

MINI TRANSMITTER FOR RECESSED INSTALLATION

Product Code: **32001320**



PRODUCT SUMMARY:

Radio transmitter module designed to be installed inside the common electrical boxes, ideal for automation and load control, lights etc. without need of cabling. Versatility and safety is achieved thanks to battery power. The device features two channels with which it is possible to manage two light spots or an electrical automation using two operation directions.

The transmission is a dynamic code (rolling code) HCS, ideal for applications with high security requirements: for each keystroke, the device transmits a unique code.

The transmitter can be coupled to any Mipot receiver, as well as with receivers able to decode the below described frames (eg. 33000145MIP, 33000148MIP).

The module has been certified according to **Radio Equipment Directive (RED) 2014/53/EU**.

Compliant with REACH and RoHS directives

CHARACTERISTICS:

- 433.92 MHz operating frequency
- OOK Modulation
- HCS coding
- CR2032 battery power supply
- Programming Key
- Acoustic programming feedback through Buzzer
- Low battery alarm
- Embedded antenna



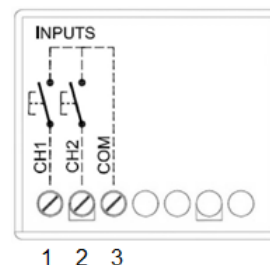
MECHANICAL CHARACTERISTICS

EXTERNAL DIMENSIONS:

H (high) = 36 mm
 W (width) = 42 mm
 L (length) = 21 mm

TERMINAL BOARD CONNECTION:

1. Channel 1 input
2. Channel 2 input
3. Common (GND)



ELECTRICAL CHARACTERISTICS @ 25 °C

Parameter	Min.	Typ.	Max.	Unit	Notes
Supply Voltage (Vcc)	2.0	3.0	3.3	V	
DC Current drain	-	15	-	mA	
Operating Frequency	-	433.92	-	MHz	
Frequency Accuracy	-	±100	-	kHz	
Output Power	-	5	-	dBm	1
Range inside buildings	-	30	-	m	2
IP Level	-	IP20	-	-	
Operating Temperature	-10	-	55	°C	

Note 1: Radiated power in free space.

Mipot S.p.A. reserves the right to modify the specifications without notice
 2020

Cormons, August 26th,

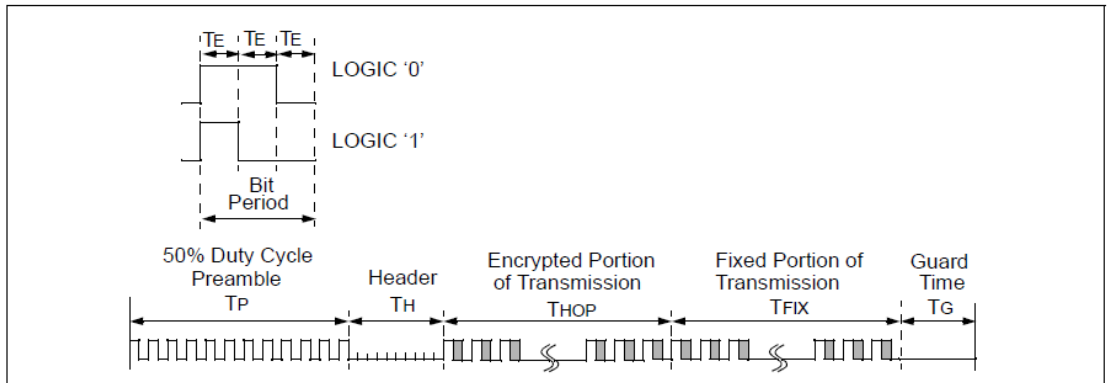
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Note 2: The estimated range has to be considered as indicative, since the reception is susceptible to interference from other radio devices operating at the same frequency and the presence of obstacles between transmitter and receiver.

HCS RADIO FRAME CHARACTERISTICS

Parameter		Min.	Typ.	Max.	Unit
Time base	Te	350	400	450	µs
PWM pulse width	3*Te	1050	1200	1350	µs
Preamble duration	Tp	8.0	9.2	10.4	ms
Header duration	Th	3.5	4.0	5.4	ms
Pause between frames (guard time)	Tg	14.0	16.0	18.0	ms

Radio Frame Structure:



Frame Organization:

MSb	34 bits of Fixed Portion						32 bits of Encrypted Portion						LSb			
	Repeat (1 bit)	VLOW (1 bit)	Button Status (*)				Serial Number (28 bits)	Button Status (*)				OVR (2 bits)		DISC (10 bits)	Sync Counter (16 bits)	
S2			S1	S0	S3	S2		S1	S0	S3						

(*): in 32001320 only key S0 e S1 are used.

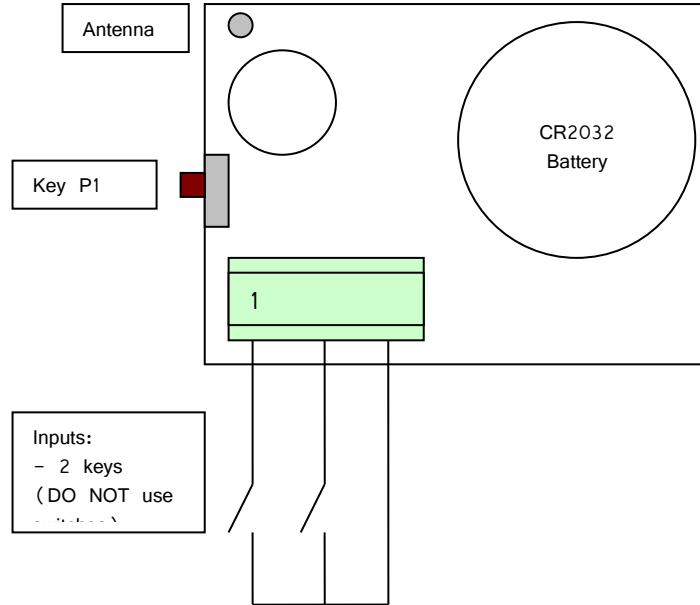
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INSTALLATION



- Transmitter can be installed in SELV plant sections (i.e. Ringer circuits, video, 12 / 24 V spotlights, etc.)
- Do not install the transmitter in plant sections under mains

CONNECTION SCHEMATIC INDICATIONS:



OPERATION

When closing to ground (terminal 3) inputs 1 and 2 (according to the corresponding terminals), the device transmits HCS frames.


It is recommended to use buttons (automatic release after pressing) and NOT switches. In case of button pressure longer than 25 seconds, the device ceases to transmit in order to avoid battery discharging (auto-shutoff).

To ease the installation, both channels frames transmission is available without cabling the device; simply act on the side button (accessible through the plastic case, or removing the circuit from the box - see below) as described in the following table:

PROGRAMMING MENU

Phase	Description	Example
1	<p>Shortly press the programming key of the MINI-TX a number of times equal to the channel you want to program:</p> <p>1 pressure -> Channel 1</p> <p>2 pressures -> Channel 2</p> <p>3 pressures -> back to Channel 1</p> <p>The system will notify the user the selection just made with an equal number of beeps.</p> <p>If you do not take any action for more than 10 seconds, device jumps to end state (phase n.3).</p>	
2	<p>Press and hold the button; the TX transmits # 5 frames to enable learning of the selected channel on the receiver.</p> <p>The TX emits a sound sequence of OK at the end (two beeps of increasing tone).</p>	

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3	End: the device exits the menu and return to normal operation. A sound sequence of END is emitted (two beeps of decreasing tone).	
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LOW BATTERY WARNING: When the battery voltage falls below the minimum operation threshold, the device emits an acoustic warning: three fast beeps are performed every time you activate one of the two inputs.



BATTERY REPLACEMENT: Battery replacement requires the device opening trough the terminals side cover removing. A elongate tool such as a screwdriver is suggested to remove the device from its container, taking care not to damage components on the card. **This operation has to be performed by qualified personnel only, since intervention requires tampering with the wiring and the opening of any recessed boxes.**

DECLARATION OF CONFORMITY

Hereby MIPOT S.p.a. declares that the product MINI TRANSMITTER FOR RECESSED INSTALLATION complies with the essential requirements and other relevant provisions of Directives:

- 2014/53/CE
- Directive 2011/65/EU (RoHS)
- REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006

The declaration of conformity can be requested to Mipot at: support@mipot.com.

REVISION HISTORY

Revision	Date	Description
1.1	27-08-2019	Final release