Q-MATIC Wireless Solutions 433.92 Mhz

Customer Flow Management™

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1. Introduction

Topics in this chapter

What is a wireless solution?

A wireless solution is a system in which some or all wires are replaced by other techniques.

Wires have two purposes: power supply and signal transmission. Usually it is easier to replace the signal transmission than the power supply. Signals can be sent by light, sound or radio but you cannot send power. Usually you give the device an internal power source, a battery. Some devices still need the power wire.

Wireless technologies are nothing new. They are widely used and very reliable.

The advantages of a wireless solution

Wires are reliable and safe but they can cause many problems. Wires are not very aesthetic. It is necessary to spend a great deal of time to hide the wires when you make an installation. The wireless solution devices are installed at the same time they are unpacked.

Wired devices are usually not movable, not even if they are small. You must spend hours with the wires if you want to move the devices to new locations. Wireless solution devices are movable. The user can place them wherever they want.

To add a new wired device can be a painstaking job. Removing panels causes much annoyance for your customer. You can avoid this if you use a wireless solution. Unpack the device and perhaps change some settings. That is all you have to do. Your customers will be impressed of your quick service.

Where can you use a wireless solution?

You can use the wireless solutions almost everywhere. They use radio waves for communication, which means that they are very safe and reliable. The signals can pass through most types of obstacles.

You can get problems if there are other devices using the same radio frequency. The wireless solution uses 433.92 MHz, which is a frequency that is free to use in all kinds of remote controlled devices. This usually does not cause any problems because of the low output power.

Wireless terminals

The wireless terminals are the wireless parts of the wireless solution. They are battery powered and use radio for communication.

Each wireless terminal has three buttons. The buttons have no default functions; you must write a script program for each button. Two of the buttons are large and easy to press. These buttons should be used for functions that are frequently used, for example to call the next customer. The third button is much smaller and a little bit more difficult to press. This button should be used to special functions that should not be easy to use by mistake, for example alarms, move customers, etc.

The number of terminals that can be used in the same system has no exact limit. The risk of interference increases with the number of terminals. The multi interface can only receive the signals from one terminal at the same time. You should limit the risk that buttons on two or more terminals are pressed at the same time. This risk depends on the number of terminals used at the same time and how frequently the buttons are pressed.

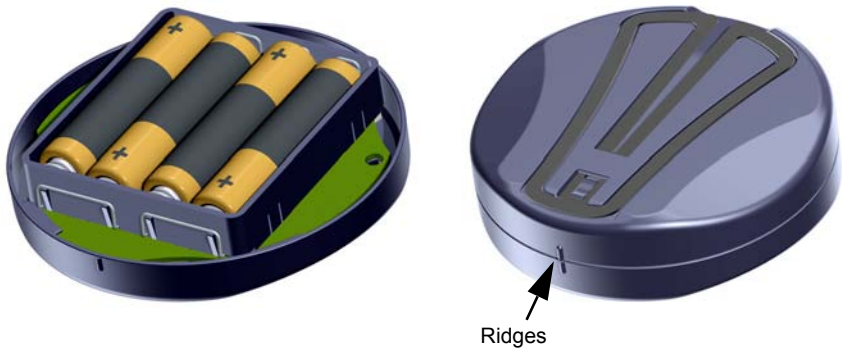
The wireless terminal uses four standard 1.5 V AAA batteries but it is also possible to use four 1.2 V AAA rechargeable batteries. It sends the code as long as any button is pressed. The transmission automatically stops after 60 seconds to prevent drainage of the battery.

The frequency of the radio signal is 433.920 MHz. The range without any obstacles is up to 80 m. These frequencies are reserved for all kinds of remote controlled devices. The limited output power reduces the risk of interference between different remote controlled devices.

There is a clip at the back of the terminal. Use the clip to attach the terminal to the clothing, for example the pockets. Press the wide end of the clip to make it easier to attach the terminal.

To change batteries

Turn the top of the terminal anticlockwise to get access to the batteries. Replace the batteries and close the terminal. Note the two small ridges on the top and bottom; they align perfectly when the terminal is closed correctly. Always replace all the batteries at the same time.



Incorrectly inserted batteries may damage the terminal. Make sure that they are correctly inserted.

Technical specifications, Wireless Terminal

Article Number
EU 433.92 MHz 10320203
USA 433.92 MHz 10320211

Used with
MI2280 Multi Interface with radio
Q-NOVA
Q-DIRECT

Table 4: General Technical Data

Diameter	70 mm
Thickness	21 mm
Weight	125 g

Table 4: General Technical Data (Continued)

Battery	4 pcs of AAA 1.5 V or 4 pcs of AAA 1.2 V rechargable
Maximum Power Consumption	12 mA
Operating Temperature	10 - 32 °C
Storage Temperature	-10 - 40 °C
Operating Humidity	15 - 85 % Rel. humidity
Storage Humidity	10 - 90 % Rel. humidity

Table 5: 433.92 MHz Europe

Maximum output power	10 mW
Frequency Minimum Typical Maximum	 433.38 MHz 433.92 MHz 434.46 MHz
Range	30 - 80 m
CE marked and complies with the following standards	ETSI/EN300220, EN301489

Table 6: 433.92 MHz USA

Maximum output power	1 mW
Frequency Minimum Typical Maximum	 433.38 MHz 433.92 MHz 434.46 MHz
Range	20 - 60 m
Complies with the following standards	FCC 15.231 FCC ID: RT2-10320211
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.	