

Wireless Pushbutton Switches

A2W

World's first*

A “wireless, batteryless”
switch with
“reception confirmation LED”



* Based on November 2017 OMRON investigation.

On-site Innovation Created by a Switch that Connects People and Machines “Wirelessly”

With increasing high-mix low-volume production and more frequent changeovers of products, manufacturing sites increasingly require more versatile and flexible production systems.

OMRON wireless switches offer:

- Production lines without restrictions on the layout
- Easy addition to existing facilities
- Installation on the moving parts

Achieve flexible on-site design with high reliability.
Contribute to enhanced productivity.





| DAILY PRODUCTION REPORT | | | | 15/NOV/12 | |
|-------------------------|----------|---------|--------|-----------|-----------|
| 12:44 | EQ. LACT | EQ. VAR | MAKPTS | PFSTAR | |
| UP TIME % | 97.3 | 116 | 3 | 100 | -11 |
| F.A.L | DPR | CSL | DOORS | EQ. REP | FLOAT TGT |
| 0 | 95 | 85 | 15 | 3 | 92 |
| | | | | INT | PLT |
| 0 | 85.7 | 111 | | 3 | 88 88 |



OMRON's unique technologies change the manufacturing.

Self-power generation by the pushing force

BATTERYLESS design eliminates the need for maintenance.

Even in environments with poor visibility or noise

The RECEPTION CONFIRMATION LED provides peace of mind.

Highly diffractive sub-GHz frequency band

ACHIEVES HIGHLY RELIABLE WIRELESS COMMUNICATION.

A Wireless Switch with Reliability and Usability

Patent pending

Reception confirmation LED

Successful reception is confirmed by LED.

Detailed wireless communication status can be monitored.

| Reception confirmation LED | Status |
|----------------------------|---|
| Green | Reception success (received field strength "Strong") |
| Yellow | Reception success (received field strength "Weak") |
| Red | Reception failure |
| No lit | Slave button fault (no signal transmission from Slave button) |



Degree of protection: IP65

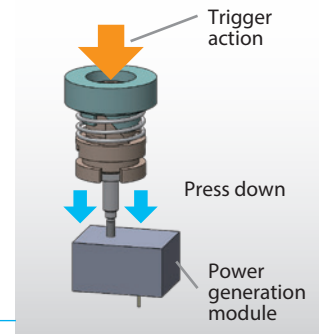
* Only for the main unit of Slave button and optional antenna.

Patent pending

Batteryless due to self-power generation

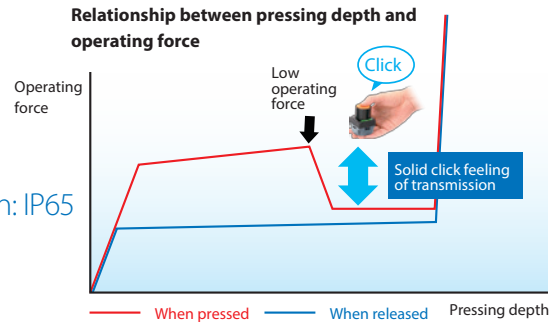
Self-power generation by the pushing force eliminates battery management.

Operation by the trigger action drives the power generation module and generates stable electricity.



Feel the click firmly even with gloves on

The feel when you click strikes a balance between lower operating force and solid feeling of transmission.



Highly reliable communications

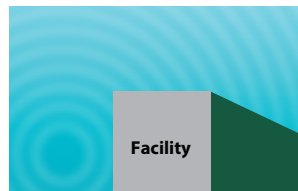
Sub-GHz-band that is less susceptible to obstacles

High diffraction and high penetration



Sub-GHz band (900 MHz)

The radio wave is subject to block by obstacles as it goes straight without diffraction.



Quasi-microwave band (1 GHz to 3 GHz)

The radio wave goes straight without diffraction, being blocked by obstacles.

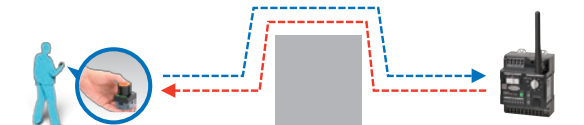
Long-range transmission

Transmission distance: **approx. 100 m** without obstacles



* Also without influence of noise

Transmission distance: **approx. 30 to 50 m** even with obstacles

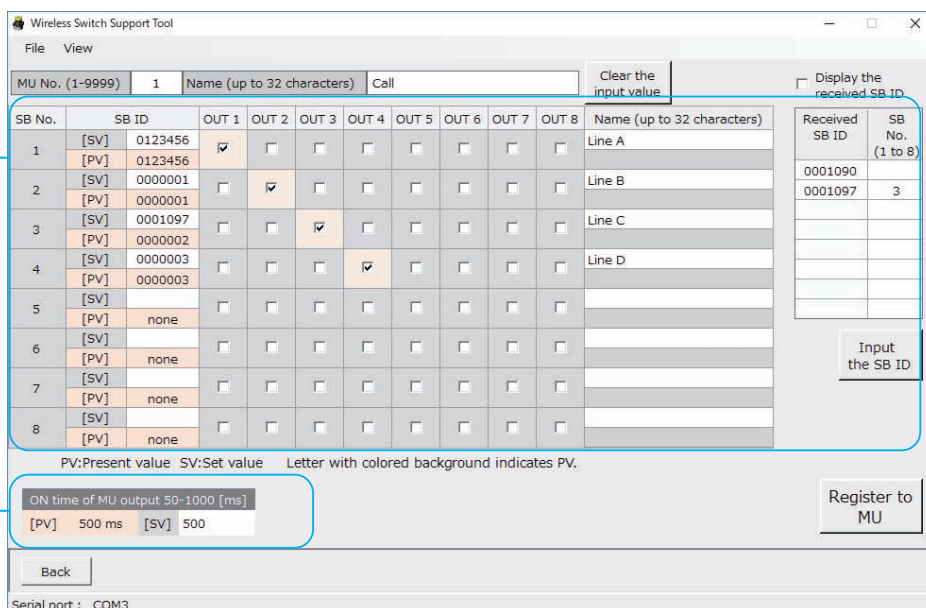


Easy Setup and Evaluate with “Wireless Switch Support Tool”, Available for Free

Wireless Switch Support Tool enables easy settings of the master unit and confirmation of radio field intensity transmitted from the slave buttons.

Visualization of master unit settings

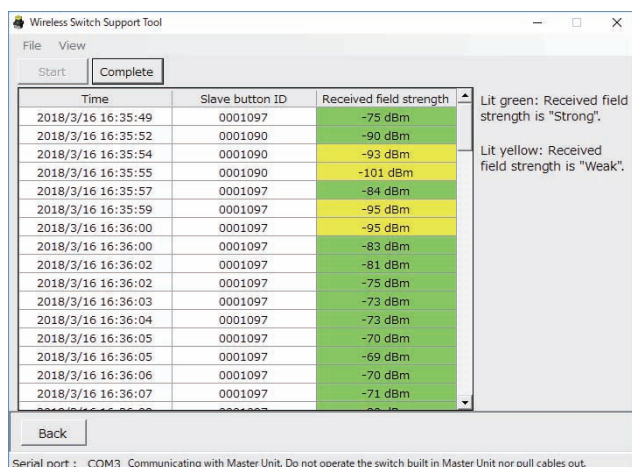
You can confirm and change the state of registration, deletion of each slave button.



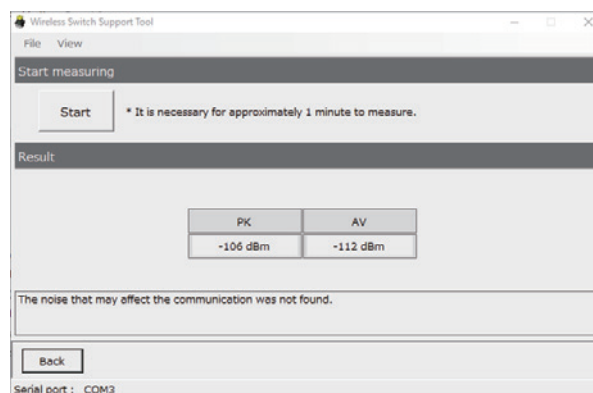
Control output (one-shot) ON duration of master unit is configurable.

Quantitative evaluation of radio wave intensity

Display the radio wave intensity received from slave buttons



Confirmation of noise intensity surrounding the master unit

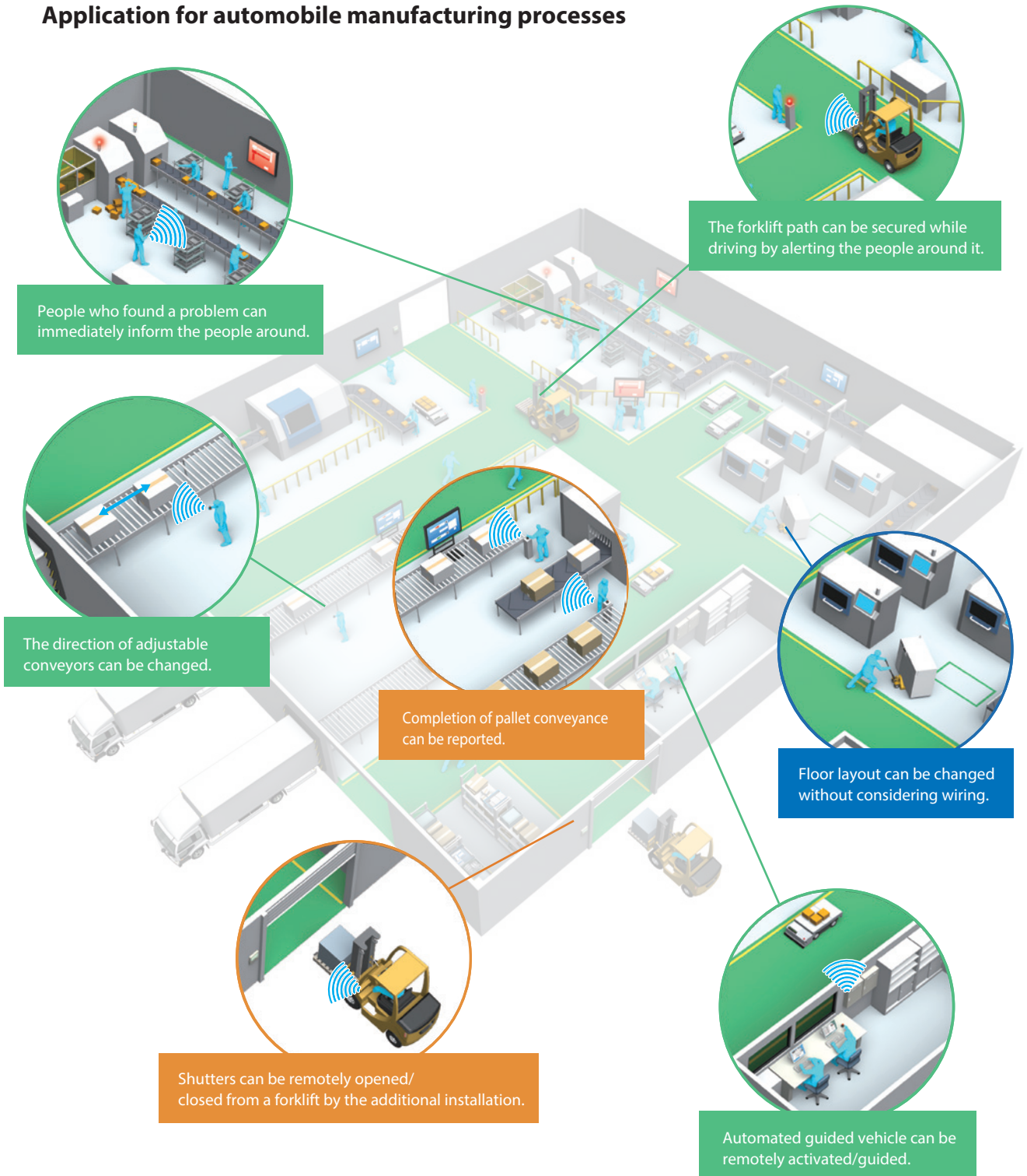


Note: For use of Wireless Switch Support Tool, the USB serial conversion cable (E58-CIFQ2) and the conversion cable (E58-CIFQ2-E) are necessary.

Wireless Communications Enables a Wide Range of Applications.

Wireless communications reduces the troubles caused by disconnection, and time and expenses required for rearrangement of floor layout.

Application for automobile manufacturing processes



Benefit of wireless 1

Man-hours reduction
Easy to change equipment layout without re-wiring effort

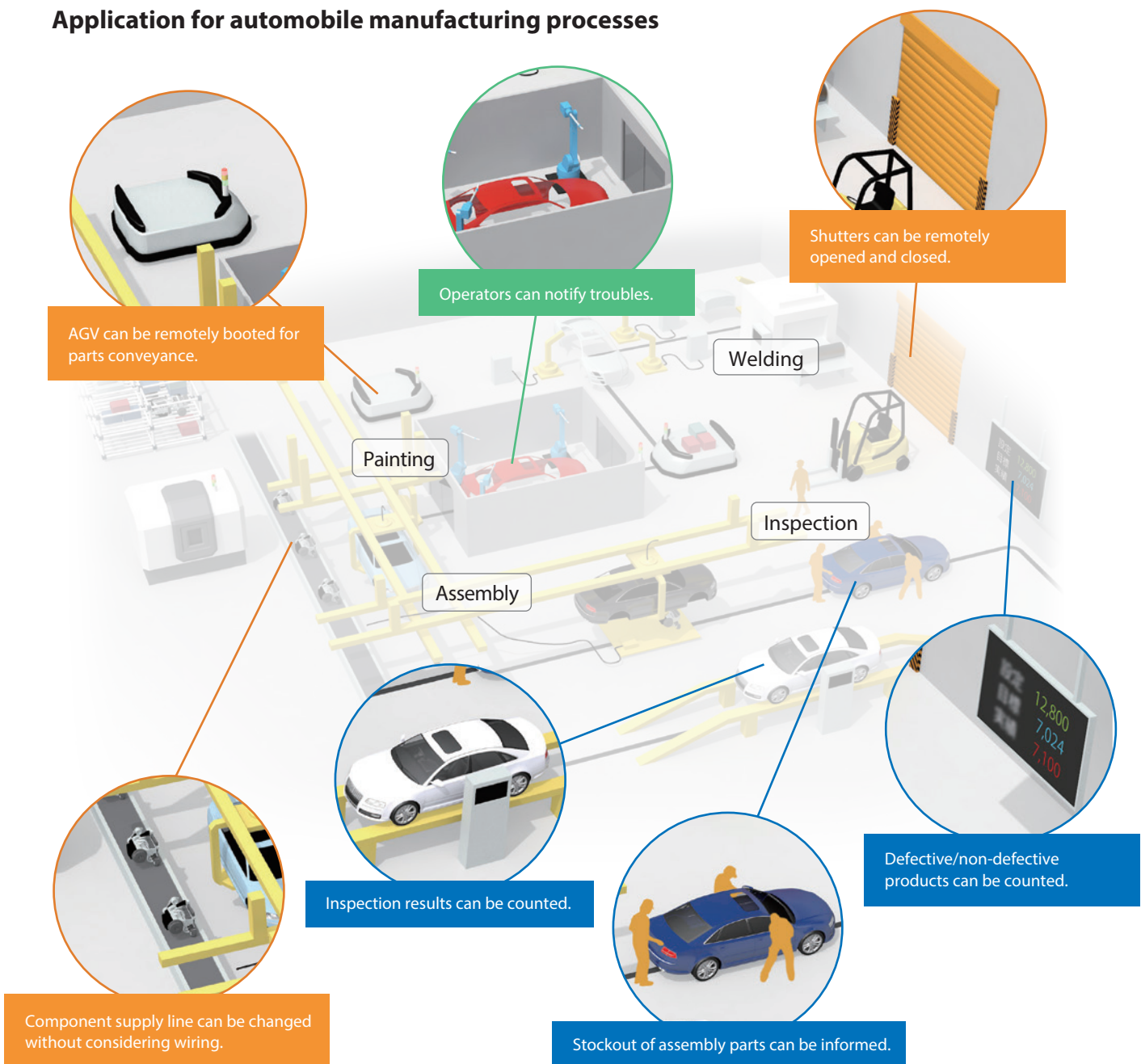
Benefit of wireless 2

Work efficiency improvement
Unfixed slave buttons eliminates location constraints in the work space

Benefit of wireless 3










Conveying work efficiency improvement
Unfixed slave buttons makes it possible to press buttons without getting in and out of a moving truck

Application for automobile manufacturing processes



Main Specifications

[Slave button]

| | | | | | | |
|----------------------|---|---|--|---|---|--|
| Button type | Mushroom, Full guard | | | | | |
| Button color | Green  | Yellow  | White  | Blue  | Black  | Red  |
| Flange color | Yellow  | Black  | Red  | | | |
| Degree of protection | IP65 | | | | | |

[Master Unit]

| | |
|-----------------------------------|-------------------|
| Rated voltage | 24 VDC |
| Allowable voltage range | 21.6 to 26.4 VDC |
| Output circuit shared voltage | 30 VDC max. |
| Maximum load current | 50 mA per point |
| Output logic | One-shot (500 ms) |
| Number of connected Slave buttons | 8 max. |

| | |
|-------------|--|
| Accessories | Extension antenna (cable length 2.5 m), Slave button strap |
|-------------|--|



Our shared Value Design for Panel (herein after referred to as Value Design) concept for the specifications of products used in control panels will create new value to our customer's control panels.

Combining multiple products that share the Value Design concept will further increase the value provided to control panels.

*Only for Main Units.

Wireless Pushbutton Switch A2W

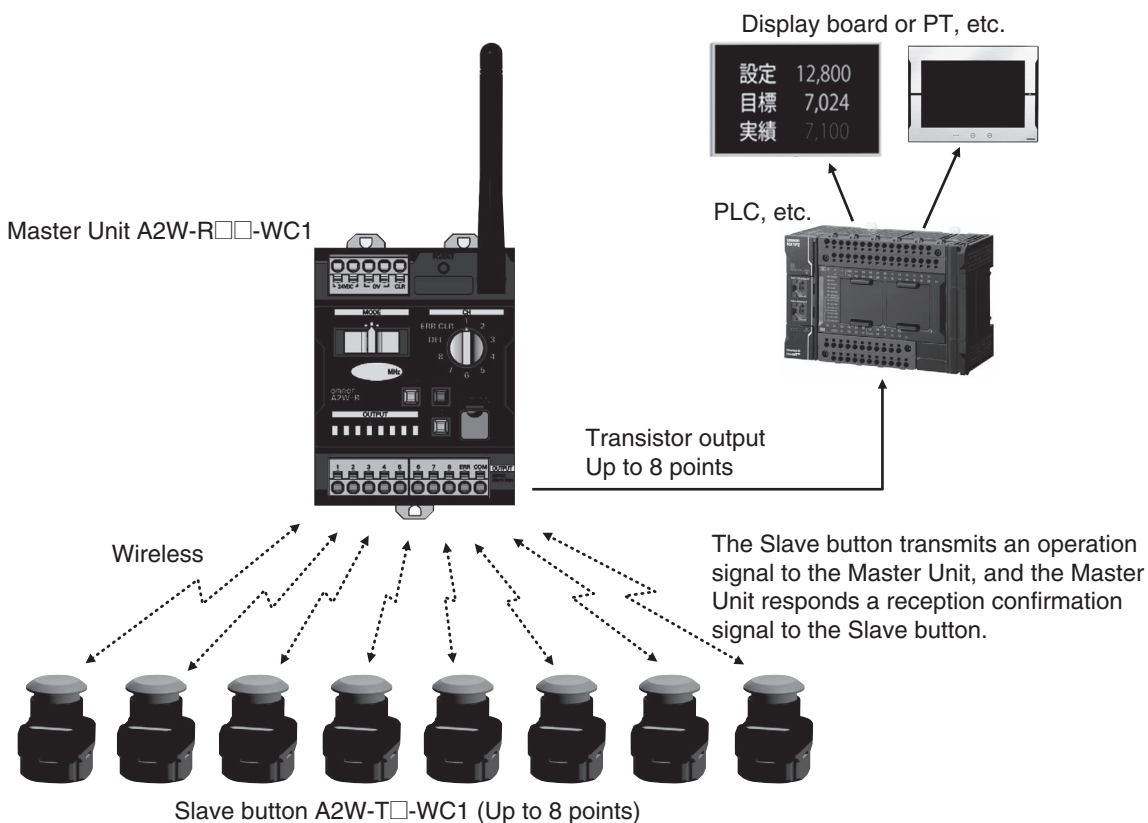
Wireless switch using sub-GHz band Combines wireless reliability and ease-of-use in consideration of work environments

- Sub-GHz band for reduced interference and better signal propagation to difficult-to-reach areas
- Visualization of impedance to wireless transmission because of damage or noise, using Master Unit error output
- Visualization of Slave button reception status using reception confirmation LEDs
- Transmission distance independent of the transmission position of the Slave button
- Visualization of configuration using PC tools that avoid erroneous ID registration
- Visualization of signal quality in display and usage environments using PC tools
- 8 outputs with focus on decentralized control
- Self-power generation eliminates battery replacement and enhances safety and energy saving in the Slave button
- Slave button's shape allows easy use of buttons



For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

System Components



A2W

Model Number Structure

Model Number Structure

Slave button

A 2 W- - WC

1 2 3 4 5 6 7

1.

| Slave button | |
|--------------|--|
| T | |

2.

| Frequency (MHz) | |
|-----------------|-------|
| B | 868.3 |

3.

| Protocol | |
|----------|------------------|
| 1 | OMRON's protocol |

4.

| Area | |
|------|--------------|
| ZA | South Africa |

5.

| Button type | |
|-------------|------------|
| 1 | Mushroom |
| 2 | Full guard |

6.

| Button color | |
|--------------|--------|
| R | Red |
| G | Green |
| Y | Yellow |
| A | Blue |
| W | White |
| B | Black |

7.

| Flange color | |
|--------------|--------|
| R | Red |
| Y | Yellow |
| B | Black |

Note: This product is a wireless device that conforms to the radio regulations of South Africa.
It cannot be used outside of South Africa.
For product details, please contact us separately.

Master Unit

A 2 W- - WC

1 2 3 4 5

1.

| Master Unit | |
|-------------|--|
| R | |

2.

| Frequency (MHz) | |
|-----------------|-------|
| B | 868.3 |

3.

| Output Configuration | |
|----------------------|------------------|
| N | Sinking Outputs |
| P | Sourcing Outputs |

4.

| Protocol | |
|----------|------------------|
| 1 | OMRON's protocol |

5.

| Area | |
|------|--------------|
| ZA | South Africa |

Note: This product is a wireless device that conforms to the radio regulations of South Africa.
It cannot be used outside of South Africa.
For product details, please contact us separately.

Ordering Information

Slave button

| Type | Button type | Frequency (MHz) | Area | Button color | Flange color | Model |
|--------------|-------------|-----------------|--------------|--------------|--------------|------------------|
| Slave button | Mushroom | 868.3 | South Africa | Red | Black | A2W-TB-WC1 ZA1RB |
| | | | South Africa | Green | Black | A2W-TB-WC1 ZA1GB |
| | | | South Africa | Yellow | Black | A2W-TB-WC1 ZA1YB |
| | | | South Africa | Blue | Black | A2W-TB-WC1 ZA1AB |
| | | | South Africa | White | Black | A2W-TB-WC1 ZA1WB |
| | | | South Africa | Black | Red | A2W-TB-WC1 ZA1BR |
| | | | South Africa | Black | Yellow | A2W-TB-WC1 ZA1BY |
| | | | South Africa | Black | Black | A2W-TB-WC1 ZA1BB |
| | Full guard | | South Africa | Red | Black | A2W-TB-WC1 ZA2RB |
| | | | South Africa | Green | Black | A2W-TB-WC1 ZA2GB |
| | | | South Africa | Yellow | Black | A2W-TB-WC1 ZA2YB |
| | | | South Africa | Blue | Black | A2W-TB-WC1 ZA2AB |
| | | | South Africa | White | Black | A2W-TB-WC1 ZA2WB |
| | | | South Africa | Black | Red | A2W-TB-WC1 ZA2BR |
| | | | South Africa | Black | Yellow | A2W-TB-WC1 ZA2BY |
| | | | South Africa | Black | Black | A2W-TB-WC1 ZA2BB |

Master Unit

| Type | Frequency (MHz) | Area | Output configuration | Model |
|-------------|-----------------|--------------|----------------------|----------------|
| Master Unit | 868.3 | South Africa | Sinking Outputs | A2W-RBN-WC1 ZA |
| | | | Sourcing Outputs | A2W-RBP-WC1 ZA |

Note: This product is a wireless device that conforms to the radio regulations of South Africa.

It cannot be used outside of South Africa.

For product details, please contact us separately.

Options (sold separately)

| Type | Model | Remarks |
|--|---------------|--|
| High-sensitivity magnetic-base antenna | A2W-AT2.5-WC1 | Frequencies: all frequencies supported, cable length 2.5 m Degree of protection: IP65 |
| Slave button holder | A2W-H-WC1 | One A2W-H-WC1 is included at purchase of a slave unit. |
| Slave button strap | A2W-S-WC1 | |

A2W

Ratings

Wireless Specifications

| | | |
|--|---|------------------|
| Item | Slave button model | A2W-TB-WC1 □□□□□ |
| | Master Unit model | A2W-RB□-WC1 □□ |
| Set frequency | 868.3 MHz | |
| Frequency channels | 1 channel | |
| Transmission power | 5 mW [e.r.p.] or less | |
| Wireless service area communications speed | 100 kbit/s | |
| Communications method | Simplex communications | |
| Number of wireless pushbuttons connected | 8 max. | |
| Communications distance (line of sight) | Approx. 100 m outdoors (with the included pencil antenna) | |
| Transmission time | Approx. 3 ms (from Slave button transmission to Slave button reception) | |
| Repeater function | Not supported. | |

Applicable Standards

| Area | Wireless standards | Safety standards | EMC standards |
|--------------|--|--|--|
| South Africa | Independent Communications Authority of South Africa (ICASA) | Conforms to IEC 623680-1 Conforms to EN 62368-1 | Conforms to EN 301 489-1 Conforms to EN 301 489-3 |

Conformance to EN Standards

Use a DC power line less than 3 m to conform to EN standards.

If a power line of 3 m or longer is required, extend the length at the Switching Power Supply's primary side (i.e., the AC power line).

Slave button

Ratings

| Item | Specifications |
|-------------------------------------|---|
| Operating force | 25 N max. |
| Number of operations | 1,000,000 operations |
| Vibration resistance | Frequency: 10 to 55 Hz, half amplitude: 0.75 mm Sweep 5 min, 2 h |
| Shock resistance | 1,000 m/s ² Direction: 3-axis, 6 directions |
| Ambient operating temperature range | -10 to +55°C (no condensation or freezing) |
| Ambient operating humidity range | 20% to 90%, (no condensation) |
| Atmosphere | No corrosive gas |
| Storage temperature range | -40 to +70°C (no condensation or freezing) |
| Storage humidity range | 20% to 90%, (no condensation) |
| Degree of protection | IP65 |
| Altitude | 2,000 m max. |
| Weight | 100 g max. |

Reception Confirmation LED

| Item | Details |
|---------|---|
| Green | Reception success (received field strength "Strong") |
| Yellow | Reception success (received field strength "Weak") |
| Red | Reception failure |
| Not lit | Slave button fault (no signal transmission from Slave button) |

Operating Characteristics

| Item | Code | Unit | Initial standard value |
|-----------------|------|------|------------------------|
| Operating force | OF | N | 25 N max. |
| Total travel | TT | mm | 6 mm |

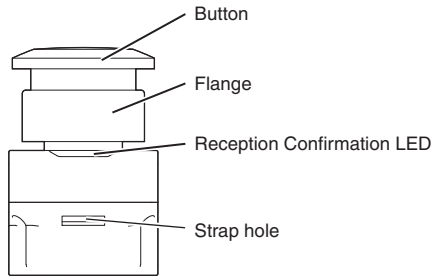
Master Unit Ratings

| Item | | Specifications |
|-------------------------------------|---|---|
| Master Unit power supply | Rated voltage | 24 VDC |
| | Allowable voltage range | 21.6 to 26.4 VDC |
| | Power consumption | 2.4 W max. |
| | Input current | 0.1 A max. |
| Output rated | Output points | Output 8 points One other point for error output |
| | Output circuit shared voltage | 30 VDC max. |
| | Maximum load current | 50 mA per point |
| | Leakage current | 0.1 mA max. |
| | Residual voltage | 2.0 V max. |
| | Output logic | One-shot (500 ms) |
| | Response time | 30 ms or less (from Slave button transmission to Master Unit signal output) |
| Number of connected Slave buttons | 8 max. | |
| Error clear terminal | Residual voltage at short | 1.5 V or less, ON |
| | Leakage current | 0.1 mA or less, OFF (current at short: approx. 7 mA) |
| Insulation resistance | 20 M Ω max. (100 VDC) Between the case and power supply terminals and all outputs terminals Between all power supply terminals and all outputs terminals | |
| Dielectric strength | 1,000 VAC, 1 min. Between the case and power supply terminals and all outputs terminals Between all power supply terminals and all outputs terminals | |
| Vibration resistance | Frequency: 10 to 55 Hz, half amplitude: 0.42mm 3-Directional, 120 minutes each (1 sweep, 1 min. \times 120 sweeps) | |
| Shock resistance | 150 m/s ² Direction of shock: 3-axis, 6 directions Shock frequency: 3 \times each direction, total 18 | |
| Ambient operating temperature range | -10 to +55°C (no condensation or freezing) | |
| Ambient operating humidity range | 20% to 90% (no condensation) | |
| Surrounding atmospheric conditions | No corrosive gas | |
| Ambient storage temperature range | -40 to +70°C (no condensation or freezing) | |
| Ambient operating humidity | 20% to 90% (no condensation) | |
| Degree of protection | IP20 | |
| Altitude | 2,000 m max. | |
| Memory protection | Non-volatile memory (Number of write operations: 1,000,000) | |
| Weight | 150 g (not including antenna) 160 g (including antenna) | |
| Mounting | DIN rail mounting Screw mounting | |

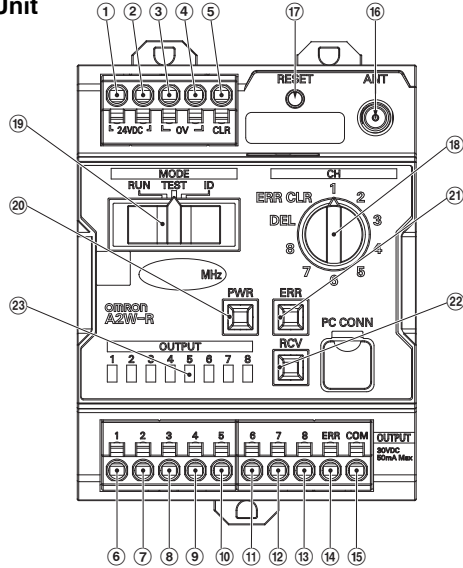
A2W

Parts Names and Functions

Slave button



Master Unit



| Number | Terminal name | Name | Functions |
|--------|---------------|-----------------------------|--|
| ① | 24 VDC | Power supply terminals | Supply 24 VDC. |
| ② | 24 VDC | | |
| ③ | 0 V 1 | | |
| ④ | 0 V 2 | | |
| ⑤ | CLR | Error clear terminal | Connect the error clear terminal to 0V (GND). |
| ⑥ | OUT 1 | Output terminals | Connects the output signal line. There are two output types: sinking and sourcing. • A2W-R□N-WC1 □□: Sinking Outputs • A2W-R□P-WC1 □□: Sourcing Outputs |
| ⑦ | OUT 2 | | |
| ⑧ | OUT 3 | | |
| ⑨ | OUT 4 | | |
| ⑩ | OUT 5 | | |
| ⑪ | OUT 6 | | |
| ⑫ | OUT 7 | | |
| ⑬ | OUT 8 | | |
| ⑭ | ERR | Error output terminal | Connects the error signal line. There are two output types: sinking and sourcing. • A2W-R□N-WC1 □□: Sinking Outputs • A2W-R□P-WC1 □□: Sourcing Outputs |
| ⑮ | COM | Common terminal for outputs | Used as common for output and error output. |
| ⑯ | - | Antenna terminal | Connect the included pencil antenna. (Optional antenna A2W-AT2.5-WC1 can also be connected.) It transmits and receives data by wireless communications via the antenna. |
| ⑰ | - | Reset switch | <ul style="list-style-type: none"> Delete the Slave button registration information corresponding to the output settings switch. By pressing the output settings switch in the "ERR CLR" state when an error output is generated, error output will be reset. When the power is turned ON in the pressed state, it is reset to the factory setting. |

| Number | Terminal name | Name | Functions |
|--------|---------------|-----------------------------------|--|
| ⑱ | - | Output settings switch | Used to register or delete the ID of the Slave button to or from the output of the Master Unit. Also used to reset the error output without using the error clear terminal. |
| ⑲ | - | Mode settings switch | Set the operation mode of the Master Unit to ID mode, TEST mode, and RUN mode. |
| ⑳ | - | Power LED (PWR) | Lit green when the power is ON. |
| ㉑ | - | Error LED (ERR) | Lit red when there is a possibility that abnormality occurs in the master unit and it will not output correctly according to the Slave button operation. |
| ㉒ | - | Received field strength LED (RCV) | <ul style="list-style-type: none"> RUN mode or TEST mode It lights according to the received electric field strength of the received data. Lit green: Received field strength is "Strong" Lit red: Received field strength is "Weak" ID mode Lit green when registration or deletion is success. Flashing green when registration or deletion is failure. When error output occurs Lit green when the Master Unit setting data error is detected. Lit yellow when there is a possibility that the Master Unit will not output properly according to the Slave button operation. |
| ㉓ | - | Output LED (OUTPUT 1 to 8) | <ul style="list-style-type: none"> RUN mode When outputting to the output terminal, the corresponding output LED lit yellow. TEST mode It does not output to the output terminal, and the corresponding output LED lit yellow. ID mode The output LED corresponding to the output setting switch lit yellow. |

Display Section

| LED name | Color | Enabled mode | Status | Meaning |
|----------------------------------|-----------------|---|--------------------------|---|
| PWR | Green | Always enabled | Lit | During Power Supply |
| | | | Not lit | No power supplied |
| RCV | Green or yellow | RUN/TEST | Lit/Not lit | Received field strength monitor: Lit green: Received field strength is "Strong" (lit up for 500 msec) Lit yellow: Received field strength is "Weak" (lit up for 500 msec) Not lit: No received |
| | | ID | Lit/Not lit/ Flashing | ID registration: Lit green: ID registration successful (lit up for 3 s) Not lit: Data for ID registration not received Flashing green: ID registration failed (flashes for 3 s after every 250 ms) |
| | | | | Delete ID: Lit green: ID deletion successful (lit up for 3 s) Not lit: Data for ID deletion not received Flashing green: ID deletion failed (flashes for 3 s after every 250 ms) |
| Enabled only when ERR LED is lit | Lit/Not lit | Lit green: Error in Master Unit setting data Lit yellow: Error in the most important function (wireless received, registration/verification, or output) All not lit: Error in CPU initialization process during startup | | |
| OUTPUT 1 to 8 | Yellow | RUN/TEST | Lit | Data is received from the ID assigned to the corresponding output |
| | | | Not lit | Data is not received from the ID assigned to the corresponding output |
| | | ID | Lit | Reads corresponding output settings switch values 1 to 8 |
| | | | All Lit | Reads output settings switch value DEL |
| | | | All not lit | Reads output settings switch value ERR_CLR |
| ERR | Red | Always enabled | Lit | Error in CPU initialization processing at startup, or in Master Unit setting data, or in the most important function (wireless received, registration/verification, or output) |
| | | | Not lit | No Master Unit error |

Note: For received field strength LED (RCV) green flashing, this also flashes even when attempting to select or reset a non-registered output settings No. and delete or reset.

Settings Switch

Mode Settings Switch

Set the operation mode of the Master Unit.

Factory setting: ID

| Operation mode | Function |
|----------------|--|
| RUN | Communications mode: carry out normal communications |
| TEST | Test mode: Perform installation test such as reception intensity measurement * |
| ID | ID mode: Register or delete Slave buttons |

* There is no output from the output terminal.

Output Settings Switch

Register or delete the Slave button ID * for each output number of the Master Unit.

Factory setting: 1

| No. | Enabled mode | Other settings requirements | Function |
|---------|--------------------------------------|---|--|
| 1 to 8 | ID | Continuous data reception within a fixed period from the Slave button to be registered | Register the ID of the target Slave button to be registered in the specified output number |
| | | Press the Reset switch (ON) | Delete IDs of all Slave buttons registered in the specified output number |
| DEL | ID | Continuous data reception within a fixed period from the Slave button for which the registration is to be deleted | Delete the ID of the Slave button to be deleted from the registration list |
| | | Press the Reset switch (ON) | Delete all IDs from the registration list |
| ERR CLR | ERR LED lit red + RCV LED lit yellow | Press the Reset switch (ON) | Execute the software reset of the Master Unit |

* This is the identification number of the Slave button for wireless communications.

Reset Switch

Execute resets of Master Unit.

Factory Setting: Not pressed (OFF)

Setting Procedures

Slave buttons Registration Setting

- Set the output for the Slave button ID.
- When the mode settings switch has been set to "ID", the Slave button ID that has received the data during the same operation of the Slave button three or more times within three seconds, and the contents set in the output settings switch are linked.
- If you make "Wireless Push Buttons Registration setting" while another system is operating in the vicinity, erroneous settings may be made. Therefore, make the "Wireless Push Buttons Registration setting" in an environment in which other systems are not operating.
- In the ID deletion procedure, if the received field strength LED (RCV) flashes, then a non-registered port ID may be selected.
- At Slave button registration (ID registration/deletion procedures), confirm that the output LCD is lighting correctly for the output setting No. to select.

Wireless push button registration/deletion procedure

* Using the wireless push button

- Set the mode settings switch of the Master Unit to "ID".
- Set the output settings switch of the Master Unit.
1 to 8: The output destination is set as outputs 1 to 8.
DEL: The information about the received ID is deleted from the registration list.
- Press the wireless push button three or more times to make sure that the received field strength LED (RCV) is lit.
- Set the mode settings switch of the Master Unit to "RUN" or "TEST".

Wireless push button deletion procedure

* Using the RESET switch

- Set the mode settings switch of the Master Unit to "ID".
- Set the output settings switch of the Master Unit.
1 to 8: The ID information registered in outputs 1 to 8 is deleted.
DEL: The information about all IDs is deleted from the registration list.
- Press the Reset switch of the Master Unit until the received field strength LED (RCV) is lit.
- Set the mode settings switch of the Master Unit to "RUN" or "TEST".

Resetting Error Output (RCV indicator lit yellow.)

Using the RESET switch

- Set the output settings switch of the Master Unit to "ERR_CLR".
- Press the Reset switch.

Using the error clear terminal

- Connect the error clear terminal to GND.

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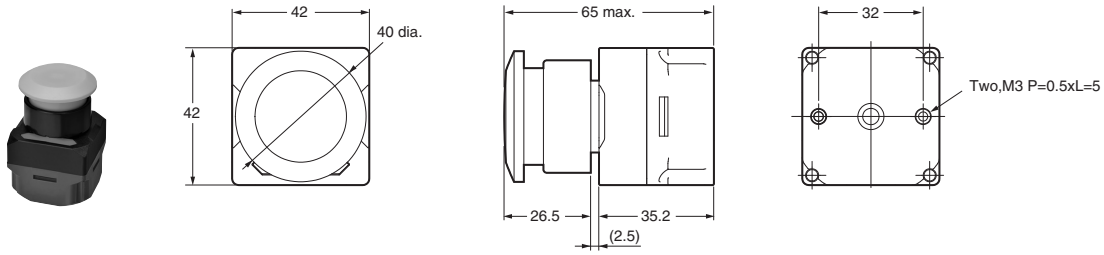
Dimensions

(Unit: mm)

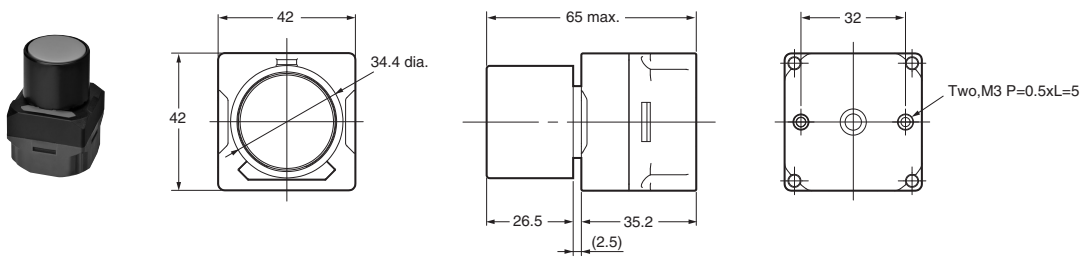
Unit

Slave button

A2W-T□-WC1 □□1□□

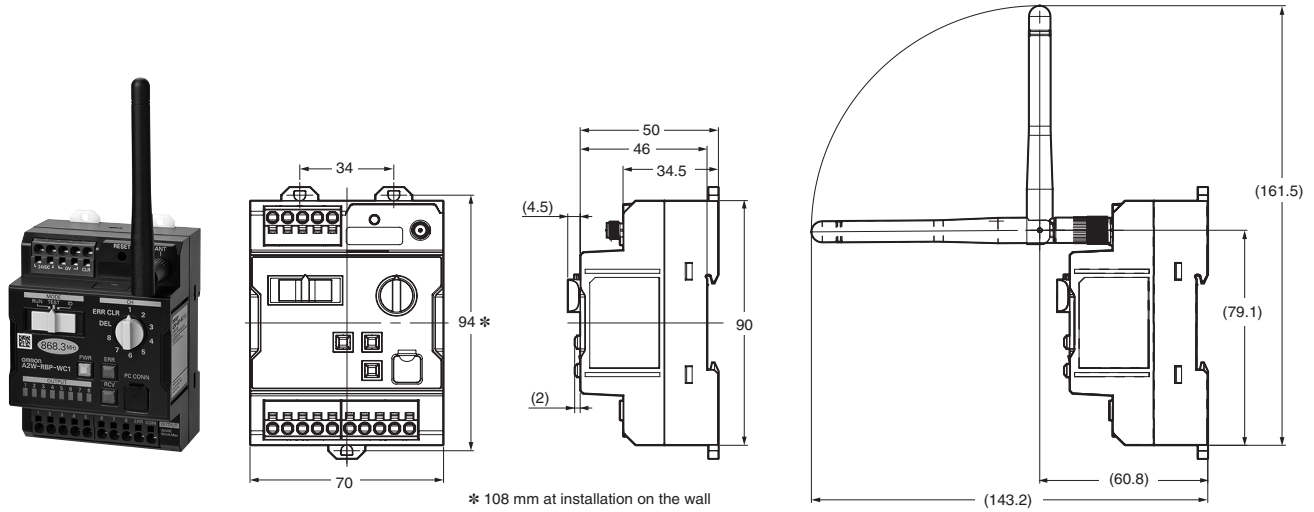


A2W-T□-WC1 □□2□□



Master Unit

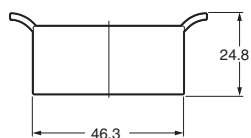
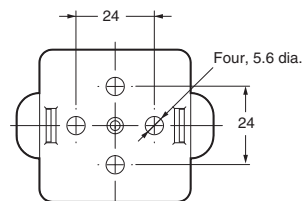
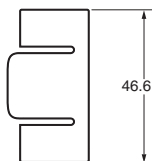
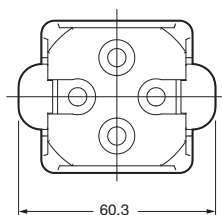
A2W-R□□-WC1 □□



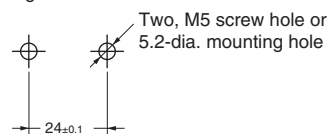
Options (sold separately)

**Holder
A2W-H-WC1**

One A2W-H-WC1 is included at purchase of a Slave button.



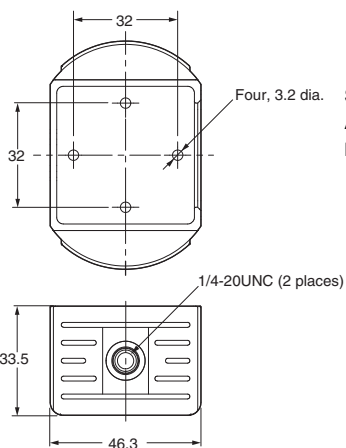
Mounting Hole Dimensions



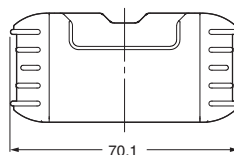
How the holder is used



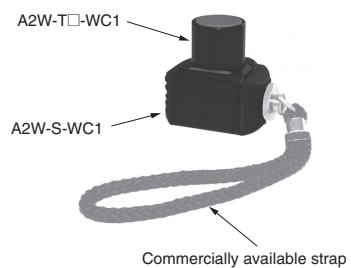
**Strap
A2W-S-WC1**



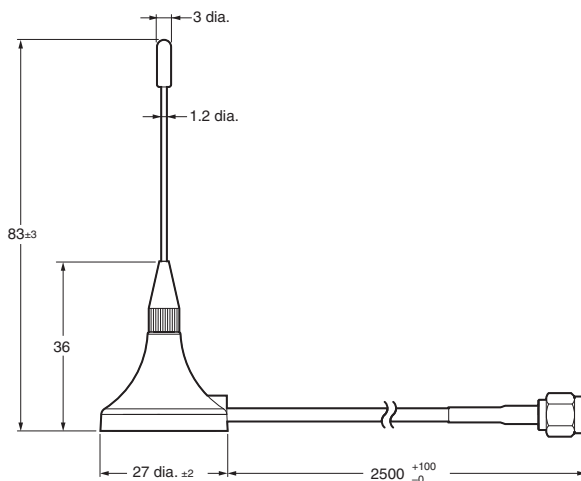
Slave button mounting screws:
Accessories (2 places)
Be sure to use the accessory screws.



Example of using the strap

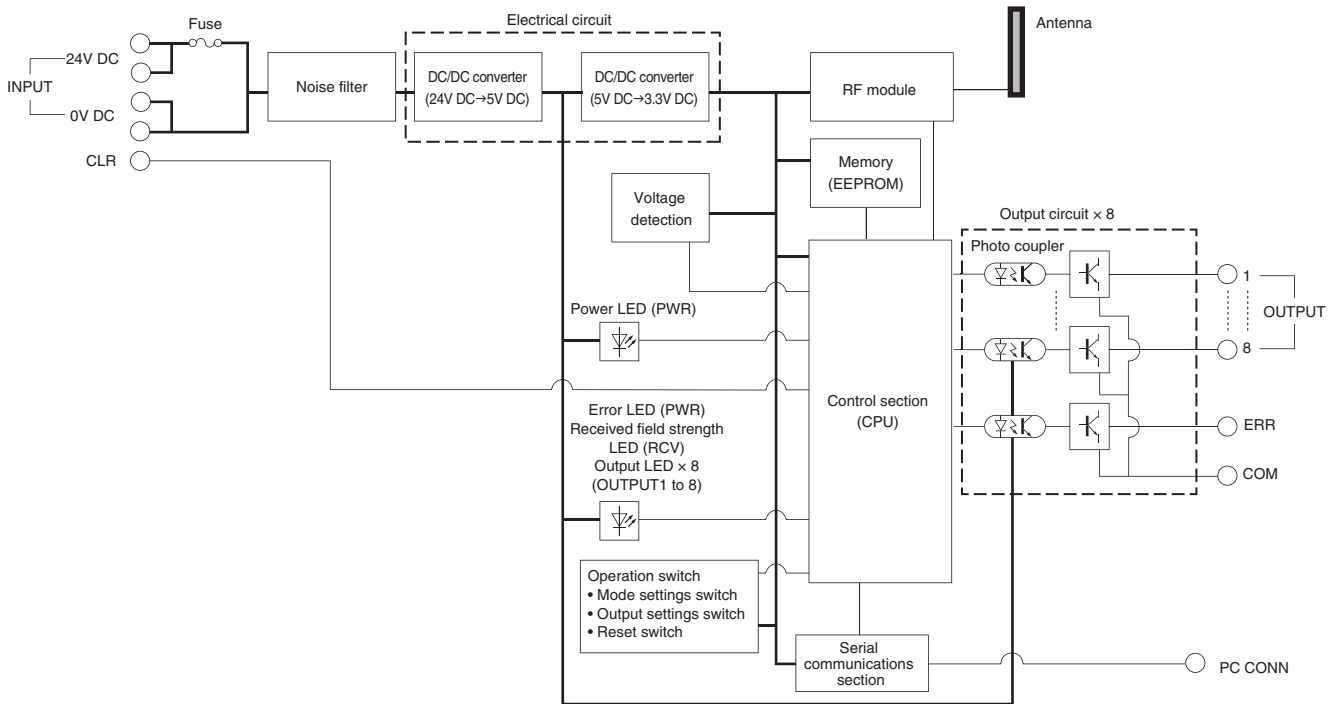


**High-sensitivity Magnetic Base Antenna
A2W-AT2.5-WC1**



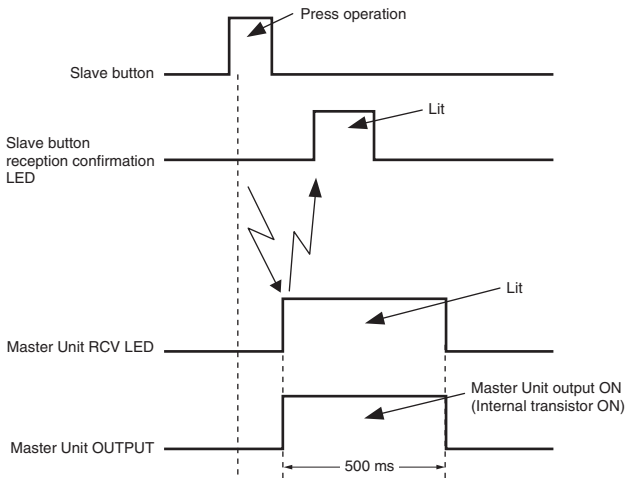
Connection

Internal Connection Diagram (Master Unit)



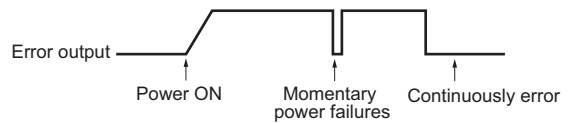
Output Specifications

Operation Timing Chart



Note: If you press two or more Slave buttons simultaneously within 2 ms, operation of the Slave button after that may not be sent to the Master Unit.

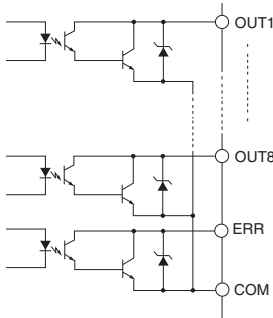
Error Output Signal (Master Unit)



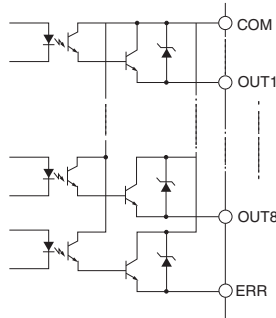
| Status | Internal transistor |
|-----------------------------------|---------------------|
| Power is OFF. | OFF |
| Normal operation | ON |
| Error, or momentary power failure | OFF |

Output/Error Output Circuit Diagram (Master Unit)

Output/Error output circuits diagram (Sinking Outputs)



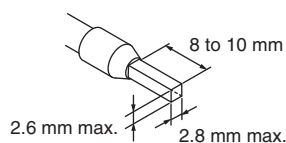
Output/Error output circuits diagram (Sourcing Outputs)



Recommended Ferrules and Crimp Tools Coating peeling amount

| Recommend Wire Type | | Stripping length (Ferrules not used) | | | | |
|---|-------|---|---|--|----------------------|----------------------------|
| 0.25 to 1.5 mm ² /AWG 24 to AWG 16 | | 8 mm | | | | |
| 2 to 2.5 mm ² /AWG 14 | | 10 mm | | | | |
| Applicable wire | | Ferrule conductor length (mm) | Stripping length (mm) (Ferrules not used) | Recommended ferrules | | |
| (mm ²) | (AWG) | | | Manufactured by Phoenix Contact | Manufactured by Wago | Manufactured by Weidmuller |
| 0.25 | 24 | 8 | 10 | Al 0, 25-8 | H0.25/12 | 216-301 |
| | | 10 | 12 | Al 0, 25-10 | --- | --- |
| 0.34 | 22 | 8 | 10 | Al 0, 34-8 | H0.34/12 | 216-302 |
| | | 10 | 12 | Al 0, 34-10 | --- | --- |
| 0.5 | 20 | 8 | 10 | Al 0, 5-8 | H0.5/14 | 216-201 |
| | | 10 | 12 | Al 0, 5-10 | H0.5/16 | 216-241 |
| 0.75 | 18 | 8 | 10 | Al 0, 75-8 | H0.75/14 | 216-202 |
| | | 10 | 12 | Al 0, 75-10 | H0.75/16 | 216-242 |
| 1/1.25 | 18/17 | 8 | 10 | Al 1-8 | H1.0/14 | 216-203 |
| | | 10 | 12 | Al 1-10 | H1.0/16 | 216-243 |
| 1.25/1.5 | 17/16 | 8 | 10 | Al 1, 5-8 | H1.5/14 | 216-204 |
| | | 10 | 12 | Al 1, 5-10 | H1.5/16 | 216-244 |
| 2.5 | 14 | 10 | 12 | Al 2,5-10 | H2.5/16DS | 216-246 |
| Recommended Crimp Tools | | | | CRIMPFOX6 CRIMPFOX6T-F CRIMPFOX10S | PZ6 roto | Variocrim p4 |

- Note: 1.** Make sure that the outer diameter of the wire coating is smaller than the inner diameter of the insulation sleeve of the recommended ferrule.
- 2.** Make sure that the ferrule processing dimensions conform to the following figures.

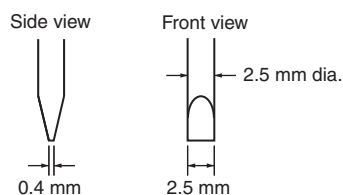


Recommended Flat-Blade Screwdrivers

Use a flat-blade screwdriver to connect and remove wires.

Use one of the following flat-blade screwdrivers.

The following table shows manufacturers and models as of 2018/Dec.



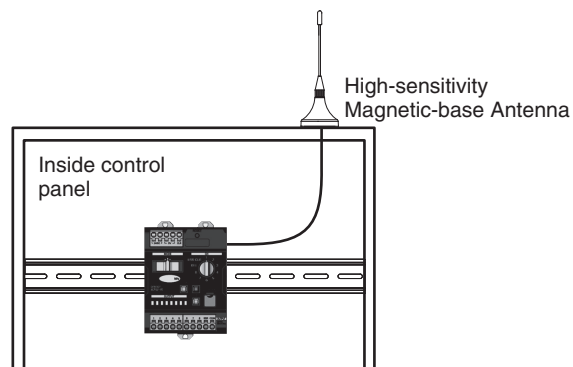
| Model | Manufacture |
|------------------------------------|-----------------|
| ESD 0,40 × 2,5 | Wera |
| SZS 0,4 × 2,5 SZF 0-0,4 × 2,5 * | Phoenix Contact |
| 0.4 × 2.5 × 75 302 | Wiha |
| AEF.2,5 × 75 | Facom |
| 210-719 | Wago |
| SDIS 0.4 × 2.5 × 75 | Weidmuller |
| 9900 (-2.5 × 75) | Vessel |

* The SZF 0-0,4 × 2,5 (manufactured by Phoenix Contact) can be procured through an OMRON exclusive purchase form (XW4Z-00B).

Using the Magnetic-base Antenna

High-sensitivity Magnetic-base Antenna (A2W-AT2.5-WC1) of the option (sold separately) should be used when the radio environment is not good.

Note: Do not install a product with a pencil-type antenna in a metal panel as it may result in degradation of radio performance. When installing the Master Unit inside a panel, use a high-sensitivity magnetic-base antenna, and make sure the antenna can be installed outside the panel.



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