

Wireless Radio

Long Range Transmitting Module

with Encoder and Data Pins

Model No.: TM4000-4



A. Technical Specifications:

Parameter	Remarks	Reference Value			Units
		Minimum	Standard	Maximum	
Operating Voltages	DC		9		V
Operating Current			>100		mA
Quiescent Current			≤0.02		mA
Modulation Mode	AM				
Operating Frequency	More than 20 choices	260	315	440	MHz
Transmitting Distance			4000		m
Encoder	2262				

Coding Mode	Soldering				
Coding Type	Fixed Code / Hopping code				
Dimension(LWH)			49*31*8		mm

B. Pin Function Introduction:

Pin	Name	Function
	VDD/VCC	Power Anode
	GND/VSS	Power Cathode
	D0	Data Terminal
	D1	Data Terminal
	D2	Data Terminal
	D3	Data Terminal
	ANT	Antenna

C. Product Specifications:

1. Transmitting module uses SAW stable frequency, small temperature excursion, even no excursion with hand touching, which can still guarantee the stable performance in the environment of vibration and big temperature change.
2. Transmitter module has an external extra reliable power magnifying circuit, which improves tremendously the transmitting power and efficiency, the transmitting distance reaches 2000m-4000m and it makes it possible to control in very far distance.
3. Frequency error is generally within $\pm 75\text{KHz}$, not like LC oscillating circuit of which the error is around $\pm 500\text{KHz}$, so that guarantee the reliability.
4. As the decoder is a kind of normal encoding circuit made through CMOS technique with low power consumption and low price, under the normal conditions, the quiescent current is almost zero.
5. The transmitter module generally requires DC9V as operating voltage, DC12V will shot the magnifying tube, only could be used less than one second. If the voltage is less than DC9V, the transmitting power will be less and the transmitting distance will be shorter.
6. Factory setting frequency is normally 315Mhz, the frequency can be adjusted from 260MHz to 433MHz in case of special requirement.
7. Code secrecy function, fixed code/hopping code selectable, there are 6561 address codes for fixed code unit and more than 200 million address codes for hopping code unit.
8. Can be used in car anti-theft system, home anti-theft system, remote control toy and other remote control electric appliances etc.

D. Notes:

1. VCC voltage is the same as the module operating voltage with a tolerance of $\pm 5\%$.
2. The antenna of module affects the receiving effect greatly, connect 50ohm of 1/4 wavelength of single liberation antenna (wavelength= light speed/frequency), around 23 cm in length before being used. Pulling out the antenna and keeping it straight will give the best effect.
3. The antenna position is very important to the receiving effects, so shorten the connecting wire as much as possible, if the wire can't be shortened, can use a 50ohm special anti-resistance RF coaxial-cable instead. Can connect the antenna directly to ANT interface, or connect the antenna after ANT Pin Inserting System is being connected. Keep the antenna as straight as possible during installation, keep away from the shield and high voltage as well as other interference sources.
4. If the transmitting distance becomes shorter or even no transmitting, please check if the power supply is efficient and if the frequency and oscillating resistance of the transmitting module matche the receiver's (2262/1.2M 2272/200K or 2262/4.7M 2272/820K).
5. To reach the right transmitting distance, the antenna should be pulled out completely and the antenna of the receiver should be straight. Both of the transmitting module and receiver should be 1.5 meter above the floor, meanwhile the receiver only drive a simple component like LED and the TX/RX system is in a level, open, interference-free environment.