

PERFORMANCE DATA- CMD-KEYX-XXX

ABOUT THESE MEASUREMENTS

The performance parameters listed below are based on module operation at 25°C from a 3Vdc supply unless otherwise noted.

RF-Parameters CMD-KEYX-XXX		Designation	Min.	Typical	Max.	Units	Notes
Frequency of Carrier Harmonic Emissions		F _C P _H	314.925 -	315 -	315.075 -40	MHz dBc	- -

RF-Parameters CMD-KEYX-XXX		Designation	Min.	Typical	Max.	Units	Notes
Frequency of Carrier Harmonic Emissions		F _C P _H	417.925 -	418 -	418.075 -40	MHz dBc	- -

RF-Parameters CMD-KEYX-XXX		Designation	Min.	Typical	Max.	Units	Notes
Frequency of Carrier Harmonic Emissions		F _C P _H	433.845 -	433.92 -	433.995 -45	MHz dBc	- -

Electrical Parameters CMD-KEYX-315, 418, 433MHz		Designation	Min.	Typical	Max.	Units	Notes
Operating Voltage Range		V _{CC}	2.7	-	3.2	Vdc	-
Current Average		I _{CA}	-	1.7	-	mA	1
Current In Sleep		I _{SLP}	-	0	-	μA	2
Output Power		P _O	PART 15.231 Compliant 26bits 3x 50%				
TX Data length							
Average Data Duty Cycle							
Encoder Oscillator		F _{ENC}		70		KHz	
Operating Temperature			-30°C	to	+70°C		

Notes:

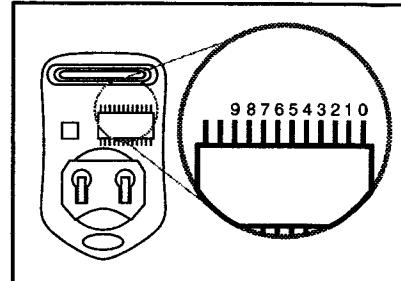
1. Current draw with 50% mark/space ratio.
2. Current draw in standby

THEORY OF OPERATION

The CMD-KEYX-XXX Keyfob Command Unit combines a high-performance SAW (Surface Acoustic Wave) based transmitter with an on-board encoder. The keyfob can transmit the status of 1 to 5 buttons along with the state of ten address lines for security and creation of unique transmitter/receiver relationships. The product's operation is straightforward. When a button is pressed, power is applied to the internal circuitry and the encoder IC is enabled. The encoder then detects the logic states of the address traces and button data lines. These states are then formatted into a 3-word transmission cycle which continues until the button is released. The encoder data is used to modulate the transmitter which through the antenna conveys the data into free space. The transmitted signal may be received by any Linx KH or LC receiver or pre-made function module of the same frequency. Once data is received it is decoded using a decoder IC or custom microcontroller. The transmitted address bits are checked against the address settings of the receiving device. If a match is confirmed, the decoder's output(s) are set to replicate the transmitter's button status.

SETTING THE TRANSMITTER ADDRESS

The keyfob allows the selection of one of 1024 unique addresses. All keyfobs from the factory are supplied set to the same address. To avoid ID contention with other units in the vicinity or to create unique relationships it may be helpful to change the address settings. This may be accomplished by cutting the appropriate jumper trace(s) with a sharp object such as an X-acto knife as shown. The traces are accessed by removing the rear cover as for battery replacement.

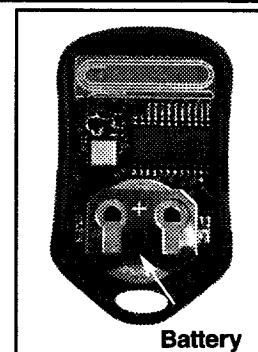


CONTENTION CONSIDERATIONS

It is important to understand that only one transmitter at a time can be activated within a reception area. While the transmitted signal consists of encoded digital data, only one carrier of any frequency can occupy airspace without contention at any given time.

BATTERY REPLACEMENT

The remote unit utilizes a CR-2032 Button Lithium Cell. In normal use it will provide 1-2 years of operation. Access for replacement is accomplished by gently prying apart the two halves of the keyfob at the seam (fingernails will do for this). Once the unit is open, remove the battery by sliding the battery out from beneath the retainer. Replace with the same type of cell while observing the polarity shown.



COMPLIANCE REQUIREMENTS

The CMD-KEYX-XXX has been pre-certified by Linx for FCC Part 15 compliance when used with an appropriate function module in keeping with the applications allowed under section 15.231.

LABELING/INSTRUCTION REQUIREMENTS

The CMD-KEYX-XXX Remote Command Unit has already been labeled in accordance with FCC regulations in effect as of the date of this document. No further labeling of the unit is needed; however, it is necessary to include the statement on page 7 in the end product's instruction manual or insert card.