

MOONS'

MS-WS100NA

Wireless sensor user manual(warning)

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warning

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.

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.

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

Catalogue

1	Introduction.....	3
2	Wireless sensor.....	4
2.1	Parts to introduce.....	4
2.1.1	Magnetic base	4
2.1.2	Antenna	5
2.1.3	End cover	5
2.2	Channel configuration.....	5
2.3	The installation.....	5
2.4	Technical parameters.....	5
2.4.1	Vibration measuring.....	5
2.4.2	Temperature measurement.....	6
2.4.3	Wireless communications.....	6
2.4.4	Size.....	6
2.4.5	Weight	6
2.4.6	Power	6
2.4.7	Environment.....	6
2.4.8	Anti-explosion	6
2.4.9	IP Grade.....	6
3	After-sales service	7

1 Introduction

MS - WS100NA wireless monitoring system is shown in figure 1. It includes wireless sensors and wireless gateway, and server and other equipment

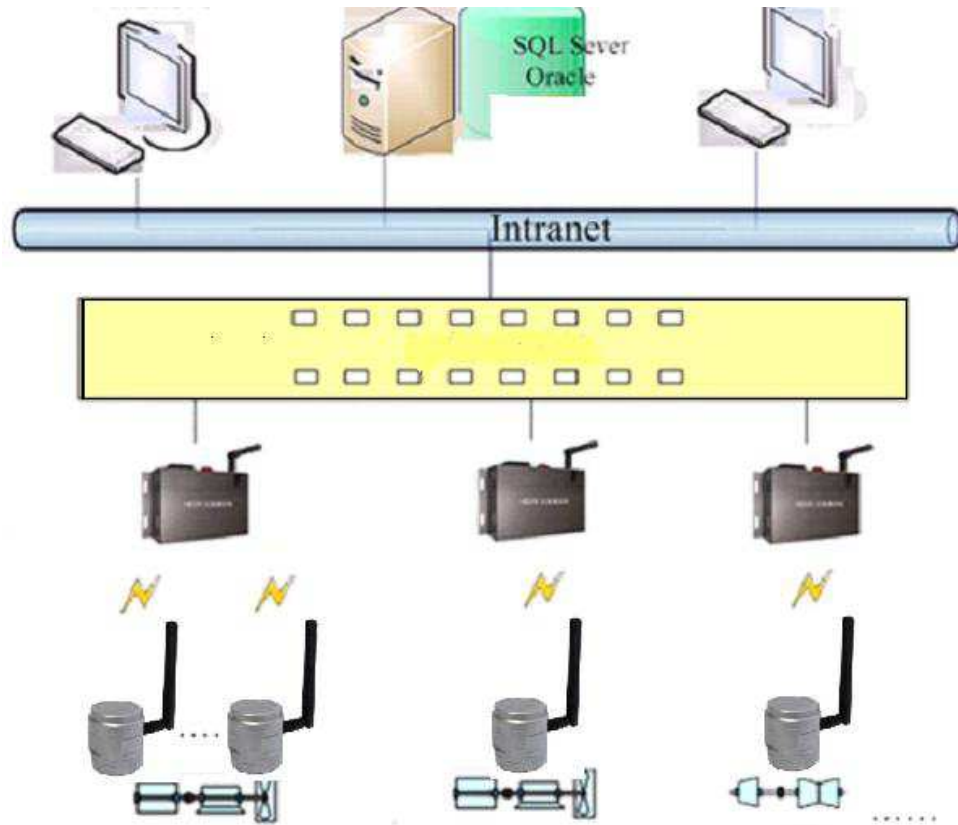


figure 1

Wireless gateway in wireless way to sensor send control instructions, and receiving sensor measured data. A gateway can be under the jurisdiction of multiple wireless sensors. Wireless sensors, including temperature measurement, vibration measurement and wireless transmission function, batteries, installation is very convenient

2 Wireless sensor

2.1 Parts to introduce

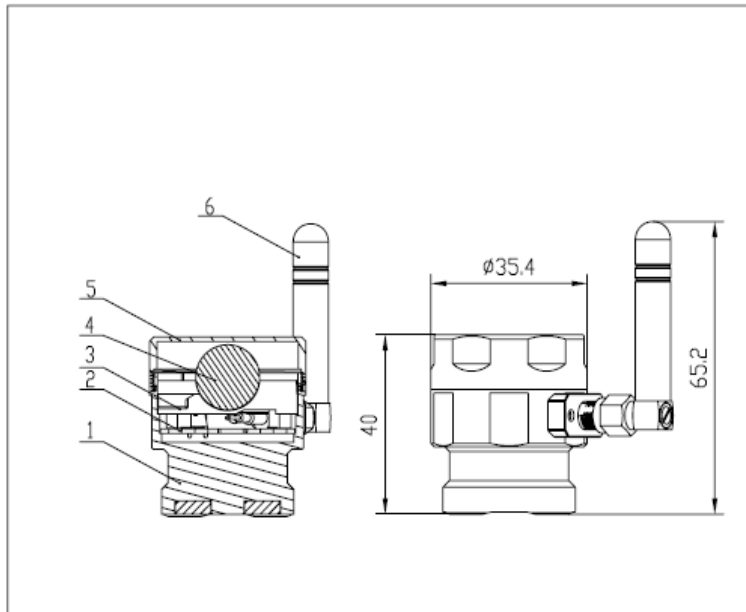


figure 2

2.1.1 Magnetic base

Wireless sensor installed on the equipment under test (magnet), As shown in figure 2 at the bottom of the wireless sensor is a magnetic.

The temperature sensor is in the middle of the magnetic, When installing sensors in the region with a thick layer of silicon grease, This is conducive to better and more quickly transfer equipment surface temperature.

2.1.2 Antenna

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When horizontal vibration sensor test, will use the installation method as shown in figure 3, to keep the antenna rod is perpendicular to the ground.

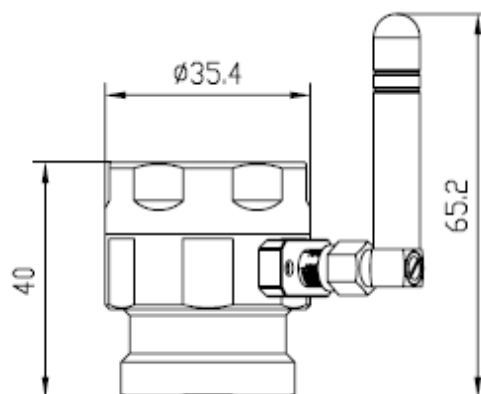


figure 3

2.1.3 End cover

Spin start cover, showing the battery as shown in figure 4, the battery socket and lamp

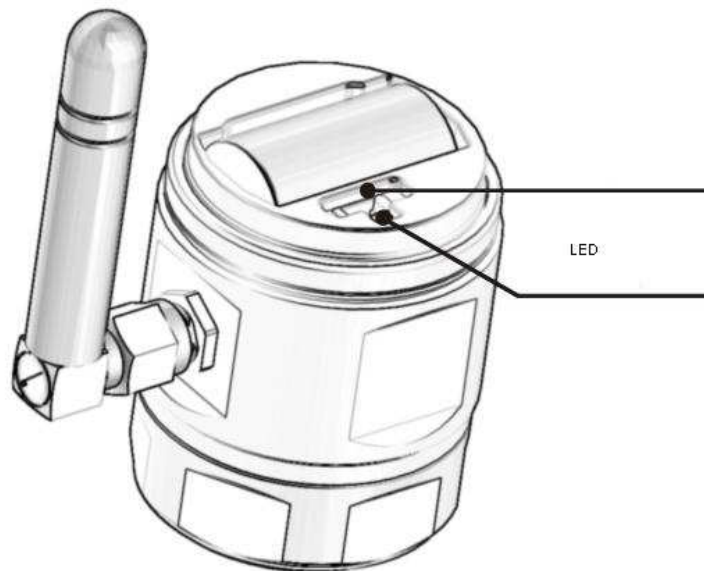


figure 4

A light way	Express meaning
Not bright lights	Sensor is not successful
Bright after 3 seconds, put out	Sensor is successful
Bright after three seconds, flashing several times (5 times/SEC)	Sensor is successful , but with wireless gateway unicom failure
Bright after 3 seconds, slow flashing 3 times (1 / s)	Sensor is successful and wireless gateway unicom success, but received the gateway response

2.2 Channel configuration

Consistent Zigbee wireless channel

2.3 The installation

With reference to national standard GB/T 19873.1-2005

2.4 Technical parameters

2.4.1 Vibration measuring

Type: acceleration, velocity and displacement

Acceleration: 40g (Peak)

Velocity: 280 mm/s (rms)

Displacement: 2500um (pp)

Frequency range: 10Hz

100Hz、200Hz、500Hz、1kHz、2kHz、5kHz、10kHz

A/D: 24

Line number: 0、100、200、400、800、1600、3200

Precision: $\pm 5\%$

Memory capacity: 512 k bytes

2.4.2 Temperature measurement

Measuring range: $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$

Precision: $\pm 1^{\circ}\text{C}$

2.4.3 Wireless communications

Frequency of communication: 916MHz

Communication protocol: IEEE 802.15.4

Communication distance: 80m

2.4.4 Size

35mm (diameter) $\times$ 46mm (high)

2.4.5 Weight

120g

2.4.6 Power

lithium battery (1/2AA) 3.6V

2.4.7 Environment

Environment temperature: $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$, RH: 10% $\sim$ 90%

2.4.8 Anti-explosion

Ex ia IIC T6 Gb

2.4.9 IP Grade

IP67

3 After-sales service

This warranty does not include batteries, is not suitable for use by mistake. From the date of purchase this product warranty period is one year.

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