

Telecommand radio module

NK-2.4Y 2.4 GHz

The NK-2.4Y is an embedded input / output radio module which operates in the 2.4 GHz band. In spite of its small size and low power consumption, it achieves a communication range of 100 m (line of sight).

Our original frequency hopping protocol allows multiple modules to be used in one area simultaneously without concern about radio channels. With a fast input-output response time of 20 ms, a maximum of 8 switch inputs / outputs can be transmitted. Regarding an antenna, customers can select either internal PCB antenna or external antenna specified by Circuit Design.

Link signal output shows connection status, which helps the user to stay within the signal coverage area.

Features

- FCC, ISED, CE, UKCA and ARIB conformity
- Module can be set to either input or output mode.
- CRC-16 error detection
- Achieves a Hamming distance of 6 to minimize malfunction
- Transmission of max 8 switching signals by connecting simple external circuitry
- Low current consumption
- Rapid two way communication for confirmation of communication link status.
- 1:1 communication only
- Frequency hopping allows multiple systems in one area without concern about channel management



Applications

- Remote tail lifts on trucks.
- Remote control of care lifts on welfare vehicles
- Shutter open and close



General

Parameter	Specification
Applicable standard	FCC Part 15 / ISED RSS-247 ARIB STD-T66 / EN 300 440
Communication method	Half duplex (for ACK purposes only)
Communication range	100 m (Line of sight)
Communication mode	1:1 (Input mode: Output mode)
Frequency	2403 to 2479 MHz (Frequency Hopping)
Operating temperature	-30 to +65 C
Antenna	Internal pattern antenna or specified external antennas
Supply voltage	2.2 to 5.5 V
Input / Output response	30 to 60 ms
Communication bit rate	250 kbps
Hamming distance	6
Dimensions	35.3 x 17.8 x 3.5 mm
Weight	3.2 g
Soldering conditions	Hand soldering (Soldering iron temp: 350 C within 3 sec)

NK-2.4Y

Input mode

Parameter	Specification
RF output power	1.4 mW (+20%, -80%)
Supply current	3 mA ave.
Inputs	8 switch inputs
Input voltage range	-0.3 V to REG + 0.3 V (REG = Internal voltage 2.058 to 2.142 V)
Input voltage threshold	Low Level: 0.4 V (max) High Level: 1.7 V (min)

NK-2.4Y

Output mode

Parameter	Specification
Supply current	When linked: 7 mA ave. During linking: 14 mA ave.
Outputs	8 switch outputs
Output voltage range	0.3 V to REG + 0.3 V (REG = Internal voltage 2.058 to 2.142 V)
Output voltage threshold	Low Level: 0.9 V (max) High Level: 1.1 V (min)
Output holding time when communication shutoff	400 ms typ.

Specifications are subject to change without prior notice