

Digital Torque Meter

TNP Series Software

Compatible with Windows 10 or Later

# Digitorq\_TNP

Instruction Manual

Please read this manual thoroughly before use.

— Table of Contents —

Introduction	2
1. Overview	2
2. Configuration	2
3. Setup Procedure	3
3.1 Extracting the Downloaded File	3
3.2 Digitorq_TNP Installation Procedure	3
3.3 USB Driver Installation Procedure	5
4. Digitorq_TNP Descriptions	8
4.1 Startup	8
4.2. Initial Screen	8
4.3 Main Menu Common Items	9
4.4 Memory Data Import	10
4.4.1 Memory Data Format	13
4.4.2 Frequency Distribution Graph	15
4.5 Continuous Data Import	19
4.5.1 Continuous Data Format	21
4.5.2 Continuous Data Graph	22
4.6 Print Setting	24
5. Administrator Privileges	27
6. Typical Errors	29
7. Input Range List	30

## Introduction

Thank you for using “Digitorq\_TNP”, the software for the Digital Torque Meter TNP.

This instruction manual provides comprehensive instructions on the operation of “Digitorq\_TNP” software for Digital Torque Meter (hereafter referred to as “this software”).

## 1. Overview

This software is designed to directly import torque measurements from the Digital Torque Meter TNP to a PC via USB communication.

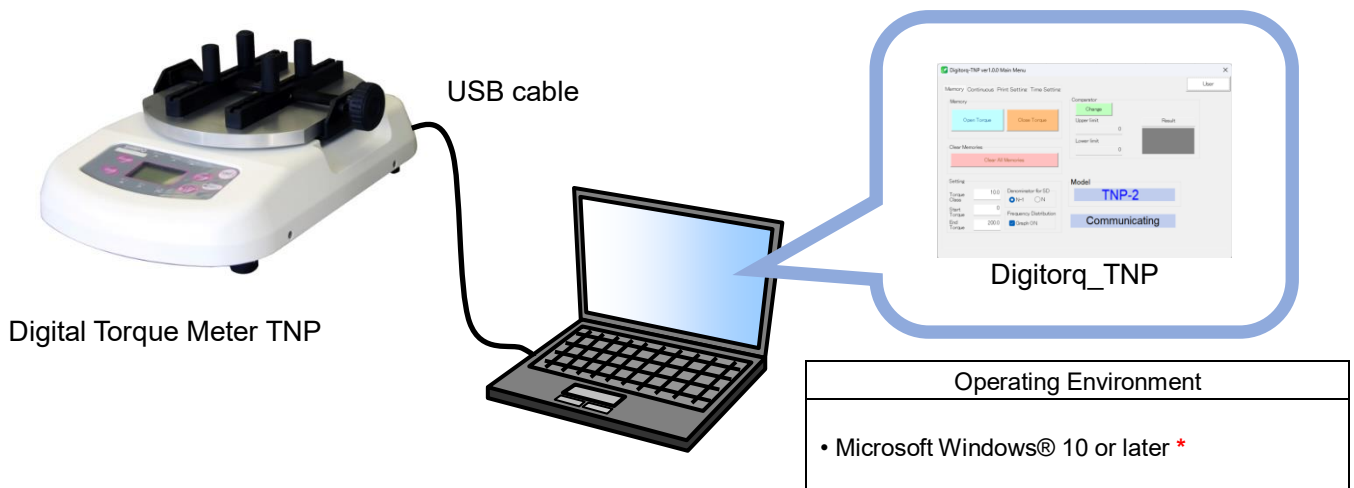
This software includes the following functions.

- Opening/closing torque memory data import
- Continuous data import
- Load and set comparator values

When importing memory data, a frequency distribution graph can be created based on the imported data.

When importing continuous data, a time vs torque graph can be created.

## 2. Configuration



- \* Ensure that the digital torque meter is powered ON before connecting the USB cable to the PC.
- \* While using Digitorq\_TNP, do not turn OFF the digital torque meter unit, change comparator values or memory data, or switch measurement modes on the unit, as this may cause the software to malfunction. Do not perform these operations while connected to the PC.
- \* Microsoft and Windows are registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.

### Caution

- All copyrights and related rights to “Digitorq\_TNP” and its associated documentation are reserved by NIDEC DRIVE TECHNOLOGY Corporation.
- For other details, please refer to the Terms of Service displayed during this software installation.

### 3. Setup Procedure

Before using Digitorq\_TNP, both the communication driver and Digitorq\_TNP must be installed.

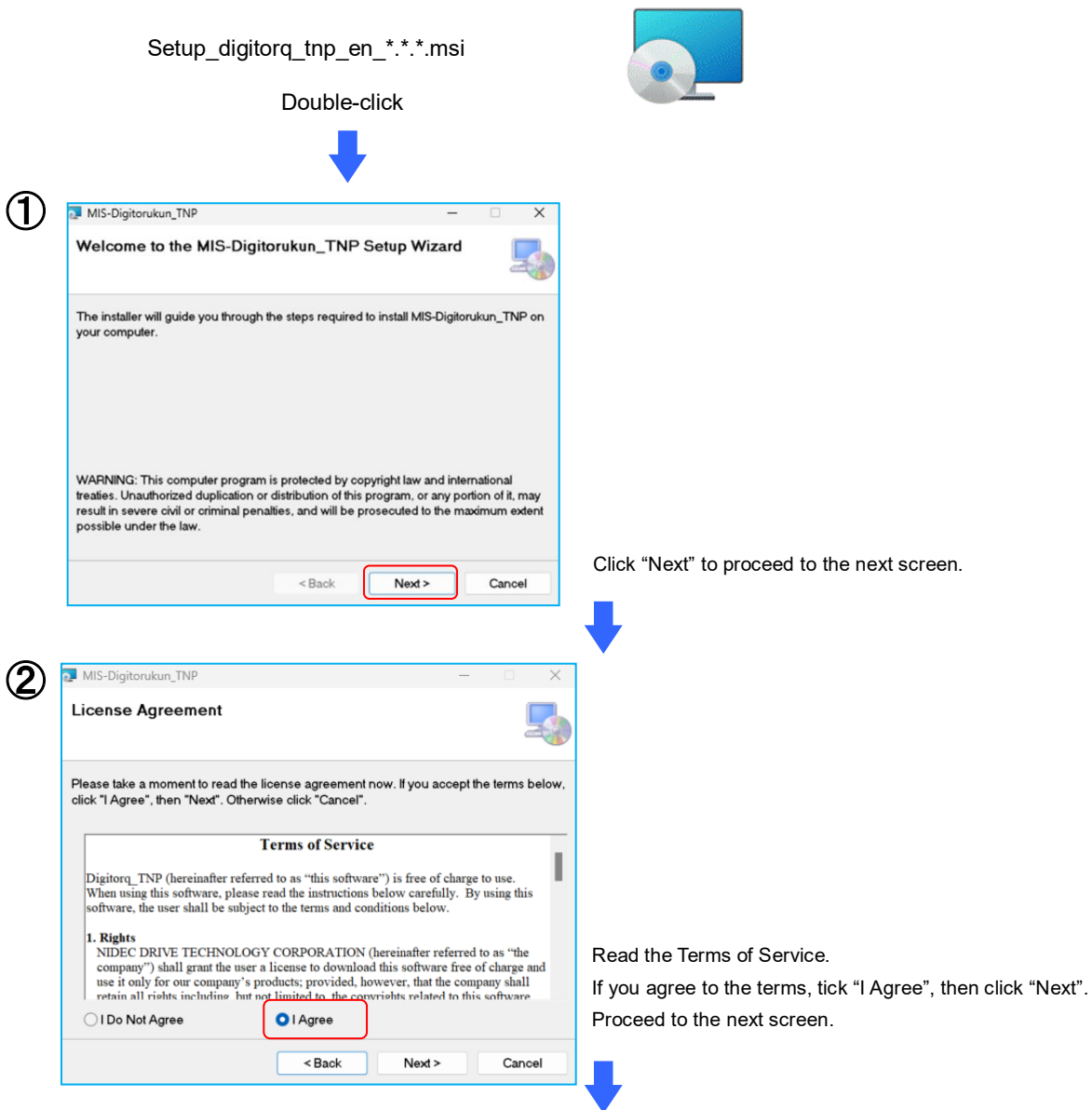
#### 3.1 Extracting the Downloaded File

When you extract the “NDTC-digitorq\_tnp\_en\_download\_v\*.\*.zip” file downloaded from our website, the following files and folder will be saved in the designated location.

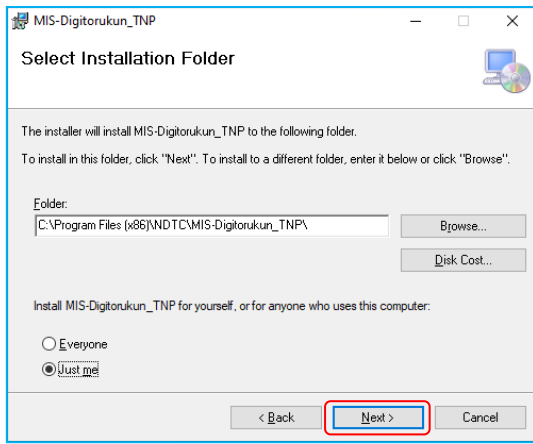
- \* Version information is given in the \*.\*.\* part.
- Setup\_digitorq\_tnp\_mis\_en\_\*. \*.\*.msi
- Digitorq\_TNP Instructionmanual.pdf

#### 3.2 Digitorq\_TNP Installation Procedure

Double-click the “Setup\_digitorq\_tnp\_en\_\*. \*.\*.msi” file to start the installation of Digitorq\_TNP.



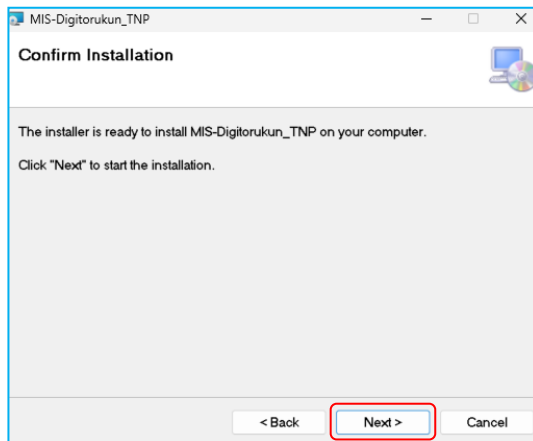
③



Select the destination folder for installing.  
Click "Next", and go to the next screen.



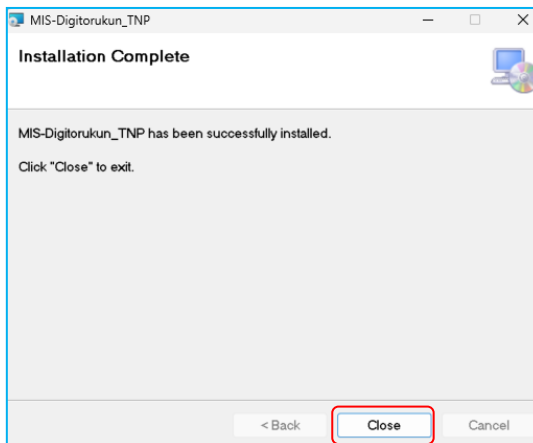
④



Click "Next" to start installation.



⑤



Click "Close", and installation is complete.

- When Digitorug\_TNP installation is complete, the application will be created in the Windows Start menu.

### 3.3 USB Driver Installation Procedure

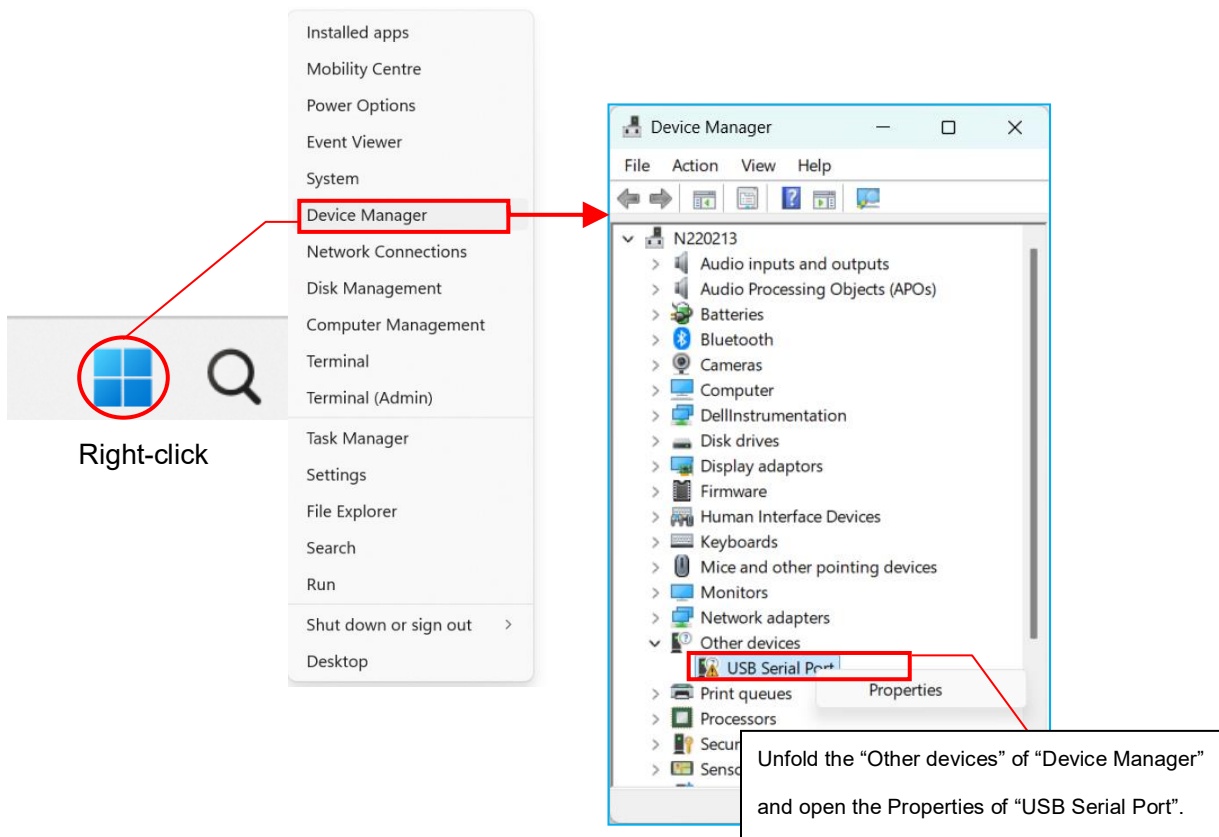
With TNP powered ON, connect the USB cable to the USB port on the PC.

The driver installation process slightly differs depending on the PC environment.

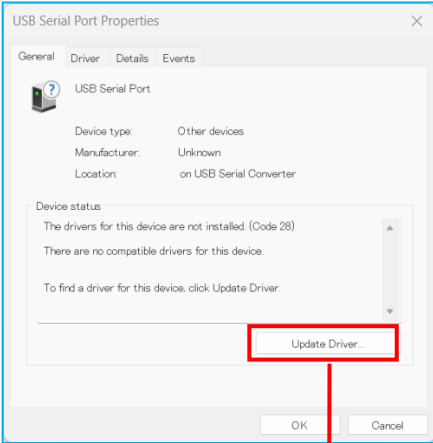
Perform installation according to the PC environment specifications below.

#### Installation for Windows 10

With TNP powered ON, connect the USB cable into the USB port on the PC, then go to “Device Manager”.

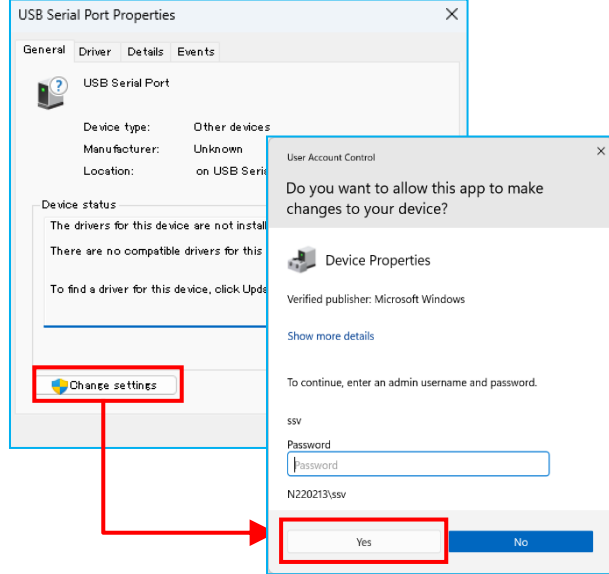


• Log in with Administrator privileges

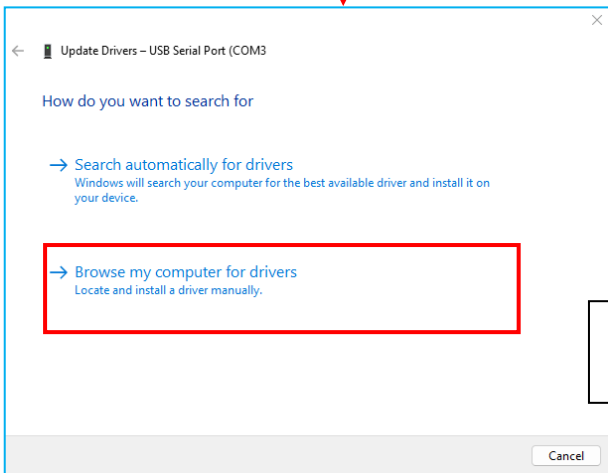
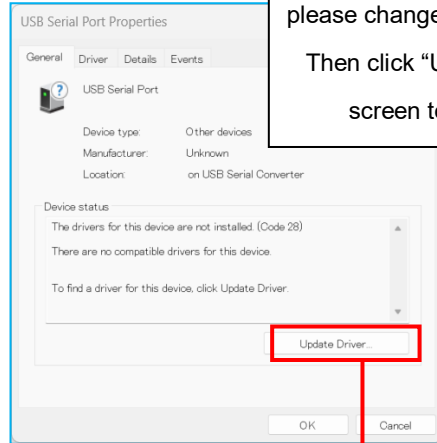


Click "Update Driver" on In the Property screen, Start the driver updating.

• Log in with Standard user privileges

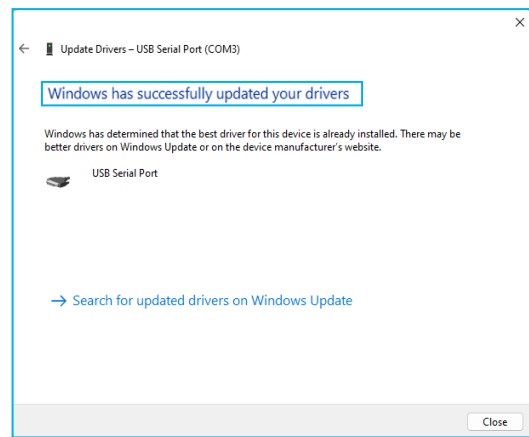
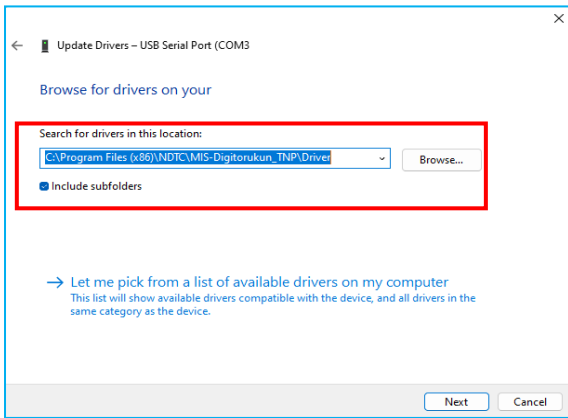


If logging in with standard user privileges, please change administrator privileges at first. Then click "Update Driver" on the Property screen to start the driver updating.



Click "Browse my computer for drivers" and proceed to the next.



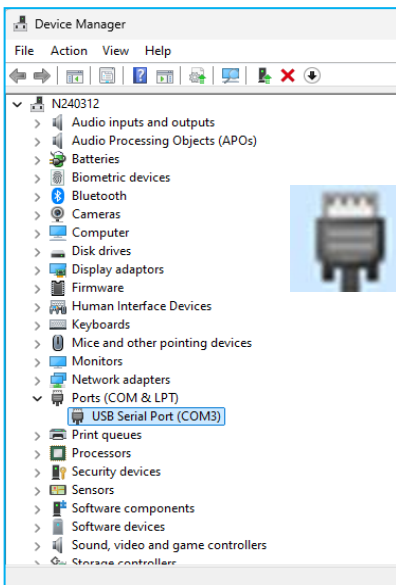


Click "Browse", then select "C:\Program Files (x86)\NDTC\MIS-Digitorukun\_TNP\Driver", and click "Next" to proceed.

- Confirming COM port number

The assigned COM port number can be verified in Device Manager.

When selecting a COM port number at the startup of Digitorq\_TNP, select the COM port number displayed in Device Manager.

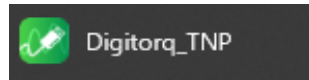


\* □ presents the COM port number.

## 4. Digitorq\_TNP Descriptions

### 4.1 Startup

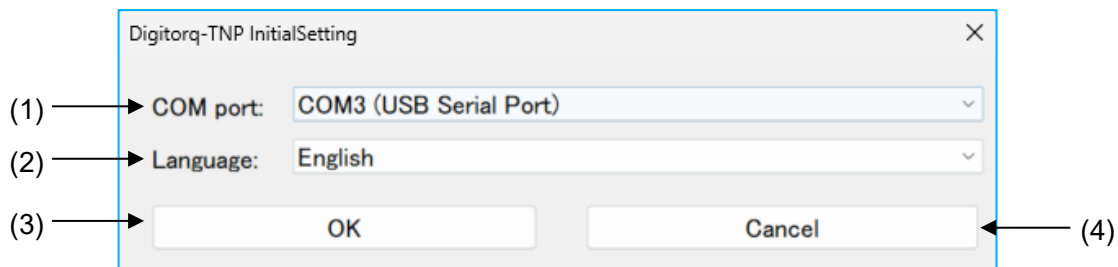
Click “Digitorq\_TNP” from the Start menu.



### 4.2. Initial Screen

Once this software starts normally, the Initial screen is displayed.

Select the COM port and Language, and click the OK button.



(1) COM Port : Only COM port numbers registered in Device Manager can be displayed and selected.

(2) Language : If the display language is set to English, the available options are English and Japanese.

If the display language is set to Japanese, the available options are 英語 (English) and 日本語 (Japanese).

Switching the display language will update the main screen accordingly.

(3) OK : Click “OK” sends the settings to the digital torque meter and displays the main menu.

(4) Cancel : Click “Cancel” closes the Initial Screen and exit Digitorq\_TNP.

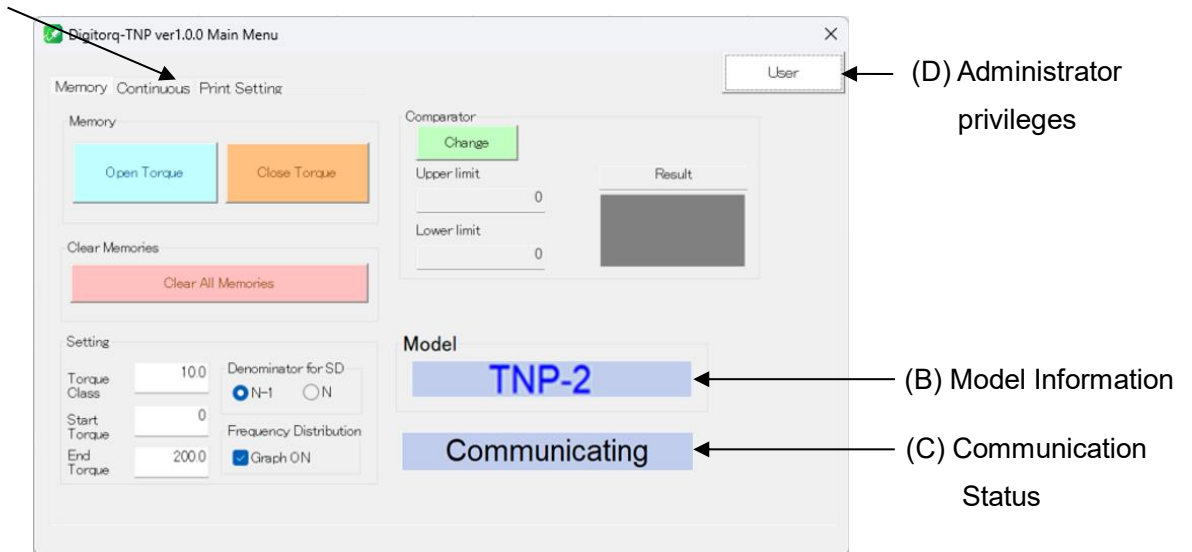
\* If communication with TNP cannot be established when clicking the “OK” button, a message box will be displayed, as shown below, and the next screen will not be accessible.

<p>(1) A communication port different from the one set on the PC was selected in “COM Port”, or the TNP is not properly connected to the PC.</p>	A screenshot of an error message box titled "Digitorq_TNP" with a close button (X). It contains a yellow warning triangle icon and the text "The device is not opened. Please check the COM port." Below the text is an "OK" button.
<p>(2) The TNP unit is not powered ON, or any other communication error occurs.</p>	A screenshot of an error message box titled "Digitorq_TNP" with a close button (X). It contains a yellow warning triangle icon and the text "Failed the communication with TNP. Please check communication cable and power supply." Below the text is an "OK" button.

## 4.3 Main Menu Common Items

If communication is established successfully, clicking the “OK” button on Initial Screen will display the following Main Menu.

### (A) Import Mode Selection Tab



### (A) Import Mode Selection Tab

Select the appropriate tab based on the required function from the four available tabs: “Memory Data”, “Continuous”, “Print Setting”.

### (B) Model Information

The model of the connected digital torque meter is displayed.

### (C) Communication Status

The data import status is displayed as follows.

Display	Status
No display	Normal status
Displays “Communicating”	Active communication
Displays “Communication Error”	Communication error

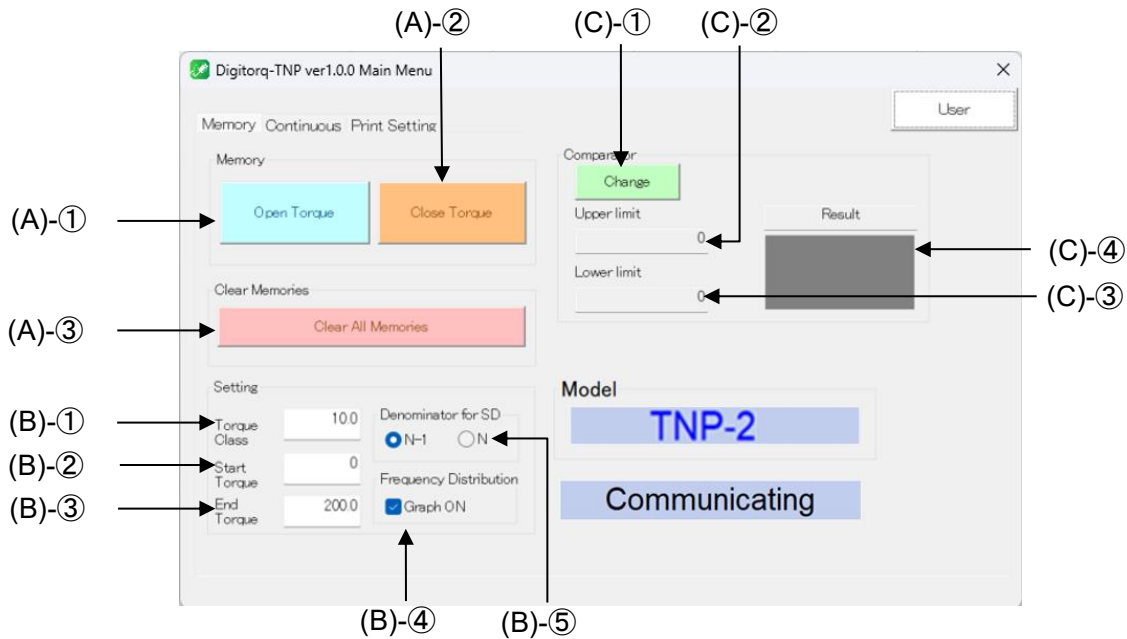
### (D) Administrator privileges

The Administrator privileges screen is displayed, allowing users to lock/unlock settings and change the password.

## 4.4 Memory Data Import

Click the “Memory” tab in the Main Menu to display the following page.

Memory Mode allows the import of saved torque measurement data from the Digital Torque Meter TNP.



### (A) Memory Data Import

#### ① Open Torque

Imports the opening peak torque data registered in memory and save it as a CSV file.

#### ② Close Torque

Imports the closing peak torque data registered in memory and save it as a CSV file.

#### ③ Clear All Memories

Clear all the opening/closing peak torque data registered in memory.

Clicking this option will display a confirmation screen. Click “Yes” to clear all memory data.

### (B) Setting

#### ① Torque Class

Determines the width of one class interval when creating a frequency distribution graph.

#### ② Start Torque

Specifies the minimum Torque Class value shown on the frequency distribution graph.

#### ③ End Torque

Specifies the value included in the maximum Torque Class shown on the frequency distribution graph.

\* For the input range of ①, ②, and ③, refer to “7. Input Range List.”

#### ④ Denominator for SD

Select whether the denominator used for calculating the standard deviation is N-1 or N.

[Default: N-1]

#### ⑤ Frequency Distribution

If ticked, a frequency distribution graph will be created after importing the memory data.

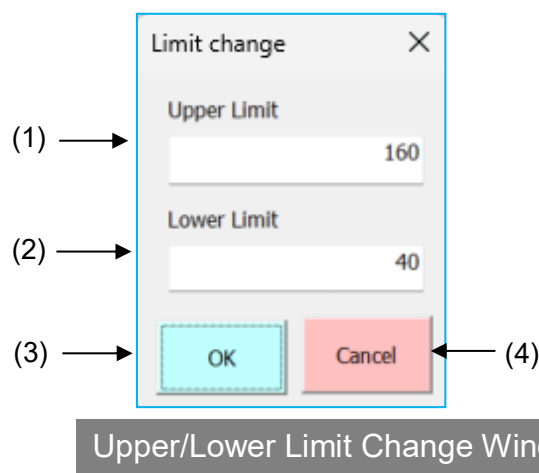
If unticked, the graph will not be created.

[Default: OFF]

### (C) Upper/Lower Limit Judgement

#### ① Change button

Opens the window for changing the upper/lower limit judgement values.



(1) Upper Limit *	Displays the upper limit torque judgement value. Direct input is also possible. [Default value: Comparator upper limit value imported from the digital torque meter]
(2) Lower Limit *	Display the lower limit torque judgement value. Direct input is also possible. [Default value: Comparator lower limit value imported from the digital torque meter]
(3) OK button	Sends the changed values to the digital torque meter.
(4) Cancel button	Returns to the Main Menu without changing the upper/lower limit judgment values.

\* The input range for the upper/lower limit judgement values is between 0 and the rated torque. The number of decimal places that can be entered is based on the display specifications of the connected digital torque meter (refer to 7. Input Range List).

However, the values cannot be input if the upper limit judgement value is less than the lower limit judgement value.

\* The imported torque data will be judged by comparing the absolute torque value with the upper/lower limit judgement values, in either the memory data import or continuous data import modes. Therefore, only positive values can be entered for the upper/lower limit judgement values.

## ② Upper Limit

---

Displays the upper limit judgement value.

[Default value: Comparator upper limit value imported from the digital torque meter]

## ③ Lower Limit

---

Displays the lower limit judgement value.

[Default value: Comparator lower limit value imported from the digital torque meter]

## ④ Result

---

When the upper/lower limit judgement is enabled,  
the judgement result will be displayed in a window as “OK” or “NG”.

- OK judgement: Lower Limit  $\leq$  | Measured torque |  $\leq$  Upper Limit
- NG judgement: When there is at least one torque value entry that meets the following conditions  
Upper Limit  $<$  | Measured torque value |  
or | Measured torque value |  $<$  Lower Limit

### • Calculating formula for Standard Deviation

The formula to calculate the denominator for standard deviation can be selected in the above item (B)-④.

The calculating formulas are as follows.

#### • For N-1

$$\text{Standard Deviation} = \sqrt{\frac{\sum (Xi - \text{Average Value})^2}{N - 1}}$$

$$\text{Average Value} = \sum Xi / N$$

$Xi$  = Measured Data       $N$  = Number of Memory Data

#### • For N

$$\text{Standard Deviation} = \sqrt{\frac{\sum (Xi - \text{Average Value})^2}{N}}$$

$$\text{Average Value} = \sum Xi / N$$

$Xi$  = Measured Data       $N$  = Number of Memory Data

## 4.4.1 Memory Data Format

Click the Open Torque or Close Torque button to import the memory data into the CSV file, as shown below.

	A	B	C
1	Open Torque		(1)
2			
3	Date	2024/12/12 8:59	(2)
4	Prepared by		(3)
5	Remarks		(4)
6			
7	Temperature		(5)
8	Humidity		(6)
9			
10	Model	TNP-2	(7)
11	Unit	Ncm	(8)
12	Denominator for SD	N-1	(9)
13	Torque Class	10	(10)
14	Start Torque	0	(11)
15	End Torque	200	(12)
16	Data number	15	(13)
17	Max	30.9	(14)
18	Min	0	(15)
19	Average	20.3	(16)
20	Standard Deviation	8.37	(17)
21			
22	Upper Limit	160	(18)
23	Lower Limit	40	(19)
24			
25	Number of High NG	0	(20)
26	Number of Low NG	15	(21)
27	Defective rate(%)	100	(22)
28			
29			
30	(23)	(24)	(25)
31	Memory Number	Result	Torque(Ncm)
32		1 L	17.1
33		2 L	15

When importing the closing memory data

	A	B	C
1	Close Torque		
2			
3	Date	2024/12/12 9:00	
4	Prepared by		
5	Remarks		
6			
7	Temperature		
8	Humidity		
9			
10	Model	TNP-2	
11	Unit	Ncm	
12	Denominator for SD	N-1	
13	Torque Class	10	
14	Start Torque	0	
15	End Torque	200	
16	Data number	14	
17	Max	64.8	
18	Min	10.9	
19	Average	43	
20	Standard Deviation	18	
21			
22	Upper Limit	160	
23	Lower Limit	40	
24			
25	Number of High NG	0	
26	Number of Low NG	6	
27	Defective rate(%)	42.86	
28			
29			
30			
31	Memory Number	Result	Torque(Ncm)
32		1 L	36.1
33		2 L	28.5

When importing the opening memory data

• **Description for Each Item**

(1) Memory Data Type Displays the opening/closing torque memory data.	(14) Max Displays the maximum value of imported torque data.
(2) Date Displays the date and time when the test started.	(15) Min Displays the minimum value of imported torque data.
(3) Prepared by The write column is created.	(16) Average Displays the average value of imported torque data.
(4) Remarks The write column is created.	(17) Standard Deviation Displays the standard deviation of imported torque data.
(5) Temperature The write column is created.	(18) Upper Limit Displays the upper limit judgment value currently set.
(6) Humidity (%) The write column is created.	(19) Lower Limit Displays the lower limit judgment value currently set.
(7) Model Information Displays the model for the digital torque meter.	(20) Number of High NG Displays the number of upper limit NG in all memory data.
(8) Unit Displays the unit for the digital torque meter.	(21) Number of Low NG Displays the number of lower limit NG in all memory data.
(9) Denominator for SD Displays the denominator for standard deviation selected in the Main Menu.	(22) Defective rate (%) Displays the defective rate in all memory data.
(10) Torque Class Displays the class width entered in the Main Menu.	(23) Memory Number Displays the memory number of the imported memory data.
(11) Start Torque Displays the Start Torque entered in the Main Menu.	(24) Result Displays the upper/lower limit judgement result. (H: High, O: OK, L: Low)
(12) End Torque Displays the End Torque entered in the Main Menu.	(25) Torque (Ncm) Displays the torque value of the imported memory data
(13) Data Number Displays the number of imported torque data entries.	

• **Number of High NG, Number of Low NG, and Defective Rate**

When importing the memory data, among the torque data entries registered in memory, the number of memory data entries where the upper/lower limit judgement result is H (torque data > upper limit judgement value) is displayed as the Number of High NG. Similarly, the number of memory data entries where the upper/lower limit judgement result is L (torque data < lower limit judgement value) is displayed as the Number of Low NG.

The judgement results for each torque value will be written in the column of the above item (24).

Additionally, the total number of memory data entries where the upper/lower limit judgement result is H or L is summed, and its percentage to the number of all memory data is calculated and displayed as the Defective Rate (%).

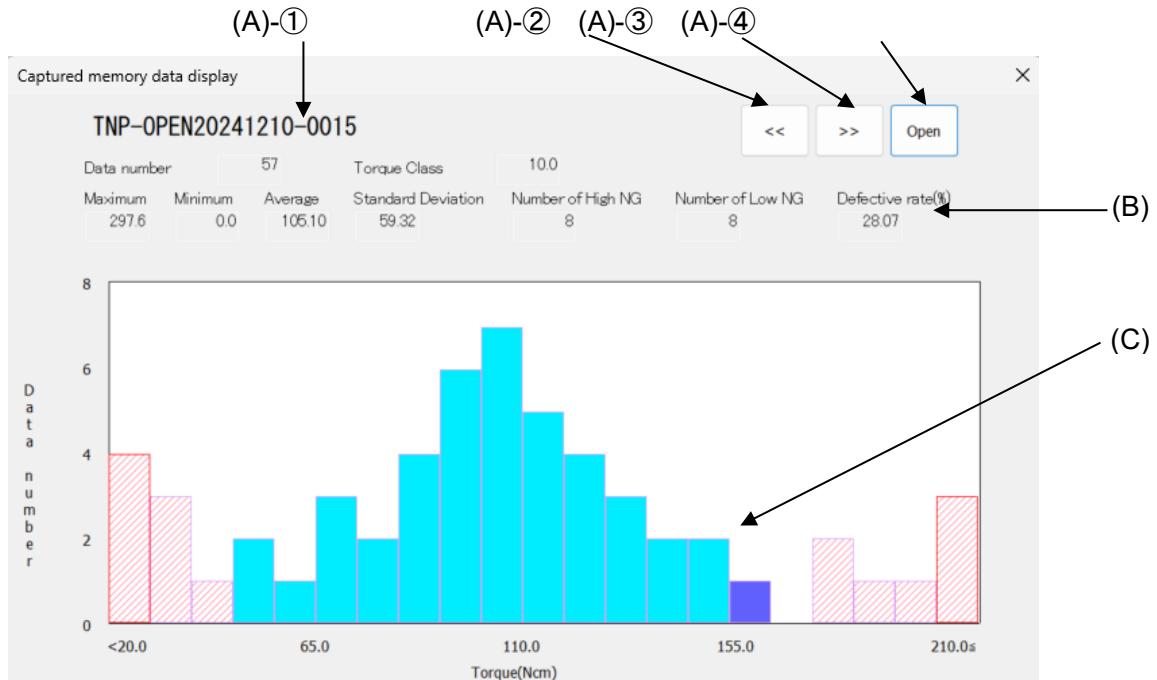
The calculating formula for the defective rate is as follows:

$$\text{Defective Rate(\%)} = \frac{\text{Number of High NG} + \text{Number of Low NG}}{\text{Number of All Memory Data}} \times 100$$

If both the upper and lower limit judgement values are 0, Number of High NG, Number of Low NG, and Defective Rate will not be displayed.

## 4.4.2 Frequency Distribution Graph

- In the memory data import mode, a frequency distribution graph can be automatically created.
- When “Graph ON” is not selected in the Main Menu, the graph will not be created.
- When importing the memory data, if the Graph ON is ticked, the memory data is imported to create a graph.



### (A) Loading CSV File

#### ① File Name

Displays the file name of the currently displayed imported data.

#### ② <<

Opens the previous file of the currently displayed imported data (file name sequential number -1) and displays the data and graph.

#### ③ >>

Opens the next file of the currently displayed imported data (file name sequential number +1) and displays the data and graph.

#### ④ Open

Opens the file selection dialog.

Displays the imported data and the graph created from the data in the selected CSV file.

CSV files not created from the “Continuous” tab will not be displayed correctly when loaded.

### (B) Report on Imported Data

#### ① Data Number:

Total number of imported data entries.

#### ② Torque Class:

The class width set in the Main Menu.

#### ③ Maximum:

The maximum value of the imported torque value.

#### ④ Minimum:

The minimum value of the imported torque value.

#### ⑤ Average:

The average value of the memory data.

#### ⑥ Standard Deviation:

The standard deviation of the memory data.

- ⑦ Number of High NG: Displays the number of upper limit NG in all memory data.
- ⑧ Number of Low NG: Displays the number of lower limit NG in all memory data.
- ⑨ Defective Rate (%): Displays the defective rate in all memory data.

After clicking the “Open Torque” or “Close Torque” tab in the Main Menu, the imported data is displayed in real-time.

The imported data is saved as a CSV file.

The file name differs depending on the selected import mode.

Open Torque: TNP-OPEN {yyyymmdd}-0123.csv (yyyymmdd: the date, 0123: a sequential number starting from 1).

Close Torque: TNP-CLOSE {yyyymmdd}-0123.csv (yyyymmdd: the date, 0123: a sequential number starting from 1).

The data is saved under the folder name “%APPDATA%\NDTC\MIS-Digitorukun\_TNP\DATA\MemoryData”.

When loading a CSV file, the saved imported data is displayed.

### (C) Graph

A graph is displayed based on the imported data.

The graph is saved as a bitmap file.

The file name differs depending on the selected import mode.

Open Torque: TNP-OPEN {yyyymmdd}-0123.bmp (yyyymmdd: the date, 0123: a sequential number starting from 1).

Close Torque: TNP-CLOSE {yyyymmdd}-0123.bmp (yyyymmdd: the date, 0123: a sequential number starting from 1).

The data is saved under the folder name “%APPDATA%\NDTC\MIS-Digitorukun\_TNP\DATA\MemoryData”.

(1) Graph Details

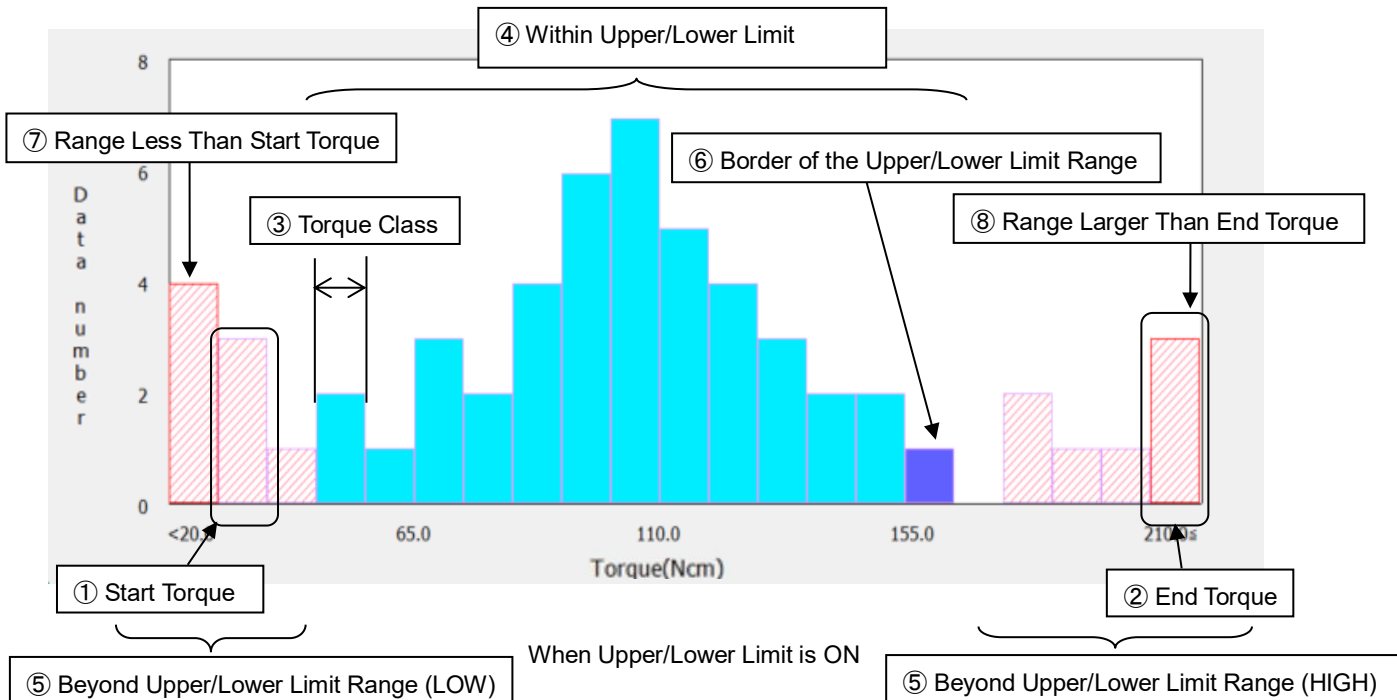
Horizontal Axis: Torque Class value      Vertical Axis: Number of Data entries

The Torque Class, Start Torque (minimum torque value displayed on the graph), and End Torque (value included in the maximum Torque Class on the graph) are determined based on the values entered in the Main Menu.

The number of divisions is automatically set based on the Torque Class, Start Torque, and End Torque.

(2) Graph Format (When Upper/Lower Limit is ON)

When the upper/lower limit judgement is ON (Upper limit judgement value = Lower limit judgement value  $\neq$  0), the following graph is displayed.

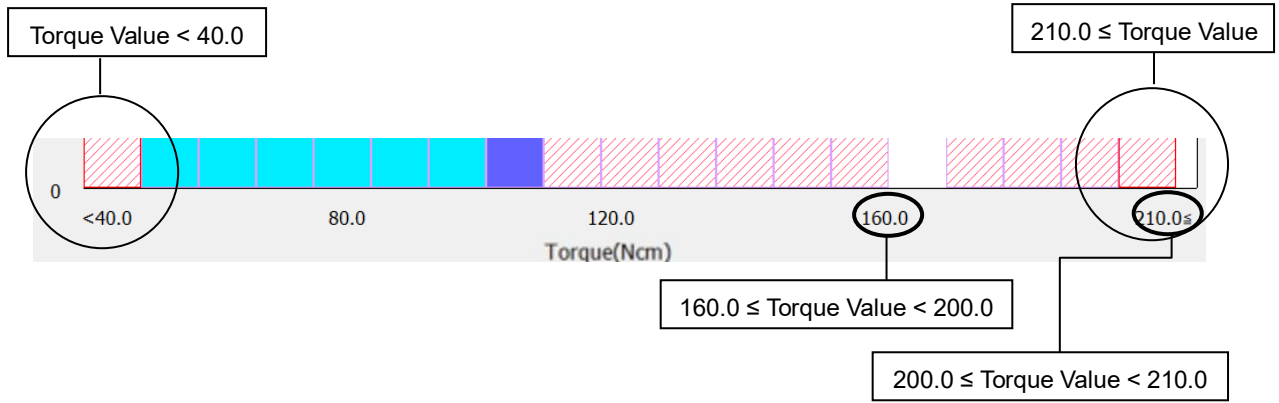


- ① The "Start Torque" class entered in the Main Menu.
- ② The class including the "End Torque" entered in the Main Menu.
- ③ The width of the class interval is the "Torque Class" value entered in the Main Menu.
- ④ Bars representing class within the upper/lower limit range are displayed in aqua.
- ⑤ Bars representing class beyond the upper/lower limit range are displayed in pink diagonal lines.
- ⑥ If there are torque data entries beyond the upper/lower limit judgment values in a class including the upper/lower limit judgment values, the bar for that class is displayed in blue.
- ⑦ Torque data before the Start Torque is distributed in the first class of the graph (enclosed by a red line).  
When the Start Torque is 0, this class is not displayed.
- ⑧ Torque data after the class containing the end torque is distributed in the first class of the graph (enclosed by a red line).

• The class values on the graph are displayed as shown in the diagram below.

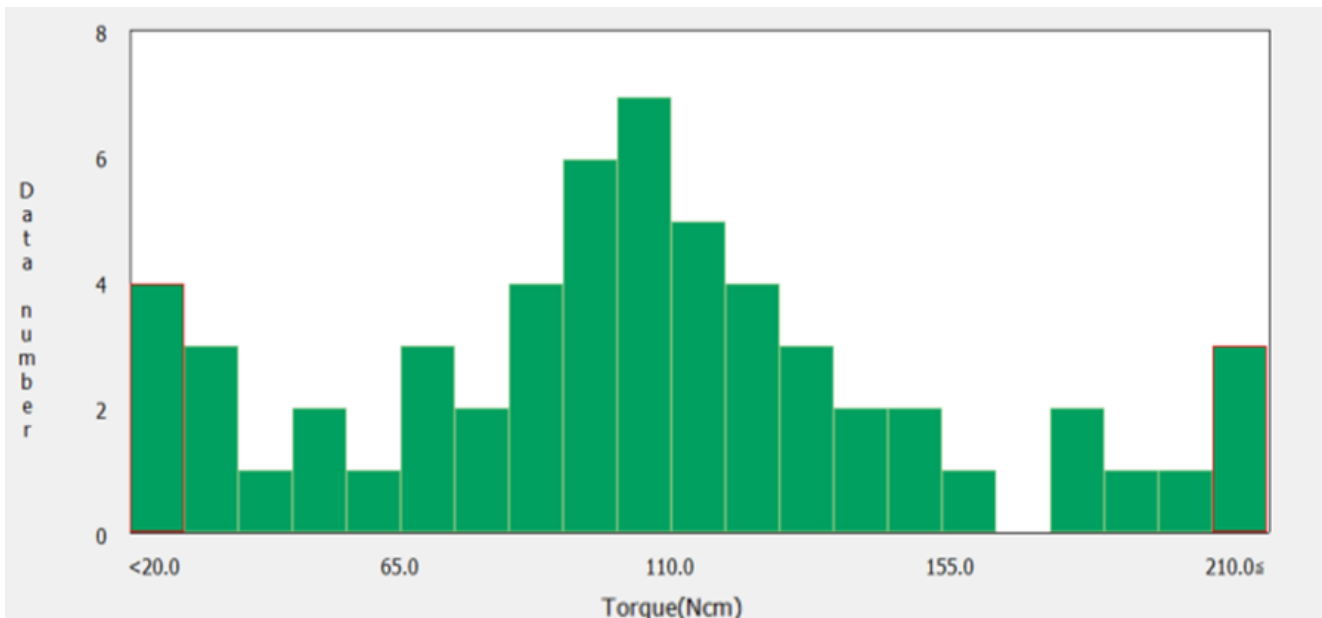
Each class has the range of "class value  $\leq$  torque value < next class value on the right", and torque value of the memory data that fits in that range will be categorized to its class.

• The above ⑦ is the range of "torque value < Start Torque", while ⑧ is the range of "(class value of the class including the End Torque + Torque Class)  $\leq$  torque value".



(3) Graph Format (When Upper/Lower Limit is OFF)

When upper/lower limit is off (upper limit value = lower limit value = 0), the following graph is displayed without colour coding for each class.

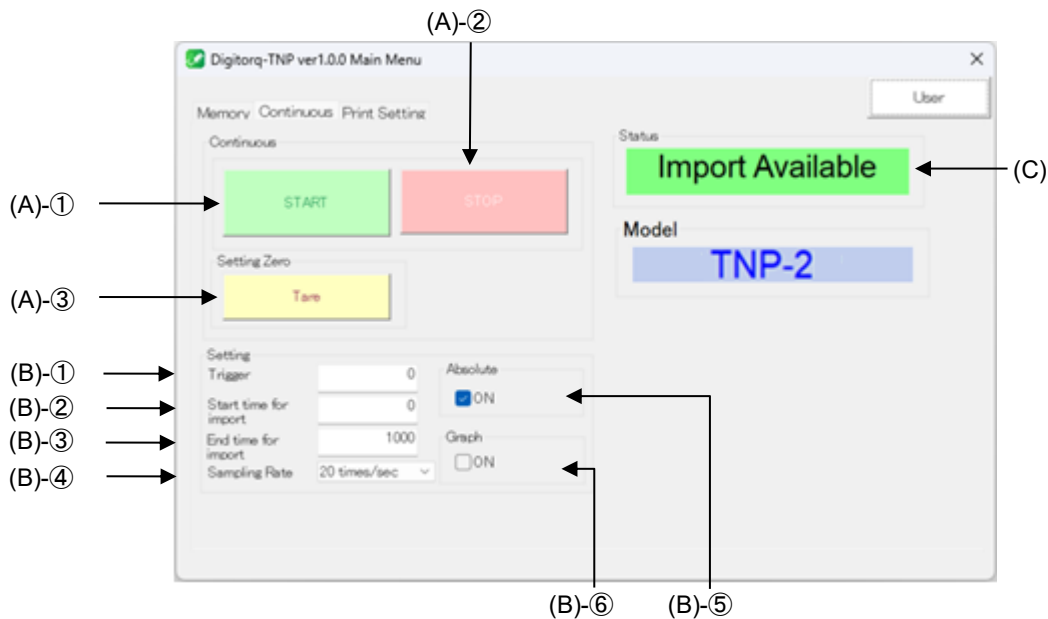


When Upper/Lower Limit Judgement is OFF

## 4.5 Continuous Data Import

Click the “Continuous” tab on the Main Screen to display the following page.

In the continuous data import mode, torque values measured by the digital torque meter can be imported in real-time.



### (A) Continuous Data Import

#### ① START button

Starts importing the continuous data.

Importing the continuous data continues until the STOP button is pressed or until the process is complete based on the specified Start/End time for import.

Upon clicking the “START” button, all buttons except the “STOP” button are disabled until data import is complete.

#### ② STOP button

Stops importing the continuous data.

#### ③ Tare button

Resets the display on the digital torque meter unit to zero.

### (B) Setting

#### ① Trigger

##### • Trigger On Checkbox

Tick the checkbox to toggle the trigger ON/OFF.

When ticked before starting data import, the trigger is enabled.

\* For the input range, refer to “7. Input Range List”.

#### ② Start Time for Import (0 to 99999999)

Set the interval between pressing the START button and starting the data import.

When the trigger is ON, data import starts at the point the set start time for import has elapsed after trigger activation.

When the trigger is OFF, data import starts at the point the set start time for import has elapsed after the START button is pressed.

### ③ End Time for Import (0 to 99999999)

---

Set the interval before data import is terminated.

Even if the set end time for import has not elapsed, data import is terminated when the number of imported data entries reaches 32,000.

### ④ Sampling Rate

---

Select a sampling rate from 20 times/sec, 50 times/sec, or 100 times/sec on the drop-down menu.

Example: Selects 100 times/sec → imports approximately 100 data entries per second.

#### Caution

- The sampling rate for continuous data import is an approximate value.

In actual operation, the number of imported data entries per second may exceed the selected sampling rate.

### ⑤ Absolute ON

---

When this option is selected, the torque data on the closing torque is displayed as the absolute value when importing the continuous torque data on the closing torque.

When this option is not selected, the torque data on the closing torque is displayed as negative values. [Default: ON]

### ⑥ Graph ON

---

When this option is selected, a continuous data graph is created after importing the continuous data.

When this option is not selected, the graph will not be created. [Default: OFF]

## (C) Status

---

The data import status is displayed as follows.

Display	Status
Import Available	The status that the continuous data can be imported.
Idle	The status of waiting for trigger.
Importing	The status that the continuous data is being imported.
Complete	The status that a single continuous data import session is completed.
Import Unavailable	The status that the continuous data import can not be imported due to communication error.

## 4.5.1 Continuous Data Format

Clicking the START button imports the continuous data into a CSV file, as shown below.

	A	B	C
1	Continuous		(1)
2			
3	Date	2024/12/12 9:19	(2)
4	Prepared by		(3)
5	Remarks		(4)
6			
7	Temperature		(5)
8	Humidity		(6)
9			
10	Model	TNP-2	(7)
11	Unit	Ncm	(8)
12			
13	Data No.	106	(9)
14	Max	66.3	(10)
15	Min	0	(11)
16	Average	10.58	(12)
17			
18	(13)	(14)	
19	Time (s)	Torque(Ncm)	
20	0	0	
21	0.05	3	

When importing the continuous data

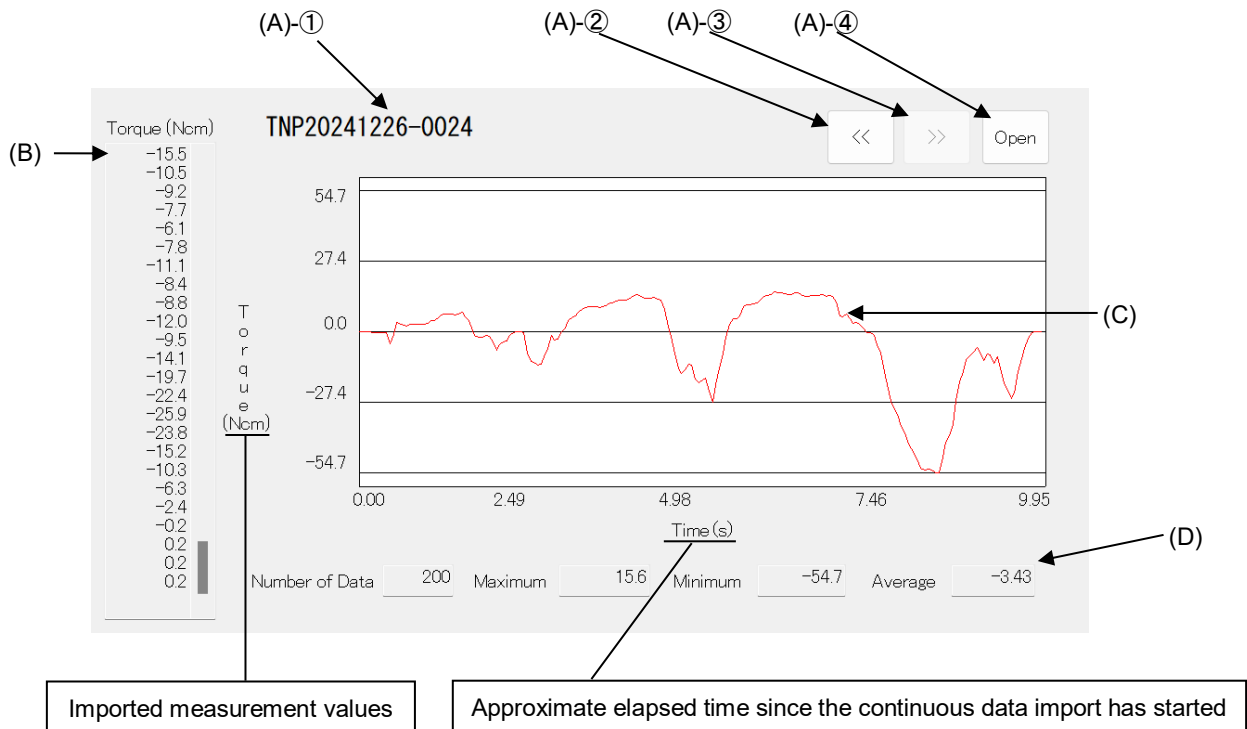
### • Description for Each Item

(1) Memory Data Type Displays "Continuous".	(8) Unit Displays the unit for the digital torque meter.
(2) Date Displays the date and time when the test started.	(9) Data Number Displays the number of imported continuous torque data entries.
(3) Prepared by The write column is created.	(10) Max Displays the maximum value of the imported continuous torque data.
(4) Remarks The write column is created.	(11) Min Displays the minimum value of imported continuous torque data.
(5) Temperature The write column is created.	(12) Average Displays the average value of imported continuous torque data.
(6) Humidity The write column is created.	(13) Time (sec) * Displays the elapsed time since the continuous torque data import start.
(7) Model Displays the model for the digital torque meter.	(14) Torque (Ncm) Displays the continuous torque data.

\* The time (sec) in (13) is an approximate value and does not guarantee the precise elapsed time display.

## 4.5.2 Continuous Data Graph

- In the continuous data import mode, a continuous data graph can be automatically created.
- When “Graph ON” is not selected in the Main Menu, the graph will not be created.
- When importing the continuous data with the “Continuous” tab in the Main Menu, the imported data and graph are displayed.
- The imported data is displayed in real-time, while the graph and other elements are shown after the import is complete.



### (A) Loading CSV File

#### ① File Name

Displays the file name of the currently displayed imported data.

#### ② <<

Opens the previous file of the currently displayed imported data (file name sequential number -1) and displays the data and graph.

#### ③ >>

Opens the next file of the currently displayed imported data (file name sequential number +1) and displays the data and graph.

#### ④ Open

Opens the file selection dialog.

Displays the imported data and the graph created from the data in the selected CSV file.

CSV files not created from the “Continuous” tab will not be displayed correctly when loaded.

### (B) Imported Data

After pressing the START button from the “Continuous” tab in the Main Menu, the imported data is displayed in real-time.

The imported data is saved as a CSV file.

The file name is “TNP {yyyymmdd}-0123.csv” (yyyymmdd: the date, 0123: a sequential number starting from 1).

The save destination folder is “%APPDATA%\NDTC\MIS-Digitorukun\_TNP\DATA\ContinuousData”.

When loading a CSV file, the saved imported data is displayed.

### (C) Graph

A graph is displayed based on the imported data.

The graph is saved as a bitmap file.

The file name is "TNP {yyyymmdd}-0123.bmp"

(yyyymmdd: the date, 0123: a sequential number starting from 1).

The save destination folder is "%APPDATA%\NDTC\MIS-Digitorukun\_TNP\DATA\ContinuousData".

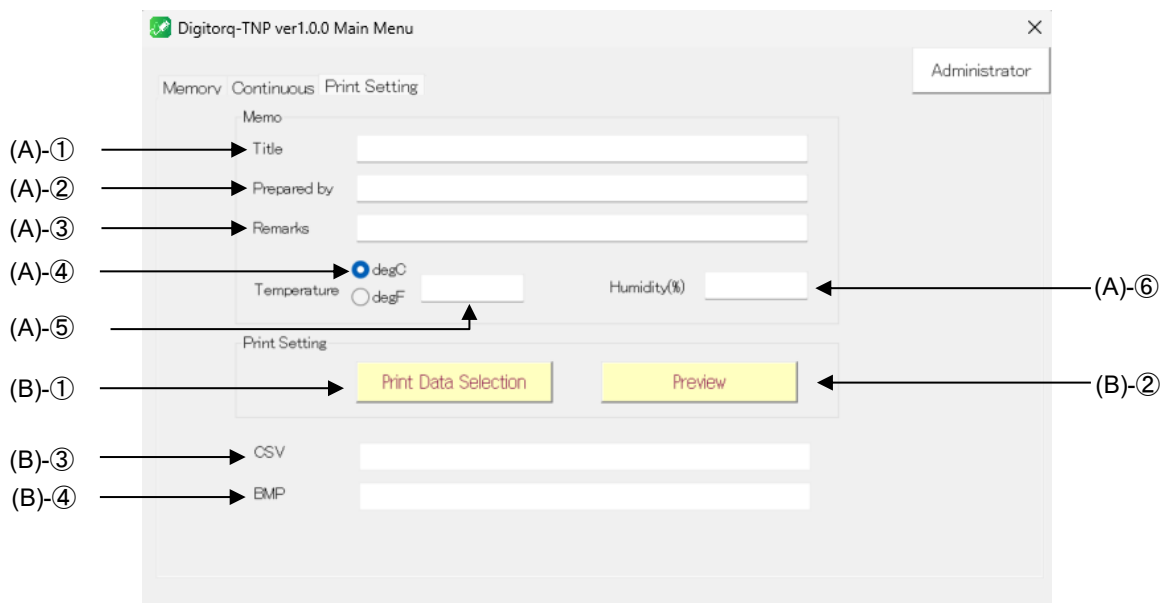
### (D) Report on Imported Data

- ① Number of Data: Total number of imported data entries.
- ② Maximum: The maximum value of the imported torque value.
- ③ Minimum: The minimum value of the imported torque value.
- ④ Average: The average value of the continuous data.

## 4.6 Print Setting

In the print setting, CSV file created when the memory or continuous data has been imported can be changed into a single report format. Write the contents entered in Memo into a CSV file to display the print preview.

\* This feature is enabled only for CSV files and BMP files created when the memory or continuous data has been imported.



### (A) Memo

#### ① Title

Up to 20 characters including both uppercase and lowercase letters can be entered in the title.

[Default: Blank]

#### ② Prepared by

Up to 20 characters including both uppercase and lowercase letters can be entered in the name of the person in charge of measurement.

[Default: Blank]

#### ③ Remarks

Up to 20 characters including both uppercase and lowercase letters can be entered in the remarks.

[Default: Blank]

#### ④ Temperature Unit (°C/°F)

The temperature display unit can be selected from either Celsius (°C) or Fahrenheit (°F).

[Default: Celsius (°C)]

#### ⑤ Temperature

Temperature can be entered. You can enter the value directly, or using the numeric keypad screen.

[Default: Blank]

[Input range: 5-digit integer between 0–99999 (including decimal points)]

#### ⑥ Humidity (%)

---

Humidity can be entered. You can enter the value directly, or using the numeric keypad screen.

[Default: Blank]

[Input range: 5-digit integer between 0–99999 (including decimal points)]

### (B) Print Setting

---

#### ① Print Data Selection

---

Opens the file selection dialog.

Prints the imported data and the graph created from the data in the selected CSV file.

CSV files not created from the “Memory” or “Continuous” tabs will not be printed correctly when loaded.

#### ② Print Preview

---

Click the Print Preview button to put the descriptions entered in (A)-② to ⑥ into the CSV file, and display the Print Preview screen (\*).

#### ③ CSV File

---

Displays the name of the selected CSV file.

#### ④ BMP File

---

Displays the name of the selected CSV file.

#### \* Note on the Print Preview Screen

① Data and graph will be automatically displayed when the Preview button is pressed. However, the printout may not be at the appropriate size depending on your environment or application. In this case, use the “Print Scaling” and set the scaling before printing.

The scaling can be set in 5% increments between 75% and 200%.

② For actual printing, click the “Print” button on the print preview screen.

- Print Preview Screen

① Displays the entered information for Title.

Preview X

**Open Torque**

Date 2024/12/12 08:59:59  
 Prepared by Nidec  
 Remarks 3rd lot

Temperature(deg C) 20.5  
 Humidity(%) 40.6

Model TNP-2  
 Unit Ndm  
 Denominator for SD N-1  
 Torque Class 10.0  
 Start Torque 0  
 End Torque 200.0  
 Data number 15  
 Max 30.9  
 Min 0.0  
 Average 20.3  
 Standard Deviation 8.37  
 Upper Limit 160.0  
 Lower Limit 40.0  
 Number of High NG 0  
 Number of Low NG 15  
 Defective rate(%) 100.00

Print Multiple 100%

**Torque Test**

**TNP-OPEN20241210-0015** << >> Open

Data number	Maximum	Minimum	Average	Standard Deviation	Number of High NG	Number of Low NG	Defective rate(%)
57	297.6	0.0	105.10	59.32	8	8	28.07

Torque(Ncm)

Prepared by Nidec  
Remarks 3rd lot

Temperature(deg C) 20.5  
Humidity(%) 40.6

② Displays the entered information for Prepared By

③ Displays the entered information for Remarks

⑤ Displays the entered value for Temperature

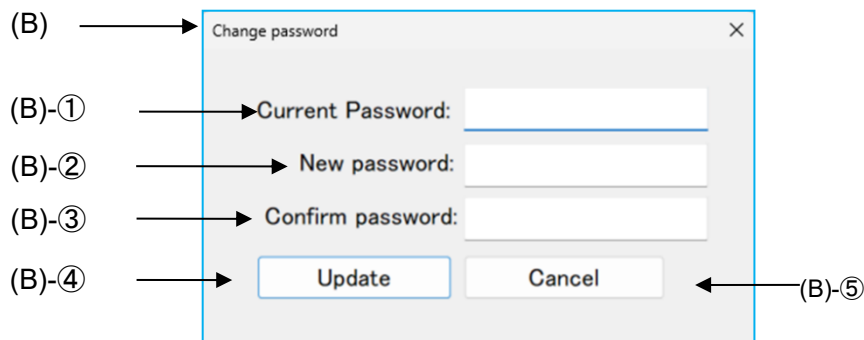
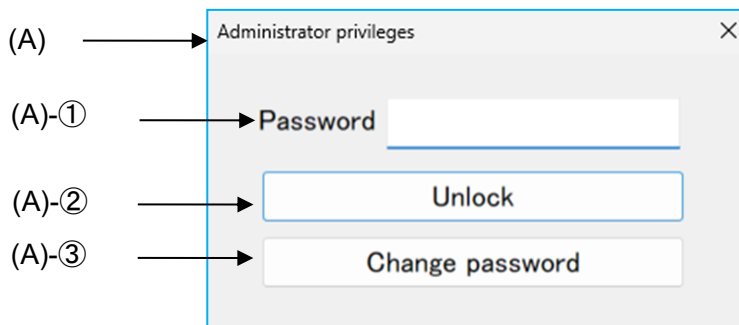
⑥ Displays the entered value for Humidity

④ Displays the Temperature unit

## 5. Administrator Privileges

Click the “Administrator” button in each tab will display the window shown below.

Switching to Administrator Privileges enables the setting changes.



### (A) Password Entry

#### ① Password

Enter the Administrator Privileges password.

The default password upon installation is “password”.

It is recommended that it be changed upon first use.

The password must consist of at least one alphanumeric character or symbol.

If the password is forgotten, reinstalling the software will reset it to the default password.

During reinstallation, both the password and all other settings will be reset. Hence, ensure that the current settings are recorded beforehand and reconfigure them afterwards.

#### ② Unlock

When the entered password is correct, the settings in each tab will become editable.

#### ③ Change password

Navigates to the Change Password window.

## (B) Change Password

### ① Current Password

Enter the currently set password.

### ② New Password

Enter the new password to be registered.

### ③ Confirm Password

Re-enter the new password. This must match the password entered in (B)-②.

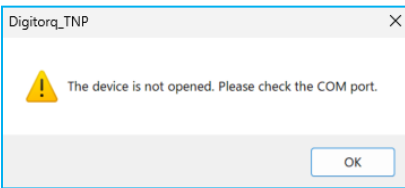
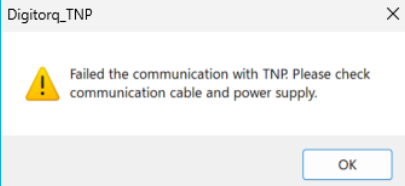
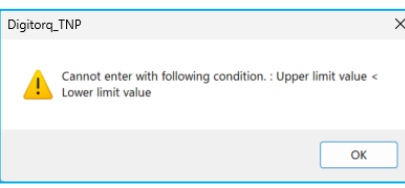
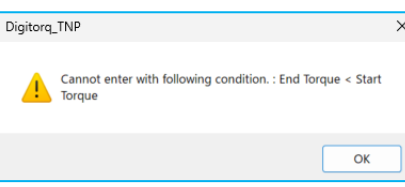
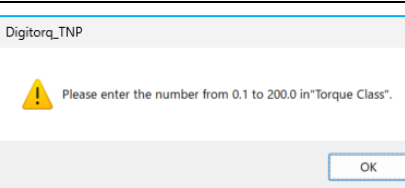
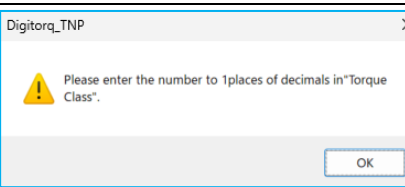
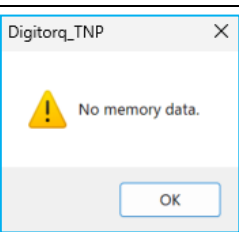
### ④ Update Password

Updates the password. The password will only be updated if the New Password and Confirm Password match.

### ⑤ Cancel

Close the window without changing the password.

## 6. Typical Errors

Error Message	Cause	Solution
	The USB cable is either not connected or the required driver has not been installed.	Ensure that the USB cable is properly connected. Or, ensure that the driver is correctly installed.
	The torque meter unit is powered OFF.	Ensure that the torque meter is powered ON.
	When you have entered the values that provide Upper limit judgment value < Lower limit judgment value, and clicked the OK button on the window for changing upper/lower limit judgment values.	Enter an upper limit judgment value that is larger than the lower limit judgment value.
	When you have entered the values that provide End Torque < Start Torque, and clicked the Open/Close Torque button.	Enter an end torque value larger than the Start Torque value.
	When you have entered a value out of the input range in each input item  The acceptable range varies depending on the model.	Refer to the error message, and enter a value within the input range.
	A value in number of decimal places outside the input range was entered in the input fields.  The acceptable range varies depending on the model.	Refer to the error message, and input a value in number of decimal places within the input range.
	<ul style="list-style-type: none"> <li>• When you have clicked the “Clear Last Data” button under the condition that the number of registered memory data entries is 0.</li> <li>• When you have clicked the “Open (Close) Memory” button under the condition that the number of registered memory data entries is 0.</li> </ul>	Perform operation under the condition that there is registered memory data.

## 7. Input Range List

Model	Item	Upper Limit Value		Lower Limit Value		Torque Class	
		N•m *1	N•cm	N•m *1	N•cm	N•m *1	N•cm
TNP-0.5	Input range	0 to 500.0	0 to 50.00	0 to 500.0	0 to 50.00	0.1 to 500.0	0.01 to 50.00
	Default value	*2	*2	*3	*3	25	2.5
	Number of decimal places	1	2	1	2	1	2
TNP-2	Input range	0 to 2.000	0 to 200.0	0 to 2.000	0 to 200.0	0.001 to 2.000	0.1 to 200.0
	Default value	*2	*2	*3	*3	0.1	10
	Number of decimal places	3	1	3	1	3	1
TNP-5	Input range	0 to 5.000	0 to 500.0	0 to 5.000	0 to 500.0	0.001 to 5.000	0.1 to 500.0
	Default value	*2	*2	*3	*3	0.25	25
	Number of decimal places	3	1	3	1	3	1
TNP-10	Input range	0 to 10.00	0 to 1000	0 to 10.00	0 to 1000	0.01 to 10.00	1 to 1000
	Default value	*2	*2	*3	*3	0.5	50
	Number of decimal places	2	0	2	0	2	0
Model	Item	Start Torque		End Torque		Trigger	
		N•m *1	N•cm	N•m *1	N•cm	N•m *1	N•cm
TNP-0.5	Input range	0 to 500.0	0 to 50.00	0 to 500.0	0 to 50.00	0 to 500.0	0 to 50.00
	Default value	0	0	500	50	0	0
	Number of decimal places	1	2	1	2	1	2
TNP-2	Input range	0 to 2.000	0 to 200.0	0 to 2.000	0 to 200.0	0 to 2.000	0 to 200.0
	Default value	0	0	2	200	0	0
	Number of decimal places	3	1	3	1	3	1
TNP-5	Input range	0 to 5.000	0 to 500.0	0 to 5.000	0 to 500.0	0 to 5.000	0 to 500.0
	Default value	0	0	5	500	0	0
	Number of decimal places	3	1	3	1	3	1
TNP-10	Input range	0 to 10.00	0 to 1000	0 to 10.00	0 to 1000	0 to 10.00	0 to 1000
	Default value	0	0	10	1000	0	0
	Number of decimal places	2	0	2	0	2	0

\*1 mN•m only for TNP-0.5.

\*2 Default upper limit judgement value: TNP upper limit comparator value

\*3 Default lower limit judgement value: TNP lower limit comparator value

## NIDEC DRIVE TECHNOLOGY CORPORATION

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## NIDEC DRIVE TECHNOLOGY CORPORATION

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