

User Manual

Ikargo2 Transmitter

Remote Control



Revision history

Table of revisions

Date	Changed	Rev
February 2021	Changed name Ikargo10 to Ikargo2	0201
July 2019	Rebranded to Danfoss.	0101

Contents

Safety instructions

General safety.....	4
Safety warnings.....	4

Technical description

Ikargo2 Dimensions.....	5
Ikargo2 Start-up.....	6

Maintenance

Ikargo2 Maintenance Recommendations.....	8
Troubleshooting.....	8

Charger and battery

BC70K and BT11K specifications.....	9
BC70K Battery Charger Set-up.....	9
BC70K Charger LEDs Status	10
Battery Charging Recommendations.....	10
BC70K Battery Charger Dimensions.....	11

Safety instructions

Ikargo2 General Safety

The following safety instructions must be read carefully to install and use the product properly, and to keep it in perfect working condition, and to reduce the risk of misuse.

- Strictly adhere to the installation instructions contained in this document.
- Make sure that professional and competent personnel carry out the installation.
- Ensure that all site and prevailing safety regulations are fully respected.
- Make sure that this document is permanently available to the operator and maintenance personnel.
- Keep the transmitter out of reach of non-authorized personnel.
- Remove the transmission key when the set is not in use.
- Check each working day the STOP button and other safety measures. When in doubt, press the STOP button.
- Whenever several sets have been installed, make sure the transmitter is the right one. Identify the machine controlled on the label for this purpose on the transmitter or by using the display (in case it has one).
- Service the equipment periodically.
- When carrying out repairs, use spare parts supplied by Danfoss only.

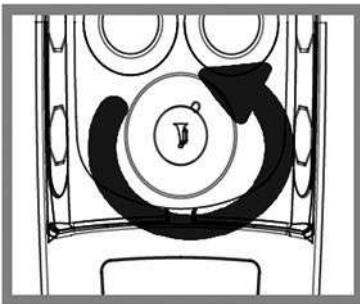
Warning

Potential damage to the operator or the product. Do not use this product on machines in potentially explosive atmospheres unless the model is ATEX/RATEX certified to work in such conditions.

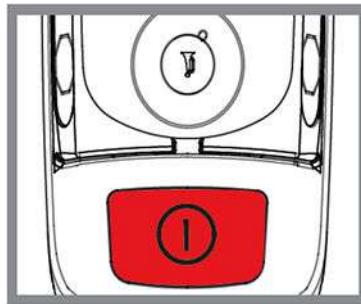
Ikargo2 Safety Quick Guide

Follow the Safety Quick Guidelines below to reduce risk of injury to the operator or the product.

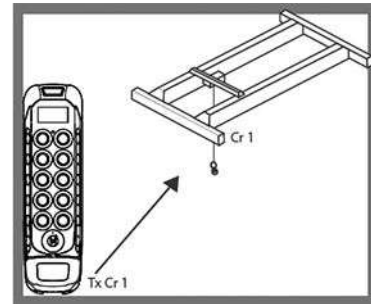
Changes or modifications not approved by Danfoss can void the user's authority to operate this product.



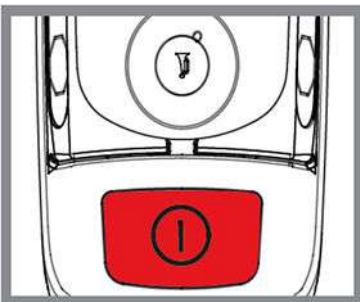
Remove the transmission key only when the set is not in use or to deny the access.



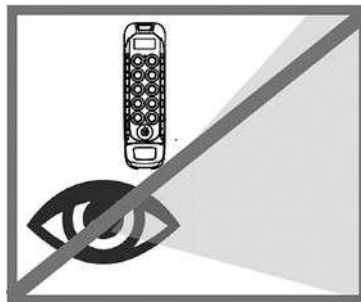
When in doubt, press the STOP button.



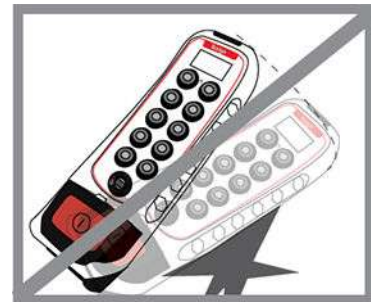
Make sure the transmitter works with the machine to be handled.



After use set the contact key and the STOP button.



Do not use the set when visibility is limited.

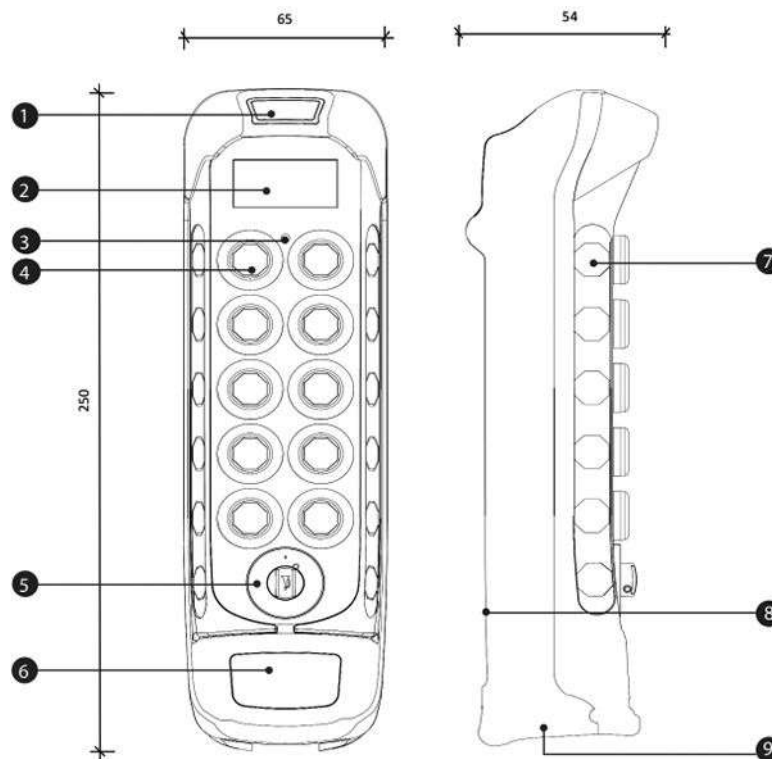


Avoid knocking or dropping the set.

Technical description

Ikargo2 Dimensions

Dimensions (mm)



1. Range limiter
2. RGB display
3. Status LED
4. Maneuver push button
5. Multi-key/START
6. STOP button
7. Movement pictogram housing
8. BT11K battery housing
9. Extractable EEPROM housing

Technical description

Ikargo2 Start-up

In order to turn the transmitter on - **OPERATION mode**, follow the steps bellow:

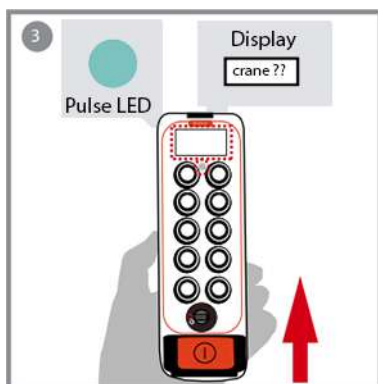
1. Insert the charged BT11K battery model in the transmitter and ensure the EEPROM module is in place.
The battery must be charged according to the charger manual's instruction.



2. Turn the multi-key from the position 0 to the 1 position.
The multi-key cannot be removed while in the 1 position.



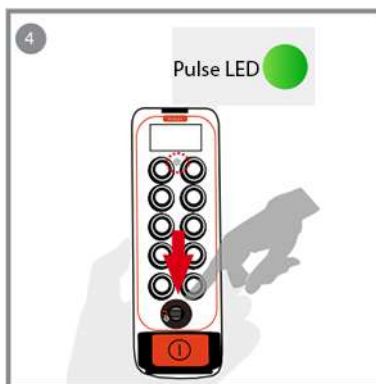
3. Push and pull out the stop button.



The LED will blink in blue-green colors and the battery level will appear in the display. It is recommended to introduce the machine identifier (example: EOT crane number).

Technical description

4. Press START with the multi-key until the radio link is performed.



The LED color will turn green to indicate that the transmitter and receiver link is confirmed.

5. After confirmation, press the maneuver buttons to verify corresponding movements.

Maintenance

Ikargo2 Maintenance Recommendations

This product is designed for use in an industrial environment that may shorten the product's lifespan. Use these recommendations to maximize the lifespan of the product.

- Use the hook/belt provided with the transmitter to prevent the transmitter from falling
- Do not clean the transmitter with solvents or pressurized water; use a damp cloth or soft brush for cleaning
- If the push buttons show signs of deterioration, contact the Authorized Technical Service for repair
- Check if the battery contacts are correct, otherwise replace them.
- Be sure to recharge or replace battery regularly

Maintenance tips quick reference



Ikargo2 Troubleshooting

The transmitter has status monitoring LED's which help identify irregularities. The most common signals are contained in the table below:

LED color Frequency	Pulse Frequency	Description	Action
Green continuous		The transmitter works properly. Operation mode is OK.	No action needed.
Green pulses		STANDBY mode. If transmitter is 4 minutes ON and no action has been taken.	Press START to return to operation mode.
Red slow pulses		Low battery signal.	In 5 minutes you need to replace with full battery.
Red fast pulses		EEPROM module missing or corrupted.	Check EEPROM module or reprogram if necessary.
Red double pulses		A maneuver is activated at transmitter start up process; may indicate hardware damage if no order is active.	Release maneuver or replace transmitter if necessary.
Red continuous		General hardware failure or damage.	Replace transmitter

Charger and battery

BC70K and BT11K specifications

BC70K battery charger

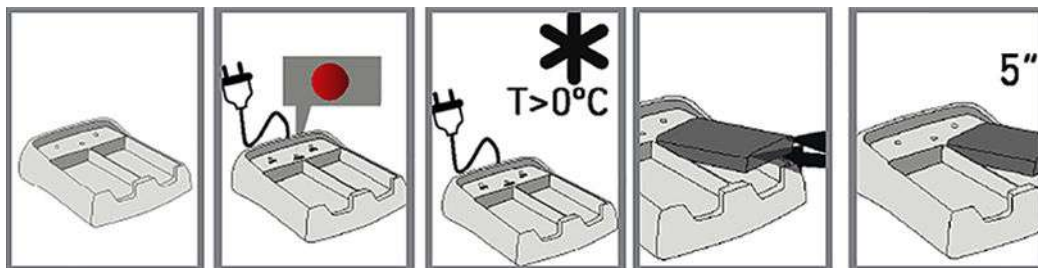
Specification	Value
AC power supply	110 – 230 V, 50/60 Hz, $\pm 10\%$, automatic switching
DC power supply, nominal	12 – 24 V

BT11K battery

Specification	Value
Voltage	3.7 V
Capacity	1130 mAh Li-Ion
Charging temperature	0°C to 45°C
Discharge temperature	-20°C to 60°C
Charging mode	Fast (<2.5 h) and intelligent
Weight	23 g

BC70K Battery Charger Set-up

The battery charger has two charging compartments that can simultaneously charge two BT11K batteries. Use the information below to set up the BC70K battery charger.



1. Connect the charger to a power source using the cable provided.
The red LED will switch on if the charger is properly connected.
2. Place the batteries in the charger.
3. Optional: If charging two batteries, wait at least five seconds before inserting the second battery into the compartment.

Warning

Possible damage to battery.
Be sure to charge batteries in environments with temperatures over 0°C.

Charger and battery

BC70K Charger LEDs Status

The BC70K charger has a LED for each compartment (**BAT 1** and **BAT 2**) and a common indicator (**POWER**).

LED color / frequency	Description
Green LED / pulsing (BAT 1, BAT 2)	The battery is being charged
Green LED / continuous (BAT 1, BAT 2)	The battery is completely charged
Red LED / pulsing or continuous (BAT 1, BAT 2)	The battery charger fault
Red LED / continuous (POWER)	The charger is properly connected to power source

Battery Charging Recommendations

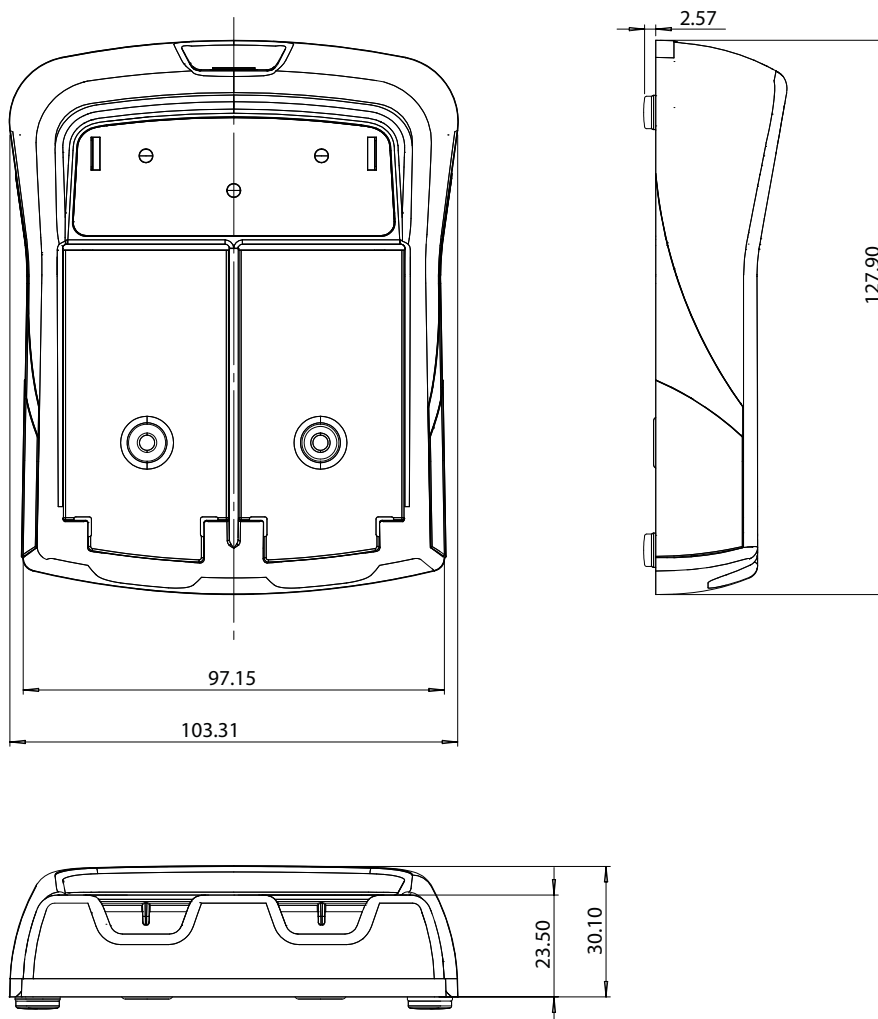
The battery lifespan is estimated to 500 recharging cycles and is largely dependent on the conditions of use. To maximize the lifespan of the batteries and battery charger, follow these recommendations:

-
- Do not recharge the battery until it is completely flat, as shown with red LED slow pulse on the transmitter
 - Always charge the batteries at temperatures between 0° and 45°C (the batteries will not become fully charged at temperatures exceeding 45°C)
 - Do not leave the battery charger or batteries in a direct sunlight
 - Charge batteries at least once every six months
 - Avoid short circuits between the battery contacts; do not carry charged batteries in toolboxes or next to other metal objects (keys, coins, etc.)
 - Always keep contacts clean
-

Charger and battery

BC70K Battery Charger Dimensions

Dimensions (mm)



Products we offer:

- Cartridge valves
- DCV directional control valves
- Electric converters
- Electric machines
- Electric motors
- Gear motors
- Gear pumps
- Hydraulic integrated circuits (HICs)
- Hydrostatic motors
- Hydrostatic pumps
- Orbital motors
- PLUS+1® controllers
- PLUS+1® displays
- PLUS+1® joysticks and pedals
- PLUS+1® operator interfaces
- PLUS+1® sensors
- PLUS+1® software
- PLUS+1® software services, support and training
- Position controls and sensors
- PVG proportional valves
- Steering components and systems
- Telematics

Danfoss Power Solutions is a global manufacturer and supplier of high-quality hydraulic and electric components. We specialize in providing state-of-the-art technology and solutions that excel in the harsh operating conditions of the mobile off-highway market as well as the marine sector. Building on our extensive applications expertise, we work closely with you to ensure exceptional performance for a broad range of applications. We help you and other customers around the world speed up system development, reduce costs and bring vehicles and vessels to market faster.

Danfoss Power Solutions – your strongest partner in mobile hydraulics and mobile electrification.

Go to www.danfoss.com for further product information.

We offer you expert worldwide support for ensuring the best possible solutions for outstanding performance. And with an extensive network of Global Service Partners, we also provide you with comprehensive global service for all of our components.

Local address:

Hydro-Gear

www.hydro-gear.com

Daikin-Sauer-Danfoss

www.daikin-sauer-danfoss.com

**Danfoss
Power Solutions (US) Company**
2800 East 13th Street
Ames, IA 50010, USA
Phone: +1 515 239 6000

**Danfoss
Power Solutions GmbH & Co. OHG**
Krokamp 35
D-24539 Neumünster, Germany
Phone: +49 4321 871 0

**Danfoss
Power Solutions ApS**
Nordborgvej 81
DK-6430 Nordborg, Denmark
Phone: +45 7488 2222

**Danfoss
Power Solutions Trading
(Shanghai) Co., Ltd.**
Building #22, No. 1000 Jin Hai Rd
Jin Qiao, Pudong New District
Shanghai, China 201206
Phone: +86 21 2080 6201

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequent changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.