EC-RF210-M30

High-frequency integrated reader

The EC-RF210-M30 module is a high-frequency 13.56 (MHz) RFID reading and writing device independently developed by EC-LINK in accordance with the Modbus communication protocol. Can be easily installed in size-limited applications.

Application field: widely used in factory automation and logistics automation. Identification of materials / workpiece on production assembly line and automatic identification of tool configuration; identification of conveyor line tray in logistics industry, material management, fixture / workpiece identification on mobile platform; identification of production materials in machinery and equipment, etc.

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Instructions for the operation:

1. Device initialization and connection

- Select the corresponding upper computer software according to the equipment model.
- Connect the reader to the computer / host through the RS485 interface to ensure that the power indicator is normally (if red).

2. software configuration

Run the supporting management software and set the working mode (such as continuous reading / single trigger)

3. Label operation preparation

3.1. Label compatibility check

Confirm that the RFID tag type (passive tags, HF / UHF tags) is compatible with the reader and that the tag should be properly attached to the surface of the item.Check the power supply stability of the reader.

3.2. Scanning environment optimization

Remove the metal obstacles between the reader and the label, and maintain an effective scanning distance (about 1-60mm).

4. Data read and write

4.1. Data read operation

Place the tag within the reader antenna range, and the reader automatically reads the tag information. Read data are displayed through the software interface.

4.2. Data writing operation

Enter the information to be written (such as item number, batch) in the management software and write the label in the writable state. Avoid moving labels during writing to prevent data loss.

Specification parameters:

- **Working frequency： 13.560MHZ**
- **Support protocol: ISO15693, ISO14443A**
- **Read distance: 0~60mm (Related to carrier performance and usage environment)**
- **Read interval: read only once**
- **Maximum power dissipation：≤1W**
- **Indicator light ： LED**
- **Communication interface：RS485**
- **Control protocol ： Modbus RTU**
- **Supply Voltage ： 7V-30V**
- **Maximum operating current：＜200mA**
- **Standby current： 10uA**

Physical parameters:

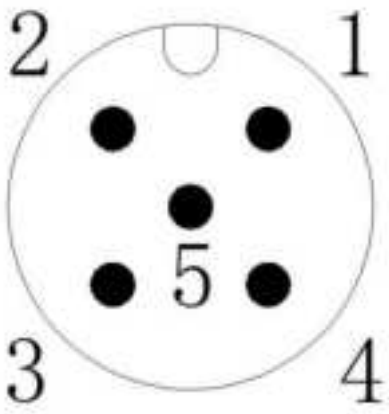
- **Interface type: M12 5PIN A CODE**
- **Case material：Stainless steel、ABS**
- **Product size：Φ30mm×83mm**
- **Installation requirements：Φ30mm Installation hole**
- **Protection level：IP67**

Enviromental parameter:

- Working temperature ： -40℃~70℃
- Storage temperature：-40℃~85℃
- Working humidity：＜95% No condensation

Interface definition：

1) M12 A Code

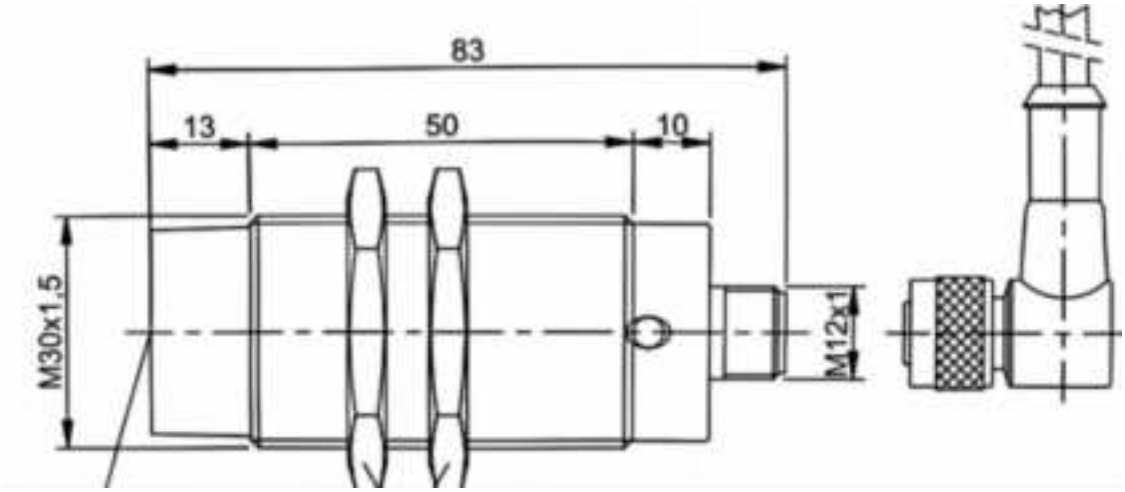


M12 A Code	
1	24V DC
2	RS485 B
3	GND
4	RS485 A
5	G.GND

2）Indicator light

Indicator light	Color	Explanation
LED	Red	The module has been powered on
	Green	Data labels have been detected

- **Size：　　M30mmX83mm**



caution：

This device must be professionally installed

device is generally for industrial/commercial use. it must be sold to authorized dealers or installers only,cannot be sold via retail to the general public or by mail order.

The equipment is an RFID technology RF product, and must be installed by electrical and electronic professionals with a professional certificate

FCC Caution

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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for

a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

RF warning for Mobile device:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

IC Caution.

CAN ICES-003(B) / NMB-003(B)

RSS-Gen Issue 3 December 2010"&"CNR-Gen 3e éditionDécembre 2010:

- English:

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 undesired operation of the device.

- French:

Le présentappareilestconforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitationestautorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareildoit accepter tout brouillageradioélectriquesubi, mêmesi le brouillageest susceptible d'encompromettre le fonctionnement.