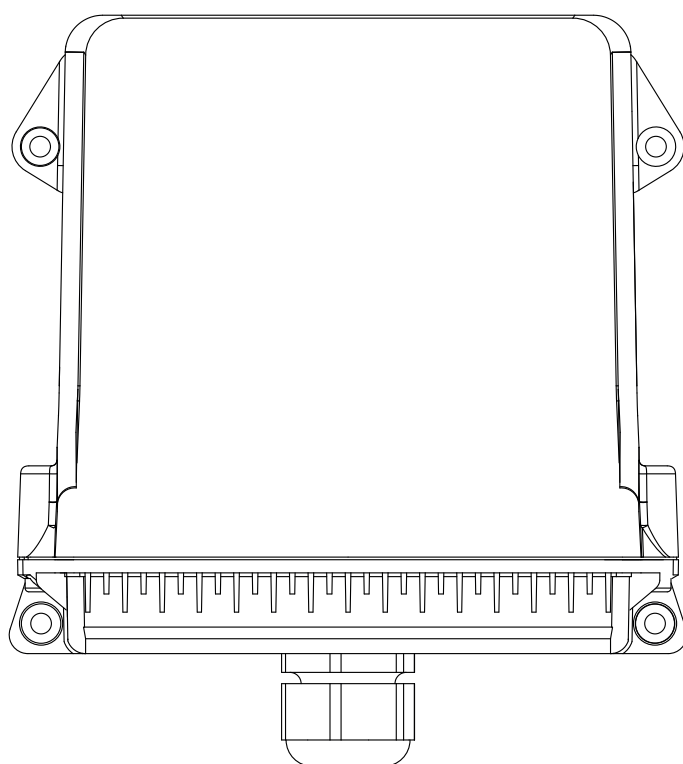




R11

USER's MANUAL

01- 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 in potentially explosive atmospheres, except the models certified ATEX/RATEX to work in that conditions.

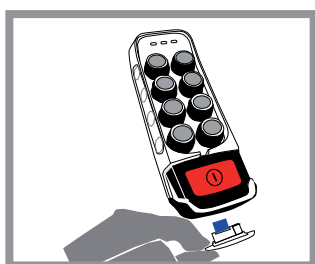
- a) Strictly adhere to the instructions for installation contained in this manual.
- b) Make sure that professional and competent personnel carry out the installation.
- c) Ensure that all site and prevailing safety regulations are fully respected.
- d) Make sure that this manual is permanently available to the operator and maintenance personnel.
- e) Keep the transmitter out of reach of unauthorised personnel.
- g) On starting each working day, check to make sure that the STOP button and other safety measures are working.
- h) When in doubt, press the STOP button.
- i) 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 or by using the display (in case it has one).
- j) Service the equipment periodically.
- k) When carrying out repairs, only use spare parts supplied by IKUSI dealers.

WARNING

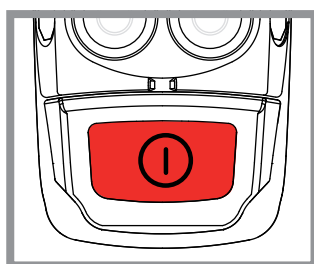
- The equipment must be operated by qualified personnel.
- After use, never leave the equipment ON (one or several transmitters). Always set the STOP button to switch off position of the equipment to avoid accidentally to activate manoeuvres –specially in crane maintenance purposes-.
- Do not use the set when visibility is limited.
- Avoid knocking or dropping the set.
- Do not use the set if failure is detected.

REMEMBER

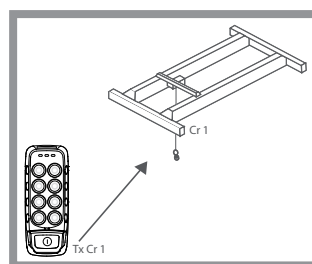
Changes or modifications not expressly approved by IKUSI could void the user's authority to operate this equipment.



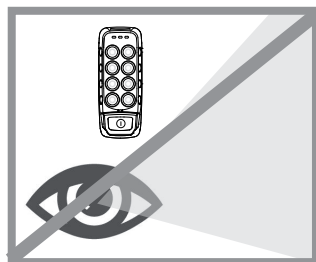
Remove the EEPROM in order to disable the transmitter



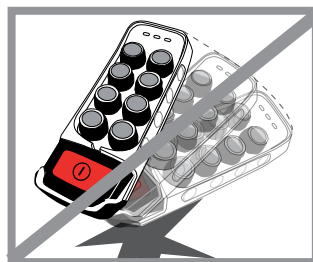
When in doubt, press the STOP button



Make sure the transmitter works with the machine to be handled



Do not use the set when visibility is limited



Avoid knocking or dropping the set

FCC/ISED Regulatory notices

Modification statement

IKUSI ELECTRONICA, S.L. has not approved any changes or modifications to this device by the user. Any changes or modifications could void the user's authority to operate the equipment.

IKUSI ELECTRONICA, S.L. n'approuve aucune modification apportée à l'appareil par l'utilisateur, quelle qu'en soit la nature. Tout changement ou modification peuvent annuler le droit d'utilisation de l'appareil par l'utilisateur.

Interference statement (if it is not placed in the device)

This device complies with Part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Wireless notice

This device complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Le présent appareil est conforme à l'exposition aux radiations FCC / ISED définies pour un environnement non contrôlé et répond aux directives d'exposition de la fréquence de la FCC radiofréquence (RF) et RSS-102 de la fréquence radio (RF) ISED règles d'exposition.

L'émetteur ne doit pas être colocalisé ni fonctionner conjointement avec à autre antenne ou autre émetteur.

FCC Class B digital device notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

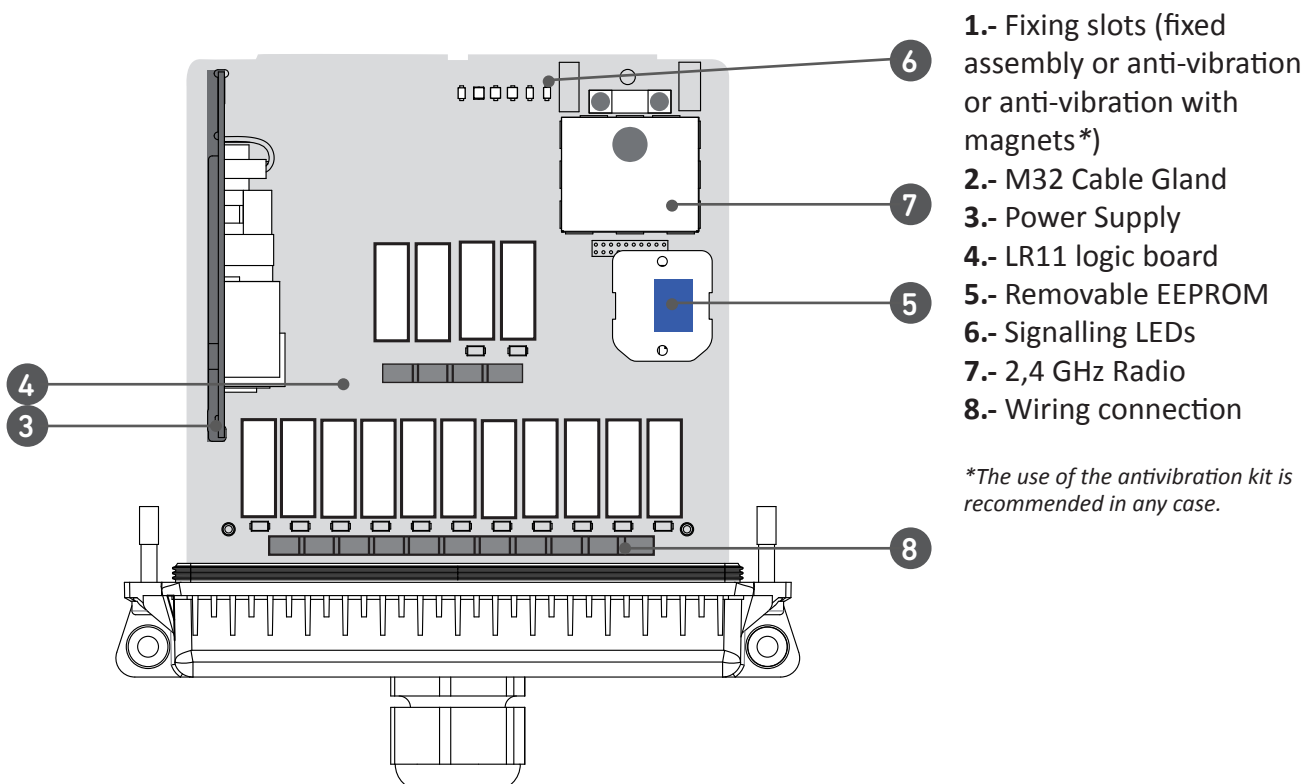
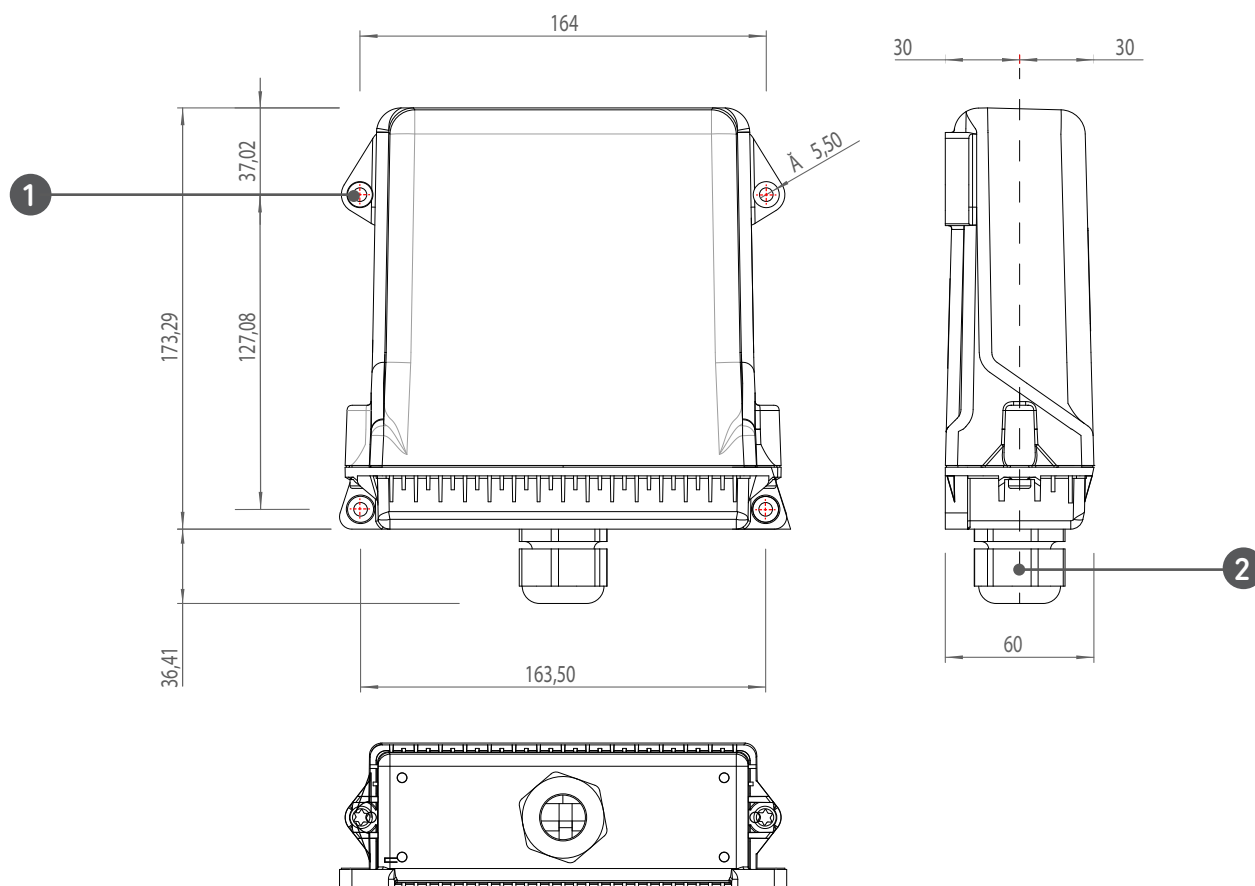
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAN ICES-3 (B) / NMB-3 (B)

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de classe B est conforme à la norme canadienne ICES-003.

02- TECHNICAL DESCRIPTION



SPECIFICATIONS

R11	
Ingress Protection	IP65 / NEMA 4
Frequency Band	2,4 GHz
AC Power Supply	48-240 Vac (Multivoltage)
DC Power Supply	8-36 Vdc
Power (W)	10 W
Antenna	Internal.
Removable EEPROM	Internal.
Señalizaciones	na.
ON/OFF Outputs (Max.)	11
Maximum output current (A)	8 A
Maximun voltage (V AC)	250 V
Analogue Outputs (Max.)	na.
CANOpen, Profibus-DP, SAE J1939	na.
ON/OFF Inputs (Max.)	na.
Analogue Inputs (Max.)	na.
STOP FUNCTION	
Performance Level EN 13849	Category 3 PL d
Maximum output current (A)	6 A
Output voltage (V AC)	250 V
Temperature range	-20°C +70°C
Relative Humidity	Máx. 95% (without condensation)
Storage temperatura range	(24h) -25°C / +75°C (-13F/167°F)
Storage temperatura range —long periods-	-25°C / +55°C (-13F / 131 °F)

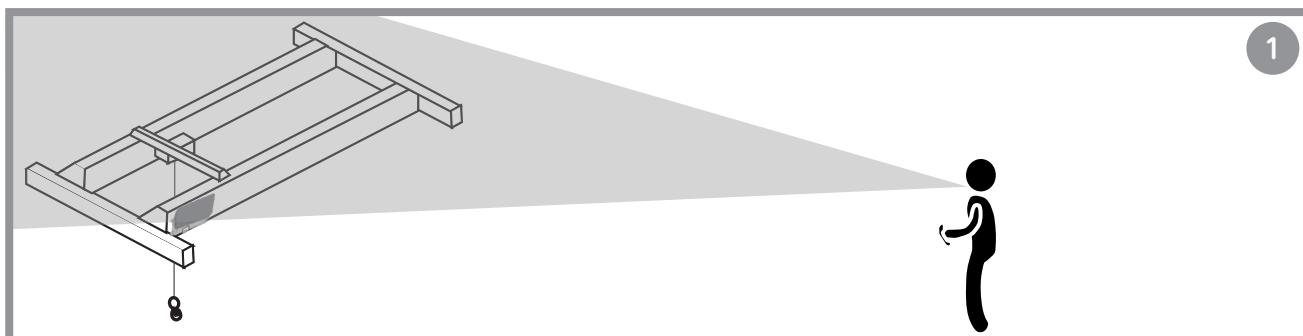
03- RECEIVER's INSTALLATION



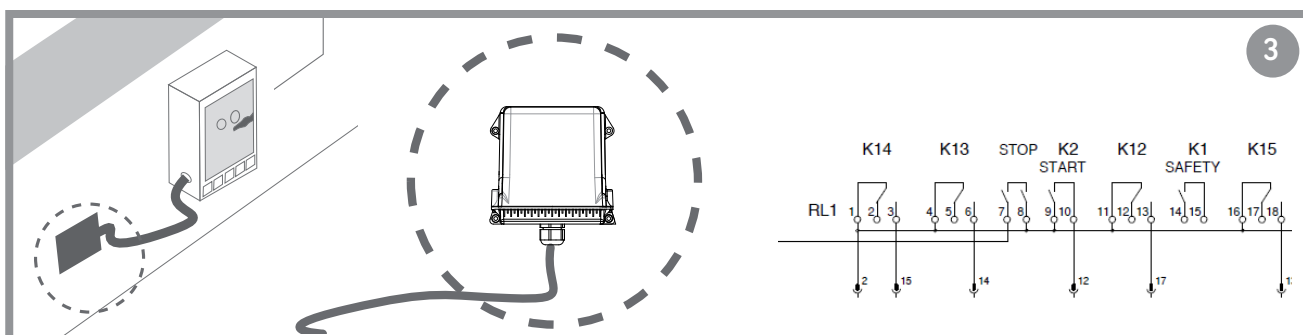
WARNING

Manage the complete shut down of the machine throughout the whole installation of the receiver, following the legislation on occupational risk presentation in force. Check the power supply and shut down the main switch, disconnecting the interface cable between the receiver and the machine's electrical box. Remember that the receiver has more than one circuit of low tension. Even if the power supply of the receiver is not connected, there is still risk of electric shock.

HOW TO LOCATE THE RECEIVER



1. Find a easily accesible and clear location, if possible with a direct vision between the receiver's antenna and the transmitter's working area.
2. In cases where a high level of vibration is expected, it is recommended the use of shock-absorbers. It can be supplied as an accessory a magnet kit, which allow a esay and fast assembly, and the shock absorver kit.



3. Proceed the connection of the power supply and the receiver's outputs. Use the connection block diagram provided with the system, where it is detailed the correspondence between the transmitter manoeuvres and the receiver's outputs.
4. Check the electrical installarion and verify if there's an option to connect the neutral or the ground cable. In that case, don't forget to connect the ground cable. The use of fireproof or flame retardant cables is recommended for the connection.

04- TROUBLESHOOTING

The troubleshooting LEDs are located on the receiver board. In order to reach the signalling, the receiver must be accesible and connected and the two screws located on the base of the receiver must be released, using the suitable tool.

LEDs on the receiver board.



LED	LED COLOUR / FREQUENCY	PULSE FREQUENCY	MEANING	ACTION
POWER	Green / Continuous		Switched ON if powered.	Check power supply if it is switched OFF
STATUS	Blue / Fast pulses		Starting the system, stablishing communication with radio and EEPROM.	Wait
	Blue/ Continuous		Waiting for tranmistter communication. Coming from ACTIVE STOP.	Release STOP pushbutton and press START
	Blue/ Slow pulses		Waiting for tranmistter communication. Coming from PASIVE STOP.	Press START
	Green / Continuous		Working.	Operate
	Red / Slow pulses		EEPROM Error. EEPROM module mising or corrupt.	Check EEPROM and reprogram if necessary
	Red / Double pulses		Radio Error. Radio communication error.	Replace receiver
	Red / Triple pulses		Secondary micro error or error between micro communication.	Replace receiver
STATUS+ DIAG 1	Red/ 4 pulses		Low tension in the receivers power supply	Supply the system with the correct voltage
	Orange/ Slow pulses			
	Red/ 4 pulses		Hardware error	Replace receiver
	Orange/ Double pulses			
	Orange/ Triple pulses			
	Red/ 4 pulses			
	Orange/ 4 pulses			
DIAG 1	Green / Slow pulses		Low link quality	
	Green / Double pulses		Medium link quality	
	Green / Triple pulses		High link quality	
ORDER	Green / Continuous			
RELAY	Green / Continuous		STOP relay activated	