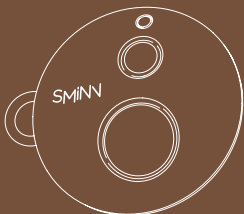


DÚO

TWO CHANNEL TRANSMITTER

INSTRUCTION MANUAL



SMINN

innovative in electronics

DESCRIPTION

SMINN transmitters are developed with state-of-the-art electronics and technology and make use of a robust anticopy system. They provide a high degree of operating reliability and security. They are designed to send the activation/deactivation order to SMINN receivers that are part of motor controllers, alarm systems, access control systems, home automation systems, etc

Devices that are built using high quality materials and components and the latest technology. They are made taking into account the current regulations for usage in residential, commercial and light industry environments.



OPERATION

When a button of the transmitter is pushed, it sends a ciphered 72 bits data frame only decipherable by a SMINN receiver with high security Evolutive Cryptocode technology.

Each transmitter has a unique serial number that distinguishes it from the rest and a PIN code that ensures usage with receivers with the same PIN code. The PIN code can only be modified via SMINN programming tools. PIN codes increase the security and simplify the delivery of transmitters to the final user, avoiding the need to actually go to the installation site. The receiver must be configured to accept transmitters this way.

TRANSMITTER REGISTRATION

Depending on the level of security configured in the receiver's memory it is possible to register transmitter codes manually or via radio.

Security level 1 (Basic): Transmitter can be programmed in invitation mode knowing the PIN (the certified number of the installation) using a SMINN programming console. Invited transmitters are automatically registered by level 1 receivers.

Security level 2 (Intermediate): Transmitters already in use can INVITE new transmitters that share the same PIN (the certified number of the installation).

Security level 3 (Advanced): Emitters will be registered in the receiver manually. Radio-based registration is disabled.

REGISTRATION BY INVITATION

SMINN transmitters can invite new transmitters to receivers where they are already registered.

To invite a new transmitter follow these instructions. See **Fig. 1:**

1. Press and hold the transmitters 1st and 2nd buttons at the same time (5 sec) until the operation led is on.
2. Release both buttons (the led is still on).
3. Approach the transmitter in USE to the left side of the NEW transmitter.
4. Press and hold the 1st button (channel 1) of the transmitter in USE.
5. Wait until the NEW transmitter's led flashes for 5 times (operation OK).
6. Release the push of the transmitter in USE.

The new transmitter has received the invitation and has 10 attempts to register in the receivers where the transmitter in USE is already registered; after those, the invitation disappears.

REPLACEMENT AND BLOCKING DUE TO LOSS

Knowing the SERIAL number of the lost transmitter and with the corresponding credentials, the installer will be able to:

1. Program a NEW transmitter ready to work that will replace the lost one in the memory of the receiver. Only possible if the receiver has been previously configured to accept transmitters with this method (security levels 1 and 2).
2. Block temporarily the transmitter in the memory. Only in receivers with external memory.

BATTERY REPLACEMENT

The lithium battery that powers the transmitter is a CR2032 and has an average life of 2 years with 10 transmissions per day. Transmission duration, operating temperature and other factors can affect battery

life. When the battery is starting to die, the range of the transmitter will decrease and the led will flicker with less light. When that moment comes, replace the battery with another one of the same type and quality (Maxell CR2032 3v recommended), considering polarity. The transmitter will continue working properly. See **Fig. 4-7.**

UNDER NO CIRCUMSTANCE IT SHOULD BE DISPOSED WITH THE COMMON WASTE

Note: dead batteries contain pollutant substances and they should be handed in collection points for this kind of products according to the current regulations.

USE LIMITATIONS

Functionality is not guaranteed if used in different applications than the specified ones.

The manufacturer reserves the right to change the specifications of these systems as well as this manual without prior warning.

The equipment must be manipulated only by specialized and/or skilled personnel.

THE USAGE INSTRUCTIONS OF THIS DEVICE SHALL BE HANDED TO THE USER, WHO WILL HAVE THEM IN THEIR POSSESSION. IF THEY ARE MISLAID, THE USER CAN ASK FOR A COPY OR DOWNLOAD IT DIRECTLY FROM THE WEBSITE WWW.SMINN.COM

Any modification or adjustment to the system is forbidden, except for those indicated in this manual.

WARRANTY

This product has undergone a complete TEST during its manufacturing process that guarantees its reliability and proper operation.

The manufacturer provides 24 months of warranty to the product from the date printed in the product and against any anomaly that it may present in its appearance or operation.

Any damage caused by third parties, natural causes (flooding, fire, lightning, etc), arising from improper handling or installation, vandalism or any other cause non attributable to the manufacturer will void the warranty.

The warranty only covers repairs or replacement of the damaged device. Any expenses derived from assembling, travelling, transport, natural wear of parts, etc., and, in general, any expenses that are not part of the repairs or replacement of the damaged element of the system are excluded.

The installer/provider will ask the manufacturer for an **RMA** number or authorization for transport of the system in warranty. Without this previous requisite, the manufacturer will not be able neither to process nor provide warranty service.

WARNING

This product must be used in installations which has been conceived for, considering any other as improper use. The packaging and wrapping **MUST NOT** be dumped in the environment. Keep products, packaging, wrapping, documentation, etc., out of the reach of children. Follow the current local, national or European regulations.

The information contained in this document may have some mistakes that will be corrected in future editions. The manufacturer keeps the right to modify the content of this document or the product without prior warning.

CE DECLARATION CONFORMITY

The company ELSON SISTEMAS, S. L.
Pol. Ind. Torrelarragoiti, P6-A3-1^º
48170 Zamudio – Vizcaya
(SPAIN)

Declares that

The product DUO Transmitter
Manufactured by ELSON ELECTRÓNICA, S.A.
Under the trademark **SMINN**
Created for Residencial, comercial and industrial use.

This device meets the provisions contained in the article 3 of the R&TTE 1999/05/CE Regulation, as long as its usage is compliant to what was envisaged, having applied the following regulations:

Electromagnetic compatibility 2004/108/CE
Low Tension 2006/95/CE
FCC Regulations Part 15
Federal Communications Commission Low Power Transmitters⁽¹⁾

⁽¹⁾ This equipment must endure any external radio-electrical interference and should not cause any detrimental interference to other systems. Meeting the provisions of this regulation, any modification or adjustment to the product that may alter its characteristics or the functionality it has been developed for are entirely prohibited.

Zamudio 2010.03.30


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TECHNICAL CHARACTERISTICS

DUO 434	Two Channels	433.92 MHz +- 75KHz
DUO 868	Two Channels	868.3 MHz +- 35KHz
Encoding	Evolutive Crypto Code 72 bits	
Battery	Lithium battery 3V - CR2032	
Battery life	2 years aprox. depending on use	
Power in stand by	Menor de 0.0005mA (0.5uA)	
Power in standby	Lower than 0.0005mA (0.5uA)	
Radiated power	Mod.434	<10mW for 433.92 MHz
	Mod.868	<25mW for 868.3 MHz
Range outdoors	Until 200 m	
Nominal range	100 m	
Operating temperature	-20 / +65°C	
Degree of protection	IP40	
Size	H 42 x W 42 x Z 13 mm	

Nota:

433.92 MHz and 868.35 MHz frequencies are not compatible between them. The user or the installer should choose one taking into account the saturation of the frequency band in the area of usage. Other electronic devices, such as radio ear plugs, alarms and radio operated cranes can influence negatively in the range of transmitters that work in the same frequency band.

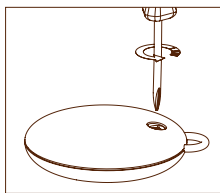


Fig. 4 Battery access.

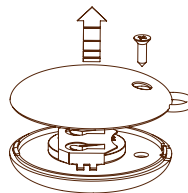


Fig. 5 Removable battery compartment lid.

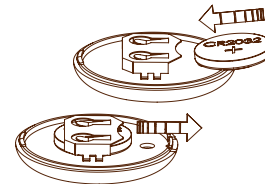
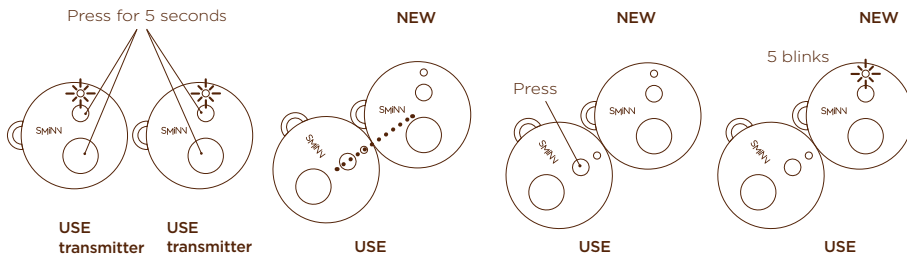


Fig. 6 - 7 CR2032 battery.

Fig. 1 Registration by invitation (steps 1 to 4).



Step 1. Press and hold the 1st and 2nd buttons at the same time until the led switches on.

Step 2. Align them into the indicated position. Both transmitters must be in physical contact with each other.

Step 3. Press and hold the 1st button of the transmitter in USE.

Step 4. Wait until the NEW transmitter's led flashes for 5 times. Operation OK.

