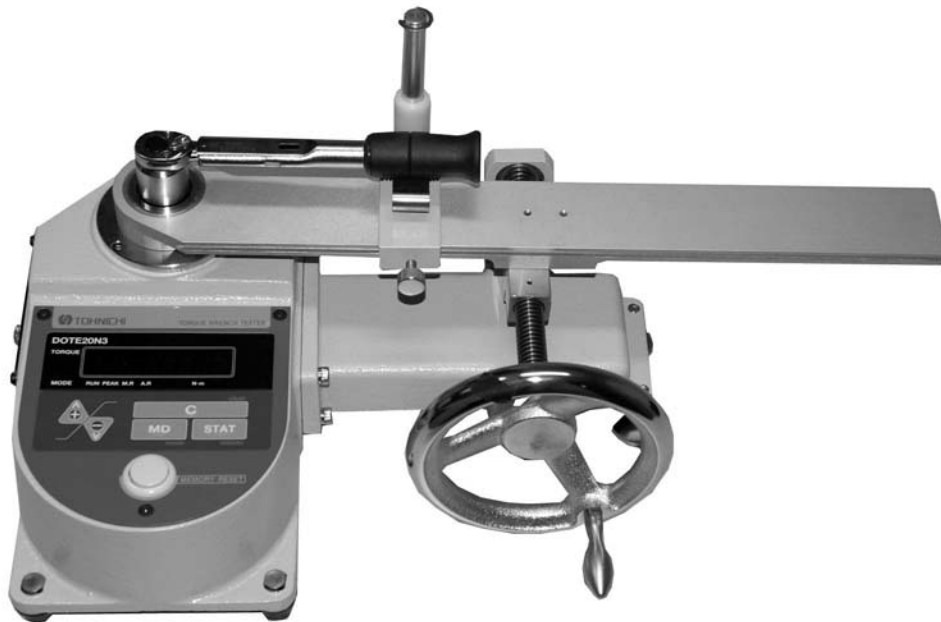


# DIGITAL TORQUE WRENCH TESTER MODEL DOTE3

## OPERATING INSTRUCTION

**DOTE3** DOTE3 Model



CE

To use this product properly and safely, please read this manual carefully before use. If you have any question about the product and its operations, please contact your nearest distributor or TOHNICHI MFG. CO., LTD.

## Safety Precautions

**To customers:** Before using this product, please read this operating instruction carefully to use it properly.

If you have any question, please contact your nearest distributor or TOHNICHI MFG. CO., LTD. This operating instruction should be stored in a safe place.



Safety Symbol

This symbol is used for drawing attention to "safety precautions". If you see this symbol in this operating instruction, attention should be paid to safety. Take preventative actions according to the description and conduct "safe operations and proper control".

### Signal Words

The signal words are the headers which indicate the level of hazard that should be known for human safety and in handling devices. The signal words for safety are "Danger", "Warning" and "Caution" depending on the level of hazard to human. The signal words are used with the safety symbol to indicate the following situations.

"⚠ Danger": Indicates an imminently hazardous situation which, if not avoided, could result or serious injury.

"⚠ Warning": Indicates a potentially hazardous situation which, if not avoided, could result or serious injury.

"⚠ Caution": Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

### ⚠ Warning

- (1) Stop using the product when smoke comes out or strange smell or unusual noise occurs.  
Use in an abnormal state may result in electric shock or fire.  
In such occasions immediately turn off the power, remove the AC adapter from the outlet and contact your nearest distributor or TOHNICHI MFG. CO., LTD.
- (2) Do not disassemble or modify this tester.  
It may result in loss of safety, degradation in functions, shortening of product life, or failure.
- (3) Stop using the product when foreign matter or liquid such as water gets inside.  
You may be exposed to the danger of electric shock or fire.
- (4) Do not connect or disconnect the AC adapter with wet hands.  
You may be exposed to the danger of electric shock.
- (5) Do not use this tester with a power voltage other than that specified (AC100V to 240V±10%).  
Use with any unspecified power voltage may result in electric shock or fire.
- (6) Do not use a damaged power cable of AC adapter.  
Use of a damaged power cable may result in electric shock or fire.  
When handling the power cable, follow the instructions below.
  - Do not damage, extend or heat the power cable.
  - Do not yank the power cable, put heavy objects on it, or pinch it.
  - Do not bend the power cable by force, twist it or bind it.
  - Do not use a power cable other than that supplied with the product.
  - Do not use the power cable with other devices.
- (7) Handle the AC adapter carefully.  
Improper handling may result in fire.
  - Remove any foreign matter such as dust before inserting the plug into outlet.
  - Be sure to insert the power plug fully into outlet.
- (8) When removing the AC adapter from outlet, grasp the plug by hand firmly.  
Do not pull on the power cable. It may damage the cable, resulting in fire or electric shock.
- (9) Do not place this tester on an unstable or shaky place such as a rickety table or slope.  
The tester or attachments (socket, ratchet adapter) may fall, resulting in injury.

- (10) Do not put this tester in a place where inflammable liquid or combustible gas is present.  
It may cause electric shock or fire.
- (11) Be sure to use the specified accessories or options.  
Do not use any accessory or option other than those specified in this operating instruction.  
Use of any unspecified accessory may result in accident or injury.

### **Caution**

- (1) Do not put this tester in a place of much moisture or dust, in a place that is exposed to water or direct sunlight, or in a place where the humidity or temperature fluctuates largely.  
It may result in electric shock, fire, malfunction, degradation of performance or failure.
- (2) Clean the AC adapter periodically. Before cleaning, disconnect the plug from outlet and clean the root of the plug and the portion between the blades.  
Accumulation of dust at the root of the power plug may cause a short circuit, leading to fire.
- (3) If this tester is not to be used for a long time, be sure to disconnect the AC adapter from outlet for safety.
- (4) Before moving this tester to another place, be sure to turn off the power, remove the AC adapter from outlet and disconnect all connecting cables. When moving the line checker, avoid shock or vibration to it.  
It may damage the AC adapter or connecting cables, resulting in fire, electric shock or malfunction.
- (5) Do not use this tester to conduct measurements beyond its capacity.  
For safe and efficient operation, use this tester to measure the torque wrenches suited to the capacity.  
Measurement beyond the capacity may cause accident or damage.
- (6) Check for any damaged parts.  
Before use, check the line checker, accessories and other parts for damage and make sure that it operates normally and fulfills the specified functions.  
Check the parts and all other portions that may affect the operation for damage, installation status, etc.  
For replacement or repair of damaged parts, contact your nearest distributor or TOHNICHI MFG. CO., LTD.

## **Precautions for Use**

- (1) Never use a power source with a voltage other than 100-240V. Use the attached AC adapter.
- (2) Do not use this torque wrench checker in an environment other than that specified in the operating instruction.
- (3) Do not disassemble or modify this tester.
- (4) Before use, make a pre-operation inspection and check the settings.
- (5) If this torque wrench checker gets wet with water or grease, it may break down or burn out. Be careful not to drop water or grease.
- (6) Do not let this torque wrench checker fall or bump. It may result in damage or failure.
- (7) Use this torque wrench checker within the measurement range specified in the operating instruction.
- (8) Be sure to conduct a periodic inspection.
- (9) Before make measurement, make sure that "zero" is displayed.  
Should the tester give out abnormal smell or catch fire during use, stop using it immediately. Then, move the line checker to a safe place and contact your nearest distributor or TOHNICHI MFG. CO., LTD.

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## 1. Outline

Model DOTE3 is a digital torque wrench tester designed for calibrating torque wrenches, and it has the following features:

- (1) No need of torque wrench weight correction
  - The torque wrench to be measured is set horizontally, and torque wrench correction is not necessary.
- (2) Stable measurement conditions
  - By turning the handle, the "loading device" is activated to apply a load correctly to the effective length of the torque wrench, keeping stable calibration conditions and preventing errors.
- (3) Data memory/arithmetic function
  - Up to 99 readings can be stored. The sampling number, maximum value, minimum value and average value of stored data can be displayed.
- (4) Data transmission to external devices
  - The RS232C output terminal allows the DOTE3 to be interfaced to PC or Tohnichi printer (EPP16M2).
- (5) Power source
  - Adaptable to AC100-240V±10%. The DOTE3 can be used in most of countries or regions in the world.
- (6) CE marking acquired
  - The DOTE3 can be safely used in the EU.

## 2. Standard Construction

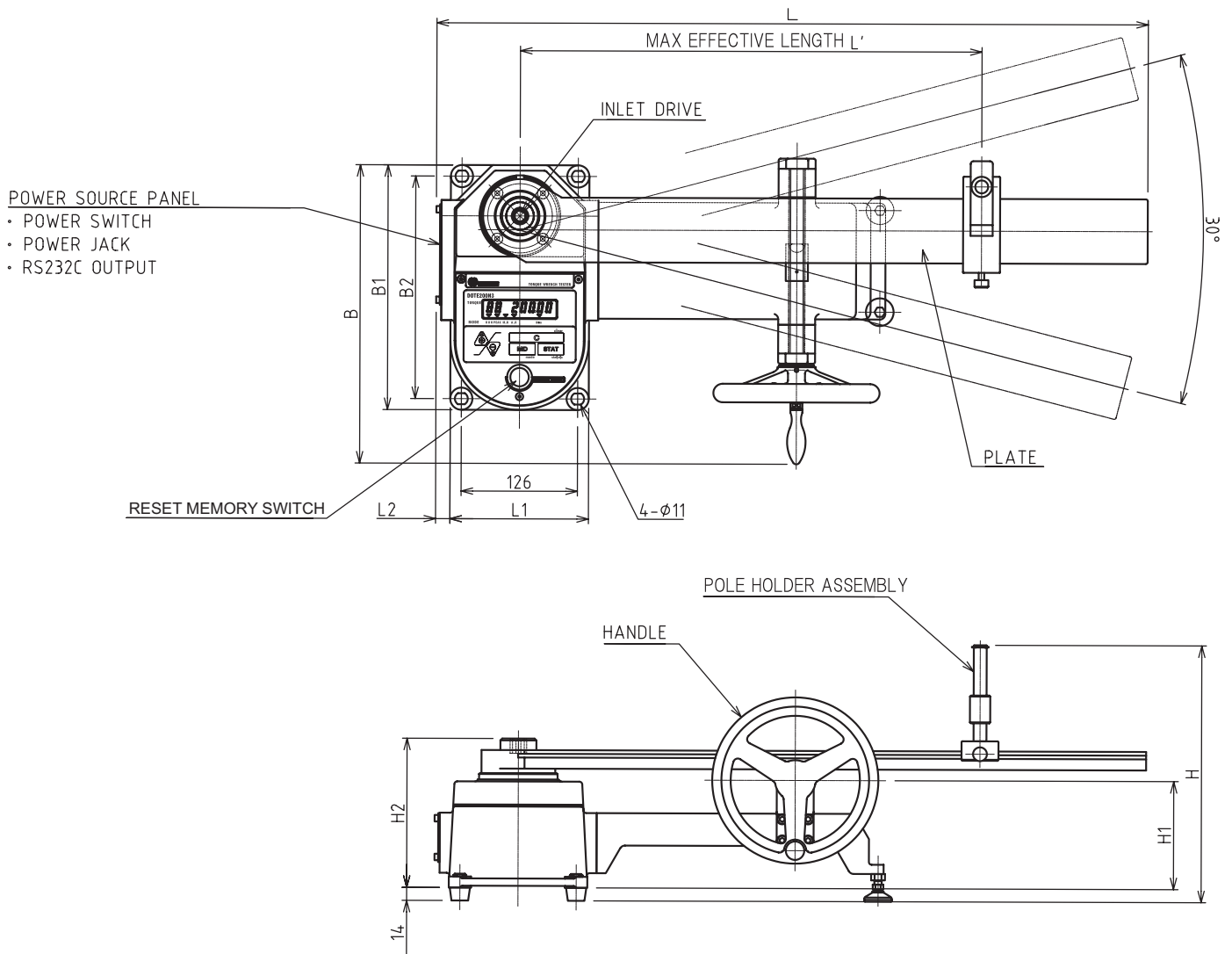
- |   |                         |
|---|-------------------------|
| (1) Main Unit of the Tester                         | 1pc.                    |
| (2) AC Adapter (Type : BA-3)                        | 1pc.                    |
| (3) Loading Plate                                   | 1pc.                    |
| (4) Pole Assembly                                   | 1pc. (2pc for DOTE20N3) |
| (5) Sockets (not supplied for DOTE200N3, DOTE500N3) | 1pc.                    |
| (6) Hex Adapters                                    | 1pc.                    |
| (7) Operating Instructions                          | 1pc.                    |
| (8) Operation Sticker                               | 1pc.                    |

## 3. Specifications

### 3-1 Common Specifications

<b>Display</b>	8-figure fluorescent display tube LED height 10.5mm
<b>Count Value</b>	2 figures
<b>Display Value</b>	5 figures
<b>▼ Mark Indication Displays</b>	RUN: Run Mode PEAK: Peak Mode M. R: Manual memory/reset A. R: Auto memory/reset Unit: N·m
<b>Output</b>	RS232C
<b>Power Source</b>	AC100V~AC240V ± 10% 50/60Hz
<b>Environmental Conditions</b>	0~40 °C Humidity below 85% RH (no condensation)
<b>Accuracy</b>	±1% + 1digit

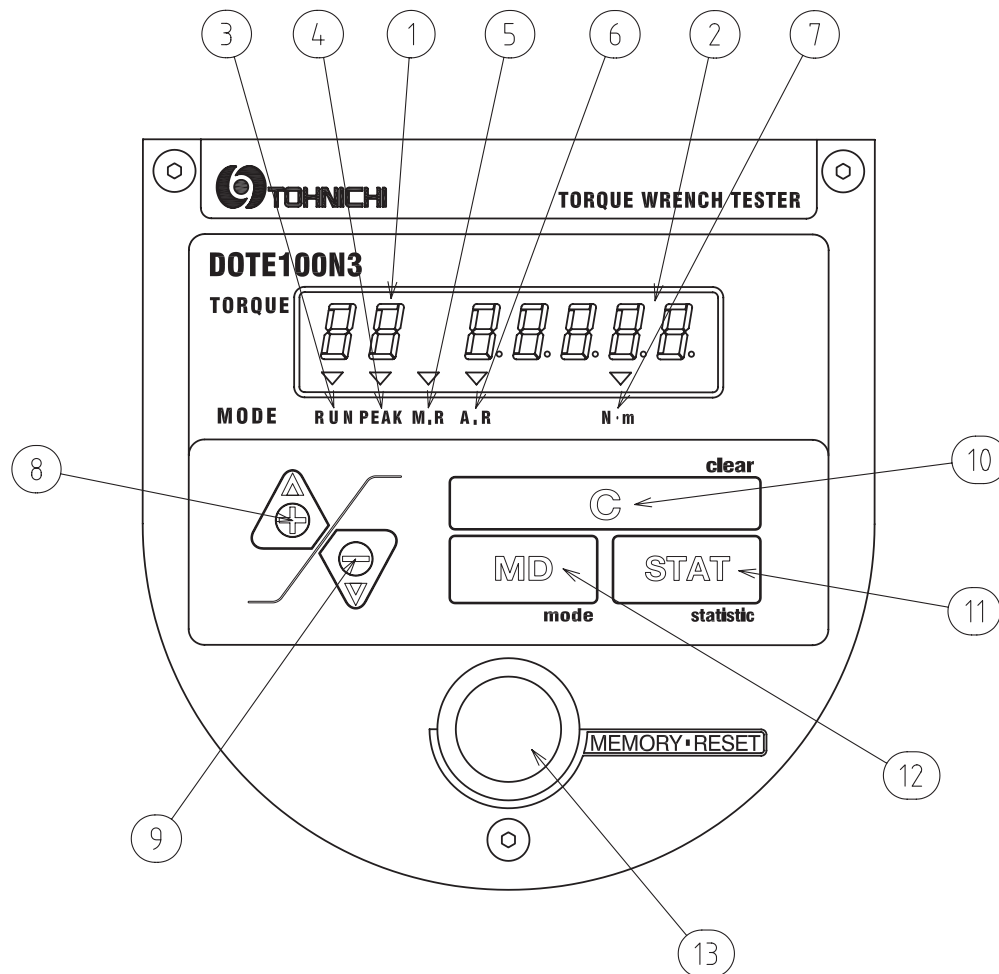
### 3-2 Specifications for Each Model



MODEL		DOTE20N3	DOTE50N3	DOTE100N3	DOTE200N3	DOTE500N3	DOTE1000N3
NEWTON [N·m]	MIN ~ MAX	2 ~ 20	5 ~ 50	10 ~ 100	20 ~ 200	50 ~ 500	100 ~ 1000
	1 digit GRADUATION	0.005	0.01	0.02	0.05	0.1	0.2
MODEL		200DOTE3	500DOTE3	1000DOTE3	2000DOTE3	5000DOTE3	10000DOTE3
METRIC [kgf·cm/kgf·m]	MIN ~ MAX	20 ~ 200	50 ~ 500	100 ~ 1000	200 ~ 2000	5 ~ 50 kgf·m	10 ~ 100 kgf·m
	1 digit GRADUATION	0.05	0.1	0.2	0.5	0.01	0.02
MODEL		200DOTE3-A	500DOTE3-A	1000DOTE3-A	2000DOTE3-A	5000DOTE3-A	10000DOTE3-A
ENGLISH [lbf·in/lbf·ft]	MIN ~ MAX	18 ~ 180	44 ~ 440	87 ~ 870	170 ~ 1700 lbt·in	36 ~ 360 lbf·ft	73 ~ 730 lbf·ft
					15 ~ 150 lbt·ft		
	1 digit GRADUATION	0.05	0.1	0.2	0.5 0.05	0.1	0.2
TORQUE WRENCH MAX EFFECTIVE LENGHT [mm]		410			660	1020	1650
INLET DRIVE [mm]		9.5		12.7		19.0	25.4
DIMENSION [mm]	L'	511			771	1141	1771
	B	263			323	394	509
	H	221			278	304	361
	B1	245			265		
	B2	221			241		
	L1	150					
	L2	5.6			15.6		
	H1	87			117	139	139
	H2	142			162	201	222
WEIGHT [kg]		11			13	24	45
ACCESSORIES [mm]	SQUARE (FEMALE)	6.3		6.3 9.5	-	-	19.0
	HEX (MALE)	10·13·19 12·14·17			17·22·27 19·24·30	22·27·29 30·32·36	34·41 46·50

## 4. External View

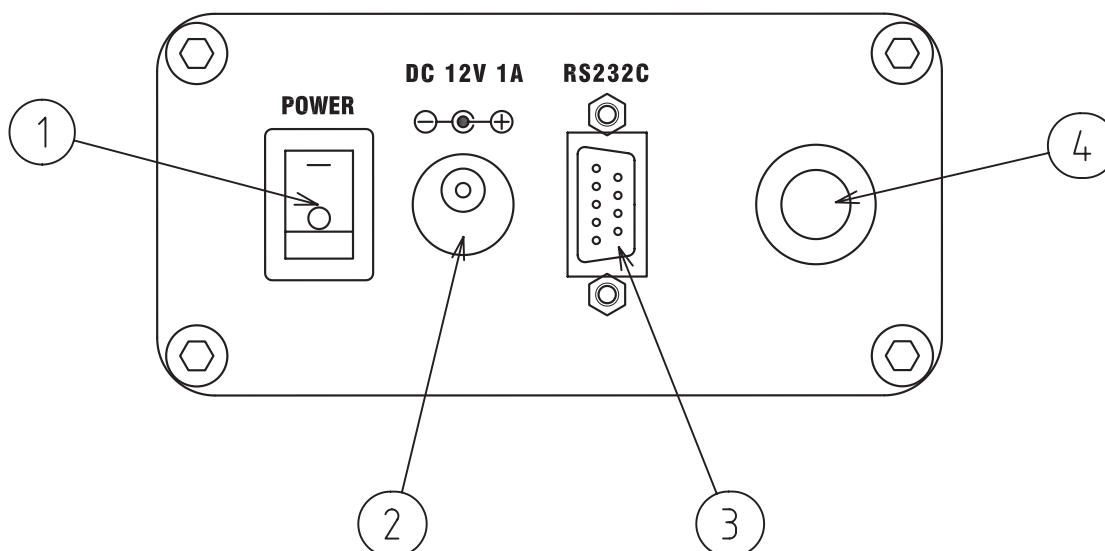
### 4-1 Display and Operation Keys



- |                                     |  |
|-------------------------------------|--|
| (1) Counter                         | The count memory is displayed.   |
| (2) Torque Value                    | Screen indicates the torque value.   |
| (3) Run Mode                        | The ▼ mark for RUN lights when RUN (continuous) mode is selected.  |
| (4) Peak Hold Mode                  | The ▼ mark for PEAK lights when PEAK (maximum value) mode is selected.   |
| (5) Manual Memory/Reset             | When manual memory mode is on, the ▼ mark for M.R remains lit.<br>(PEAK MODE) ▼ mark remains lit in RUNMODE.   |
| (6) Auto Memory/Reset               | When Auto memory mode is on, the ▼ mark for A.R remains lit.   |
| (7) Measurement Units (2-Units)     | The ▼ mark lights and indicates the unit in use.   |
| (8) Count Forward Key               | When the ▼ key is pressed, the ▼ key moves the memory counter forward.   |
| (9) Count Backward Key              | When the ▼ key is pressed, the ▼ key moves the memory counter backward.  |
| (10) Clear "C" Key                  | In the PEAK mode, the peak value is cleared. Or, the stored measurement value is cleared. In RUN mode, the displayed value is set to zero. (zero adjustment) |
| (11) STAT Key                       | The STAT Key displays the sampling number and the maximum value, minimum value and mean value of the reading   |
| (12) Mode "MD" Key                  | The mode "MD" key selects "RUN" mode or "PEAK" mode.   |
| (13) Reset Button<br>(RESET/MEMORY) | The measured data is stored and the Reset Button simultaneously moves the counter forward when pressed.  |



## 4-2 Power Source and Output



- (1) POWER Switch: Turns the power ON or OFF.
- (2) DC power jack (12V, 1A, center plus): Connect the attached AC adapter.
- (3) RS232C terminal
- (4) Arithmetic processing switch: While the arithmetic processing switch is depressed, the measurement value is converted by the conversion factor indicated in the table below and the resultant value is displayed.

Model	Conversion factor
DOT20N3~200N3	×10.1972
DOT500N3, DOT1000N3	×0.10972

## 5. Function and Operation

- Data Memory : Memory capacity up to 99 readings. (Peak and Run values)

- Sampling Number (n)

The sampling number from "1" to the last count number is displayed.

- Maximum Value (HI) : The maximum value among stored data from "1" to the last count number is displayed.
- Minimum Value (Lo) : The minimum value among stored data from "1" to the last count number is displayed.
- Mean Value (Av) : The mean value among stored data from "1" to the last count number is displayed.

- Auto Memory/Reset

After reaching the Peak value the auto memory saves the data after the load is released down to 2% of the maximum torque capacity of the DOTE3. The auto memory time can be set between 0.1~5.0 seconds.

- Data Sampling

- (1) Continuous Display (Run Mode)

Select "RUN" mode by pressing the MD key. When the torque wrench is loaded, the torque value increases. When the load is released, the torque value goes back to zero.

However, when the RESET/MEMORY button is pressed while measuring, the displayed value is stored and the RESET/MEMORY key moves the memory counter forward.

- (2) Maximum Value Display (Peak Mode)

Select "PEAK" mode by pressing the MD key. When the torque wrench is loaded, the torque value increases. When the load is released, the maximum torque value applied remains in the display.

### **Cautions:**

- \* Before starting data sampling, check the settings.
- \* If the measurement is repeated for over 99 readings, the stored data in the same count number will be deleted. Transmit the data to a PC or printer from the DOTE3 if required.

- Data Deletion

- (1) To delete one piece of data:

Display the data to be deleted by pressing the forward key or backward key and press the "C" key to delete the data.

- (2) To delete data in count values from "a certain" to a certain number:

Display the last count value to delete, press STAT key. Then, "ST" will be displayed. Display the first count value to delete, and press "STAT" key. While it displays "n", "HI", "Lo" or "Av", press STAT and C key at the same time. The selected range of data will be deleted.

- (3) To delete all stored data:

Turn the power off. All stored data will be deleted.

### **Caution:**

- \* Before deleting data, check whether or not the data should be deleted.
- \* Before turning the power off, transmit all required data to a PC or printer to save it.

- STAT key function (Statistical processing function)

- (1) Press the forward (▲) key or backward (▼) key to display the last count in the range to be subjected to statistical processing.
- (2) Press STAT key once to display "ST". Press the forward (▲) key or backward (▼) key to display the first count in the range to be subjected to statistical processing.
- (3) By pressing STAT key, the sampling number "n", maximum value "HI", minimum value "Lo" and average value "Av" are displayed in turn.

**Cautions:**

\* Data values under 2% of the maximum capacity of the DOTE3 will be disregarded and not saved as valid data.

- ▲ ▼ Key Function

- (1) The torque data value in the required counter value can be retrieved by pressing the ▼ key or ▲ key.
- (2) If the ▼ key or ▲ key is held, the memory counter moves forward or backward quickly.
- (3) When setting the DOTE3, the ▼ key and ▲ key are used as change keys to set the desired unit as well as the reset time.

- Peak Hold Value

The maximum torque value will be held as "Peak Hold Value" and the data will be stored.

- Display Flashing

When loading exceeds 110% of the maximum capacity of the DOTE3, the display flashes on and off and "---" appears on the display as overload warning.

- Error display

The DOTE3 has a self-diagnosis function. When an error occurs, any of the error messages from Err1 to 9 is displayed. If the error message remains displayed, take a note of the message such as Err1 and contact us.

«When any of Err1 to 5 is displayed»

- Turn the power OFF, and without touching any key, turn the power ON again.
  - If the Err message disappears, the DOTE3 functions properly.
  - If the Err message doesn't disappear, the DOTE3 needs repair. Contact your nearest distributor or TOHNICHI MFG.CO., LTD.

«When ERR8 is displayed»

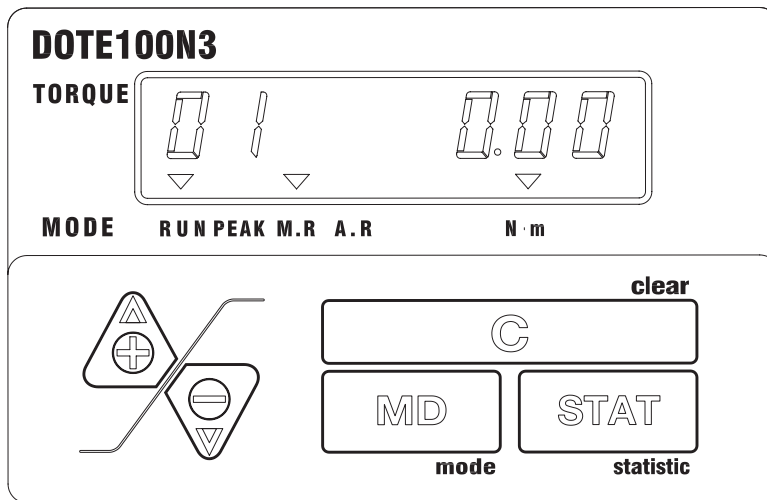
- The DOTE3 needs repair. Contact your nearest distributor or TOHNICHI MFG.CO., LTD.

«When ERR9 is displayed»

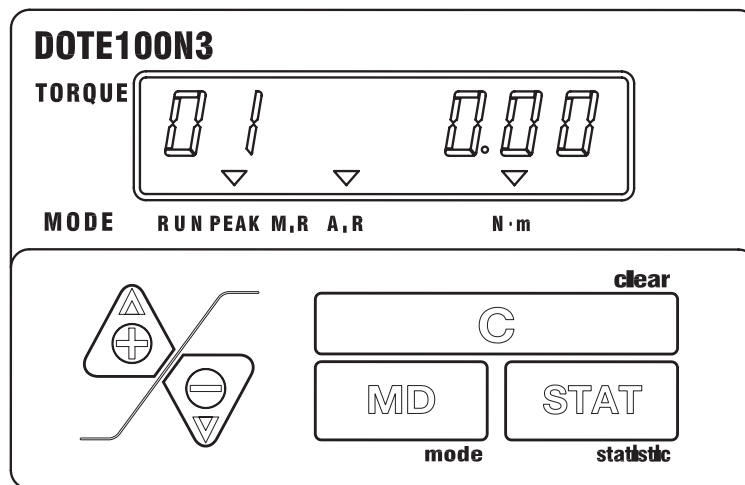
- Under unloaded conditions, press the C key.
  - If the "Err9" message disappears, the DOTE3 functions properly.
- If the "Err 9" message doesn't disappear, turn the power OFF and then turn it ON again.
  - If the "Err 9" message remains displayed, the DOTE3 needs repair. Contact your nearest distributor or TOHNICHI MFG.CO., LTD.

- Setting Run or PEAK mode

Press "MD" key to select RUN or PEAK mode.



The above drawing shows RUN mode

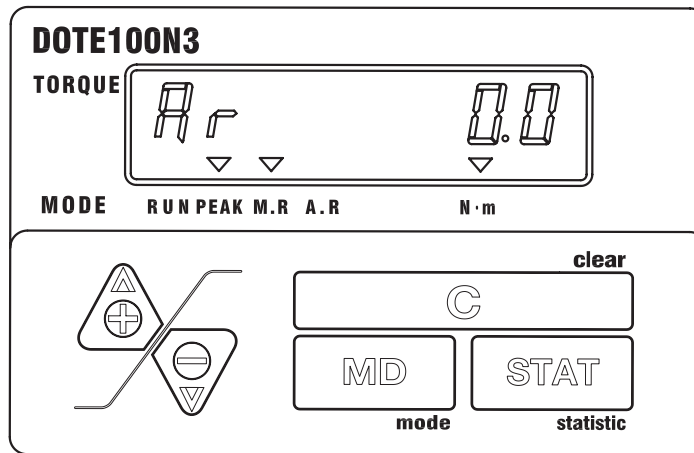


The above drawing shows PEAK mode

- Auto Memory/Reset Setting

Press "C" key → "STAT" key → "MD" key.

After performing the above procedure, the "0.0" display starts flashing. It is ready for setting.



Select the auto reset time between 0.1 and 0.5 seconds by pressing the ▼ key or ▲ key. Press "STAT" key for setting. However, if the manual reset is required, leave the "0.0" number display and press "STAT" key for setting.

**Caution**

- \* If "C" key is pressed while measuring, all the stored data will be deleted. Press "MEM" key after the measurement.
- \* Auto reset functions only in Peak Hold mode.
- \* The Reset Button does not function in the auto reset mode.

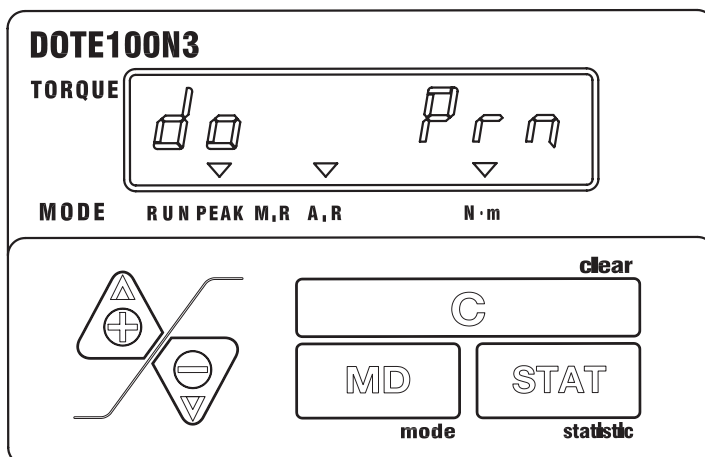
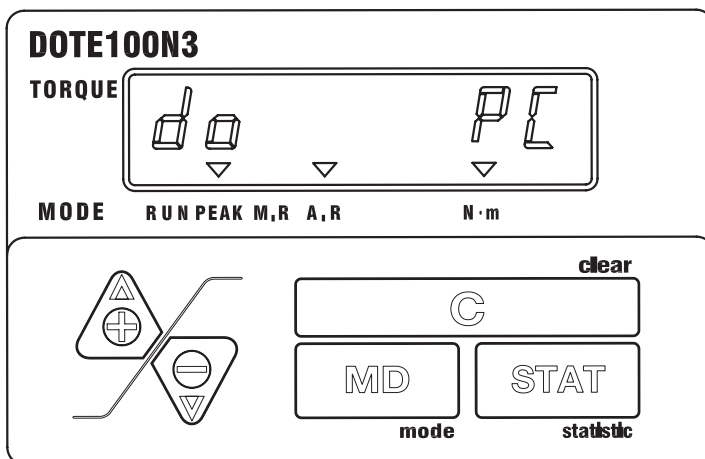
- Communication setting

- (1) Output format setting (Factory default: PC output)

Printer output or PC output is set for the RS232C output format.

By pressing ▲ key or ▼ key, select "Prn" for printer output or "PC" for PC output. Then, press STAT key for baud rate setting.

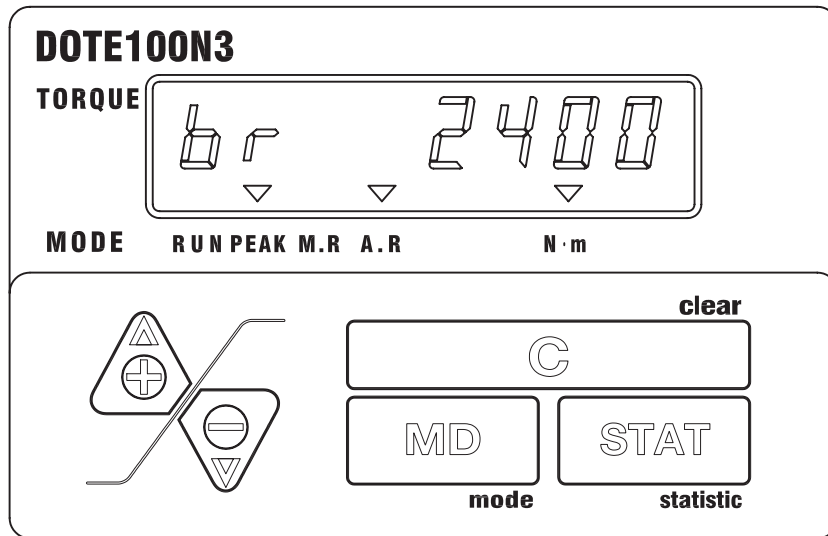
If "C" key is pressed, the setting is canceled and the display returns to the measurement condition.



(2) Communication baud rate setting (Factory default: 2400bps)

To set the communication baud rate, use ▲ key or ▼ key to select "2400", "4800", "9600" or "19800". Then, press STAT key for data length setting.

If "C" key is pressed, the setting is canceled and the display returns to the measurement condition.

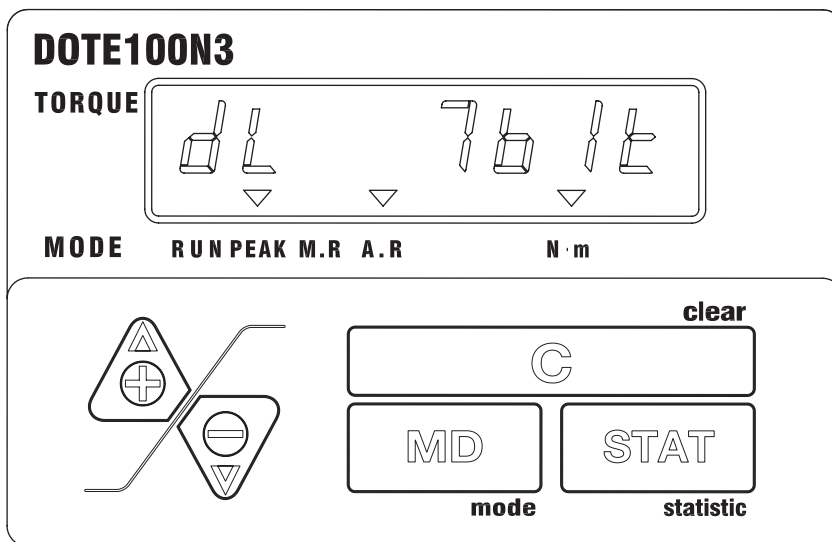


This shows that the communication baud rate is set to 2400bps.

(3) Data length setting (Factory default: 7bps)

To set the data length, using ▲ key or ▼ key, select "7bit" or "8bit". Then, press STAT key for parity setting.

If "C" key is pressed, the setting is canceled and the display returns to the measurement condition.

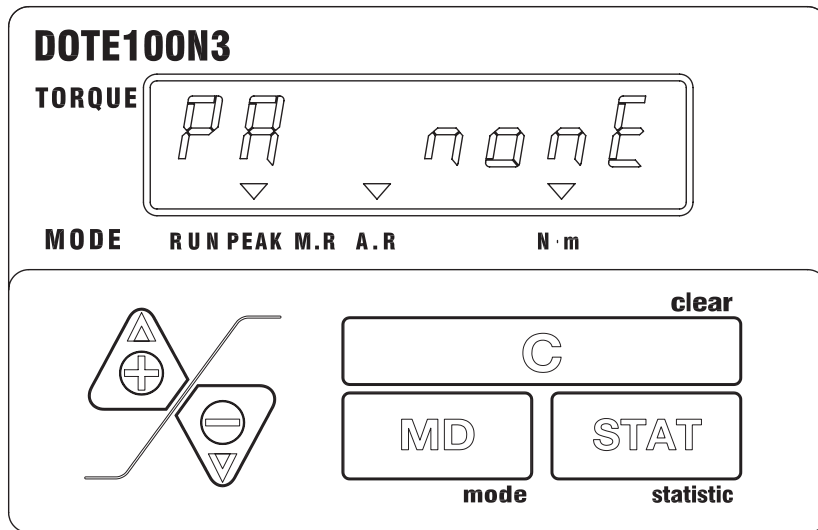


This shows that the communication baud rate is set to 7bits.

(4) Parity setting (Factory default: none)

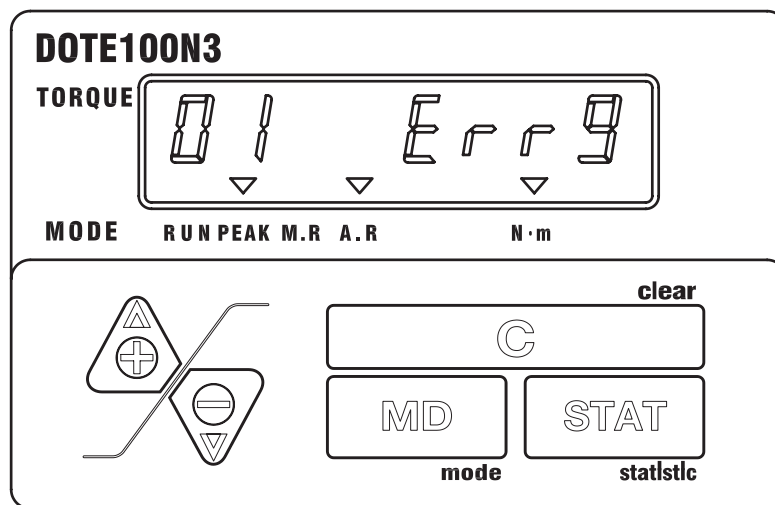
To set the communication parity, use ▲ key or ▼ key to select "nonE" for none, "EvEn" for even number or "odd" for odd number. Then, press STAT key to return to the measurement condition.

If "C" key is pressed, the setting is canceled and the display returns to the measurement condition.



This shows when communication baud rate is set to "nonE".

- Auto Zero Adjustment: When "C" key is pressed in the RUN mode, the automatic zero function is activated.



If the torque load after zero adjustment exceeds the maximum measurement value by 5% or more, "Err9" is displayed.

«When "Err9" is displayed»

- Under unloaded conditions, press "C" key.
  - If the "Err9" message disappears, the DOTE3 functions properly.
- If the "Err 9" message doesn't disappear, turn the power OFF and then turn it ON again.
  - If the "Err 9" message remains displayed, the DOTE3 needs repair. Contact your nearest distributor or TOHNICHI MFG.CO., LTD.



## 6. How to Calibrate a Torque Wrench (recommended method)

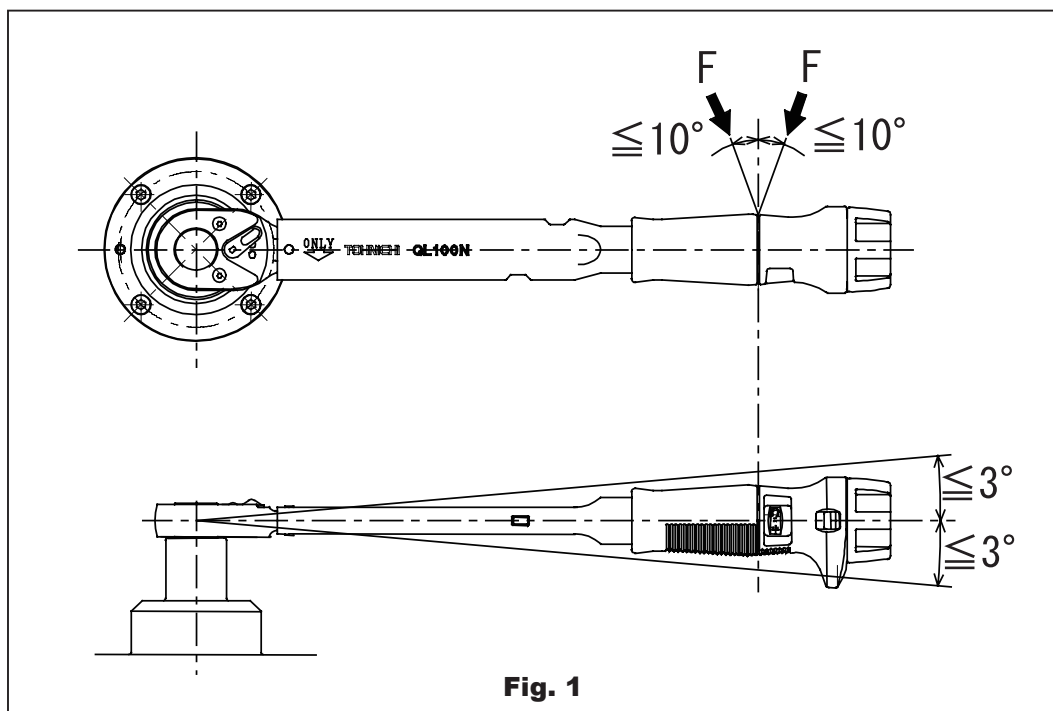
### 6-1 Calibration Conditions

#### 6-1-1 Calibration temperature

Calibration shall be performed at the ambient temperature in the 18 to 28°C range. Temperature variations shall be within  $\pm 1^\circ\text{C}$ .

#### 6-1-2 Check the following points before starting calibration of a torque wrench.

- (1) Place the torque wrench tester on a stable workbench.
- (2) For dial and beam type torque wrenches, read the measurement value in a direction perpendicular to the scale or dial. (Parallax correction)
- (3) For click type torque wrenches (QL/SP type), without measuring, load the torque wrench in an operating direction at the maximum capacity (nominal capacity of the torque wrench) 5 times for shakedown. Conduct the same procedure in other operating directions.
- (4) For dial and beam type torque wrenches (CEM/DB/F type), before calibration, load the torque wrench up to the maximum torque value and release the loading. Then, be sure to set the scale or digital display to zero. Conduct the same procedure in other operating directions.
- (5) Apply the load at the center of the grip or at the marked loading point within the specified range in Fig. 1.



### 6-2 Precautions in Calibrating Torque Wrenches

- (1) In calibrating a click type torque wrench (QL/SP type), load the torque wrench up to 80% of its target torque value using the torque wrench tester. After that, load it up to the final target torque value evenly and slowly in 1 to 3 seconds. In the case of calibrating a preset type torque wrench that is not for single-purpose use, start calibrating at a lower load up to the target torque value.
- (2) For dial and beam type torque wrenches (CEM/DB/F type), load the torque wrench up to the measuring torque value using the torque wrench tester. If the load exceeds the measuring torque value, perform a calibration again starting at the zero position.

### 6-3 Operation

- (1) Place DOTE3 on a horizontal sturdy workbench.
- (2) Place the attached Operation Sticker on DOTE3.
- (3) Put the Plate on to DOTE3 and fix the Plate with the set screw on the side.
- (4) Place the Pole Holder Assembly on the Plate.
- (5) Connect the attached AC adapter to DOTE3 and confirm that power switch is turned off. Then, insert the plug of the power cable into an AC supply receptacle.
- (6) Turn the power switch on. (Before using, leave DOTE3 on for over 30 minutes.)
- (7) Set each mode.  
Auto memory/reset, communication setting  
For the setting information refer to section 5. for Function and Operation.
- (8) Select adapter or socket based on the torque wrench to be calibrated.
- (9) Set the measuring mode based on the torque wrench to be measured.
  - 1) Click types (model QL, SP etc): Peak Hold Mode (PEAK)
  - 2) Dial and Beam types (model CEM·DB·F): Run Mode (RUN)For the setting information refer to section 5. for Function and Operation.
- (10) Perform Auto Zero Adjustment.  
For Auto Zero Adjustment, see "5. Function and Operation"
- (11) Confirm the calibration torque values of the torque wrench.
- (12) Move the Pole Holder Assembly to the effective length of the torque wrench and adjust the height of the Pole Holder Plate to keep the torque wrench horizontal. Confirm the measuring stroke of the torque wrench before calibration.
- (13) Turn the handle of DOTE3 till you hear the click of the torque wrench for click type torque wrenches or reach the measuring torque value for dial and beam type torque wrenches.
- (14) After the above procedure release the loading of the torque wrench. In case of manual reset press the Reset Button for next operation. In case of auto memory, the data will be saved and the counter will be forwarded to the next. When the loading of the torque wrench is released down to 2% of the maximum capacity of the DOTE.
- (15) For dial and beam type torque wrenches, when the measuring torque value is reached, press the MEMORY/RESET key to store data and move the counter forward by one.
- (16) Repeat steps (13), (14) and (15) until the calibration measurements are completed.
- (17) Turn the power switch off after the completion of the measurements.

## 7. Options

- (1) Tohnichi Printer..... EPP16M2
- (2) Cable for Tohnichi EPP16M2 printer ..... Catalog No. 382
- (3) Cable for PC  
DOTE3 → PC ..... Catalog No. 383
- (4) Calibration Kit  
Model DOTCL36N (For DOTE20N3, 50N3)  
Model DOTCL100N (For DOTE100N3)  
Model DOTCL200N (For DOTE200N3)  
Model DOTCL700N (For DOTE500N3)  
Model DOTCL1000N (For DOTE1000N3)

## 8. How to Use Optional Accessories

### (1) Printer print out

#### 1) Progressive print out

To Print out data one by one, press RESET BUTTON after connecting DOTE3 and Tohnichi printer EPP16M2 with the cable (catalog No.382). However, in the case of progressive print out, the sampling number, maximum value, minimum value and mean value will not be printed. All data will be printed when ALL MEMORY/RESET is set.

Print out example:

```
1 : 123.4kgf·cm
2 : =====kgf·cm
3  124.5kgf·cm
4 : 125.6kgf·cm
5 : 123.2kgf·cm
6 : 124.3kgf·cm
7 : =====kgf·cm
8 : 122.0kgf·cm
```

However, if the torque value is too low, the "======" part is printed. (Refer to section 6. Function and Operation.)

### (2) Cotinuous print out

Connect the DOTE and Tohnichi printer EPP16M2 with the cable (Catalog No.380). By pressing ▼ and ▲ keys, display the last counter value and press STAT key to shown "ST" in the counter display. Then, press ▲ or ▼ key for printing. The required torque values, sampling number, maximum value, minimum value and mean value are printed out.

\* If the arithmetic processing key is pressed before printing, the converted torque value is printed out with \*\*\*\* printed for the unit.

Print out example:

```
1 : 123.4kgf·cm
2 : =====kgf·cm
3  124.5kgf·cm
4 : 125.6kgf·cm
5 : 123.2kgf·cm
6 : 124.3kgf·cm
7 : =====kgf·cm
8 : 122.0kgf·cm
-----
n=6
HI : 125.6kgf·cm
LO : 122.0kgf·cm
X  : 123.8kgf·cm
```

The "======" parts are torque values shown in the torque display. However, these torque valuesa are too low to print out. (Refer to section 5. Function and Operation.)

The low torque values not printed by the printer are excluded from the data processing.

(3) Print out of statistic processing values only

Connect DOTE3 and Tohnichi printer (EPP16M2) with a cable (catalog No. 382). Display the last count of the printing range and press STAT key to display "ST". By pressing ▲ or ▼ key, select the first count of the printing range. Then, press STAT key, and press ▼ key while "n" is displayed. The sampling number "n", maximum value "MAX", minimum value "MIN" and average value "AVE" in the selected range will be printed out.

Model	Conversion factor
DOTE20N3~200N3	×10.1972
DOTE500N3, DOTE1000N3	×0.10972

n=6

MAX: 125.6kgf·cm

MIN: 122.0kgf·cm

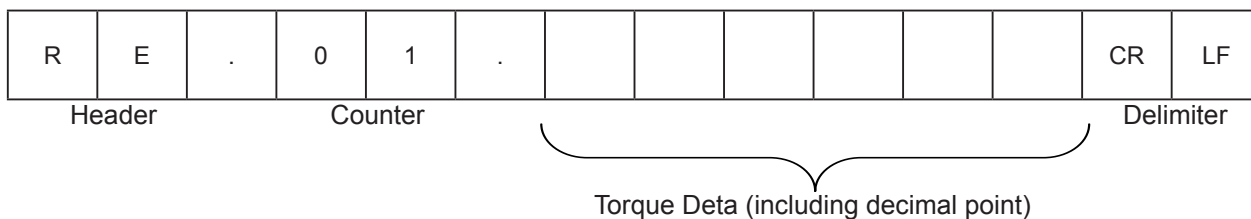
AVE: 123.8kgf·cm

## 9. Additional Notes

Data output format from DOTE3 to a PC

- Data form at : RS232C
- Transmission system : Start-stop synchronization serial
- Baud rate : 2400bps
- Data length : 7bit
- Stop bit : 1bit
- Parity : None

Format



Designs and specifications are subject to change without notice



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