the garbage. If the product does not work anymore, dispose it in accordance with applicable legal regulations.

By following the above recommendation you comply with your legal obligations and contribute to the protection of the environment.

10. WARRANTY

The ICARUS blue device has been tested in a controlled environment and proven to be resistant to moist and dust under certain conditions (meets the requirements of classification IP66 as described by the international standard IEC 60529)

It is not possible for the supplier / manufacturer to ensure that the contents of this user manual as well as the application of the products of the ICARUS Family will be understood and followed by the user. Improper and / or incorrect mounting and / or assembly and incorrect operation can result in personal injury and damage of the materials.

The manufacturer takes no responsibility for personal injury and damage of the materials and / or personal possessions, and any other arising costs, which are the result of improper and / or incorrect assembly, injudicious and improper use and / or incorrect application other than that for which our products are designed and manufactured, or the omission of maintenance or doing wrong maintenance, and / or anything else that is therewith linked, all of these completely at the discretion of the supplier / manufacturer.

Any unauthorized disassembly and / or alteration keeps the manufacturer from any responsibility. All necessary and used parts must be authorized by the manufacturer so the ICARUS blue will have and remain a guaranteed safety and operation over its lifetime.

11. DECLARATION OF CONFORMITY

Manufacturer
ICP systems B.V.
Handelsweg 48, 7451PJ Holten, The Netherlands.

Plant
ICP systems B.V.
Handelsweg 48, 7451PJ Holten, The Netherlands.

Herewith declare that**:**

Product description	: Bluetooth receiver
Product Name	: ICARUS blue
Module Number	: 90010000

Are in conformity with provisions of the directives applied:

Radio Equipment Directive (RED)	**2014/53/EU**
Low Voltage Directive (LVD)	**2014/35/EU**
Electromagnetic Compatibility (EMC)	**2014/30/EU**

and we declare compliance with the following standards:

Safety	EN60950-1:2006 +AC:2011 +A11:2009 +A12:2011 +A1:2010 +A2:2013
EMC	EN 301 489-1 V1.9.2
	EN 301 489-3 V1.9.2
	EN 301 489-17 V1.9.2
LVD	EN 62479:2010
Radio	EN 300 328 V1.9.1

Year in which CE marking was first affixed : 2016

Issued by	: ICP systems B.V.
Date	: January 3, 2017
Place	: Holten, The Netherlands

Signature :

ICP Systems B.V.
Handelsweg 48
7451 PJ Holten
info@icpgroup.nl

Philipp Rasche
Head of engineering
ICP systems B.V.

CE