OMRON

WE70-AP/CL /-US/-EU/-CN

FA Wireless LAN Unit

ENG	Instruction Sheet

Thank you for your purchase of Omron's product.
Read and understand this instruction sheet before using this product for safe and proper use.
This product must be handled by a qualified person who has sufficient knowledge on electricity.
Keep this document close at hand for reference.

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Please read the following manual, as well for safe and appropriate use.
"WE70-AP/CL FA Wireless LAN Unit OPERATION MANUAL" (Cat.No.N153-E1(ENG))

Safety Precautions

● Warning Indication

⚠ WARNING	If you fail to use a product properly, it may result in injuries, light or heavy, and may lead to death. Also, a serious damage on property may be caused.

⚠ CAUTION	If you fail to use a product properly, it may result in injuries or damage on property.

Do not use IEEE802.11 outdoors.
The Radio Law in Japan prohibits outdoor use of IEEE802.11a (5.2GHz/5.3GHz band).
Within this product's frequency range, industrial, scientific, and medical equipment as well as RFID premises radio station (license required) and specified low power radio station (license not required) used in factory manufacturing lines are operated.
(1) Before using this device, confirm that no RFID premises radio station or specified low power radio station is operating close to it.
(2) If in case this product causes radio interference with an RFID premises radio station, immediately change the product's frequency or stop radio emission, and contact OMRON representative for actions to take to prevent cross talk (e.g. installation of a partition)
(3) If any other problem occurred due to this product, such as radio interference with an RFID specified low power radio station, contact OMRON representative.

This product is given approvals of wireless standards from the following countries.
United States, Austria, Denmark, Finland, Germany, United Kingdom, Ireland, Italy, Netherlands, Norway, Sweden, Switzerland,Spain, France, Belgium, Greece, Portugal, Czech, Hungary, Poland, Slovenia, Slovakia
It cannot be used in other countries.

Suitability for Use

OMRON shall not be responsible for conformity with any standards, codes or regulations that apply to the combination of the products in the customer's application or use of the product.
Take all necessary steps to determine the suitability of the product for the systems, machines, and equipment with which it will be used. Know and observe all prohibitions of use applicable to this product.
NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
See also Product catalog for Warranty and Limitation of Liability.

⚠ WARNING

DO NOT use this product without a protection circuit. Otherwise it may result in heavy injuries or damage on life or property due to malfunction.
Dual or triple safety protection circuits, such as emergency stop, interlock, or limit circuit, must be configured by external control circuit so that the system should operate on safe side even if a failure of this product or an error due to an external factor occurred.

● Warning Indication

⚠ WARNING

This product uses electric wave for communication which may be broke up temporarily due to its environment or usage.Safety of the system must be maintained even in such a case.

Do not use this product for a real-time control application.

DO NOT use this product close to any medical equipment such as a pacemaker as it may affect operation of such medical equipment and may result in heavy injuries.

⚠ CAUTION

In rare cases, light electric shock, fire, or failure of this product may occur.
Do not disassemble, modify, fix, or touch inside of this product.
Disassembly and modification are prohibited by the Radio Law in each countries.

Precautions for Safe Use

Observe the following precautions when using this product:
1) Dedicated packaging must be used for transportation of this product.Take precautions to prevent excessive vibration or shock on the product or falling of the product.
2) Storage of this product must be within the specified environment. Allow the product to warm up to room temperature for at least 3 hours after it has been stored at -10 degrees C or lower.
3) Use the product within the specified temperature and humidity ranges.
4) Do not use the product under the following environments:
 • Locations subject to extreme temperature changes resulting in condensation
 • Locations subject to static electricity, excessive noise, or electric fields
 • Locations where the product may come into contact with water, oil, or chemicals
 • Locations where corrosive gases or flammable gases are present
 • Locations where large amounts of dust or dirt are present
 • Locations subject to spatters, iron chips, or fillings
5) Do not use it outdoors (outside a control panel).
6) Use tape, cord, or other means to hold the product while adjusting the installation position to prevent the product from damage due to failing.
7) Tighten the mounting screws to the specified torque of 4.4 to 5.3 in lb. (0.5 to 0.6 N.m)
8) Provide sufficient space around the product for heat dissipation. Install the products with a margin of 20mm or longer externally.
9) Do not reverse the power supply connection or connect the product to an AC power supply.
10) Use the correct power supply voltage.
11) Use the solid wire, 26 to 17 AWG for power supply. The exposed length of wire is 10 to 11mm.
12) Do not lay communications cables and antenna cables near other high-voltage cables or power lines.
13) Setup is required after the installation or replacement of this product. Set up the product correctly according to the manual, and be sure to confirm that communication is established before using it.
14) Do not apply excess vibrations or shock to this product. Do not drop this product.
15) Other wireless devices operating within the same frequency band may interfere with this product or be adversely affected by this product. Therefore, be sure to perform the test provided with the product (e.g., installation tests) before operating it.
16) Make sure that the antenna is not disconnected during operation.
17) Do not use this product near other devices that may malfunction due to the electromagnetic waves emitted by this product.
18) Turn OFF the power supply before performing any wiring or replacing devices.
19) Do not touch the product with wet hands.
20) Dispose of the product as industrial waste.

We, the manufacturer (name of the manufacturer) hereby declare that this equipment (type of the equipment), model WE70-AP-EU/WE70-CL-EU is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

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

STP cables must be used for connection to host computer and/or peripherals in order to meet FCC emission limits.
In according with 47 CFR Part15.407(e) U-NII devices operating in 5.15-5.25GHz frequency bands are restricted to indoor operations only.
This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.
This equipment complies with FCC radiation exposure limits set forth for uncontrolled equipment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. This equipment should be installed and operated with at least 20cm and more between the radiator and person's body (excluding extremities: hands, wrists, feet and legs).

■ Specification

● Wireless LAN Block (5GHz, 54Mbps; Common in AP/CL)

Item	Specification
Standards	IEEE802.11a
Transmission Type	Orthogonal Frequency Division Multiplexing (OFDM), Simplex
Frequency Range	5150 to 5350MHz (8 channels), 5470 to 5725MHz (11 channels), 5725 to 5825MHz (5 channels)
Transmission speed	Auto/54/48/36/24/18/12/9/6Mbps (theoretical)
Maximum Transmission Distance (Clear View)	Indoors: About 40m (Do not use it outdoors)

● Wireless LAN Block (2.4GHz, 11Mbps/54Mbps; Common in AP/CL)

Item	Specification
Standards	IEEE802.11b/IEEE802.11g
Transmission Type	(Using 802.11b) Direct Sequence Spectrum Spread, Simplex
	(Using 802.11g) Orthogonal Frequency Division Multiplexing (OFDM), Simplex
Frequency Range	2400 to 2483.5MHz (13 channels or 11 channels)
Transmission speed	(Using 802.11b) Auto/11/5.5/2/1Mbps (theoretical)
	(Using 802.11g) Auto/54/48/36/24/18/12/9/6Mbps (theoretical)
Maximum Transmission Distance (Clear View)	Indoors: About 60m

● Common Spec for Wireless LAN Block (Common)

Item	Specification
Security	OCB AES <128-bit>, WEP (RC4) <64/128/152-bit>, WPA-PSK (with encryption type of AES <128-bit> /TKIP <128-bit>), WOC KEY
Group Communication	Comformance to ANY-connection refusal
Transmission Power	10mW/MHz or less
Antenna	Dual Band Diversity Antenna SMA Reverse Connector

● Wired LAN Block (Common)

Item	Specification
Standards	IEEE802.3 (10BASE-T), IEEE802.3u (100BASE-TX) (Use STP LAN cables)
	RJ-45 x 1

* Use straight cables for connection to PLC or PC.

● General Specification (Common)

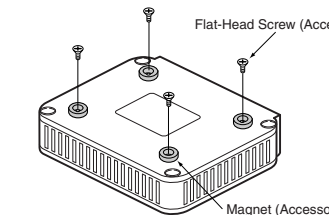| Item	Specification
Main Unit Setup	Web Browser
Power	20.4 to 26.4 VDC (Screwless Terminal Block)
Current consumption	250mA max.
Ambient Operation Temperature	0 to +50 °C (With no condensation)
Dimensions	120(W) x 103(D) x 34.5(H)mm (excluding projection)
Weight	About 360g (Main Unit Only)

● Other Functions

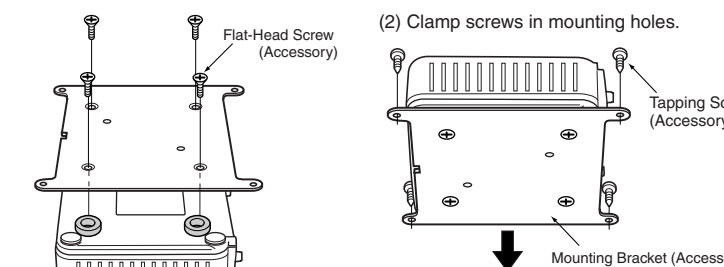| Item	Specification
Wireless LAN	Supporting Communication Rate Enhancement Technology Atheros Super AG, Variable Transmission Power (3 Levels: High/Mid/Low), Transmission Load Distribution (Connection Terminal Limiting), 11g Protection, Client-to-Client Wireless Communication Inhibition, Roaming, AP-to-AP bridging, MAC Address Registration Security, SSID Setup Any Access Denial
Others	Supporting SYSLOG, Web Browser Setup, Administrator ID Setup, Administrator IP Registration

■ Installation method

● Mounting Magnets

Mounting screws for this wireless unit must be tightened with torque of 4.4 to 5.3 in. lb. (0.5 to 0.6 N.m)

Flat-Head Screw (Accessory)
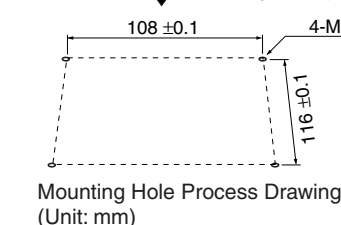Magnet (Accessory)

● To mount Using Mounting Bracket

(1) Attach the mounting bracket on accessory magnets which are installed on wireless unit. (Magnet is attached between mounting bracket and a wireless unit.) Installation on a control panel requires screw hole drilling.
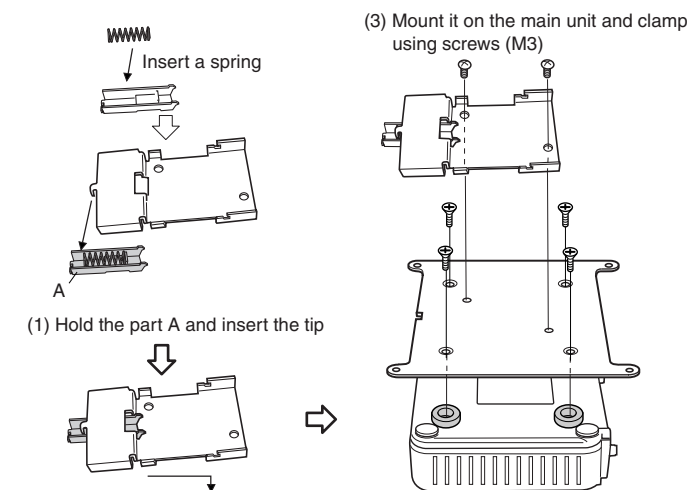

Flat-Head Screw (Accessory)
(2) Clamp screws in mounting holes.
Tapping Screw (Accessory)
Mounting Bracket (Accessory)

Mounting screws for this wireless unit must be tightened with torque of 4.4 to 5.3 in. lb. (0.5 to 0.6 N.m)

108 ±0.1   4-M5
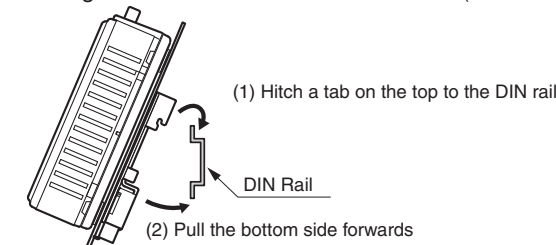116 ±0.1

Mounting Hole Process Drawing (Unit: mm)

● To mount on a DIN rail

* Do not install a product with a pencil-type antenna in a metal panel as it may result in degradation of radio performance. To install this product in a panel, use and install a magnetic-base antenna outside the panel.

Insert a spring
(1) Hold the part A and insert the tip
A
(2) Pull it to the right and lower it while pressing the spring

(3) Mount it on the main unit and clamp it using screws (M3)

Mounting screws for this wireless unit must be tightened with torque of 4.4 to 5.3 in. lb. (0.5 to 0.6 N.m)

<Mounting>

(1) Hitch a tab on the top to the DIN rail
DIN Rail
(2) Pull the bottom side forwards

<Demounting>

Insert a flat-head screw driver under the lower tab and pull downward

(2) Unhitch a tab from the DIN rail
DIN Rail
(1) Pull the lower part