

KILEWS

KILEWS JAPAN CO., LTD.

□ KTM - 8

□ KTM - 80

數位扭力計操作手冊

DIGITAL TORQUE METER INSTRUCTION MANUAL

OTW-Q02

Operation Menul for Digital Torque Meter

Model: KTM-80 KTM-8

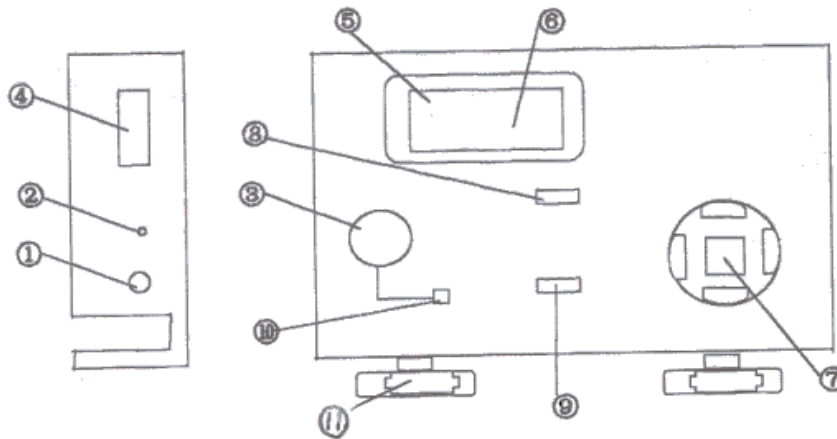
1. Caution for safety

1. Keep work area always clean.
Cluttered areas and benches may invite injuries.
2. Consider work area environment.
Do not use torque meter in the rain or in the damp or wet place.
Use the product at a place left at constant temperature(about 24°C).
Keep work place well lighted.
Do not use or charge the product in presence of flammable liquids or gases.
3. Keep children away.
Keep any person other than the operator(s) away from work area.
4. Dress properly.
Do not wear loose clothing or jewelry, which may be caught in moving parts.
5. Work with the most care.
When using the product, carefully work, with consideration to how to handle, how to work, work environment, etc.
6. Fix main body firmly.
When operated for measuring a large torque, use clamps or a vise, etc. .It is not only more safe than holding by hand but also makes it possible to grip the screwdriver by both hands.
7. Do not apply a torque exceeding the permissible load.
If applied beyond the permissible load, it may cause damage to the detector, resulting in accident or injury.
8. Do not disassembly, shock and vibrate this product.
Avoid disassembling the product that is a precise instrument. If the torque meter is damaged by excessive shock or vibration, the product may not only show the full performance but also result in accident or injury.
9. Caution to electric shock
Do not touch power plug by wet hand. It may cause electric shock.
10. For charging the battery be sure to use only exclusive charger.
Using a charger other than specified may cause a fire or injury.
11. Charge properly.
Charge on the indicated voltage. Do not use DC power or engine generator. It may cause abnormal heat, resulting in a fire.
Keep the charging time not longer than 8 hours. Overcharge may bursting, overheat and liquid leakage, resulting in a fire or injury.
Charge in a well-ventilated place. While being charged, do not cover with cloth.
12. Never throw the battery(built-in the torque meter) into fire.
It may cause burst or give off toxic substance. (The procedure for scrapping the battery shall be followed in accordance with local or regional law on waste disposal. If there is no local or regional law on waste disposal, be sure to dispose of the battery at a recycling shop.)
13. In the following cases, turn off the main switch and disconnect the plug from outlet.
When not used or charged;
When repaired;
When any other danger is expected.
14. Maintain torque meter with care.
For better and safer performance, check screw joints regularly and use ones whose tips are free from deformation and wear down.
For replacement of accessories follow the instruction manual.
Inspect cords and extension cords periodically and if damaged, replace them.
15. Do not handle cord violently.
Do not carry the product hanging by cord or draw out socket from outlet by pulling cord.
Do not put cord near to a hot, oily or edgy part.
16. Check for absence of damaged parts.
Before further use of the product, carefully check for no damage, normal operation, or intended functions.
Check whether or not any other components that may affect its operation are normal.
Replace parts according to the instruction manual.
17. Have the product repaired by the specialized dealer.
Do not modify this product.
Repair should be made always by the dealer where you purchased the product. If repaired by any person with no knowledge or skills of repair, it may not only show the full performance but also may cause any accident or injury.
18. Use only the specified accessories and attachments.
Do not use any accessories and attachments other than ones specified in this instruction manual.
19. Store properly when not in use.

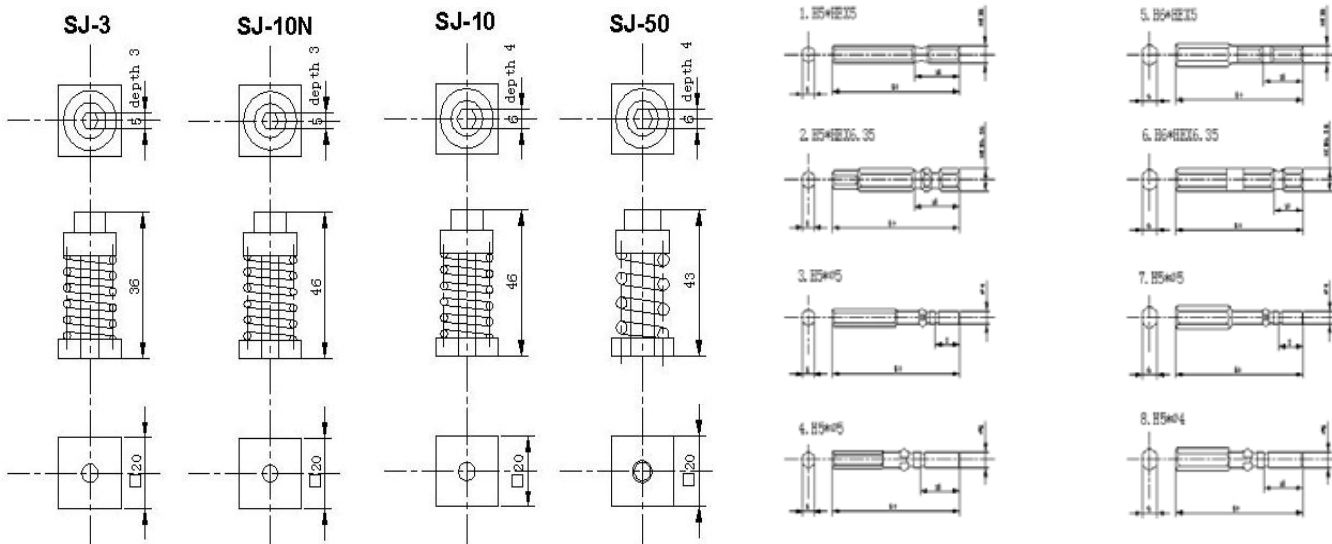
Store the torque meter in a dry place and in a height out of children's reach, or secured area.
To transport the product, reuse the packing case with which this product was delivered.

2. Appearance

(1) AC ADAPTOR Terminal	(7) Socket
(2) System Reset	(8) Measuring Unit Switch
(3) CLEAR Button (Timer Set)	(9) Mode Select Switch
(4) RS-232C Data Transfer Terminal	(10) POWER Switch (Timer Set)
(5) LOBAT Display	(11) Knob
(6) Display	



SCREW JOINT



3. Specifications

MODEL		KTM-80	KTM-8
Measuring range	lbf · in	1.5~90.0	0.15~9.00
	kgf · cm	1.5~100.0	0.15~10.00
	N·m	0.15~10.00	0.015~1.000
Accuracy		From 200~1000 digit display within +/- 0.5% From 15~199 digit display within +/-1digit	
Display		3.5 figures of LCD	
Measuring direction		CW · CCW	
Measurement mode 3 way	P-P (peak)	Peak load value hold.	
	TRACK	Indication of real time torque value.	
	P-D (peak down)	Indication peak down point and hold.	
Automatic data clear function		Setting time past, former value automatic zero reset.	
Data transfer		Serial interface RS232C (Baud rate : 9600)	
Power supply		6 VDC (Ni-Cd chargeable battery 1.2Vx5cells)	
Automatic power save		10 minutes no use, automatically switch off.	
Measuring unit		lbf · in·kgf · cm·N · m (selectable)	
Charging time		From empty - 8hours	
Continuous working time		About 12hours	
Battery life		Chargeable for 300 times or more. However, it varies depending on operating conditions.	
Exclusive charger		INPUT : 120V or 230V 60Hz OUTPUT : DC7.25V 120mA	
Socket size		20mm square and 9.5mm square	
Size		155(W) × 125(D) × 55(H)	
Weight		About 1 kg	
Recommend buffer accessories		SJ- 50 x1 S-10 spring x1 Joint bit x1set(4pcs)	SJ- 10 x1 SJ-3 x1 Joint bit x1set(4pcs)

***Do not use for measurement of impact tool. Do not apply more than the specified torque.**

*Measurement joint (SJ- 50, 10)can perform extraction and insertion of screw and spacer.

6. Data transfer

6.1 Date format

Data transfer is RS-232C output conformity. Data can be outputted to the printer corresponding to RS-232C, or a personal computer etc.

Spec.	Data bit length	Start bit 1 + data bit 8 + stop bit 2 + NO parity
	Baud rate	9600bps
	Connector form	D-Sub-9pin
	Connector spec.	No. 3 pin : Data output / No. 5 pin : GND

[18]	○○○	[OE]	[20]	+/-	○○○○○	[20]	[OF]	○○○○○○	[OD]
Measured									
CAN	※	SO	Space	Mark	value	Space	SI	Unit	CR
All data 21									

- CAN : Cancellation
- ※ : Case in the memory mode Number of samples • Usually case in the mode Space
- SO : Double width expansion printing specification
- +/- : Measurement mark + the direction of bolting • - return direction
- Measured value : A decimal point is also included.
The last is a space when there is no decimal point.
[1][0][.][0][0] → 10.00 SI.
- SI : Double width expansion printing release
- Unit : In the case of N·m etc., the remainder space
[N][.][m][][][] → N·m ([k][g][f][.][c][m] → kgf·cm)
- CR : Carriage return
- △cautions An interface cable is used for connection of a computer.
Unite with a computer and prepare a cable.
Please inquire about a cable of a dealer where you purchased the product.

6.2 Output method of data

Data is outputted whenever it pushes CLEAR key after a measurement end.
Date output of the time of use of an date clear function is automatically carried out in setting time.

7. About system reset

After a Ni-Cd battery discharges completely (when not using it for a long period of time), even if it charges and it turns on a power supply, CPU in equipment may not start. If you become such a situation, please push a system reset button at once. It will be in an initial state. (it is the same as that of the time of purchase) Preservation data is eliminated.

8. Guarantee

It is allowed to fix gratuitously, if the fault which will originate in manufacture, ransportation, etc. of our company within one year after a purchase should occur, although product was manufactured under sufficient quality control.

- In the following case, it becomes the charge also within a guarantee term.
- Failure by the error, and unjust repair and unjust reconstruction and damage on use
 - Failure by fall etc. and damage after a purchase
 - Failure by the natural disaster, pollution, and unusual voltage, and damage

9. Calibration trust service

Periodical calibration is required in order to manage the accuracy of torque meter. By our company, the calibration with the high reliability traced to the national standard is performed, and in order to use it within accuracy, I recommend you calibration of one year. I offer an result of calibration document, a certification on calibration, and a traceability system figure by demand. (Periodical calibration is a charge.)

- Documents appended at the time of product purchase
- Result of calibration document
 - Certification on calibration document
 - Traceability system figure

10. Checkpoint when being Troubled

- Before judging it as failure -

When functional fault arises, please check based on a table, without judging it as failure immediately. By the corresponding processing, when fault is not canceled, please tell repair to our company or a store.

In addition, it is allowed to make the guarantee term of torque tester into one year from a purchase. However, also in an onerous case, it is according to the contents of repair.

The situation of torque tester	It does not hold by measurement mode PP-PD.
The cause of generating	It is used by setting up an auto clearance.
The processing method	Please check the setting item of an auto clear function again. When you do not use an auto clearance, please set it as 0.0C.

The situation of torque tester	Even if it turns on a power-supply switch, a power supply will go out immediately after LOBAT display.
The cause of generating	Charge is insufficient.
The processing method	Regular time charge is carried out using the exclusive charger appended.

The situation of torque tester	Even if it turns on a power supply after charge of regulation time, it does not display.
The cause of generating	If it is not used for a long period of time, internal battery will carry out full electric discharge.
The processing method	If AC adapter is connected and the S.RESET button of the side is pushed, it will return. After a return, please make a measurement mode switch the position of TR, push a clear button and make a display into zero.

11. How to deal with joint

The new type joint which added the function to prevent that a bolt and a base separateto old joint is appended.

By attaching the screw which prevents that a bolt separates,it races at the same time a bolt separates from a base, and it does not decompose.

However, since you may wear a screw mountain out and torque value may change when it continues racing, please be careful.

Moreover, if it is left where a spring is closed when there are wear, a metal fatigue, etc.of a screw part, a bolt may jump out with the pressure.It is the new joint equipped also with the dangerous prevention in that case. (PAT,P)

The cautions on use

- * Please do not apply the load more than the measurement range by any means.
- * Attached grease is attached to the bolt or the bearing part, please check before use.
- * Where a spring is loosened, please be sure to keep after use.

The number of times of an exchange standard is about 2500 times.

When the following condition comes out, please stop use, and use new joint.

When there is bend and wear of a screw thread

When there is sound etc.

For any inquiry, please contact your dealer !