

Converted torque (cont.)

[Setting procedure]

Notes about converted torque data

- Converted torque is only estimation from the tool's state quantities and therefore cannot be used for accurate torque management or quality recording.
- Conversion requires a specific amount of variation and therefore does not support refastening or momentary fastening.
- The converted torque becomes 0 if conversion failed.
- Use conversion when fastening at intervals of 0.2 or more seconds.
- This tool is not a gauge and cannot be calibrated.
- This system does not support mapping of serial numbers or such other unique product numbers.

Notes about the converted torque setting

- Make settings (adjustments) beforehand.
- Change the settings whenever you change the screw or workpiece material, the clutch step, etc.
- After setting, test and check the fastening status using an actual workpiece to confirm the desired torque is obtained.
- The work conditions and the Electric Screwdriver conditions change over time. Adjust the settings on a regular basis.

- 1 Make preparations.**
Depending on the management method on site, find the clutch step that generates a torque closest to the set torque [X].

There are two torque management methods.
(for details, refer to **P. 24**)
(A) Method that manages the torque exercised on a screw fastened to an actual workpiece
(B) Method that manages the torque of the screwdriver

- 2 Collect data.**
Try fastening 10 or more screws to an actual workpiece.

* Always use an actual workpiece even when you use method (B) for management.

- 3 Make settings.**
(1) Calculate the average [Y].
(2) Subtract [Y] from [X] to calculate the difference [Z].
(3) Input [Z] as an offset of torque.

Example 1

Set torque [X]	0.8 Nm
Average of converted torque [Y]	1.04 Nm
Difference [Z]	-0.24 Nm
Offset	-0.24 Nm

Example 2

Set torque [X]	1.3 Nm
Average of converted torque [Y]	0.98 Nm
Difference [Z]	0.32 Nm
Offset	0.32 Nm

Rotation

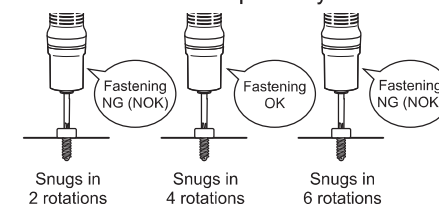
[Functional overview]

You can determine the fastening status by the rotation (times) of screw fastening.
Set the lower limit and upper limit of the rotation (times) that is judged as Fastening OK.

For the rotation (times), refer to "Rotation (times)" in "History Data" and set an appropriate value depending on the work.

- The lower limit setting must not be higher than the upper limit setting.
- Rotation (times) means the number of rotations from when the specified torque is detected after the start of rotation to when the clutch is activated.

When the lower limit and the upper limit are set to 3 and 5 respectively



Fastening OK if the number of rotations before snugging is within 3 to 5.

[Default value]

- Upper limit **OFF**
- Lower limit **OFF**

[Setting value]

- Upper limit **OFF** Disable
ON Enable / 0* times to 999 times
- Lower limit **OFF** Disable
ON Enable / 0* times to 999 times

Entering the value with (*) will disable the function.

SETTING VIA A WEB BROWSER (cont.)

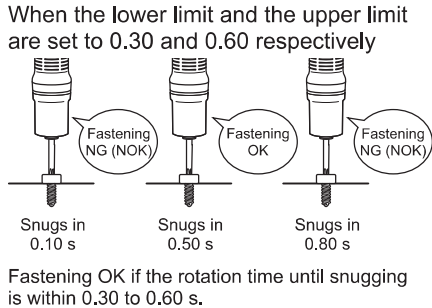
Fastening time

[Functional overview]

You can determine the fastening status by the rotation time of screw fastening. Set the lower limit and upper limit of the fastening time that is judged as Fastening OK.

For the rotation time, refer to "Fastening time (s)" in "History Data" and set an appropriate value depending on the work.

- The lower limit setting must not be higher than the upper limit setting.



[Default value]

- Upper limit **OFF**
- Lower limit **OFF**

[Setting value]

- Upper limit **OFF** Disable / **ON** Enable / **0.00*** s to **9.99** s
- Lower limit **OFF** Disable / **ON** Enable / **0.00*** s to **9.99** s

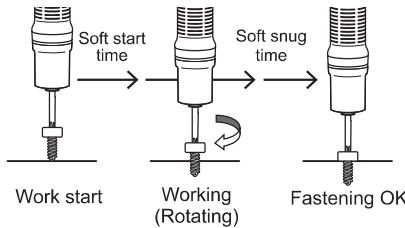
Entering the value with (*) will disable the function.

Soft start

[Functional overview]

You can set the duration of soft start and the number of rotations during soft start.

- The duration of soft start must not be shorter than the start time of soft snug.
- Because of the structure of the motor, it requires some time to increase the speed of the soft start to the normal speed.



What is soft start?

In order to prevent cross threading and screw galling, initially a screw is rotated slowly at the beginning of fastening.

[Default value]

- Continue time **0.00** s
- Rotation level **10** Lv

[Setting value]

- Continue time **0.00*** s to **9.99** s
- Rotation level **1** Lv to **10** Lv

Soft start speed level (Rotations/minute)

Level	1	2	3	4	5
EYADA218WA·WB	450	600	750	900	1050
EYADA212WA·WB	300	400	500	600	700
EYADA407WA·WB	160	220	270	330	380
* Relative to the maximum number of rotations	About 25%			About 50%	

Level	6	7	8	9	10
EYADA218WA·WB	1200	1350	1500	1650	1800
EYADA212WA·WB	800	900	1000	1100	1200
EYADA407WA·WB	430	490	540	600	650
* Relative to the maximum number of rotations		About 75%			About 100%

- The values (numbers of rotations) are only guidelines.

Entering the value with (*) will disable the function.

OPERATION

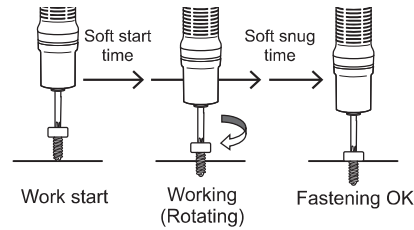
SETTING VIA A WEB BROWSER (cont.)

Soft snug

[Functional overview]

You can set the start time of soft snug and the number of rotations during soft snug.

- The duration of soft start must not be shorter than the start time of soft snug.
- Because of the structure of the motor, it requires some time to decrease the normal speed to the speed of soft snug.



What is soft snug?

In order to prevent bit detachment and minimize the impact on the base material, the bit is rotated slowly before snugging.

[Default value]

- Start timing **0.00** s
- Rotation level **10** Lv

[Setting value]

- Start timing **0.00*** s to **9.99** s
- Rotation level **1** Lv to **10** Lv

Soft snug speed level (Rotations/minute)

Level	1	2	3	4	5
EYADA218WA-WB	450	600	750	900	1050
EYADA212WA-WB	300	400	500	600	700
EYADA407WA-WB	160	220	270	330	380
* Relative to the maximum number of rotations	About 25%			About 50%	

Level	6	7	8	9	10
EYADA218WA-WB	1200	1350	1500	1650	1800
EYADA212WA-WB	800	900	1000	1100	1200
EYADA407WA-WB	430	490	540	600	650
* Relative to the maximum number of rotations		About 75%			About 100%

- The values (numbers of rotations) are only guidelines.

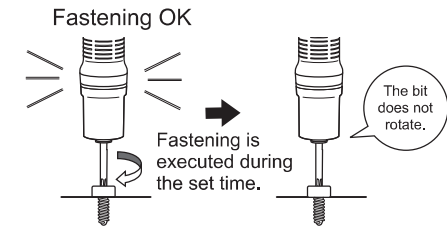
Entering the value with (*) will disable the function.

Disable fastening time

[Functional overview]

You can set the tool not to start during the set time after fastening is determined as OK.

- When both the "Ignore count time" and the "Disable fastening time" are enabled, the "Disable fastening time" takes precedence.



After fastening is determined as OK, the Electric Screwdriver does not start during the time set in the Disable fastening time.

[Default value]

0.00 s

[Setting value]

0.00* s to **9.99** s

Entering the value with (*) will disable the function.

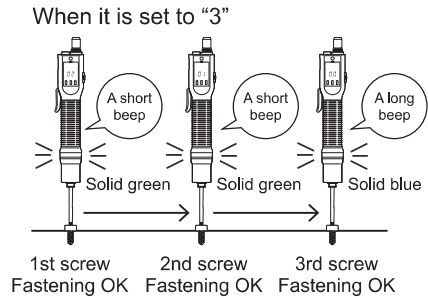
SETTING VIA A WEB BROWSER (cont.)

Batch Items

Count Quantity Setting

[Functional overview]
 The number of screws to fasten is set. The number of fastened screws determined as OK is counted, and when it reaches the set quantity, you are notified of that with a buzzer and the lighting detection lamp. **P. 26**

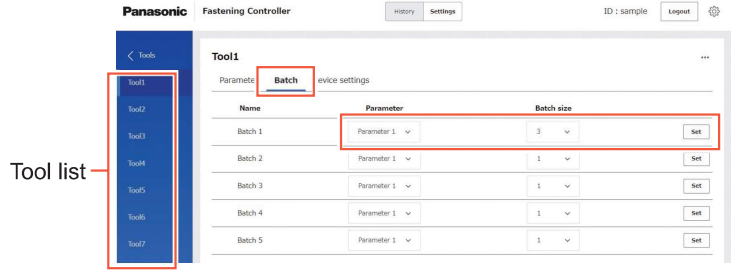
- The count quantity appears on the tool display in operation mode.
- When it reaches the set quantity, the count on the display will be reset.



In the screen for the tool number, select the “Batch” tab and make settings. Select a parameter from the “Parameter” pull-down menu and set “Batch size” (quantity to fasten, up to 99). Click [Set] to set the values for “Repeat mode (Basic mode)”.

- * One type (one parameter only) per tool can be registered.
- * To switch the tool, select the desired one from the tool list.
- * Up to 5 batches can be registered.
- * Refer to “SETTING FASTENING PARAMETERS OF TOOLS” and “SETTING THE FASTENING CONTROL MODE” in the Operating Instructions of the controller (EYARW1).

For parameters, refer to “Parameter Items”. **P. 33**



[Default value]
1

[Setting value]
1 to 99

Device settings Items

Brake

[Functional overview]
 You can enable or disable braking when rotation stops before clutch activation.

[Default value]
ON

[Setting value]
ON Braking disabled (Rotation stops immediately when you release the trigger switch.)
OFF Braking disabled (Rotation stops slowly when you release the trigger switch.)

Ignore judgement time

[Functional overview]
 You can exclude unexpected rotations that are unrelated to work, such as brief idling and screw hole alignment in push start mode, from detection. Set the duration of rotations to exclude from detection.

When it is set to “0.30”

Rotations within 0.30 s are excluded from fastening detection.

[Default value]
0.00 s

[Setting value]
0.00* s to 9.99 s

Entering the value with (*) will disable the function.

OPERATION

SETTING VIA A WEB BROWSER (cont.)

Ignore count time	
[Functional overview]	<p>You can set screws not to be counted even if they are fastened again after being determined as OK. Set the duration of fastening to exclude from counting after fastening is determined as OK.</p> <ul style="list-style-type: none"> Counting is still enabled when you reverse rotations to redo or loosen screws. When both the "Ignore count time" and the "Disable fastening time" are enabled, the "Disable fastening time" takes precedence.
	<p>Fastening OK</p> <p>Fastening is executed during the set time.</p> <p>Count ignored</p> <p>After being determined as OK, screws will not be counted during the time to ignore counting even if they are fastened again.</p>
[Default value]	0.00 s
[Setting value]	0.00* s to 9.99 s
Count return	
[Functional overview]	<p>You can set how fastened screws determined as OK are counted when reversing rotations to redo or loosen them.</p>
	<p>When it is set to "Return 1 count"</p> <p>1</p> <p>2</p> <p>The count goes back by one.</p> <p>The 2nd screw is redone. (Reverse rotations)</p>
[Default value]	Return 1 count
[Setting value]	<p>Don't change Reverse rotations are not counted.</p> <p>Return 1 count The count is put back by reverse rotations.</p> <p>Return to start The count is reset by reverse rotations.</p>

Entering the value with (*) will disable the function.

Batch complete judgement waiting time	
[Functional overview]	<p>You can set the waiting time from when the last screw fastening is determined as OK to when it is determined as count-up (count complete).</p> <p>During the set waiting time, you can reverse rotations after finishing the last screw set in the count quantity.</p> <ul style="list-style-type: none"> Forward rotations are not allowed during the waiting time.
	<p>When it is set to "3.00"</p> <p>Reverse rotations are allowed for 3.00 s.</p> <p>After the last screw fastening is determined as OK, no count-up will occur for 3.00 s, allowing you to reverse rotations to redo or loosen screws.</p>
[Default value]	0.00 s
[Setting value]	0.00* s to 9.99 s
Count method	
[Functional overview]	<p>You can switch count methods for screw fastening.</p>
	<p>Count-down mode</p> <p>3, 2...</p> <p>Count-up mode</p> <p>1, 2...</p>
[Default value]	Count down
[Setting value]	<p>Count down The number of fastened screws is counted from the set value down to 0.</p> <p>Count up The number of fastened screws is counted from 0 up to the set value.</p>

Entering the value with (*) will disable the function.

SETTING VIA A WEB BROWSER (cont.)

Buzzer (Batch complete)
<p>[Functional overview]</p> <p>You can set the buzzer pattern for count-up (count complete).</p>
<p>[Default value]</p> <p>Long beep</p>
<p>[Setting value]</p> <p>Long beep A long beep 3 short beeps Three short beeps</p>
Buzzer (Volume)
<p>[Functional overview]</p> <p>You can set the buzzer (volume). * This is a common setting for the confirmation sound and operation sound at the time of fastening OK.</p>
<p>[Default value]</p> <p>ON (Low)</p>
<p>[Setting value]</p> <p>ON Buzzer enabled / Low Low volume Mid Medium volume High High volume OFF Muted</p>

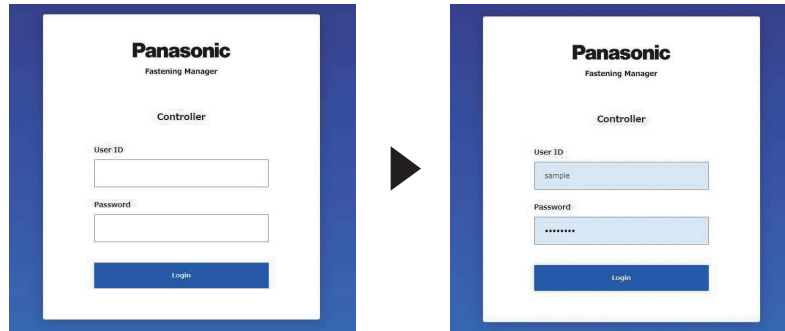
Judge LED (Color on OK)
<p>[Functional overview]</p> <p>You can set the lighting colour of the detection lamp.</p>
<p>[Default value]</p> <p>OK:Green, Batch complete:Blue</p>
<p>[Setting value]</p> <p>OK:Green, Batch complete (Count-up) :Blue OK:Blue, Batch complete (Count-up) :Green OFF Off</p>
Judge LED (Color on NG)
<p>[Functional overview]</p> <p>You can set the lighting pattern of the detection lamp for fastening NG (NOK) and error occurrence.</p>
<p>[Default value]</p> <p>NOK:Steady, Error:Blink</p>
<p>[Setting value]</p> <p>NOK:Steady, Error:Blink NOK:Blink, Error:Steady OFF Off</p>

SETTING VIA A WEB BROWSER (cont.)

Displaying the History Screen

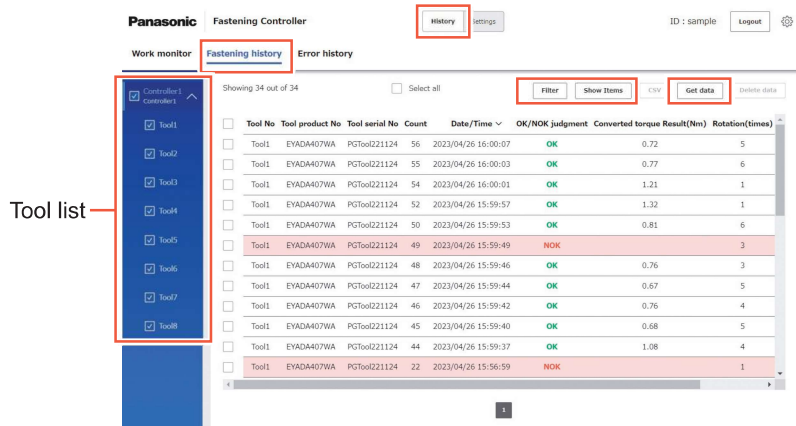
1 Displaying the Top Screen.

Refer to “Displaying the Setting Screen” to “Connecting via Network” in “PREPARATION BEFORE USE” of the Operating Instructions of the controller (EYARW1) and make settings via a web browser to display the top page.



2 Displaying the History Screen.

In the top page (the initial page of the setting screen), click [History] on the top and select the “Fastening history” tab. You can view the fastening history data sent from tools to the controller. To display the data, select the desired controller and tools from the tool list on the left and click [Get data] on the upper right. The fastening history logs are displayed from newest to oldest.



History Log Item List

Count
[Display overview] The accumulated number of times of fastening after pairing is established. This is reset when the tool is unpaired.
Batch size (Count quantity)
[Display overview] When the controller's running mode is "Free mode": Hidden When the controller's running mode is "Repeat mode": Target quantity of the batch
Batch count
[Display overview] When the controller's running mode is "Free mode": Hidden When the controller's running mode is "Repeat mode": Count (fastened quantity) of the batch
Date/Time
[Display overview] This shows the date when work was done.
OK/NOK judgment
[Display overview] The work result is shown as "OK" or "NOK". The OK/NOK criteria are as below: OK: Clutch was activated and fastening is successfully completed. NOK: The tool stopped without clutch activated or detection conditions satisfied. Reverse rotation results in blank.
NOK message
[Display overview] When the work result is "NOK", the cause is shown as "Torque", "Rotation count", "Rotation time", "Clutch", or "Error". If "NOK" is considered to be caused by "Error", error details are shown in "Error message" of the fastening history. (For details on "NOK message", refer to P. 65 .)

OPERATION

SETTING VIA A WEB BROWSER (cont.)

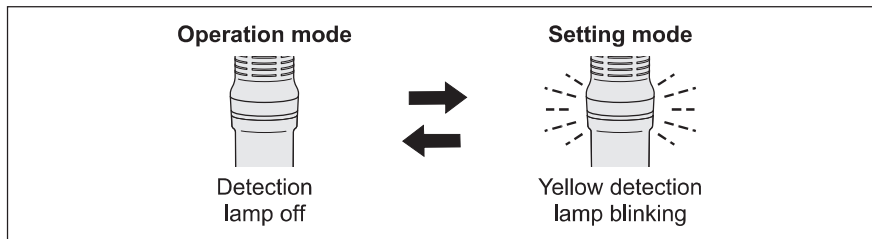
Forward/Reverse
[Display overview] Rotation direction of Electric Screwdriver. Forward: Clockwise Reverse: Anticlockwise
Upper converted torque Limit (Nm)
[Display overview] The parameter of the upper limit of the converted torque that is judged as "OK".
Lower converted torque Limit (Nm)
[Display overview] The parameter of the lower limit of the converted torque that is judged as "OK".
Converted torque Result (Nm)
[Display overview] The converted torque calculated from the current, voltage, and variation during fastening.
Offset (Nm)
[Display overview] The parameter to correct the converted torque.
Upper Rotation Limit (times)
[Display overview] The parameter of the upper limit of the rotation (times) that is judged as "OK".

Lower Rotation Limit (times)
[Display overview] The parameter of the lower limit of the rotation (times) that is judged as "OK".
Rotation (times)
[Display overview] The rotation (times) of the Electric Screwdriver during work.
Upper Fastening Time Limit (s)
[Display overview] The parameter of the upper limit of the rotation time that is judged as "OK".
Lower Fastening Time Limit (s)
[Display overview] The parameter of the lower limit of the rotation time that is judged as "OK".
Fastening Time (s)
[Display overview] The rotation time of the Electric Screwdriver during work.
Error Message
[Display overview] Details of the error that caused the "NOK" result. (For details on "Error message", refer to P. 65 .)

SETTING ON THE TOOL

1. Switching to Setting Mode

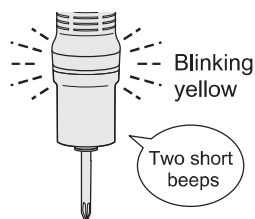
This unit can change settings according to the work. To change settings, switch to setting mode.



Switching to Setting Mode

1 Set the forward/reverse lever to the trigger switch lock position.
Set it to the “○” position.

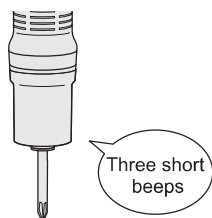
2 Hold down the OK button.
A buzzer sounds short twice (two short beeps), and the detection lamp blinks yellow.



Back to Operation Mode

1 Hold down the OK button while you are in setting mode (the detection lamp is blinking yellow).

A buzzer sounds short three times (three short beeps), and the detection lamp turns off.



2 Release the forward/reverse lever from the trigger switch lock position.

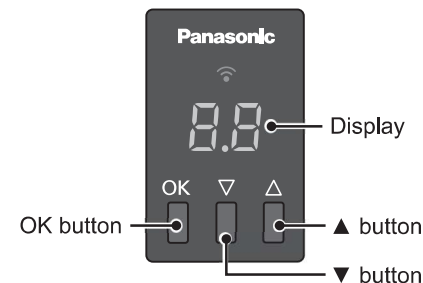
When you set it to the F position and the R position, the motor rotates forward (clockwise) and reverses (anticlockwise) respectively.

2. Selecting Menu

You can select a menu by pressing the ▼ and ▲ buttons while you are in setting mode.

A menu to be selected appears on the display.

Press the OK button to confirm the selected menu.



Count Menu (c + Number)

Display	Description	Reference page
c 4	Quantity Reset Permission Setting	53

Basic Setting Menu (b + Number)

Display	Description	Reference page
b 4	Tool Reset Permission Setting	54
b 9	Running Mode Switching Setting	55

SETTING ON THE TOOL (cont.)

Tool Reset (Initialisation Setting)

Put the tool settings back to the manufacturer default settings.

To enable this function, set “b4” Tool Reset Permission Setting” to “_1”.

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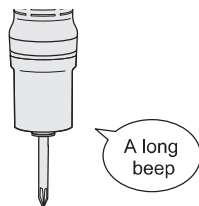
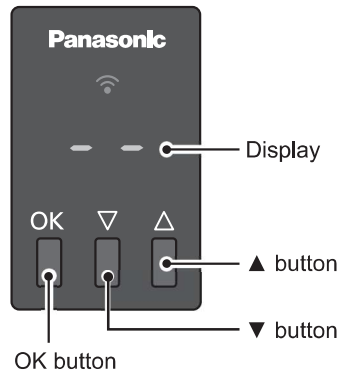
Setting Procedure

- 1 Switch to setting mode.**
Set the forward/reverse lever to the trigger switch lock position, and hold down the OK button.
(For details, see P. 50)

- 2 Hold down the OK button, ▼ button, and ▲ button at the same time.**

A buzzer sounds long (a long beep), and “-” appears on the display.

The detection lamp turns off.

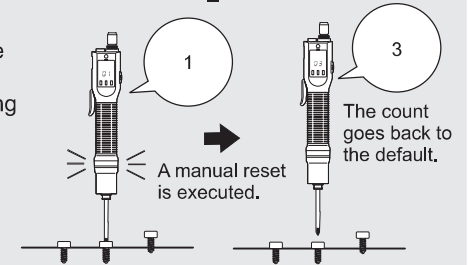


c4 Quantity Reset Permission Setting

A manual reset of the count quantity is permitted.

When it is set to “_1”, you can reset the count by holding down the ▼ and ▲ buttons at the same time, without having to wait for the end of the quantity specified in the count quantity setting.

When it is set to “_1”



Setting Procedure

- 1 Switch to setting mode.**
Set the forward/reverse lever to the trigger switch lock position, and hold down the OK button.
P. 50
- 2 Choose “c4” by pressing the ▲ and ▼ buttons, and press the OK button.**
A set value appears on the display.
- 3 Select a desired one by pressing the ▲ and ▼ buttons.**
The default is “_1”.

Display	Quantity reset permission
—	Not permitted (Manual reset disabled)
— 1	Permitted (The manual reset is permitted. To execute the manual reset, hold down the ▼ and ▲ buttons at the same time.)

- 4 Press the OK button to confirm it.**
When the setting is completed, a buzzer sounds long (a long beep), and the display returns to the menu screen.
- 5 Back to Operation Mode.**
Hold down the OK button.
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OPERATION

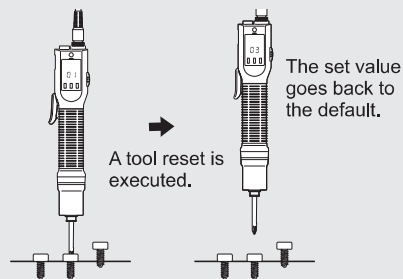
SETTING ON THE TOOL (cont.)

b4 Tool Reset Permission Setting

A tool reset is permitted.

When you set it to “_1”, you can initialise the tool by holding down the OK button, ▼ button, and ▲ button at the same time in setting mode. **P. 52**

When it is set to “_1”



Setting Procedure

- 1 Switch to setting mode.**
Set the forward/reverse lever to the trigger switch lock position, and hold down the OK button. **P. 50**
- 2 Choose “b4” by pressing the ▲ and ▼ buttons, and press the OK button.**
A set value appears on the display.
- 3 Select a desired one by pressing the ▲ and ▼ buttons.**
The default is “_1”.

Display	Tool reset permission
▲ ▲	Not permitted (Tool reset disabled)
▲ ●	Permitted (The tool reset is permitted. To execute the tool reset, hold down the OK button, ▼ button, and ▲ button at the same time.)

- 4 Press the OK button to confirm it.**
When the setting is completed, a buzzer sounds long (a long beep), and the display returns to the menu screen.
- 5 Back to Operation Mode.**
Hold down the OK button. **P. 50**

b9 Running Mode Switching Setting

You can switch the running mode of the tool. **P. 14**

Setting Procedure

- 1 Switch to setting mode.**
Set the forward/reverse lever to the trigger switch lock position, and hold down the OK button. **P. 50**
- 2 Choose “b9” by pressing the ▲ and ▼ buttons, and press the OK button.**
A set value appears on the display.
- 3 Select a desired one by pressing the ▲ and ▼ buttons.**
The default is “_ _”.

Display	Running Mode Switching Setting
▲ ▲	Stand Alone Mode (The tool is not connected to the controller in this mode.)
▲ ●	Wireless Communication Mode (The tool is connected to the controller in this mode.)

- 4 Press the OK button to confirm it.**
When the setting is completed, a buzzer sounds long (a long beep), and the display returns to the menu screen.
- 5 Back to Operation Mode.**
Hold down the OK button. **P. 50**

CAPACITY AND SPECIFICATIONS

Tool Capacity

Model No.	EYADA112WA EYADA112WB	EYADA212WA EYADA212WB	EYADA218WA EYADA218WB	EYADA407WA EYADA407WB
Recommended Work	Machine screw: M2,5 to M4,5	Machine screw: M2,5 to M4,5	Machine screw: M2,5 to M4	Machine screw: M3,5 to M5
Torque Setting Range	0,3 Nm to 2,5 Nm	0,3 Nm to 2,5 Nm	0,3 Nm to 2,0 Nm	1,5 Nm to 4,4 Nm
Torque Setting Steps	96 steps			
Fastening Torque Accuracy*	±10 %			
Speed	1200 revolutions per minute (10-step adjustment)	1200 revolutions per minute (10-step adjustment)	1800 revolutions per minute (10-step adjustment)	650 revolutions per minute (10-step adjustment)

<Measurement conditions>

Based on our specified measurement conditions.

* Fastening torque and fastening torque accuracy vary depending on the work status. Be sure to check them with actual work before use.

* The accuracy of fastening torque is not the accuracy of converted torque.

Tool Specifications

Power Supply	Power supplied by power adapter (sold separately) 100 to 240 V AC 50/60 Hz
Motor	Brushless motor (30 V DC)
Bit Holder	One-touch bit locking mechanism Applicable bits (hex shank of 6,35 mm across flats, single-ended 9 mm to 13 mm, double-ended 12 mm to 17,5 mm)
Size (Estimated Dimensions)	Overall Length: 271 mm / Grip diameter: Φ38 mm
Mass (Weight)	About 630 g
Trigger Switch Mode	Both lever start mode and push start mode available (Switchable on a single unit)
Wireless Communication Standard*1	Wireless LAN (IEEE802.11a/b/g/n) *n: HT20 only
Frequency Band	2,412-2,462 GHz / 5,180-5,240 GHz
Number of channels	2,4 GHz: 1 to 11 channels / 5 GHz: 36, 40, 44, 48 channels
Output Signals*2	<ul style="list-style-type: none"> • Fastening OK • Fastening NG (NOK) • Count-up (Count complete) • Sequence complete • Forward • Reverse • Serial numbers of tools • Time • Rotation time • Rotation (times) • Count quantity • Accumulated driving time • Accumulated quantity, etc. • Converted torque (Model No. WA only)
Input Signals*2	Drive permission signal
Operation Panel (Display)	7-segment display
Operation Button	OK button / ▼ button / ▲ button
Notification (Lamp)	4-colour display (Detection lamp)
Notification (Buzzer)	3 steps of volume

Settings for Quantity Count	<ul style="list-style-type: none"> • Count method • Count return • Count reset • Ignore judgement time • Ignore count time • Batch complete judgement waiting time
Screw Fastening Quality Determination	<ul style="list-style-type: none"> • Rotation time upper/lower limit setting • Rotation (times) upper/lower limit setting Converted torque upper/lower limit setting (Model No. WA only)
Screw Fastening Support	<ul style="list-style-type: none"> • Soft start • Soft snug • Disable fastening time
Sequence Control	Possible (Setting required on the controller side).
Others	<ul style="list-style-type: none"> • Collective setting of tools, data management, and simple data analysis is possible with the Controller Management Software (sold separately) • Able to run in the "Stand Alone Mode" when not connected to the controller.
Common Specifications	<ul style="list-style-type: none"> • Rotation direction switching (Forward/Reverse) • Braking ON/OFF setting
Included Items	<ul style="list-style-type: none"> • Screwdriver cord (2 m) • Screwdriver hanger • Clutch cover • Grip attachment (Supplied for EYADA407WA-WB only)
Separately Sold Items	<ul style="list-style-type: none"> • Screwdriver cord (2 m/3 m) • Screwdriver hanger • Clutch cover • Grip attachment • Power adapter (with a power cord)

These specifications are subject to change for performance improvement.

*1 About 5 GHz (36, 40, 44, 48 ch) support: The radio equipment supports transmission for indoor use only, except when it communicates with a base station of 5.2 GHz band high power data communication system or a land mobile relay station.

*2 Input/output signals on the controller side.

Power Adapter Specifications

Model No.	EYSZP001
Input Voltage	100 - 240 V AC, 50/60 Hz 2,6 A
Output Voltage	30 V DC, 3 A
Standby Power	0,16 W (100 V) 0,21 W (240 V) * When the screwdriver itself is not connected
Mass (Weight)	About 590 g
Size (Estimated Dimensions)	Overall Length (Long Side) 177 mm × Overall Height (Thickness) 44 mm × Overall Width (Short Side) 76 mm
Included Items	Power cord 1 m (With grounding plug, Detachable from power adapter itself)

Cautions for using a WLAN device

The device uses a frequency band shared with other types of equipment including industrial, scientific, and medical devices (e.g., a microwave) and radio stations such as a premises radio station (licenced) and low-power radio station (unlicenced) for mobile identification used in factory manufacturing lines and an amateur radio station (licenced).

1. Before using the device, confirm that there is no premises or low-power radio station for mobile identification or no amateur radio station operating in the vicinity.
2. If the device causes harmful interference with a premises radio station for mobile identification, stop use of the band immediately and consult the support centre below for the solution of the interference problem (e.g., installing a partition).
3. If the device causes harmful interference with a premises or low-power radio station for mobile identification or an amateur radio station or such other problems, consult the support centre.

■ There may be noise, shorter radio coverage, or malfunction occurring in the following environmental conditions.

- There is an obstruction (e.g., a metal or reinforced concrete object) that prevents smooth radio propagation between the wireless-enabled tool unit and the controller.
- The antennas of the controller are covered with metal.
- An operator's body is interfering with radio propagation between an operator (the wireless-enabled tool unit) and the controller.
- There is a microwave, PC, or any other device causing noise in the vicinity.
- A cell-phone or PHS phone is used near the wireless-enabled tool unit and the controller.

FCC Caution: To assume continued compliance, install and use in accordance with provided instructions. Use only the battery pack specified in the instructions. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC ID: ACJ-EYADA IC: 216A-EYADA

The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (i.) this device may not cause harmful interference and (ii.) this device must accept any interference received, including interference that may cause undesired operation.

This device complies with Industry Canada license-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.

CLEANING AND STORAGE

Cleaning

■ Wiping with Soft Cloth

Disconnect the power plug from the outlet, remove the screwdriver cord from the tool, and then wipe it with dry soft cloth.

Do not use wet cloth, thinner, benzine, alcohol, or other volatile liquids.
(Cause of discolouration, deformation, or crack)



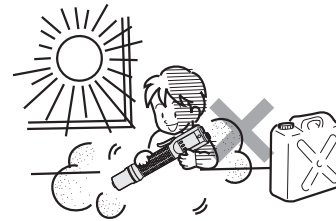
■ Conducting Periodic Inspection

- Periodically inspect for any loose screws, damage, or abnormal operation.
- Periodically inspect the power adapter for any signs of damage.

Storage

■ Avoid the following conditions during storage.

- Car cabin or other hot places
- Places exposed to direct sunlight
- Places exposed to water or dampness
- Places with a lot of foreign bodies or dust
- Places within reach of children
- Places with gasoline or other flammables
- Places with risk of fall



Updating the Firmware

Refer to “Updating the Firmware” in the Operating Instructions of the controller (EYARW1).

ERROR CODES

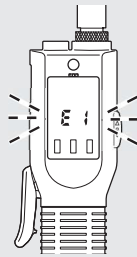
Error Display on the Tool

If there is any problem, an error code blinks on the display of the tool.

Consult the table below and take a necessary action.

- [E1] to [E9]
Pressing the OK button will clear the error display.
- [EE] and [F2] to [Fb]:
Press the OK button. Or pressing a switch will clear the error display.

If the problem persists, stop the use immediately. Bring it to your dealer.



Display	Possible cause	Action
E 1	An error occurred in the tool's internal memory or the communication line.	Turn the power off and wait approximately 10 seconds before turning it on again. When this does not eliminate the problem, send the tool for repair.
E 3	The tool is hot.	Interrupt the work and wait for it to cool down before use.
E 4	The internal protective sensor is out of order.	Send the tool for repair.
E 5	The tool is overloaded or the motor is out of order, for example.	Eliminate the condition(s) that caused the overload and recheck the condition. When this does not eliminate the problem, send the tool for repair.
E 6	A cord or cords are not correctly connected.	Check whether the cords are correctly connected and whether no cords are broken. When no abnormality is found in the cords, the power adapter may be failed. Send the tool for repair.

Display	Possible cause	Action
E 7	The tool circuit is failed or out of order, for example.	Send the tool for repair.
E 9	<ul style="list-style-type: none"> • The tool is not yet paired with the controller. • The controller unpaired the tool. 	Pair the tool with the controller. P. 28
	<ul style="list-style-type: none"> • The controller is too far from the tool. • There is an obstacle between the tool and the controller. 	Check the distance between the controller and the tool. Check for any obstacle around the tool and the controller. * Within the recommended distance between the tool and the controller (approximately 16 m for 2.4 GHz and 10 m for 5 GHz)
	<ul style="list-style-type: none"> • The controller is powered off. • The installation place or antenna direction of the controller is inappropriate. 	Check if the controller is powered on. Check the status of the controller's antenna. (Refer to "Cautions for Installation" in the Operating Instructions of the controller.)
E E	An error or failure occurred in the tool or the controller.	Turn the power off and then on. (When this does not eliminate the problem, send the tool for repair.)
	Fastening parameters are not yet set for the tool.	On the controller, set fastening parameters for the tool. (Refer to "SETTING FASTENING PARAMETERS OF TOOLS" in the Operating Instructions of the controller.)

ERROR CODES (cont.)

Display	Possible cause	Action
EE	▶ The fastening control mode is not yet set.	▶ On the controller, set the fastening control mode. (Refer to "SETTING THE FASTENING CONTROL MODE" in the Operating Instructions of the controller.)
	▶ The running mode is set to "Repeat mode (Basic mode)" on the controller and a batch is not yet registered.	▶ On the controller, register a batch. (Refer to "SETTING THE FASTENING CONTROL MODE" in the Operating Instructions of the controller.)
	▶ The running mode is set to "Repeat mode (Sequence mode)" on the controller and the tool is in a queue.	▶ Check the sequence setting. (Refer to "SETTING THE FASTENING CONTROL MODE" in the Operating Instructions of the controller.)
	▶ The running mode is set to "External control mode" on the controller and the tool has not received a control input from the external device.	▶ Check the I/O input on the controller and the external device (PLC, etc.). (Refer to "SETTING THE FASTENING CONTROL MODE" in the Operating Instructions of the controller.)
	▶ The tool's internal wiring is broken.	▶ Send the tool for repair.
	▶ A switch was operated quickly several times.	▶ A switch was operated before the reception of the signal from the controller. Wait a moment before operation.

■ Error codes for errors that occur during work.

Display	Possible cause	Action
F2	▶ During a fastening process, the tool was stopped before the clutch activated.	▶ Nothing is wrong with the product. Keep the tool in action until the clutch activates.
F3	▶ During a fastening process, the rotation time has become higher than the upper limit or lower than the lower limit.	▶ Nothing is wrong with the product. Check the workpiece and the setting for the rotation time. P. 36
F4	▶ During a fastening process, the number of rotations has become higher than the upper limit or lower than the lower limit.	▶ Nothing is wrong with the product. Check the workpiece and the rotation (times) setting. P. 35
F5	▶ During a fastening process, the converted torque has become higher than the upper limit or lower than the lower limit.	▶ Nothing is wrong with the product. Check the workpiece and the converted torque setting. P. 33
F6	▶ During a fastening process, the forward/reverse lever was switched.	▶ Do not switch the forward/reverse lever during a fastening process.
F8	▶ During a fastening process, the tool was overloaded or the motor failed.	▶ Eliminate the condition(s) that caused the overload and recheck the condition. When this does not eliminate the problem, send the tool for repair.

ERROR CODES (cont.)

Display	Possible cause	Action
F9	During a fastening process, a cord or cords became poorly connected.	Check whether the cords are correctly connected and whether no cords are broken. When no abnormality is found in the cords, the power adapter may be failed. Send the tool for repair.
FR	During a fastening process, the internal protective sensor became out of order.	Send the tool for repair.
Fh	During a fastening process, the tool became hot.	Interrupt the work and wait for it to cool down before use.

Fastening History Error Messages

You can check the fastening history in the history screen by accessing the controller via a web browser. **P. 46**

	NOK message	Error message	Cause	Action
1	Error	High temperature	<ul style="list-style-type: none"> Operation stopped to protect the tool from high heat. 	<ul style="list-style-type: none"> Cool it down before using it again. (Prevent condensation, etc.) <If the error persists> Check the work environment. Check the workpiece conditions. Check the power adapter.
2	Error	Motor sensor error	<ul style="list-style-type: none"> The temperature sensor or current sensor of the tool detected an error. 	<ul style="list-style-type: none"> Check for frequency. - If the problem occurs frequently, send the tool for repair (due to circuit failure).
3	Error	Tool locked	<ul style="list-style-type: none"> Operation stopped to protect the tool since there is no motor rotation. - Caused by the work environment - Caused by a failure in the tool 	<ul style="list-style-type: none"> Check the work environment. (Check for abnormal load and check how the operator is using the tool.)
4	Error	Low voltage	<ul style="list-style-type: none"> Operation stopped to protect the tool since abnormal voltage around the power supply was detected. - Caused by the work environment - Caused by a failure in the power adapter or the tool 	<ul style="list-style-type: none"> Check the power adapter. Check the terminal (for dust and wear). Check for frequency. - If the problem occurs frequently, send the tool for repair.
5	Error	Overcurrent	<ul style="list-style-type: none"> Operation stopped to protect the tool since abnormal current was detected. - Caused by the work environment - Caused by a failure in the tool 	<ul style="list-style-type: none"> Check the work environment. (Check for abnormal load and check how the operator is using the tool.)

ERROR CODES (cont.)

	NOK message	Error message	Cause	Action
6	Error	Rotation direction changed	<ul style="list-style-type: none"> Operation stopped to protect the tool since the forward/reverse lever setting was changed during work. 	<ul style="list-style-type: none"> Check the work environment. (Check how the operator is using the tool.)
7	Error	Parameter error	<ul style="list-style-type: none"> The set parameter is outside the setting range. 	<ul style="list-style-type: none"> Check the parameter. Set the parameter again.
8	Torque	Torque exceeded	<ul style="list-style-type: none"> The converted torque has become higher than the set upper limit during fastening. 	<ul style="list-style-type: none"> Check the setting. Check the workpiece conditions. Disable the set upper limit of the converted torque.
9	Torque	Torque insufficient	<ul style="list-style-type: none"> The converted torque has become lower than the set lower limit during fastening. 	<ul style="list-style-type: none"> Check the setting. Check the workpiece conditions. Disable the set lower limit of the converted torque.
10	Rotation count	Rotation count exceeded	<ul style="list-style-type: none"> The number of rotations of the tool's tip has become higher than the set upper limit during fastening. 	<ul style="list-style-type: none"> Check the setting. Check the workpiece conditions. Disable the set upper limit of the rotation (times).
11	Rotation count	Rotation count insufficient	<ul style="list-style-type: none"> The number of rotations of the tool's tip has become lower than the set lower limit during fastening. 	<ul style="list-style-type: none"> Check the setting. Check the workpiece conditions. Disable the set lower limit of the rotation (times).
12	Rotation time	Rotation time exceeded	<ul style="list-style-type: none"> The rotation time of the tool's tip has become longer than the set upper limit during fastening. 	<ul style="list-style-type: none"> Check the setting. Check the workpiece conditions. Disable the set upper limit of the rotation time.

	NOK message	Error message	Cause	Action
13	Rotation time	Rotation time insufficient	<ul style="list-style-type: none"> The rotation time of the tool's tip has become shorter than the set lower limit during fastening. 	<ul style="list-style-type: none"> Check the setting. Check the workpiece conditions. Disable the set lower limit of the rotation time.
14	Clutch	Stop before clutch actuation	<ul style="list-style-type: none"> Fastening ends before clutch is activated. - During fastening, the tool stopped before clutch is activated. - During fastening, the tool stopped due to NOK caused by any other reason. 	<p><When the tool stopped before clutch is activated></p> <ul style="list-style-type: none"> Check the work environment. Check the workpiece conditions. <p><When fastening NOK due to any other reason is indicated></p> <ul style="list-style-type: none"> Check the content of the fastening NOK and take necessary actions.

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