LES-21-062-NRC

May 17, 2021

Attn: Document Control Desk
Mr. David Nelson, Chief Information Officer
Office of the Chief Information Officer
11555 Rockville Pike
Rockville, MD 20852

Louisiana Energy Services, LLC
NRC Docket No. 70-3103

Subject: Request for use of MFDT Radio Remote Control Systems in Classified Areas

References: 1) Authorizing Official for Classified Networks Located at U.S. Nuclear Regulatory Commission Licensed Enrichment Facilities (Accession Number ML20357A034)

The Reference 1 memorandum designates the U.S. Nuclear Regulatory Commission (NRC) as the Authorizing Official (AO) for Louisiana Energy Services (LES), dba URENCO USA's (UUSA), classified Information Technology (IT) systems.

As the AO for classified IT systems, UUSA herewith requests the NRC's review and concurrence with UUSA's use of wireless radio remote control systems in a classified area for its Multi-Function Decontamination Train (MFDT) overhead cranes. The basis for this request, together with background and identification of the specific remote control systems, is provided in Enclosure 1. Enclosure 2 contains supporting technical data for the requested equipment.

Enclosure 1 contains Security Related Information and should be withheld from public disclosure in accordance with 10 CFR 2.390(d)(1) and RIS 2005-31.

UUSA appreciates the efforts of the NRC staff in supporting the review and concurrence of this equipment within a classified area. Should there be any questions regarding this submittal, please contact Wyatt Padgett, Licensing and Performance Manager, at 575-394-5257.

Respectfully,

Stephen R Cowne

Stephen Cowne
Chief Nuclear Officer

Enclosure: 1) Overview of MFDT Radio Remote Controls Used in Classified Areas
2) Radio Remote Control Technical Data

NMSS01
NMSS

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UUSA
The National Enrichment Facility

Enclosure 2

Radio Remote Control Technical Data

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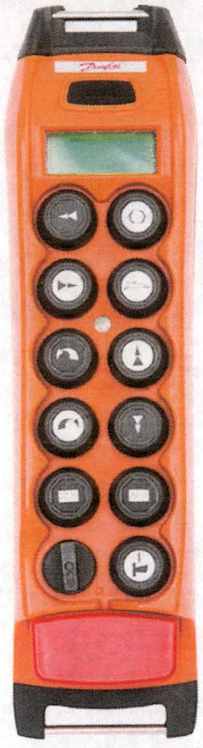
Data Sheet

Remote Control
T70 2 Transmitter

The T70 2 is highly customizable with many features and accessories. From removable EEPROM SIM module to tandem system solutions, the T70 2 brings quality and reliability to lifting applications.



Features

- High-sensitivity two-step push button
- Multi-band Radio with Full-Duplex communication
- External removable EEPROM SIM module
- Frequency management against interferences

Benefits

- Highly customizable
- Easy and fast maintenance
- High resistance to impacts
- LCD display

Applications

- Used in industrial lifting, construction and mining applications
- Used in crane applications

Comprehensive technical literature is online at *www.danfoss.com*

Technical data

Specification	Value
Stop function	Cat. 3-PLd
Ingress Protection	IP65/NEMA4
Anti-condensation system	N/A
Frequency band	Multi-band (400-930 MHz)
Main mechanisms	Push button (10 total)
Auxiliary mechanisms	Toggle and rotary switches
Removable EEPROM	External
Battery model	BT06K
Battery life	10h
Operating temperature	-20° to 70° C (-4° to 158° F)
Weight (with battery)	550 g
Harness	Hand/shoulder strap
Display	2x12 Char LCD
Cable connection	N/A
Range limiter	Available
Associated receivers	R13, R70, MPCAN, MP08, MP20

ENGINEERING
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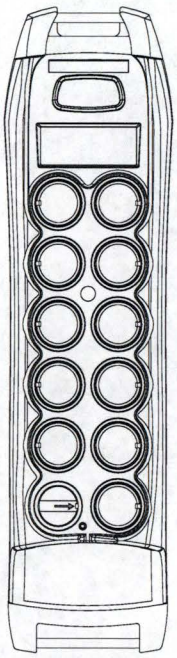
User Manual

Remote Control
T70 2 Transmitter



www.danfoss.com

Revision history

Table of revisions

Date	Changed	Rev
January 2019	Rebranded to Danfoss Power Solutions	0101

Contents

Safety instructions

T70 2 general safety

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

Potential damage to operator and product.
Do not use this product on machines in potentially explosive atmospheres unless the model is ATEX/ RATEX certified to do so.

- 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 transmission key when the set is not in use.
- On starting each working day, check to make sure that the STOP button and other safety measures are working.
- 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, only use spare parts from Danfoss.

T70 2 safety warnings

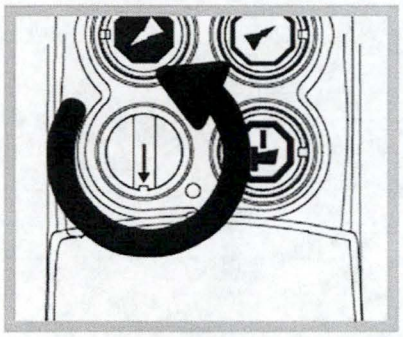
Potential damage to operator and product.
Follow the guidelines below to reduce risk of injury to the operator and the product.

- Use the device with the manufacturer's battery and battery charger (if applicable).
- Only allow qualified personnel to operate the equipment.
- Always set the STOP button in the off position when not in use.
- Always press STOP before plugging in tether cable (if applicable).
- Do not operate product when visibility is limited.
- Make sure product is compatible with the machine.
- Avoid knocking or dropping the product.
- Do not use the product if a failure is detected.

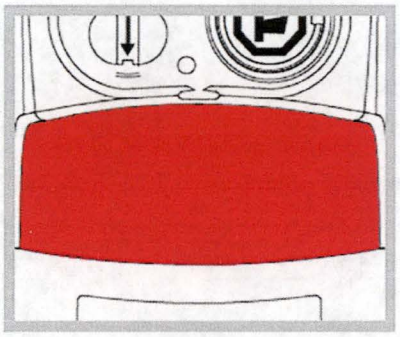
Changes or modifications not approved by Danfoss can void the user's authority to operate this product.

Safety instructions

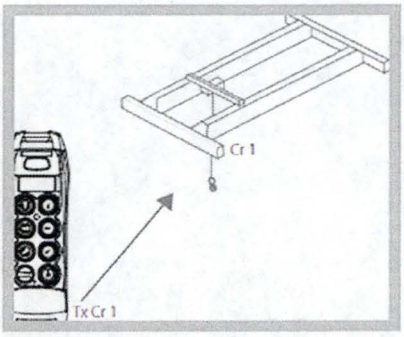
Quick reference precautions



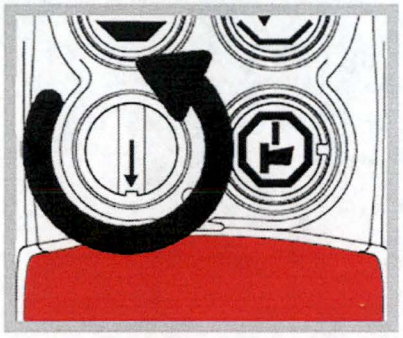
Remove the transmission key only when the set is not in use or to deny the access



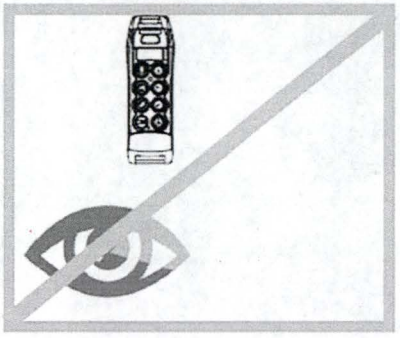
When in doubt, press the STOP button



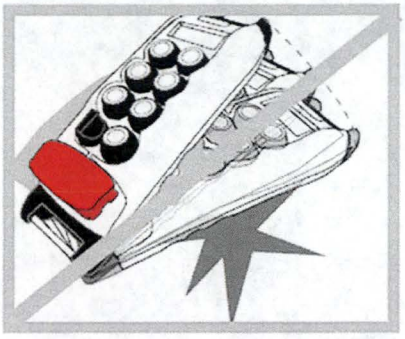
Make sure the transmitter works with the machine to be handled



After use set the contact key and the STOP button



Do not use the set when visibility is limited



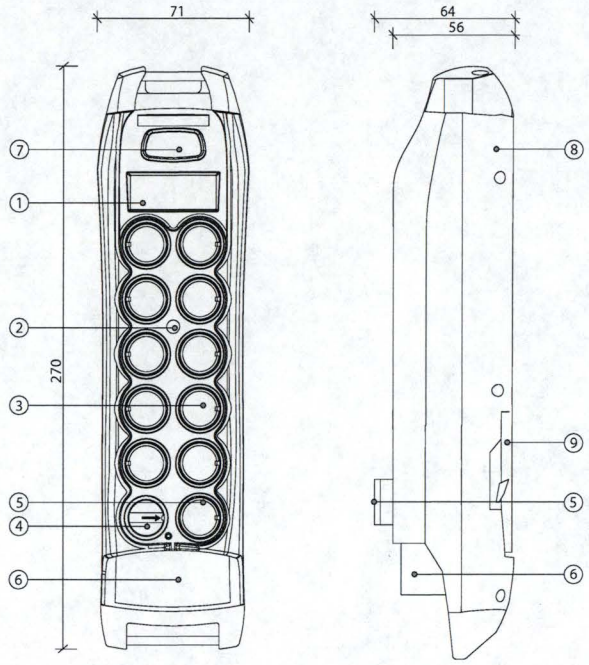
Avoid knocking or dropping the set

Technical description

T70 2 dimensions and identification

The illustration and list below describe dimensions, buttons, LEDs and labels of the T70 2 transmitter.

Dimensions in mm



1. Label for crane identification

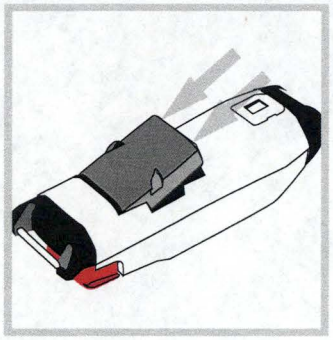
   Option: LCD Display
2. LED
3. Maneuver push button
4. Contact key
5. Start button
6. STOP button
7. Option: Range Limiter
8. External and extractable EP70 EEPROM module
9. Battery

Technical description

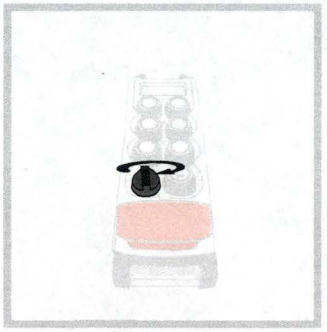
T70 2 start up

Use the information below to properly turn the transmitter ON (OPERATION mode).

1. Place a charged battery in the transmitter. The charge must be done following the instructions of the Battery Chargers' Manual.

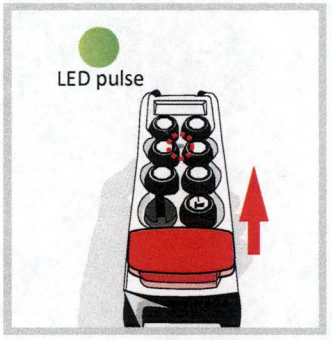


2. Turn the contact key.



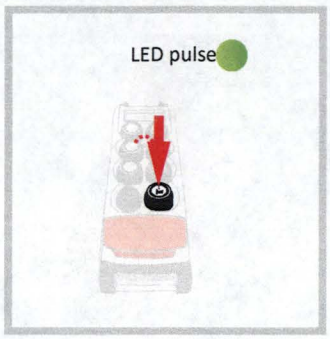
3. Push and pull out the STOP button.

   LED will flash orange-green pulse. If the transmitter has LCD, it displays the identification of the machine and battery level (only if it has been pre-programmed).



Technical description

4. Press the start button. The green LED will now light to indicate the transmitter is transmitting. Once the Tx is connected, press any maneuver button and its corresponding relay will be activated. Check to make sure all other maneuvers work in a coherent way with the expected movements.



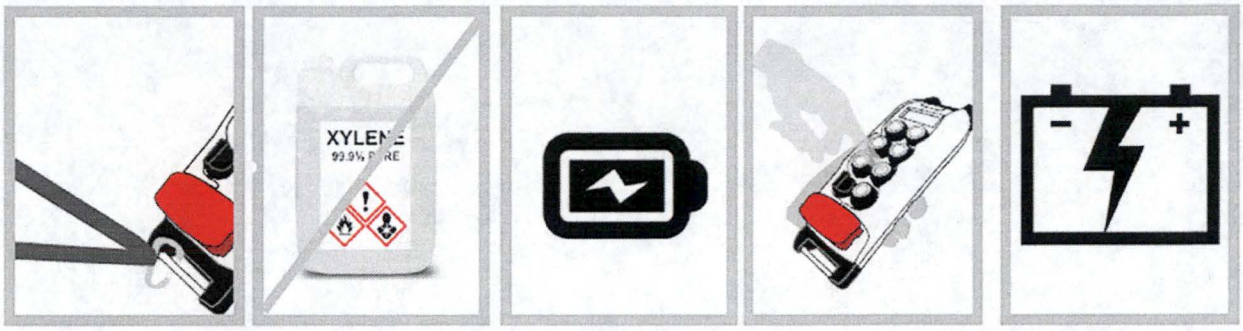
Maintenance

T70 2 maintenance tips

This product is designed for use in an industrial environment that may shorten the product's lifespan. Use these tips 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.
- Ensure that the product is supplied with AAA alkaline batteries or has a rechargeable battery
- Be sure to recharge or replace battery regularly

Maintenance tips quick reference



T70 2 troubleshooting

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

Color and frequency	Pulse frequency	Description	Action
Green | continuous		Working	Operate
Green | slow pulses		Latency; no action has been taken for some time	Press START to return to operation mode
Red | slow pulses		Low battery signal	Replace or recharge battery
Red | fast pulses		EEPROM module missing or corrupt	Check EEPROM and 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	Replace transmitter

Charger and battery

CB70 and BT06K specifications

CB70 battery charger

Specification	Value
Standard AC power supply	230 Vca ± 10%, 50
Optional AC power supply	115 Vca, 60 Hz
DC power supply	From 10.5 V to 35V

BT06K battery

Specification	Value
Voltage	4.8 V
Capacity	600 mAh NiMH
Charging temperature	From 0° to 45° C
Discharge temperature	From -20° to 50° C
Autonomy	10 h (use at 50%)
Charging mode	Fast (<2h) and intelligent
Weight	70.3 g

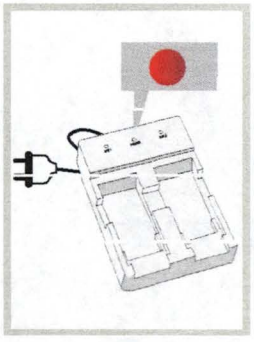
The battery is protected by an internal fuse.

Setting up the CB70 battery charger

Use the information below to properly set up the CB70 batter charger.

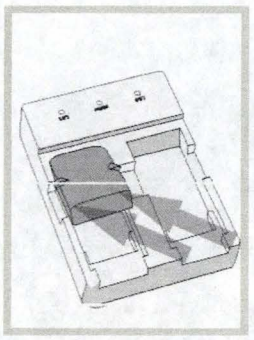
The battery charger has two charging compartments that can simultaneously charge two batteries.

1. Connect the charger to a power source using the cable supplied.
   The red LED will switch.



Charger and battery

2. Place the batteries in the compartments of the battery charger.



3. Optional: If charging multiple batteries, wait at least 5 seconds before placing the second battery in the other compartment.

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

CB70 status LEDs

Each battery compartment has an LED that indicates the status of the batteries' charge.

Green LED; pulsing	Battery is excessively depleted
Green LED; continuous	Normal charging operation mode
Green LED; off	Battery charging process is complete

The battery charger must be placed and used out of the danger area.

Remote control battery charging tips

The battery lifespan is estimated to be 500 recharging cycles and is largely dependent on the conditions of use.

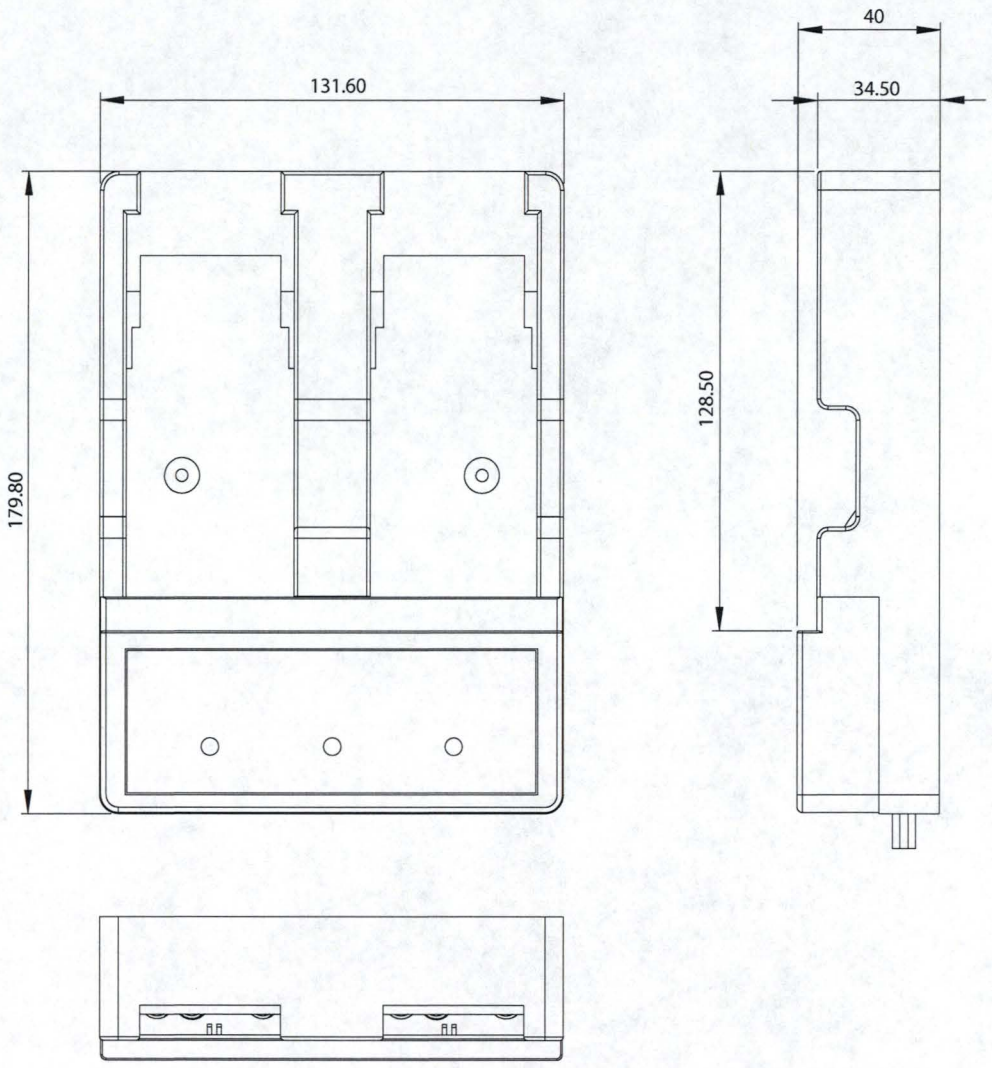
To maximize the lifespan of the batteries and battery charger, follow these tips:

- Do not recharge the battery until needed, as shown with slow, red LED pulse on the transmitter
- Always charge the batteries at temperatures between 0° and 45° C
- Do not leave the battery charger or batteries in direct sunlight
- Charge batteries at least once every six months
- Avoid short circuits between the battery contacts; do not transport charged batteries in toolboxes or next to other metal objects
- Always keep contacts clean

Charger and battery

CB70 battery charger dimensions

Dimensions in mm



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IKUSI

2.- SYSTEM DESCRIPTION

The TM70/1 and TM70/2 push-button transmitter type, radio remote control systems are designed for the remote control of hoists and cranes, and are particularly suitable for applications when the operator needs to be able to choose the best location from which to carry out an operation.

The system consists of a transmitter for selecting commands and a receiver, which is connected to the electrical system of the machine to be operated. The system also comes with a battery charger and two rechargeable batteries.

The main specifications are as follows:

The TM70

Frequency band	869,700 a 870,000 MHz; ERP <5mW Optional: 433,050 a 434,040 MHz; ERP <1mW 434.040 a 434.790 MHz; ERP <10mW 914.150 a 915.875 MHz; ERP <1mW
Response Time	100 ms
Temperature range	-20º a +65ºC

The T70/1 and T70/2 Transmitters

Protection	IP65

The R70/13 and R70/21 Receivers

Power supply	48, 115, 230 Vac ± 10%, 50/60 Hz Optional 12 or 24 Vdc
Consumption	20 W
Relays	230 Vac/8 A
STOP Relays	230 Vac/6 A
Protection	IP55
Electrical Security	Class II (EN50178)

The CB60 battery charger

Power supply	230 Vac ± 10%, 50Hz; optional 115 Vac, 60 Hz; 24 Vcc; 12 Vcc

The BT06K batteries

Voltage	4.8 V
Capacity	750 mAh NiMH
Charging temperature	0º to 45ºC
Discharge temperature	-20º to 50ºC
Autonomy	10 h (operating at 50%)

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3.- SAFETY INSTRUCTIONS

These instructions must be read carefully in order to install and use the set properly and to keep it in perfect working condition and to reduce the risks of misuse.

Do not use this set on machines for the lifting of persons or in potentially explosive atmospheres.

Any use other than that specified in this manual is dangerous. The following instructions must be strictly adhered to.

3.1.- WHAT YOU MUST DO

- Strictly adhere to the instructions for installation contained in this manual
- 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 manual is permanently available to the operator and maintenance personnel.
- Keep the transmitter out of reach of unauthorised personnel.
- Remove the transmission key when the set is not in use.
- On starting each working day, check to make sure that the STOP button and other safety measures are working.
- When in doubt, press the STOP button.
- Whenever several sets have been installed, make sure the transmitter you are going to use is the right one. Identify the machine controlled on the label for this purpose on the transmitter.
- Service the equipment periodically.
- When carrying out repairs, only use spare parts supplied by IKUSI dealers.

3.2.- WHAT YOU MUST NOT DO

- Never make any changes to the set, which have been studied and approved by manufacturer.
- Never power the equipment other than with the specified power supply.
- Never allow unqualified personnel to operate the equipment.
- After use, never leave the equipment ON. Always use the contact key or the STOP button to avoid accidentally activating manoeuvres.
- Do not use the set when visibility is limited.
- Avoid knocking or dropping the set.
- Do not use the set if failure is detected.

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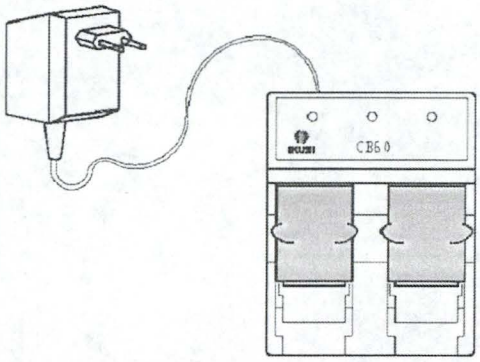
4.- INSTALLATION

4.1.- THE CB60 BATTERY CHARGER

The battery charger CB60 has two charging compartments that can simultaneously charge battery types BT06, BT12, BT06K and BT08K.

Connect the charger to the mains using the power source and cable supplied. On installing the battery charger, bear in mind that the batteries must be charged at temperatures over 5ºC and that the power supply must be left on all night. Also remember that the charger must not be left in direct sunlight, as the batteries will not become fully charged at temperatures exceeding 45ºC.



Place the batteries in the charger. The LED's should light up, indicating that recharging is in process. Complete recharging takes 12 hours, but the batteries may remain in the charger for an unlimited period of time.

The capacity of the batteries decreases with use. Their life span is estimated to be 500 recharging cycles, but this depends largely on the conditions of use, for which the following is recommended:

- Do not recharge the battery until it is completely flat. The transmitter indicates this.
- Always charge the batteries at temperatures between 0º and 45ºC.
- Charge the 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.
- Never leave batteries in direct sunlight.

Only use IKUSI manufactured batteries.
When the batteries are exhausted they can be disposed of or recycled safely according to local standards.

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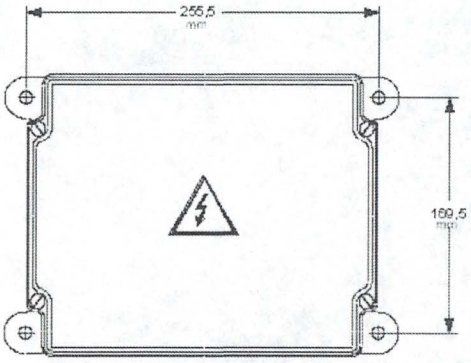
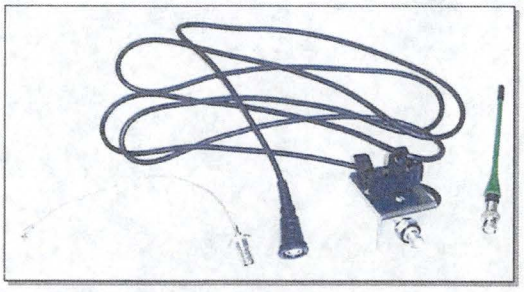
4.2.- RECEIVER

Make sure that the crane is stopped for the entire duration of the assembly process, keep the work area free and wear protective clothing.
Park the crane and position stop-ends (if these are not available use appropriate signs) at a suitable distance so that other cranes on the same runway do not hit it.
Check the power-supply voltage and turn off the mains switch.

Find a suitable location for the receiver with easy access, in a place designated for reception of the radio transmitter signal, and away from any intense radio electric disturbance sources.

Install the receiver cabinet using 4 elastic absorbers.





If necessary, it is possible to improve signal reception, by using the extension cables and external antenna kit.

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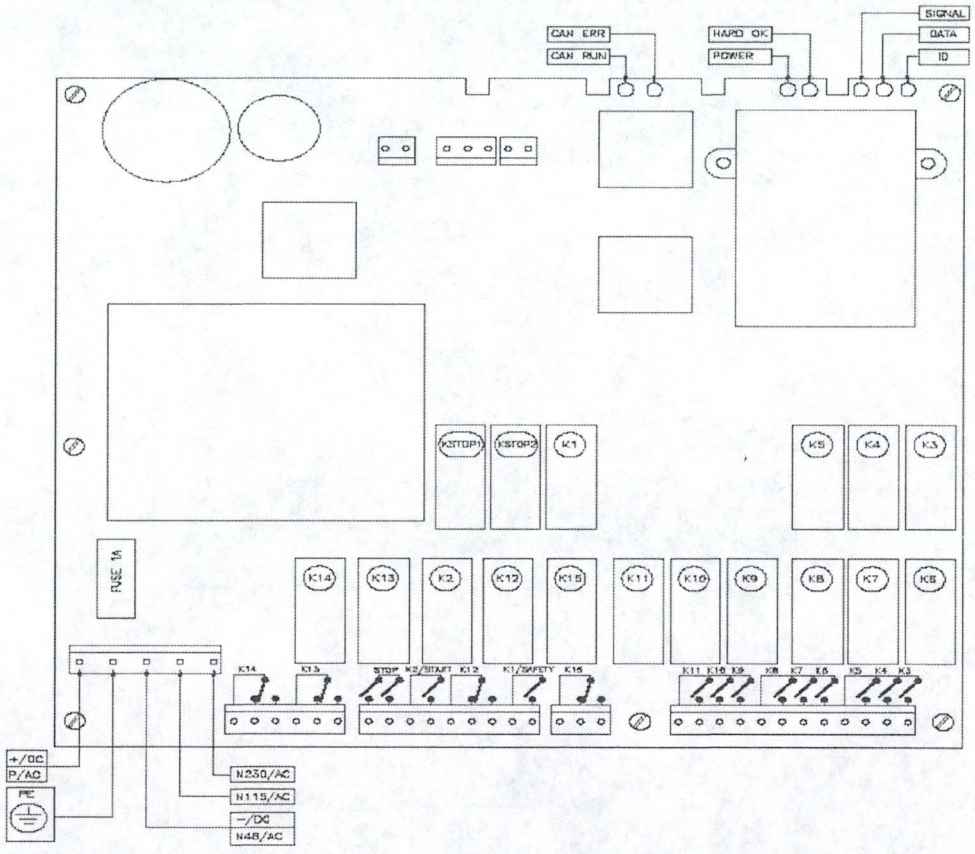
Receiver

Connect the power supply and the receiver outputs on the corresponding relay board plug-in terminals. Do this following the outputs diagram, which is supplied with the set. This diagram indicates the correspondence between the transmitter commands and the receiver outputs.

The STOP relays K15 and K16 are in series and must be connected to the main contactor coil circuit.

The K2/START is activated once the start-up command is held down.

The K1/SEC relay is a security relay, which is activated when certain commands predefined as "active" on configuration of the set. (i.e. commands which give rise to manoeuvres), are activated.



Remember to connect the ground cable.
Only use fireproof cables for connections.
Select the appropriate voltage on the receiver, (230, 115 or 48 Vac)

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4.3.- STARTING UP

Proceed with caution; the equipment may not be connected correctly which may lead to unforeseeable movements on starting-up.

Once the receiver has been connected, disconnect the power supply to the motors, (for example, by removing the fuses) and power on the receiver. With this, the receiver will enter into a 'SCANNING' mode and the following LED's will be lit in the receiver;

POWER: ON, indicates that the power supply is correct.

HARDOK: ON, indicates the absence of faults on the boards.

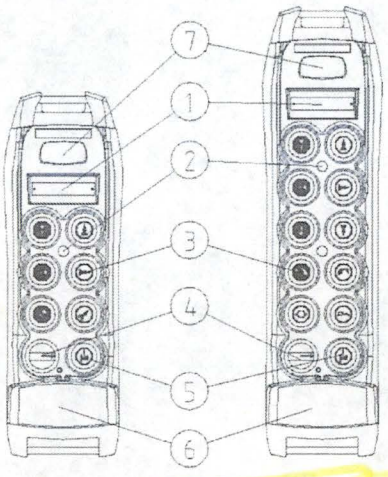
SIGNAL: OFF in the case of the channels being signal free. Blinks ON when there is a RF signal on the channels

DATA: OFF; when there is not another TM70 system active in the area. Blinks ON in the opposite case..

ID: OFF

Next, turn transmitter ON to OPERATION mode, as follows:

- Place a charged battery in the transmitter.
- Turn the contact key.
- Push and pull out the STOP button. LED flashes once orange and then green for 3 seconds. If the transmitter has LCD, it displays the identification of the machine, as well as the battery level.
- Press the start button. The green LED should now light indicating that the transmitter is transmitting.



1.- Label for crane identification.
Optional: LCD Display

2.- LED.

3.- Manoeuvre button

4.- Contact key

5.- Start button

6.- STOP button

7.- Option: Range Limitation

Transmitter

IKUSI TM70/2.13B Specifications

TM70/2.13B

Stop Function Cat. 3 - PLd

Ingress Protection IP65/NEMA4

Frequency Band Multiband (400 - 930 MHz)

Operating Temperature Range -4F +158F(-20C +70C)

T70/2 Handheld

Main Mechanisms (Max. #) Pushbuttons T70/1 (6) T70/2 (10)

Auxiliary Mechanisms Toggle & Rotary switches

Removable EEPROM External

Battery Model BT06K

Battery Life 10h

Weight (with Battery) 1 lb

Harness Hand Strap / Shoulder Strap

R13B Receiver

AC Power Supply 48 - 220 Vac ± 25% (Multivoltage)

Antenna External/Internal(Standard)

Removable EEPROM External

Signaling External

ON/OFF outputs (Max.) 13 Relays

ON/OFF inputs (Max.) 4

Analogue Inputs (Max.) 1

Maximum output Current 8A

Weight 2.9 lbs.

Dimensions (LxWxH inches) 9.65x6.3x3.2

Notes:

Systems to operate in the 915MHz range