Dual EGT meter
KOSO DL series
INSTRUCTION

Thank you for purchasing **KOSO dual EGT meter**, before operating the unit, please read the instruction thoroughly and retain it for the future reference.

⚠ Notice

1. The LCD meter does work on AC and DC 12v.
2. For installation, please follow the steps described in manual. Any damage caused by wrong installation shall be imputed to the users.
3. To avoid the short circuit, please don't pull the wire when installing. Don't break or modify the wire terminal.
4. Do not disassemble or change any parts excluding the manual description.
5. The interior examination or maintenance should be executed by our professionals.

MARK MEANING:

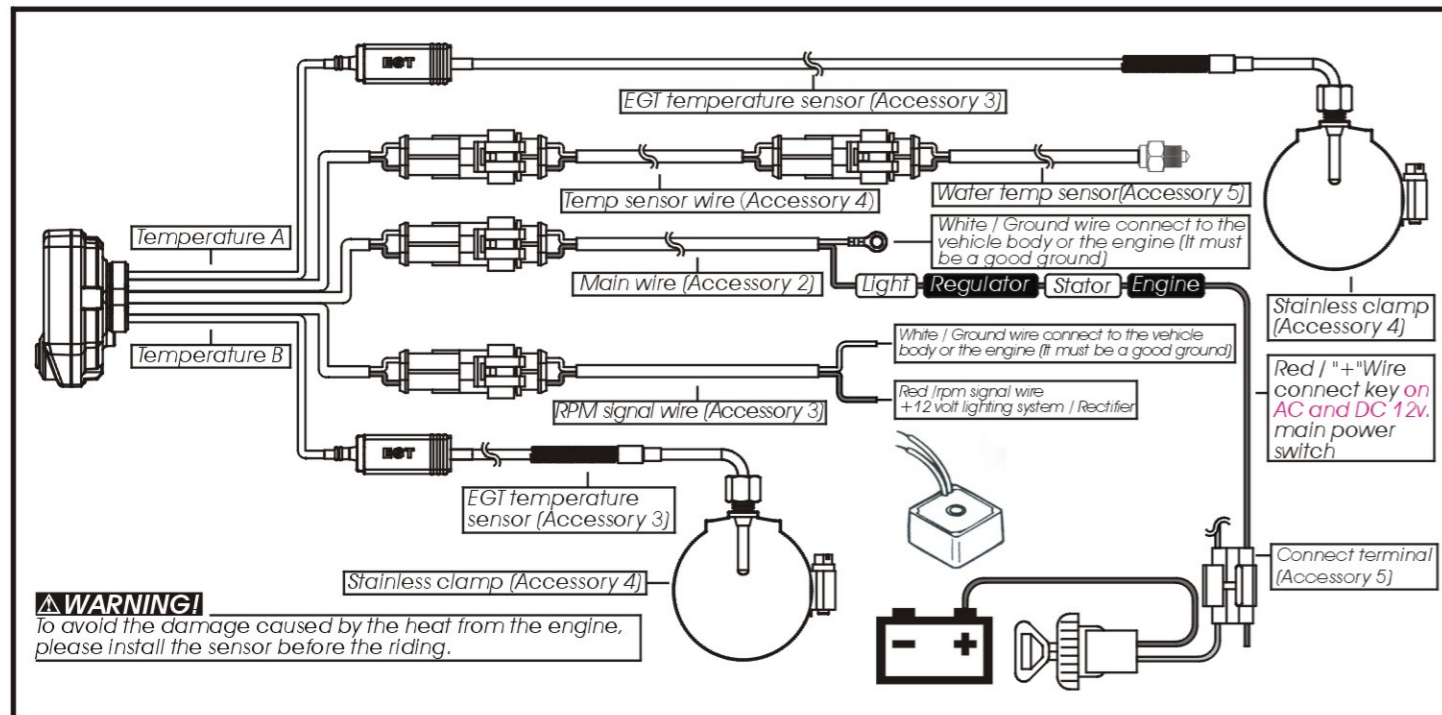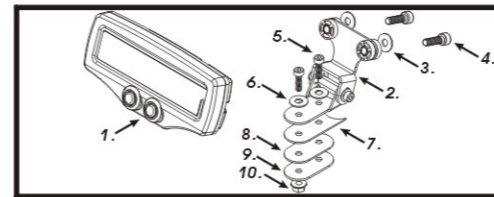| NOTE | You could get the installation details from the information behind the mark. |
⚠	Some processes must be followed to avoid the affection caused by wrong installation.
⚠ WARNING!	Some processes must be followed to avoid damages to yourself or the public.
⚠ CAUTION!	Some processes must be followed to avoid the damage to the vehicle.

PRESS THE BUTTON ONE TIME
PRESS THE BUTTON 3 SECONDS

1 Accessory

1 LCD meter X 1	2 Main wire X 1	3 RPM signal wire X1	4 Temp sensor wire X1	5 Water temp sensor X1
6 EGT temperature sensor X 2	7 Stainless clamp X 2	8 Connect terminal X 1	9 Meter bracket X 1	10 Rubber X 1 (A) Rubber X 1 (B)
11 Steel gasket X1	12 M4 X 14L screwX2 (A) M5 X 18L screwX2 (B)	13 M4 washer X2 (A) M5 washer X2 (B)	14 M4 X P0.8 nut X 2	15 M3 spannerX1 (A) M4 spannerX1 (B)

NOTE Please contact the local distributor if the items you open are not the same, with the above-listed one.

2-1 Wiring installation instructions

EGT temperature sensor (Accessory 3)
Temp sensor wire (Accessory 4)
Water temp sensor(Accessory 5)
Temperature A
White / Ground wire connect to the vehicle body or the engine (It must be a good ground)
Main wire (Accessory 2)
Light — Regulator — Stator — Engine
Temperature B
RPM signal wire (Accessory 3)
White / Ground wire connect to the vehicle body or the engine (It must be a good ground)
Red / rpm signal wire +12 volt lighting system / Rectifier
EGT temperature sensor (Accessory 3)
Stainless clamp (Accessory 4)
Stainless clamp (Accessory 4)
Red / "+"Wire connect key on AC and DC 12v. main power switch
Connect terminal (Accessory 5)

⚠ WARNING!
To avoid the damage caused by the heat from the engine, please install the sensor before the riding.

2-2 Installation instructions

When installing, please follow the process.

1. LCD meter (Accessory 1)
2. Meter bracket (Accessory 6)
3. M5 gasket X 2 (Accessory 12-B)
4. M5 X 18L screw X 2 (Accessory 11)
5. M4 X 18L screw X 2 (Accessory 10)
6. M4 gasket X 2 (Accessory 12-A)
7. Rubber (Accessory 7)
8. Rubber (Accessory 8)
9. Steel gasket (Accessory 9)
10. M4 X P0.8 nut X 2 (Accessory 13)

3-1 Basic function instruction

Select button
● In main screen, press down the **Select button** to switch °C to °F.

Over heat warning setting (EGT A/B)
● Setting range : 200~1,000°C (392~1832°F).
● Setting unit : 1°C (°F).

Over heat warning setting (Water temperature)
● Setting range : 60~250°C (140~482°F).
● Setting unit : 1°C (°F).

RPM shift light
● Setting range : 1,000~15,000 RPM
● Setting unit : 100 RPM

EGT A/B
● Display range : 100~1,200°C (250~2100°F)
● Display unit : 1°C (°F).

Adjust button
● In main screen, press down the **Adjust button** switch thermometer to top thermometer record.

Adjust button X 3 seconds
● In top thermometer record, press down the **Adjust button** for 3 seconds to reset the record.
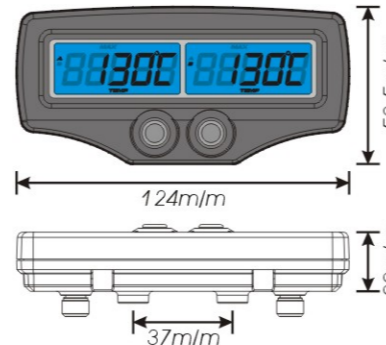
Water temperature
● Display range : 0~250°C (32~482°F)
● Display unit : 1°C (°F)

3-2 Function, setting instruction

58.5m/m
124m/m
37m/m
22m/m

● temperature	Display unit: °C & °F for alternative	
● EGT A/B	Display range : 100~1,200°C (250~2100°F)	Display unit : 1°C (°F)
● Water temperature	Display range : 0~250°C (32~482°F)	Display unit : 1°C (°F)
○ Over heat warning (EGT A/B)	Setting range : 200~1,000°C (392~1832°F)	Setting uni : 1°C (°F)
○ Over heat warning (Water)	Setting range : 60~250°C (140~482°F)	Setting uni : 1°C (°F)
● Tachometer	Display range : 15,000 RPM	Display unit : 10 RPM
○ RPM Input pulse	Setting range : 0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 6	
○ Shift light	Setting range : 1,000~15,000 RPM	Setting uni : 100 RPM
● Max. EGT record	Display range : 100~1,200°C (250~2100°F)	Display unit : 1°C (°F)
● Max. Water record	Display range : 0~250°C (32~482°F)	Display unit : 1°C (°F)
● Max. RPM record	Display range : 15,000	Display unit : 10 RPM
● Effective voltage	AC and DC 12v.	
● Effective temperature range	-30~+60°C	
● Meter standard	JIS D 0203	
● Meter size	W124 X L58.5 X H22 mm	
● Meter weight	Around 170 g	

NOTE Design and specifications are subject to change without notice!

4-1 Function switch instruction

● **4-1-1 Adjust button function instruction**

● Press select button once to switch screen like below.

● Press Adjust button once to switch screen from RPM/EGTA to RPM/EGT B.

● Press Adjust button once to switch screen from RPM/EGTB to Water TEMP/EGT A.

● Press Adjust button once to switch screen from water TEMP/EGTA to water TEMP/EGT B.

● Press Adjust button once to switch screen from water TEMP/EGTB to water TEMP/RPM.

● Press Adjust button once to switch screen from water TEMP/RPM record to RPM/EGT A.

● In Max record screen, press the **Adjust button** once to switch from Max record to the main screen.
● Press select button once to switch screen like below.

● Press down the **Adjust button** for 3 seconds to reset the MAX record.

● The main screen.

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● **4-1-2 Select button function instruction**

● **4-1-3 Select+Adjust button function instruction X3**

●In main screen, press down the **Select button** to switch °C to °F.

●Press down the **Adjust & Select** button for 3 seconds to enter setting screen. (Check section **4-2** for detail)

●The main screen.

4-2 Function setting instruction

●In main screen

●In main screen, Press down the **Select & Adjust X 3 seconds** to enter the RPM pulse setting.

●RPM pulse setting

●EX. You want to set the RPM input pulse at 2 (4 Stroke, 4 piston) .
●Press the **Adjust button** to choose the setting value.
●EX. Now the RPM input pulse setting is 1 (4 Stroke, 2 piston)

⚠ Now the setting number is flashing!

NOTE The RPM input pulse setting range is : 0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 6.

The setting value	The corresponding stroke and pistons number		The corresponding RPM signal number per ignition.
0.5	—	4C-1P	2 RPM signals per 1 ignition.
1	2C-1P	4C-2P	1 RPM signal per 1 ignition.
1.5	—	4C-3P	2 RPM signals per 3 ignition.
2	2C-2P	4C-4P	1 RPM signal per 2 ignition.
2.5	—	4C-5P	2 RPM signals per 5 ignition.
3	2C-3P	4C-6P	1 RPM signal per 3 ignition.
4	2C-4P	4C-8P	1 RPM signal per 4 ignition.
5	—	4C-10P	2 RPM signals per 10 ignition.
6	2C-6P	4C-12P	1 RPM signal per 6 ignition.

⚠ **CAUTION!** Most of the 4-cycle bikes with one single piston are igniting every 360 degree once, so the setting should be the same as the bike with 2-cycle and one piston engine.

●EX. Now the RPM input pulse setting is changed from 1 (4 Stroke, 2 piston) to 2 (4 Stroke,4 piston).
●Press **Selec button** to enters the shift light setting screen.

●The shift light setting

●EX. The RPM shift light you want to set is 12,000 RPM.
●Press the **Adjust button** to choose the setting value.

NOTE The setting range: 1,000~ 15,000 RPM。 Setting unit: 100 RPM.

⚠ Now the shift light and the setting value is flashing!

●EX. Now the shift light setting is changed from 1,000 RPM to 12,000 RPM.
●Press the **Select button** to enter the EGT A setting.

●EGT A warning function setting

●EX. We would like set EGT A warning temperature at 700C
●Press the **Select button** to move to the digit you want to set.

NOTE The setting range: 200~1,000°C (392~1832°F) Display unit : 1°C (°F)

⚠ Now the water temperature logo and the setting value are flashing!

●Press the **Adjust button** to choose the setting value.

●EX: Dual EGT A setting we would like change from 500C to 700C
●Press select button 4 times to enter ECT B warning setting screen.
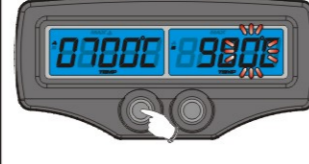
●EGT B warning function setting

●EX. We would like set EGT B warning temperature at 900C
●Press the **Select button** to move to the digit you want to set.

NOTE The setting range: 200~1,000°C (392~1832°F) Display unit : 1°C (°F)

⚠ Now the water temperature logo and the setting value are flashing!
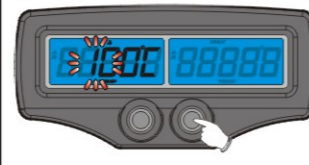
●Press the **Adjust button** to choose the setting value.

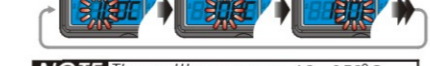●EX: Over temperature setting we would like change from 500C to 900C
●Press Select button to enter water temp warning setting screen.
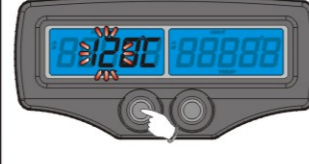
●Temperature alarm setting

●EX: You want to set the temperature alarm at 120C.
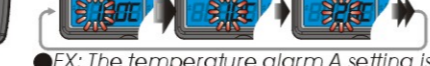●Press the **Select button** to move to the digit you want to set.

NOTE The setting range: 60~250°C (140~482°F) Display unit : 1°C (°F)

⚠ Now the water temperature logo and the setting value are flashing!

●Press the **Adjust button** to choose the setting value.

●EX: The temperature alarm A setting is changed from 100 C to 120 C.
●Press select button once to enter warning display timing setting screen.

●Alarm display timing setting

●EX: We would like to set warning display timing to 15 seconds
●Press the **Adjust button** to choose the setting value.

NOTE The setting range: 10~60s。 Display unit:1s
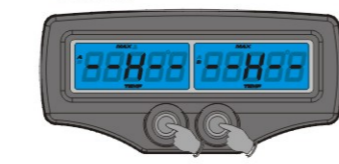
⚠ The timing digital could be set is flash now.

●EX.: The timing we already adjust from 10 seconds to 15 seconds
●Press **Select button**, to back the main screen.

4-3 TROUBLE SHOOTING.
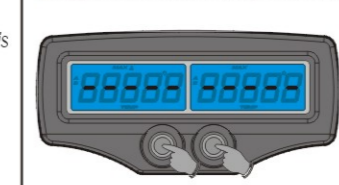
●Over temperature warning screen

● **--H--** Means that the temperature is too high to detect. (1200°C/ 2100°F)

●Low temperate warning screen

● **--L--** MEans that the temperature is too low to detect. (100°C/ 250°F)

● Signal lose warning screen

● **-----** means can not reach the signal from sensor

⚠ Please check the signal wiring situation. If the signal wiring is broken or falling off, the meter will display the wrong data or nothing like the example above

5-1 Trouble shooting

The following situation do not indicate malfunction of the meter. Please check the following before taking it in for repair.

Trouble	Check item	Trouble	Check item
The meter doesn't work when the power is on.	●The power doesn't supply to the meter. →Please make sure the wiring is connected. The wiring and fuse are not broken. →The battery is broken or the battery is too old to supply enough power **(AC and DC 12v.)** to make the meter work.	Tachometer does not appear or appear incorrectly.	●Please check the RPM sensor wiring is connected correctly. ●Please check the spark plug is R type or not. If not, please replace the spark plug with the R type spark plug. ●Please check your setting. →Please refer to the manual 4-2.
The meter shows wrong information.	●Please check the voltage of your battery, and make sure the voltage is over **AC and DC 12v.**	Temp does not appear or appear incorrectly.	●Please check the sensor. →Does the wiring break or falling off ?

※If still can't solve the problems according to the steps above, please contact with distributors or us.