KR20 WIRELESS UNIT (AKR2)

To prevent from interference with the other wireless station (Japan only)
In the frequency band using this unit, in-plant radio station (license is necessary) using at industrial such as microwave oven, science, medical machinery and a production line in factory to identify mobile object, specified low power radio station (license is not necessary) and amateur radio station (license is necessary) are managed.
1) Before using this unit, please confirm that in-plant radio station to identify mobile object, specified low power radio station and amateur radio station are not managed.
2) When some cases of harmful electric wave interference occurred from this unit to an in-plant radio station to identify mobile object, change the using frequency immediately or stop discharging the electric wave. After that please contact us to consult measures to avoid interference (for example, setting of partition).
3) When any other troubles such as harmful electric wave interference occurred from this unit to a specified low power radio station or an amateur radio station or an amateur radio station, please contact us.

Actual indication
- 2.4 GHz band electric wave is used.
- Modulation method is direct sequence type.
- Intended interference distance is 40m.
- All bands are used and possible to avoid the band of machine to identify mobile object.

Countries where the use of KR20 has been authorized
Products with the indication label affixed to their rear side
As of May 2008, the use of KR20 has been authorized in the following countries.

- Japan, China, 25 European countries (Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France*, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Malta, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK, Netherlands)

* In France, this product must not be used outdoors. Please use it indoors only.

Compliance for EN standard
Received the European wireless certification (EN300 328)
In order to comply with EN standard, use this product in following condition.
- When installing this product to wall, install it on a DIN rail.
- Use power supply cord that is less than 3m.
- For communication cable (RS232C or RS485), use shielded cable, and connect one end of shield wire to ground. And use ferrite core (correspond to TDK: ZCAT2035-0930) in the communication cable (RS232C or RS485) of wireless unit side. (Turn numbers: 2T)

Please contact ..........

Matsushita Electric Works, Ltd.
Automation Controls Business Unit
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http://www.mew.co.jp/ac/e/

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Printed in Japan.
**Optimum for high-speed data communications.**

134 kbps wireless communication speed optimized for high-speed data communications.

**Optimum for reducing the wiring and installation work.**

Reduces the cable installation costs when the layout for machines and equipments are changed or in places where the wiring is difficult.

**Common units for master and slave**

The master and slave can be identified with the setting tool software and allow direct connections.

**Easy-to-operate main unit and setting tool software**

For 1:N topology (one master and more than one slave), the setting tool software (Control Configurator) is available, which facilitates the setup. This software incorporates various test functions helpful for unit installation. This software is downloadable from our website.

---

**PRODUCT TYPES**

<table>
<thead>
<tr>
<th>Type</th>
<th>Standard antenna</th>
<th>Antenna with cable</th>
<th>Antenna extension cable</th>
<th>Power supply cable for FP</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS485</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I/O type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**APPLICATION EXAMPLES**

**To monitor the component stock in the shelf**

**To transfer the data such as 2D code, etc.**

**Counts the production number or inspection data at a high speed**

**To transmit the measured power or temperature of the machines or food storage systems or their errors by wireless.**

---

**FEATURES**

- **Wireless repeater function**
  - The communicable distance between the master and slave is approximately 250 m in RS485 mode, up to 31 terminal equipments can be connected.
  - With the repeater function, the maximum communicable distance is extended up to 300 m.

- **Compliant with wireless standards of Japan, China, Europe**
  - MEWTOCOL is used.
  - RS485 and I/O types can be mixed.

- **Easy-to-operate main unit and setting tool software**
  - For 1:N topology (one master and more than one slave), the setting tool software (Control Configurator) is available, which facilitates the setup. This software incorporates various test functions helpful for unit installation. This software is downloadable from our website.

---

**System Configurations**

- **Example of 1:1 topology**
  - Data can be exchanged between the master and slave over a distance of 250 m.
  - Two-way communication is possible between the master and slave.

- **Example of 1:N topology**
  - Up to 254 terminal equipments can be connected.
  - Two-way communication is possible between the master and slave.

---

**Application Examples**

**To monitor the component stock in the shelf**

**To transfer the data such as 2D code, etc.**

**Counts the production number or inspection data at a high speed**

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**PRODUCT TYPES**

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<th>I/O type</th>
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<th>Antenna extension cable</th>
<th>Power supply cable for FP</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS485</td>
<td>I/O type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line A</td>
<td>I/O type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line B</td>
<td>I/O type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**APPLICATION EXAMPLES**

**To monitor the component stock in the shelf**

**To transfer the data such as 2D code, etc.**

**Counts the production number or inspection data at a high speed**

**To transmit the measured power or temperature of the machines or food storage systems or their errors by wireless.**

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**FEATURES**

- **Wireless repeater function**
  - The communicable distance between the master and slave is approximately 250 m in RS485 mode, up to 31 terminal equipments can be connected.

- **Compliant with wireless standards of Japan, China, Europe**
  - MEWTOCOL is used.
  - RS485 and I/O types can be mixed.

- **Easy-to-operate main unit and setting tool software**
  - For 1:N topology (one master and more than one slave), the setting tool software (Control Configurator) is available, which facilitates the setup. This software incorporates various test functions helpful for unit installation. This software is downloadable from our website.
FEATURES

Optimum for high-speed data communications.
134 kbps wireless communication speed optimum for high-speed data communications.

Optimum for reducing the wiring and installation work.
Reduces the cable installation costs when the layout for machines and equipments are changed or in places where the wiring is difficult.

Common units for master and slave
The master and slave can be identified with the common unit settings on the unit. When purchasing, you don’t have to worry about the master and slave identifications.

RS485 types are available.
The RS485 types do not need RS232C-RS485 converters, which were conventionally required for communication with the RS485 communication equipments and allow direct connections.

Easy-to-operate main unit and setting tool software
For 1:1 topology (one each master and slave), communication is possible through settings on the main unit. For 1:N topology (one master and more than one slave), the setting tool software (Control Configurator KR) is available, which facilitates the settings. This software incorporates various test functions helpful for unit installation. This software is downloadable from our website.

Wireless repeater function
The communicable distance between the master and a slave is approximately 200 m², scaled² or approximately 50 m indoors. The communication distance can be extended using the repeater function incorporated in this unit. (Up to eight repeaters can be installed between the master and slave.)

1. Linear distance in an open location
2. The main and slave units are installed in a room with a cable designed for indoor use. If they are used outdoors, these take waterproof measures such as using plastic cases, etc.

Up to 254 terminal equipments can be connected.
The RS485 types allow up to 99 slave units to be connected for one master and in RS485 mode, up to 31 terminal equipments can be connected for one slave. Up to 254 terminal equipments can be connected in an entire network. The I/O types allow up to 99 slave units or terminal equipments to be connected for one master.

Concurrent I/O and serial (RS232C) communications are possible.
The I/O types allow concurrent I/O and serial (RS232C) communications.

All models can be configured for 1:N topology.
When NEWTOCOL is used for 1:N topology, all RS485 and I/O types can be mixed.

Compliant with wireless standards of Japan, China, Europe

System Configurations

● Example of 1:1 topology
Data can be exchanged between the master and slave over a distance of 250 m.

- I/O type
  - KR20 Master
  - KR20 Slave
- Configuration
  - Demo show setup
  - Drive circuit
  - DC power supply
  - Voltage input
- Communication
  - Two-way communication is possible between the master and slave

● Example of 1:N topology
Up to 31 units can be connected.

- I/O type
  - KR20 Master
  - KR20 Slave
- Communication
  - Two-way communication is possible between the master and slave
  - Up to 31 units
- Configuration
  - Data from slave No. 1
  - Message Runner
  - KR20 Master
  - KR20 Slave
  - PLC

PRODUCT TYPES

- RS485 type
  - KR20 Master (I/O type)
  - KR20 Slave (I/O type)
  - PLC
  - Web Datalogger Unit
  - Office

- I/O type
  - Standard antenna
  - Antenna with cable
  - Antenna extension cable
  - Power supply cable for FP

APPLICATION EXAMPLES

To monitor the component stock in the shelf

To transfer the data such as 2D code, etc.

To transmit the component pickup work instructions by wireless.

Counts the production number or inspection data at a high speed

To transmit the measured power or temperature of the machines or food storage systems or their errors by wireless.

* The RS485 and I/O types can be mixed only when NEWTOCOL is used for 1:N topology.
2. Wireless specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>RS485 type</td>
</tr>
<tr>
<td>Wireless type</td>
<td>Direct sequence spread spectrum (DS-SS)</td>
</tr>
<tr>
<td>Transmission distance</td>
<td>Approx. 250 m outdoors* (straight, obstacle-free distance), Approx. 50 m indoors</td>
</tr>
<tr>
<td>Wave output</td>
<td>0mV/µA or less</td>
</tr>
<tr>
<td>Frequency</td>
<td>2400–2483.5MHz</td>
</tr>
<tr>
<td>Number of channels</td>
<td>76 (select with communication channel switch)*2</td>
</tr>
<tr>
<td>Number of channels in same transmission area</td>
<td>15 channels recommended (when select fixed channel)*1</td>
</tr>
<tr>
<td>Communication speed</td>
<td>9.6 kbps (9.992 kbps)</td>
</tr>
<tr>
<td>Repeater function</td>
<td>8 repeaters (between master and slave)</td>
</tr>
<tr>
<td>Response time</td>
<td>–</td>
</tr>
</tbody>
</table>

*1: Antenna and antennas extension cables are required per main unit.
*2: A magnet and double-sided tape are supplied with antennas with cable for fitting.
*3: When an antenna extension cable is used, the communication distance becomes shorter.
*4: The user's manual is downloadable from the website: http://www.mwe.co.jp/ac/en/

3. Options

<table>
<thead>
<tr>
<th>Item</th>
<th>Product name</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Standard antenna</td>
<td>2 pieces</td>
</tr>
<tr>
<td>Item</td>
<td>Antenna with cable</td>
<td>2 pieces, 2 m length</td>
</tr>
<tr>
<td>Item</td>
<td>Antenna extension cable</td>
<td>Special order, 2 pieces, 2 m length</td>
</tr>
<tr>
<td>Item</td>
<td>Power supply cable for PS</td>
<td>1 piece, 1 m length</td>
</tr>
</tbody>
</table>

4. Serial communication specifications (RS232C) *4

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>RS485 type</td>
</tr>
<tr>
<td>Setting function</td>
<td>• Operating mode change (SET, RUN, TEST)</td>
</tr>
<tr>
<td></td>
<td>• Unit No. change (UNIT No. switch)</td>
</tr>
<tr>
<td></td>
<td>• Initializing (Factory setting)</td>
</tr>
<tr>
<td>Test function</td>
<td>• Communication test: 3-stage LED display (With setting tool, it can do various communication tests such as checking data amount, including repeaters and so on. And it can measure an approximate communication time.)</td>
</tr>
<tr>
<td></td>
<td>• Field intensity monitor: 3-stage LED display (With setting tool, it can display and record a field intensity of each channel by numeric value.)</td>
</tr>
<tr>
<td>LED display</td>
<td>• Distinct master or slave (MASTER)</td>
</tr>
<tr>
<td></td>
<td>• On communication, Power on (COM.)</td>
</tr>
<tr>
<td></td>
<td>• On setting, Complete setting (SET)</td>
</tr>
</tbody>
</table>

*4: Conforming to RS485
**3. Options**

**4. Serial communication specifications (RS485) (only AKR2002)**

**5. Input specifications (only AKR2015 and AKR2045)**

**6. Output specifications (only AKR2015 and AKR2045)**

**7. Functions specifications**
### Part Name and Dimensions (Unit: mm)

**Main unit**

- **Power supply connector**
  - Pin No.: 1
  - Signal name: +
  - Pin No.: 2
  - Signal name: –
- **Terminal block with cover open**

**Antenna**

- 7.0 dBi
- Operating mode switch
- Communication channel switch
- Communication status indicator

**Terminal block (only AKR2015 and AKR2045)**

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Number of pin terminal</th>
<th>Signal name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
<td>COM</td>
<td>Input</td>
</tr>
</tbody>
</table>

**RS485 terminal block (K20300)**

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Signal name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>2</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>3</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>4</td>
<td>COM</td>
<td>Input</td>
</tr>
<tr>
<td>5</td>
<td>COM</td>
<td>Input</td>
</tr>
</tbody>
</table>

**KR20 WIRELESS UNIT Utilities**

- **Protocol for 1:N topology**
  - Communication protocol: RS485
  - I/O type: OUT
  - Restrictions: No connection

- **KR20 WIRELESS UNIT Utilities**
  - **Settings tool**
    - Routing function
    - Communication test function
    - Field intensity monitor

### Restrictions

- **Wired communication restrictions**
  - Separate data sent on wire

### Mounting

1. Do not place the units in the vicinity of radios or TVs. Otherwise, the reception may be impaired.
2. If nearby broadcasting or wireless stations emit radio waves with a high field intensity, then this wireless system may not be used.
3. This system uses frequencies on 2.4 GHz band for data communication. If there are other devices using the same frequency band in its vicinity, then the communication may be impaired due to interference.
4. In order to make the wireless performance better, pay attention to the below items.
   - Mount the unit as high as possible.
   - Connect 2 of the antenna and the mounting direction is vertical for the ground.
   - Antenna should be kept away from metal board. If antennas are mounted inside the control board, the wireless performance will decrease.
   - Keep away from the place or line that noise might occur.
   - Mount in the place where electric wave condition is good, field intensity monitor.
   - When using several channels in the same communication area, check if there is no influence each other.
5. When using the unit to DIN rail, hook the upper part and push DIN hook. When removing it, pull out with minus driver until locking DIN hook. And fastening plate (AKRA806) is recommended to prevent from moving.

### Direction of communication between the master and slave (1:1 topology with repeaters or 1:N topology)

Command and response is assumed in the communication procedure. Set the master to a command sender and the slave to a response sender. Otherwise, the communication is impossible. If both units are set to command senders, then communication will not be possible.

### Command and response sequence

If commands are sent in succession, then define a sequence, in which a command is sent after the response to the previous command is returned. If a time-out is defined, then the time required for wireless communication must be taken into consideration. The time required for wireless communication may be extended depending on the communication environment. If the interval between two commands is fixed, then a command and a response may collide with each other.

### Input signal time

During 1:1 topology or 1:N topology with repeaters for the I/O type, the input or output signals are not always monitored. They are monitored only immediately before wireless transmission and when their information is transmitted. In this case, if the input signal duration is shorter than the polling time*, then it may not be transmitted to the output terminal. Therefore, in order to ensure that the input signal is transmitted, it must be held for the polling time or more.

---

1. The polling time refers to a cycle for the master to continuously transmit polling data to slaves.
2. The response time refers to the time required for the signal inputted to the input terminal to be outputted from the output terminal of the partner unit.
**Protocol for 1:N topology**

### Communication protocol

- **RS485 type**: 
- **I/O type**: 

### Restrictions

- **Wired communication restrictions**

**Separation of data sent on wire**

The wireless unit detects the end of data sent on wire not by control codes such as "\(\mathrm{C}\)!", etc., but by the idle time. Initially, if there is an idle time equivalent to 10 characters, the polling time or more, then it will be deemed the end of data and the wireless unit will start communicating. Therefore, if consecutive data includes an idle time equivalent to 10 characters or more, the data will be separated. However, if the idle time between two successive items of data is equivalent to 10 characters or less, then they will be deemed to be partial data and will not be sent correctly.

### Direction of communication between the master and slave

(1:1 topology with repeaters or 1:N topology)

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- Set the master to a command sender and the slave to a response sender.
- Otherwise, the communication is impossible. If both units are set to command senders, then communication will not be possible.

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If commands are sent in succession, then define a sequence, in which a command is sent after the response to the previous command is returned. If a time-out is defined, then the time required for wireless communication must be taken into consideration. The time required for wireless communication may be extended depending on the communication environment. If the interval between two commands is fixed, then a command and a response may collide with each other.

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**KR20 WIRELESS UNIT Utilities**

- **Settings tool**
- **Routing function**
- **Communication test function**
- **Field intensity monitor**

---

**Part Name and Dimensions (Unit: mm)**

- **Main unit**
- **Antenna**
- **Power supply connector**
- **Terminal Layouts**
- **RS232C Connector**
- **I/O terminal block (only AKR2015 and AKR2045)**
- **AKR2045 terminal block (No.8)**
- **AKR2002 terminal block (No.9)**

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**Caution for use**

1. When mounting, (wiring, adjustment etc.), be careful not to add static electricity to connector, switch and antenna.
2. Do not squeeze the switches or push buttons with an excessive force. Otherwise, they may be damaged.

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**Mounting**

1. Do not place the units in the vicinity of radios or TVs. Otherwise, the reception may be impaired.
2. If nearby broadcasting or wireless stations emit radio waves with a high field intensity, then this wireless system may not be used.
3. This system uses frequencies on 2.4 GHz band for data communication. If there are other devices using the same frequency band in its vicinity, then the communication may be impaired due to interference.
4. In order to make the wireless performance better, pay attention to the below items.
   - Mount the unit as high as possible.
   - Connect 2 of the antenna and the mounting direction is vertical for the ground.
   - Antennas should be kept away from metal board. If antennas are mounted inside the control board, the wireless performance will decrease.
   - Keep away from the place or line that noise might occur.
   - Mount in the place where electric wave condition is good to refer to field intensity monitor.
5. When using several channels in the same communication area, check if there is no influence each other.
6. When mounting the unit to DIN rail, hook the upper part and push DIN hook. When removing it, pull out with minus driver until locking DIN hook. And fastening plate (AKR466B) is recommended to prevent from moving.

---

**Restrictions**

- **Terminal Layouts**

**Separation of data sent on wire**

The wireless unit detects the end of data sent on wire not by control codes such as "\(\mathrm{C}\)!", etc., but by the idle time. Initially, if there is an idle time equivalent to 10 characters, then it will be deemed the end of data and the wireless unit will start communicating. Therefore, if consecutive data includes an idle time equivalent to 10 characters or more, the data will be separated. However, if the idle time between two successive items of data is equivalent to 10 characters or less, then they will be deemed to be partial data and will not be sent correctly.

### Direction of communication between the master and slave

(1:1 topology with repeaters or 1:N topology)

- Command and response is assumed in the communication procedure.
- Set the master to a command sender and the slave to a response sender.
- Otherwise, the communication is impossible. If both units are set to command senders, then communication will not be possible.

### Command and response sequence

If commands are sent in succession, then define a sequence, in which a command is sent after the response to the previous command is returned. If a time-out is defined, then the time required for wireless communication must be taken into consideration. The time required for wireless communication may be extended depending on the communication environment. If the interval between two commands is fixed, then a command and a response may collide with each other.

### Input signal time

During 1:1 topology or 1:1 topology with repeaters for the I/O type, the input or output signals are not always monitored. They are monitored only immediately before wireless transmission and when their information is transmitted. In this case, if the input signal duration is shorter than the polling time, then it may not be transmitted to the output terminal. Therefore, in order to ensure that the input signal is transmitted, it must be held for the polling time or more.

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**KR20 WIRELESS UNIT Utilities**

- **Settings tool**
- **Routing function**
- **Communication test function**
- **Field intensity monitor**

---

**Protocol for 1:N topology**

<table>
<thead>
<tr>
<th>Communication protocol</th>
<th>RS485 type</th>
<th>I/O type</th>
<th>Restrictions</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODBUS ASCII</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MODBUS RTU</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GT2 Series Original</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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*Operations using Micro PLC software are not supported.
* Use with 1:1 topology or 1:1 topology with repeaters for other protocols.
KR20 WIRELESS UNIT (AKR2)

■ To prevent from interference with the other wireless station (Japan only)
In the frequency band using this unit, in-plant radio station (license is necessary) using at industrial such as microwave oven, science, medical machinery and a production line in factory to identify mobile object, specified low power radio station (license is not necessary) and amateur radio station (license is necessary) are managed.
1) Before using this unit, please confirm that in-plant radio station to identify mobile object, specified low power radio station and amateur radio station are not managed.
2) When some cases of harmful electric wave interference occurred from this unit to an in-plant radio station to identify mobile object, change the using frequency immediately or stop discharging the electric wave. After that please contact us to consult measures to avoid interference (for example, setting of partition).
3) When any other troubles such as harmful electric wave interference occurred from this unit to a specified low power radio station or an amateur radio station or an amateur radio station, please contact us.

■ Actual indication

2.4 GHz band electric wave is used.

- Modulation method is direct sequence type.

- Intended interference distance is 40m.

- Bar: All bands are used and possible to avoid the band of machine to identify mobile object.

*Please put the attached label “Caution for using wireless unit” near the setting place.

■ Countries where the use of KR20 has been authorized
Products with the indication label affixed to their rear side
As of May 2008, the use of KR20 has been authorized in the following countries.

| Japan, China, 25 European countries (Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France*, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Malta, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK, Netherlands) |
| In France, this product must not be used outdoors. Please use it indoors only. |

■ Compliance for EN standard
Obtained the European wireless certification (EN300 328)
In order to comply with EN standard, use this product in following condition.

- When installing this product to wall, install it on a DIN rail.

- Use power supply cord that is less than 3m.

- For communication cable (RS232C or RS485), use shielded cable, and connect one end of shield wire to ground. And use ferrite core (correspond to TDK: ZCAT2035-0930) in the communication cable (RS232C or RS485) of wireless unit side. (Turn numbers: 2T)

* Please put the attached label “Caution for using wireless unit” near the setting place.

250 m range

High-speed data transfer

2.4 GHz, SS wireless

Antenna with cable available

RS485 type and I/O type

Antenna with cable

Antenna extension cable

Please contact ...........

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