

**FORCE GAUGE FGP/FGPX SERIES**  
**Add-in software for Excel**  
**tor i emon-S**  
**INSTRUCTION MANUAL**

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**Caution**

- All copy rights regarding toriemon-S and its documents are reserved by our company.
- Please confirm terms of use which are shown at installation.

## 1. Before use

Congratulation on your purchase of a NIDEC DRIVE TECHNOLOGY FGP/FGPX series digital force gauge.

This software is add-in application software for Excel, which is exclusively for a force gauge (FGP/FGPX series), and operating environment is Windows 10 (64bit).

torimon-S is an add-in communication software which is for downloading the data which force gauge measure into Excel sheet. Therefore Microsoft Excel 2016/2019 (32bit/64bit) is necessary to activate the torimon-S.

In addition, please read the instruction manual of the force gauge (FGP/FGPX series) other than this instruction manual.

## 2. Set up

Before using torimon-S, you need to set up of torimon-S.

### 2.1 Unpacking the download file

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After run "torimon-S\_ENG\_SEG\_download\_v\*\*\*.exe", the following file and folder is unpacked into the destination.

\*\*\* means version information.

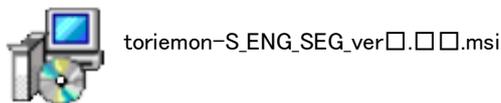
- torimon-S\_ENG\_SEG\_ver□.□□.msi
- torimon-S Instruction manual.pdf

## 2.2 Installation of the toriemon-S

### ● Installation package

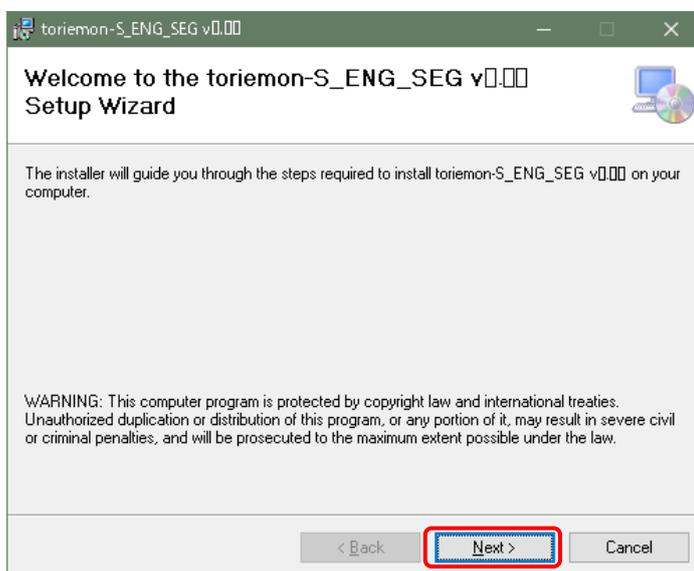
Double-click “ toriemon-S\_ENG\_SEG\_v□.□□.msi ” in the folder and start installation.

※ □.□□ shows its versions

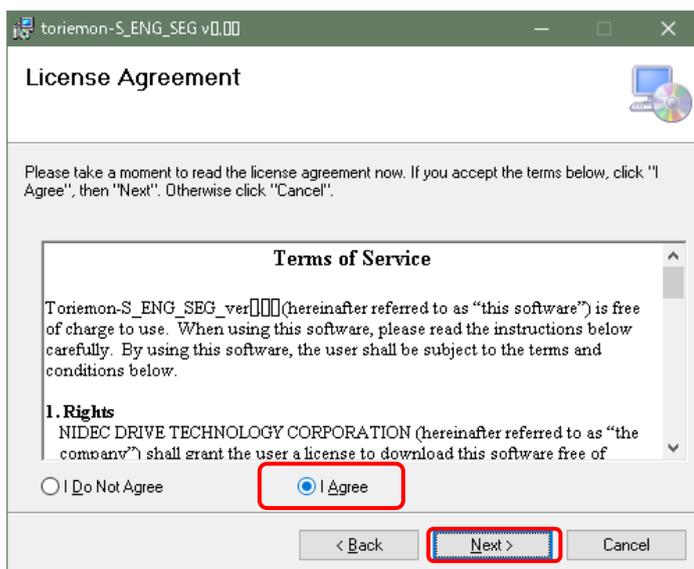


### ● Installation process

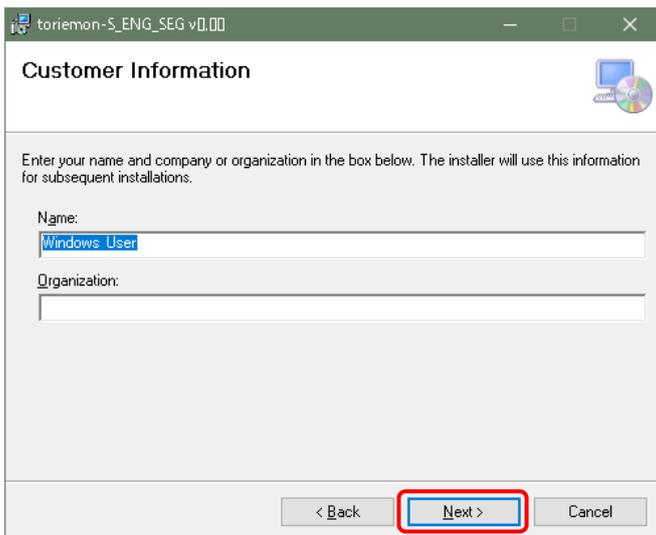
The screens shown below will appear. Follow the direction and perform installation



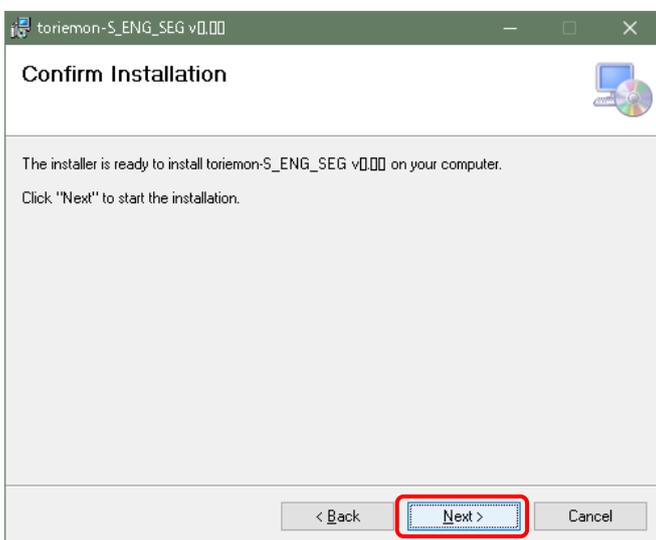
Click the [Next>], and proceed to the next.



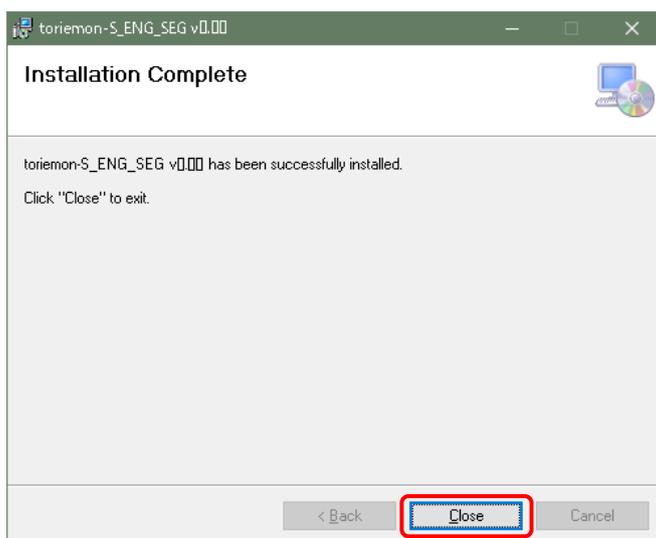
Please check the “ I Agree ” only if you can agree to the license agreement. Click the [Next>], and proceed to the next.



Click the [Next>], and proceed to the next.



Click [Next>] to start the installation.



Finish by clicking the [Close]

## 2.3 How to Start "toriemon-S"

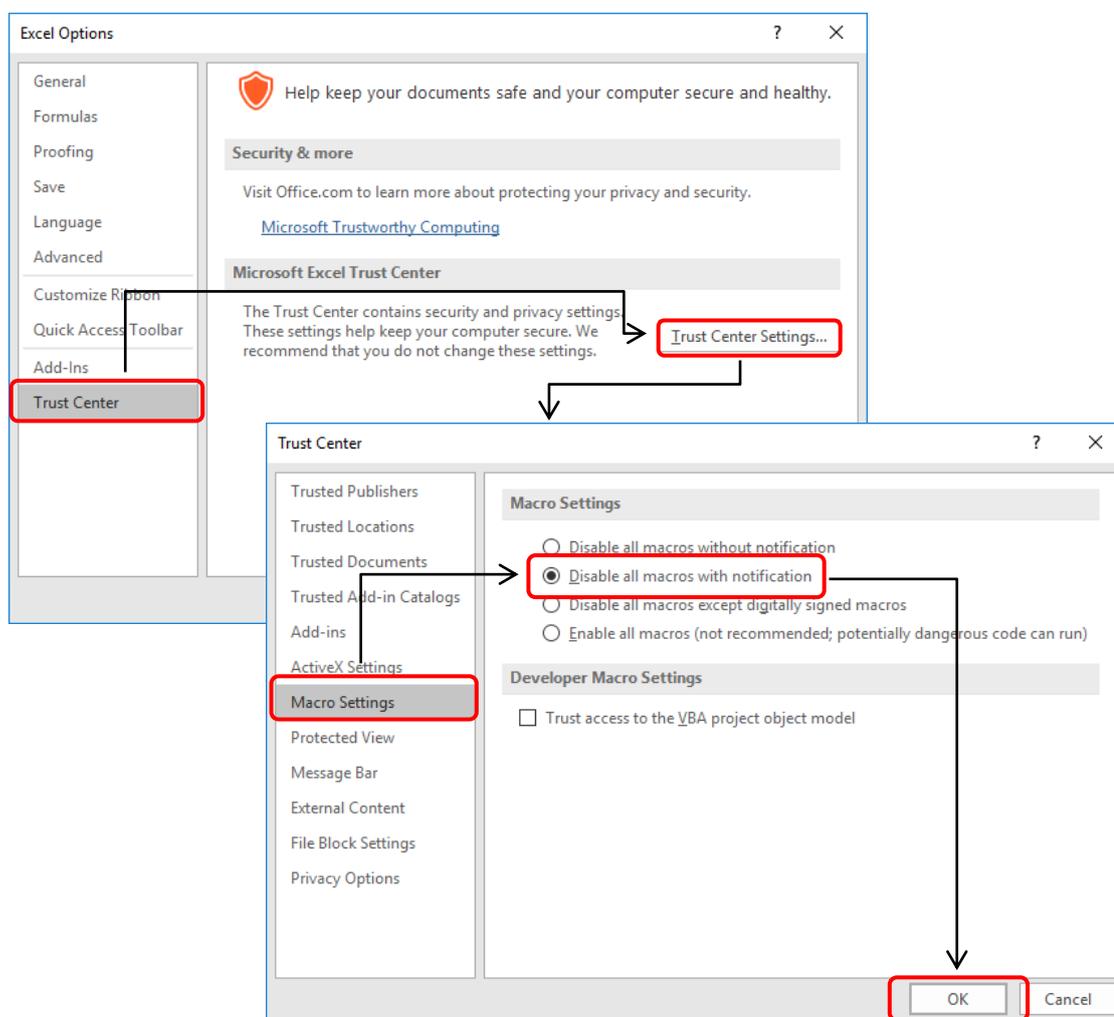
After installation, please open the folder "toriemon-S\_ENG\_SEG" and make sure there is "toriemon-S\_ENG\_SEG.xla" as follows.

Please double click "toriemon-S\_ENG\_SEG.xla" to start Excel.

### Trust Center Settings

When you first use the toriemon-S, please perform the following settings.

- (1) Open the "Options" from the "FILE" menu of Excel, and then click the "Trust Center Settings" button on the "Trust Center".
- (2) Select "Disable all Macros with notification" in "Macro Settings".
- (3) Once finish Excel, then start Excel again.  
Select "Available Macro" on security window.

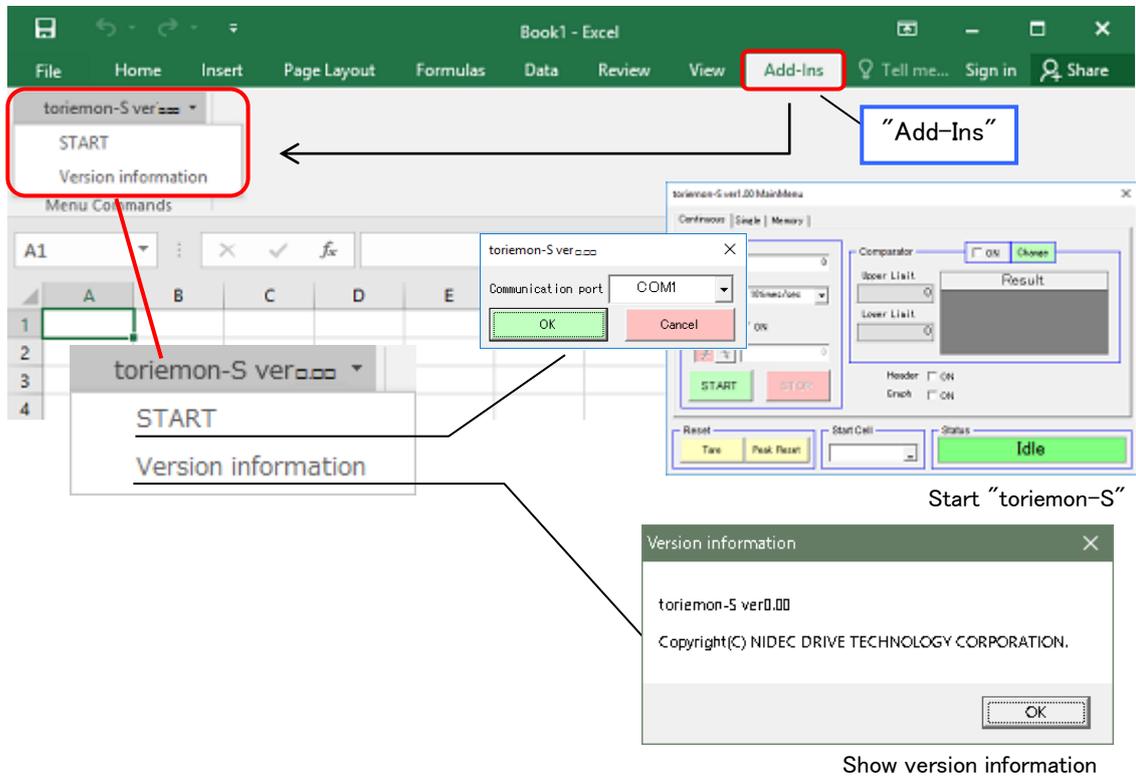


- Start "toriemon-S"

If you Click "Add-Ins" menu tab , "toriemon-S" menu appears.

Click "START" to start "toriemon-S"

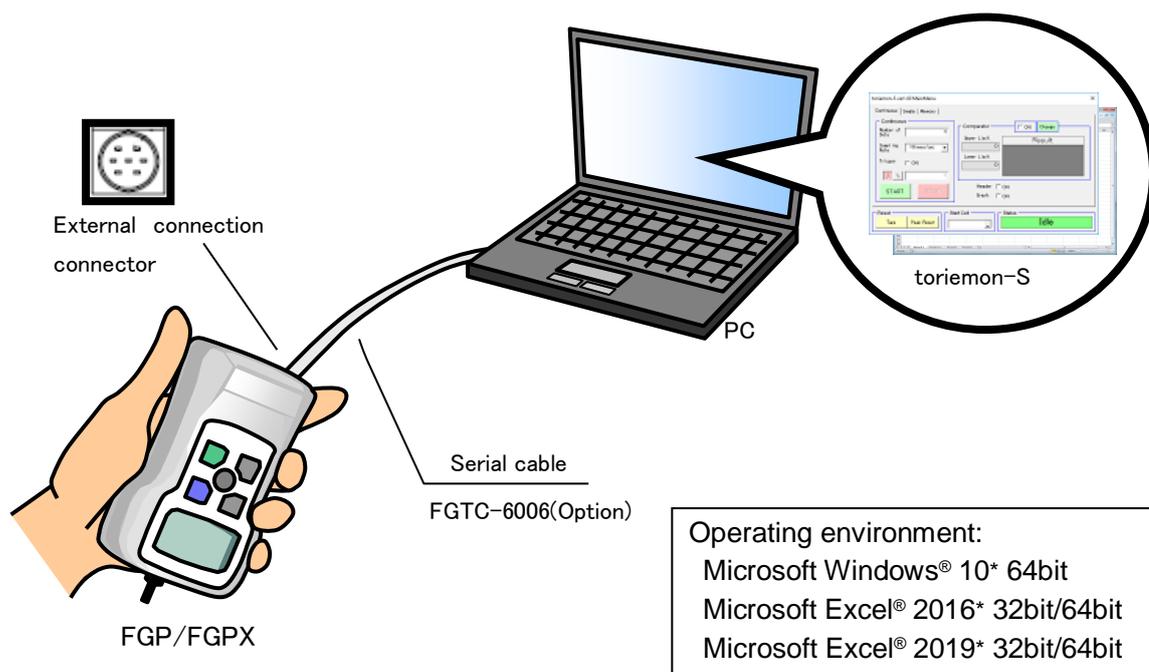
Click "Version information" to see software version.



### 3. Connection

After confirming the power of the digital force gauge is ON, connect FGTC-6006 serial cable to the RS-232C serial port (D sub 9 pin) of the PC.

In case that your PC has no serial connector, please prepare the serial/USB conversion adapter and connect it to the USB port on the PC.



\*Microsoft, Windows and Excel are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

## 4. Screen and Function

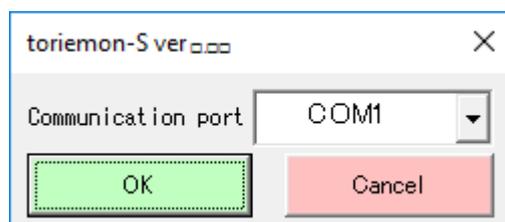
### 4.1 Start-up

Turn the force gauge on, and then connect to PC by Serial. After PC recognize the connection, start toriemon-S by click “START” of toriemon-S on menu bar.

### 4.2 Initial Screen

Generally, when start up this software, it displays the Initial Screen.

Select the Communication port, and then click OK. It advances to Main menu Screen.



- (1) Communication port : Select Communication port from COM1~COM15.  
\*mark is displayed in front of COM No, if the port is valid.
- (2) OK : When clicked, the setting contents are sent to FGP/FGPX,  
And Main menu Screen is displayed.
- (3) Cancel : When clicked, the Initial Screen is closed.

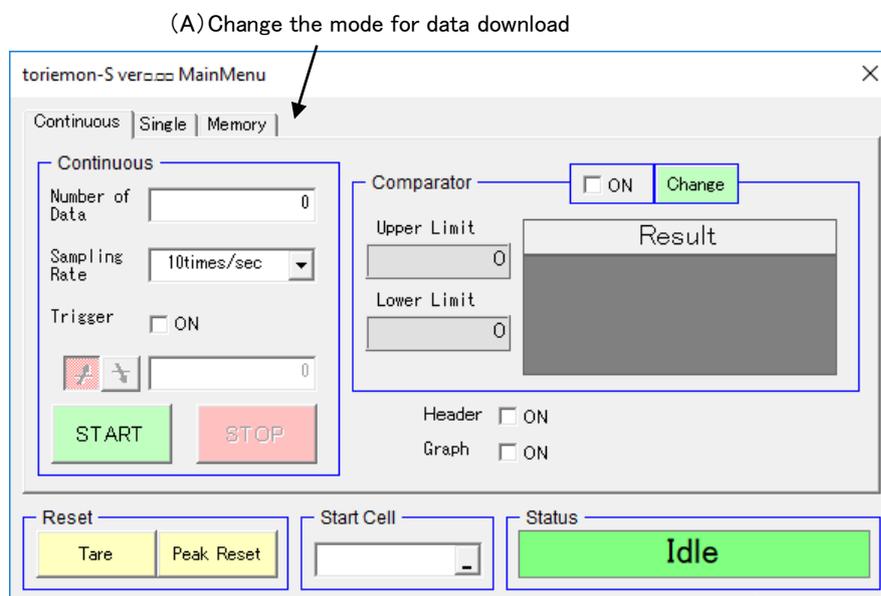


When click the OK button, if communication error occurred, following messages will be displayed.

<ul style="list-style-type: none"> <li>•When selected a Communication port that is different with “Communication port” setting of PC.</li> <li>•When the PC is not connected with FGP/FGPX.</li> </ul>	
<p>Confirm the connection of Serial cable between PC and FGP/FGPX. If there is not abnormality, confirm the COM port setting of PC.</p>	
<ul style="list-style-type: none"> <li>•When communication setting of FGP/FGPX is invalid.</li> </ul>	
<p>Please check whether the baud rate of FGP/FGPX is 19200. If not, please set the baud rate of FGP / FGXP to 19200.</p>	

### 4.3 Main menu

If the communication setting is normal on Initial Screen, the following Main menu Screen will be displayed after clicked the “OK” Button.



(A) Change the mode for data download. (B) Tare or Peak reset. (C) Please specify the cell which you download the data. (D) Condition of download.

#### (A) Mode for data download

There are three different modes for downloading.

##### 1. Continuous

Be able to download the data continuously. Comparator/Graph feature is available.

##### 2. Single

Be able to download one data and peak value. Comparator is available.

##### 3. Memory

Be able to download memory data which is in force gauge and control memory mode measuring.

#### (B) Reset

1. Tare icon: Tare of the force value.
2. Peak reset icon: Reset the peak value.

#### (C) Start Cell

Enter cell address. Or when you click a right button, you can choose the cell. The cell which you choose is active when data is downloaded. If it is space, data is inserted from the active cell.

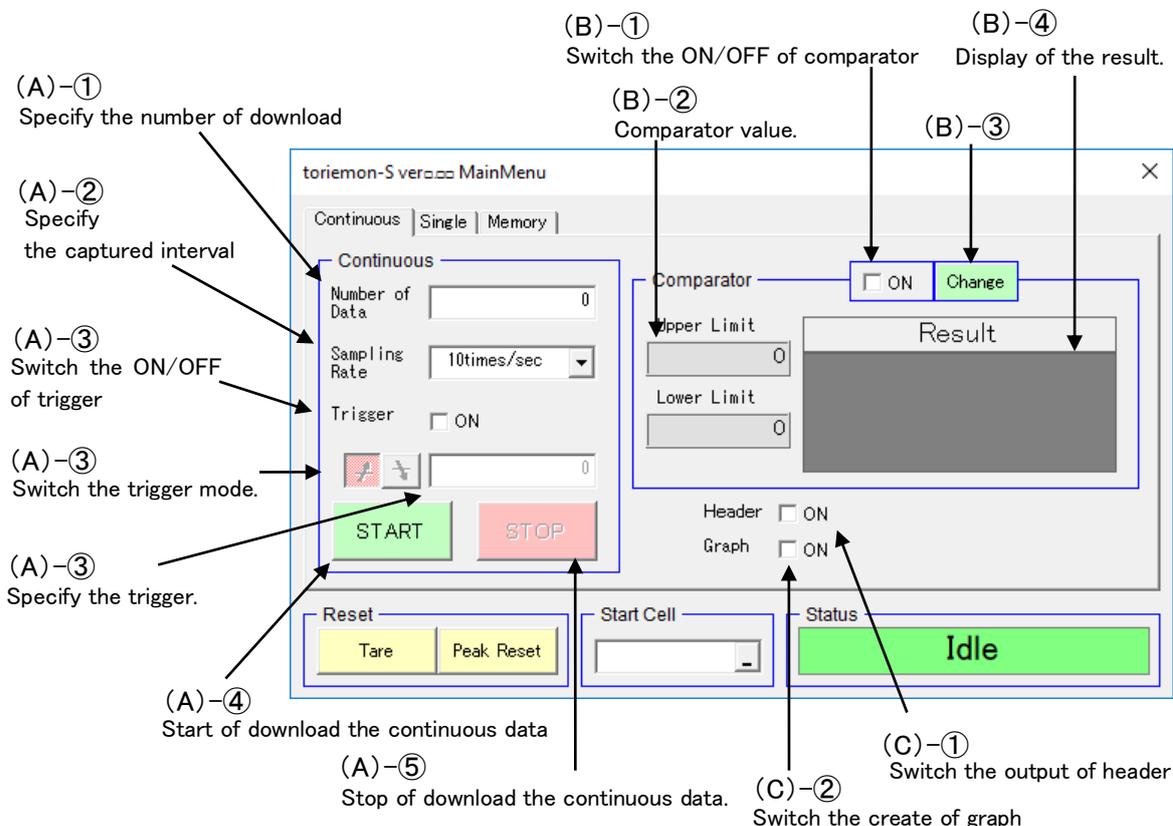
## (D) Status

Show status of downloading

Display	Status
Idle	Be able to download
Importing	Download the continuous data
Waiting for import	Waiting the download because the trigger is on.
Measuring	Measuring in Memory mode
Communication error	In case of wrong connection of force gauge and PC.
Connection error	

### 4.3.1 Continuous data download

Please click “Continuous”, then following window appear. In this mode, you can download the continuous data from force gauge in real time, and available comparator and create the graph.



#### (A) Continuous

##### 1. Captured Number:

Set the number of data (from 1 to 65000) to be downloaded.

You can take in 65000 times data maximum while the number stays “0”.

##### 2. Captured Interval:

10, 20, 50 and 100 times / sec

You can choose from menu.

Ex, 100 times / sec ⇒ capture about 100 data per 1 second.

##### 3. Trigger:

Value of trigger is from -9999 to +9999.

You can choose trigger turn on or off by check box.

In the case of turn off, you can not switch of trigger mode and specify the trigger value.

Please input them after turn on.

Click “↗” and “↘” to switch trigger mode.

↗: When the measuring data is more than trigger value, start downloading.

↘: When the measuring data is lower than trigger value, start downloading.

#### 4. START

Start downloading continuous data.

It is continued until click the stop or up to captured number you specify.

Once “START” is clicked, all icons can not be used until click “STOP”.

#### 5. STOP

Stop the continuous data download.

#### (B) Comparator

1. Check the box for comparator ON / OFF

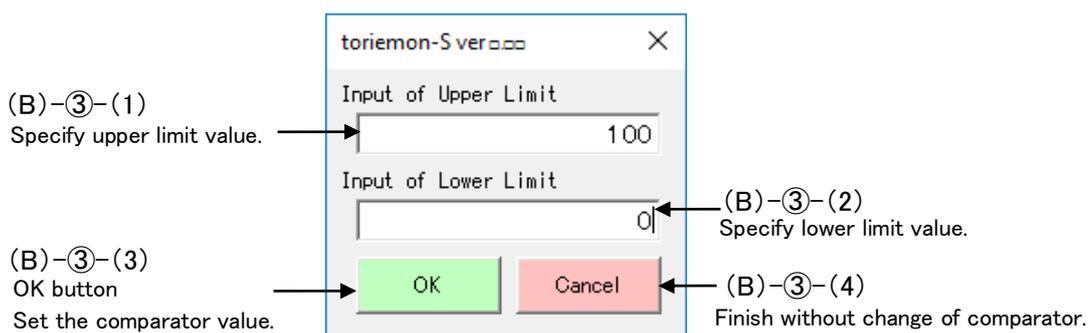
2. Upper/Lower limit:

Show upper/lower limit.

When “toriemon-S” has started, or change the data download mode, the comparator value of force gauge is displayed.

3. Change button:

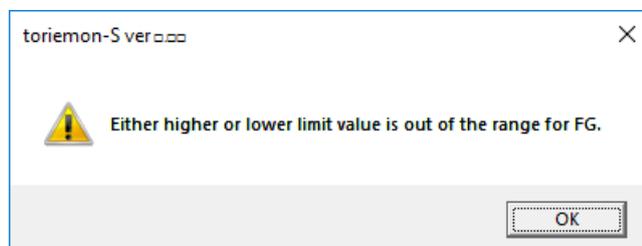
After click, following form appear.



#### ③-(1) Input of Upper limit (-9999~9999)

Input the upper limit value.

Even though input value is the input coverage, if it's outside of force display value, error message is appeared after click of OK, and the change is not reflected.



## ③-(2) Input of Lower limit (-9999~9999)

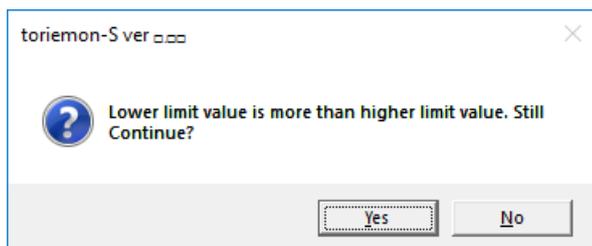
Input the lower limit value.

Even though input value is the input coverage, if it's outside of force display value, Above error message is appeared after click of OK, and the change is not reflected.

## ③-(3) OK button

After click OK button, change the setting of comparator, and the comparator value of force gauge is changed at the same time.

When Lower limit value is bigger than upper limit value, following message appear after click of OK. If you click YES, it is continued.



## ③-(4) Cancel button

Finish the input form without change of comparator.

In this time, comparator of force gauge is not changed, too. Comparator value stays same value as before.

## ④. Result

Right after downloading data, judge for upper/lower limit value is performed, and the result is shown in the result window.

OK: the loading is within a limit. (background/font: blue)

NG: the loading is over the limit. (background/font: red)

NG: Upper limit < Lower limit (background/font: red)

Nothing: the judge is not performed. (gray)

※When you create the graph, the graph which is same as (C)-②-(2) is shown.

## (C) Other

## ①. Header:

Check the box for header output.

If you download the data when it is turned on, "Continuous data" is added at the front line of Excel. Each time after completion of download, it turns OFF.

②. Graph:

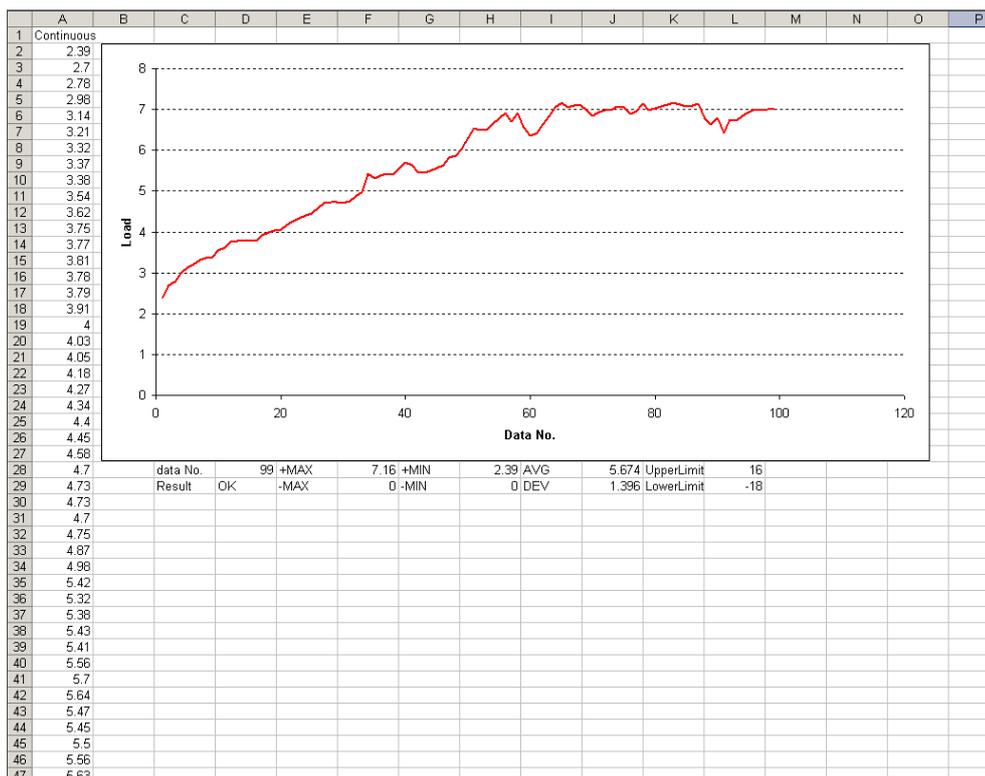
Check the box for creates the graph.

Continuous data is translated in a new graph sheet when check the box.

When download the continuous data with check box ON, work sheet (Graph1···) is added at the end of sheets. And then, show the following graph.

※When plot a graph, data download is started from A1 cell of Graph1.

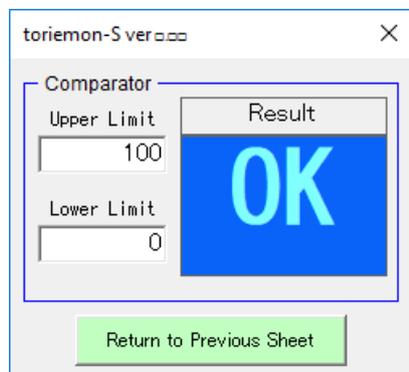
And the header will be shown in spite of Header ON/OFF.



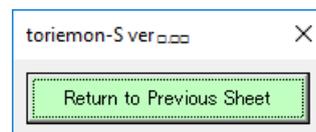
②-(1) Finish of graph

After creating the graph, the following window will be shown.

And then, click a “Return to former sheet” to go back previous worksheet



Judge is performed

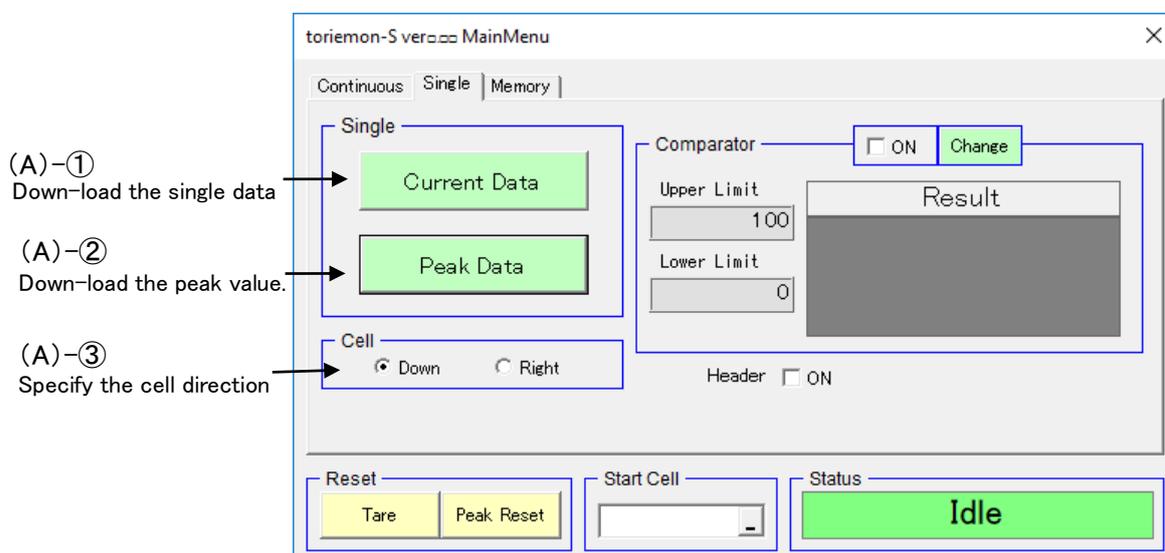


Judge is not performed

### 4.3.2 Single data download

Following picture is shown when you click “Single” tab.

In this mode, you can download the single measuring value, and peak value, and also judge the comparator.



(A) Single

①. Current data button:

When click this button, download the single (one) data into selected cell.

After the single data is inserted, active sell move to the direction which you decide in Cell.

②. Peak data button:

When click this button, download  $\pm$ peak value.

After the peak data is inserted, active sell move to the direction which you decide.

After downloading peak data, the peak data of force gauge will be automatically reset.

③. Cell:

Available feed direction for the cell of single data, and peak data.

(B) Comparator

1. Result

Judgment will be performed at the same time as download the data, and then result is shown on Result.

Judgment will not correspond to Peak value.

OK: the measuring data is within a limit. (Background/font: blue)

HIGH: the measuring data is higher than upper limit. (Background/font: red)

LOW: the measuring data is lower than lower limit. (Background/font: red)

BOTH: Upper limit < Lower limit, the measuring data is higher than upper limit  
and lower than lower limit. (Background/font: red)

Nothing: the judge is not performed. (gray)

※Other than Result window is same as “Continuous data download” mode. (Refer 4.3.1)

(C) Other

1. Header:

Check the box for header output.

If header is ON, “Current Data” will be appeared on the top (Single data),

“+ Peak” / “-Peak” will be appeared on the top (Peak data).

Each time after completion of download, it turns OFF.

### 4.3.3 Memory data download

Following window appears when you click “Memory” tab.

In this mode, you can download the memory of force gauge, and remote start/stop of memory mode measuring of force gauge.

(A) Switch the memory mode of force gauge.

(C) Show the number of memory data.

(E) Change the comparator.

(B)-① Download the memory data.

(B)-② Delete the memory data.

(D)-① Start the memory mode measuring at the force gauge.

(D)-② Stop the memory mode measuring at the force gauge.

#### (A) Memory Mode

Select Single / Continuous / Standard memory mode by using pull-down menu, and then you can change the memory mode of force gauge.

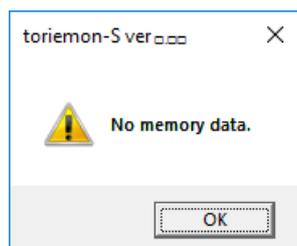
When run this software or change the data download mode, read out the memory mode from force gauge, and then show the current memory mode.

#### (B) Memory data

##### 1. “Import” button:

When click this button, data will be downloaded from memory mode, which mode is selected at force gauge.

If there is no memory data, following message “No memory data” appear.



Download data as follows

	A	B	C
1	SingleMemory		
2	Unit	N	
3	Data No.	23	
4	+MAX	12.51	
5	-MAX	0	
6	+MIN	0.28	
7	-MIN	0	
8	AVG	6.43	
9	DEV	3.675	
10	UpperLimit	16	
11	LowerLimit	-18	
12	No.	Result	Load
13	1	O	0.58
14	2	H	17.12
15	3	O	3.63
16	4	L	-19.28
17	5	O	6.81
18	6	O	4.09
19	7	O	5.03
20	8	O	9.05

	A	B	C
1	ContinuousMemory		
2	Unit	N	
3	Data No.	25	
4	+MAX	11.39	
5	-MAX	-0.26	
6	+MIN	0	
7	-MIN	0	
8	+Peak	14.81	
9	-Peak	-0.29	
10	AVG	5.79	
11	DEV	4.026	
12	UpperLimit	16	
13	LowerLimit	-18	
14	No.	Result	Load
15	1	O	0.93
16	2	O	5.95
17	3	O	11.39
18	4	O	10.43
19	5	O	-0.26
20	6	O	-0.26

#### Single Memory Data

#### Continuous Memory Data

	A	B	C	D	E	F	G	H
1	StandardMemory							
2	Unit	N	UpperLimit	16	LowerLimit	-18		
3	No.	+MAX	-MAX	+MIN	-MIN	+Peak	-Peak	Last data
4	1	0.07	0	0.03	0	0.08	0	0.07
5	2	0	-0.22	0	-0.22	0	-0.22	-0.22
6	3	0	-0.22	0	-0.22	0	-0.22	-0.22
7	4	0	-0.5	0	-0.5	0	-0.51	-0.5
8	5	9.4	0	2.67	0	12.99	0	5.97
9	6	6.38	-0.15	0	0	9.52	-0.57	6.38
10	7	3.16	0	1.08	0	5.6	-0.33	3.16
11	8	11.72	0	10.89	0	12.28	0	10.89
12	9	4.31	0	1.61	0	7.73	-0.85	4.31
13	10	6	0	3.13	0	10.09	-0.56	6
14	11	2.34	0	0.97	0	6.39	-0.27	2.34
15	12	3.83	0	1.45	0	7.46	0	2.48
16	13	5.45	0	0.77	0	8.33	-0.19	5.45
17	14	3.1	0	0.05	0	6.59	-0.16	3.1
18	15	4.99	0	2.38	0	9.02	0	4.99
19	16	4.21	0	0.37	0	8.78	0	4.21
20	17	2.87	0	0.2	0	7.59	-0.1	2.75
21	18	3.48	0	2.06	0	6.52	-0.19	3.48
22	19	1.98	0	1.66	0	5.52	-0.22	1.98
23	20	2.13	0	1.33	0	4.55	-0.14	2.13

#### Standard Memory Data

#### ①. Result

At single memory mode and continuous memory mode, judgment is as follows.

O: the measuring data is within a limit.

H: the measuring data is higher than upper limit.

L: the measuring data is lower than lower limit.

B: Upper limit < Lower limit, the measuring data is higher than upper limit and lower than lower limit.

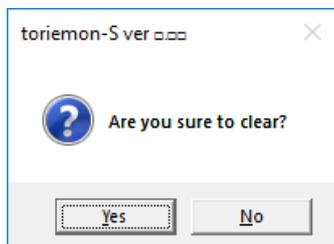
Blank: the judge is not performed(※).

※Turn on or off the judgment with comparator function is set by force gauge itself.

## ②. “Clear” button:

Click this button, and then showing “Are you sure to clear?”.

Click “Yes”, memory data will be cleared from memory mode, which is selected at force gauge.



## (C) Number of memory data

Number of memory data in the selected memory mode is shown.

When run this software or change the data download mode or at the end of memory mode measuring, read out the memory mode from force gauge, and then show this number.

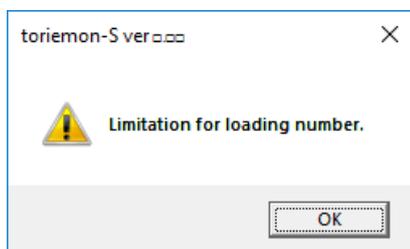
## (D) Measurement

## ①. “START” button:

In the selected memory mode, start downloading the memory data of force gauge.

In case of Continuous/Standard memory mode, stop the measuring by clicking STOP.

If memory is full, showing “Limitation for loading number”, and then cannot start measuring.



## ②. “STOP” button:

When you click this button while measuring, stop measuring.

(Unavailable in single mode)

## (E) Comparator

Setting and showing the upper / lower limit value. (Same as the 4.3.1-(B)).

In case of memory mode, switch of ON/OFF judgment and display of result window are not displayed.

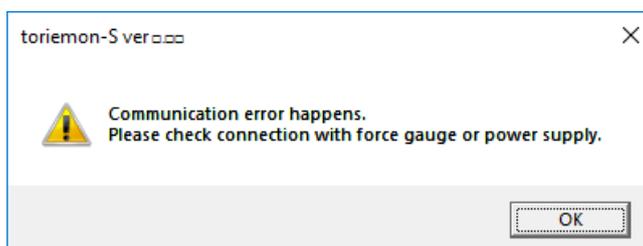
#### 4.4 Difficulties in transmission

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In the case you turn off the power of force gauge during the use of toriemon-S, or cut the connection with force gauge and PC, if you try to communicate with force gauge (such as click of start button), following error message appears and “Communication error” or “Connection error” is shown. (4.3-(D))

If it comes to these conditions, please reconfirm the connection of force gauge and the power is ON. After get back to proper condition, operate the communication procedure at toriemon-S side(※), please recover after confirmation of error message.

If it does not recover in spite of operating above method, please stop toriemon-S, and unplug the USB cable from the PC, then please connect rightly and the restart the toriemon-S.

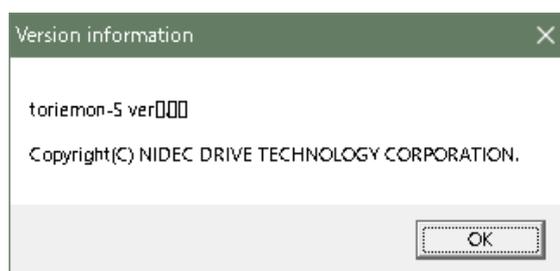


※ Please operate after the PC recognize the devise.

#### 4.5 Version information.

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Please choose the version information from toriemon-S which is added at Excel menu. You can confirm the version information of toriemon-S.



## NIDEC DRIVE TECHNOLOGY CORPORATION

〈Web Page Information〉 Please scan the QR code or access the URL below.



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## NIDEC DRIVE TECHNOLOGY CORPORATION

Nidec Shimpo Corporation change its company name to Nidec Drive Technology Corporation on April 1, 2023.