



433 MHz Ranger Long-Range MFP-2KWLS2/4 Wireless Radio Transmitters Quick Start Guide

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Introduction

The following information is for experienced installation technicians to use as a basic reference to ensure correct device installations, and is applicable for the following transmitter models:

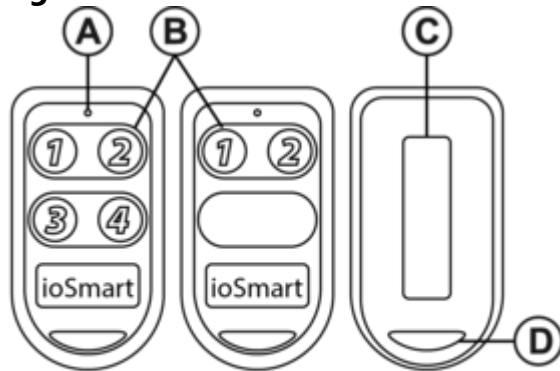
- MFP-2KWLS2
- MFP-2KWLS4

Overview

The Ranger® system features wireless radio transmitters and long-range receivers with an integrated receive antenna, designed for high-frequency identification in security access control applications. Ranger uses a digital communication routine,

available in two- or four-button transmitter configurations, where each button corresponds to its own Wiegand output on the Ranger receiver. Each transmitter has a built-in red LED that indicates button presses and battery strength. The transmitters support ioSmart cards and come with a potted proximity or contactless smart card module to function as close-range access credentials.

Figure 1. Transmitter dimensions and components



2.5 in. x 1.4 in. x .52 in. (H x W x D)
(63.5 mm x 35.6 mm x 13.2 mm)

Callout	Description
A	Red LED
B	Buttons: four on the MFP-2KWLS4, two on the MFP-2KWLS2
C	ID label
D	Key ring holder

Output formats

- Transmitters use the ioSmart SSF format with specific number sequences.
- The internal ID number of each transmitter is printed on the ID label located on the back of the transmitter.
- You can find specific coding details on the transmitter's shipping box, including format, facility code, and ID range.

Time-out feature

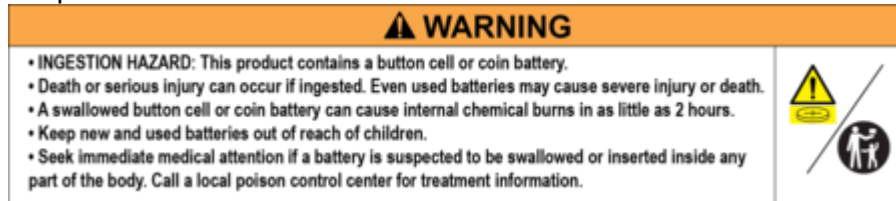
Ranger transmitters use a time-out feature to conserve battery life and prevent interference with other transmitters in the field. When you hold down a button continuously, the transmitter sends the code once and then powers off. It powers back on when you release the button.

Read range

The read range between the transmitter and receiver depends on the model of the receiver you use. If you experience issues with the read range, see [Troubleshooting](#).

Replacing the battery

Transmitters contain a replaceable CR2032, 3.3 V lithium battery enclosed in a tamper-proof battery compartment. Replace the battery if the LED does not flash when you press a button, if you experience unreliable read range, or if there is no output from the receiver.



To replace the battery, complete the following steps:

1. Place a coin in the 2-piece unit gap near the key ring holder, and twist to open the transmitter.
2. Remove the old battery and dispose of it according to local requirements.
3. Insert the new CR2032, 3.3 V lithium battery. Ensure that the plus side of the battery is facing up.
4. Snap both pieces back together.

Note: Do not ingest this battery or dispose of it in household trash. Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the transmitter, remove the battery, and keep all components away from children.

Technical specifications

Table 1. Technical specifications

Specification	Description
Operating temperature	−40° F to 149° F (−40° C to 65° C)
Operating humidity	5% to 95% relative humidity, non-condensing
IP rating	IP67-rated for outdoor use

Troubleshooting

See the following information for troubleshooting issues.

Table 1. Troubleshooting

Issue	Fix description
The transmitter does not receive data.	Enroll the transmitter: When the receiver powers on, click the transmitter twice.

Issue	Fix description
The read range is short	Set the adjustable potentiometer to the maximum setting.
Some receiver buttons are not working.	Check the receiver model: Receiver model WRR-22 works only with buttons 1 and 2.
The red LED does not flash with a button press.	Check that the battery is installed correctly and does not need a replacement.

Certifications

The receiver has the following access control performance levels and certifications.

Table 1. Access control performance levels conforming to UL STD 294

Destructive attack	Line security	Endurance	Standby power
Level I	Level I	Level IV	Level I

Table 2. Grade classification certified to CAN/ULC STD 60839-11-1

Risk level	Application	Skill/knowledge of attackers	Typical examples
Grade 1	Grade 1	Grade 1	Grade 1

FCC compliance statement

FCC Compliance Statement: This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

Changes or modifications not expressly approved by the unit supplier and JCI could void the user's authority to operate the equipment.

Product can be used without license conditions or restrictions in all European Union countries, including Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden, United Kingdom, as well as other non-EU countries, including Iceland, Norway, and Switzerland.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause unde-sired operation of the device.

Cet appareil est conforme à Industrie Canada exempts de licence standard RSS (s). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas provoquer d'interférences et (2) ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositif.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.