tachometer
KOSO GP style

INSTRUCTION

Thank you for purchasing **KOSO GP style tachometer**, before operating the unit, please read the instruction thoroughly and retain it for the future reference.

⚠ Notice

1. The lcd meter is apply for **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

1-1 Accessory

1 Meter X 1	2 RPM wire set (Type **A**) X 1	3 RPM wire set (Type **B**) X 1	4 Temp sensor wire set X 1
5 PT 1/8 water temp sensor X 1	6 Mid-way connect X 4	7 Meter bracket X 1	8 Handle bar clamp X 1
9 Rubber X 1	10 M6 X 18L screw X 1	11 M5 X P0.8 nut X 2	12 M6 X P1.0 nut X 1
13 M5 washer X 2	14 M6 washer X 1	15 Aluminum bush X 1	16 Manual

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

1-2 Option accessory

| 1 Oil temp sensor adapter | 2 Water temp sensor adapter | 3 Cylinder head temp sensor | 4 Temp sensor |

1 Oil temp sensor adapter
M12 X P1.5 X 15L
M14 X P1.25 X 15L
M14 X P1.5 X 15L
M16 X P1.5 X 15L
M18 X P1.5 X 15L
M20 X P1.0 X 15L
M20 X P1.5 X 15L

2 Water temp sensor adapter
M14
M16.M18
M22.M26m/m

3 Cylinder head temp sensor
M10.
M14m/m

4 Temp sensor
M10 X P1.0
M12 X P1.5
M14 X P1.25
M14 X P1.5
M16 X P1.5 / M18 X P1.5

| 5 Temp sensor wire set (2 M) | 6 U-type meter bracket | 7 Mirror hole meter bracket | 8 Universal adhesive bracket |

NOTE Some of the option accessories may not sell. For the details, please contact the local distributor.

2-1 Wiring installation instructions

Red / positive pole (Connect to the battery **DC 12V**)

U-type bracket (Option accessory 6)

Brown/ "+"wire connect key on **DC 12V** main power switch

Black/ ground wire connect to the vehicle body or the engine (It must be a good ground)

Meter (Accessory 1)

Brown/ RPM wire please connect it to the suitable position according to the models.

Temp sensor wire (Accessory 4)

PT1/8 (Accessory 5) please install the temp sensor to the position you want to measure

Bracket (Option accessory 7)

RPM wire set-Type **B** (Accessory 3)

RPM wire set-Type **A** (Accessory 2)

Ignition coil positive

RPM wire set-Type **A** (Accessory 2)

Coil

Spark plug wire

Spark

Spark plug cap

EMS CDI

Flywheel

Ignition pulse

Tachometer

pick up

Main switch wiring reference:

	Power	Key on	Ground
YAMAHA	Red	Brown	Black
HONDA	Red	Red / Black	Green
SUZUKI		Black	Green
KAWASAKI	White	Brown	Black / Yellow
KYMCO	Red	Black	Green
SYM	Red	Black	Green
PGO	Red / White	Orange	Black

NOTE The color listed above may differ depending on the model.

RPM wiring reference:

YAMAHA	Yellow / Black	BUELL	Pink
HONDA	Yellow / Green	CAGIVA	Gray / Green
SUZUKI	Yellow / Blue	DUCATI	Gray / Green
KAWASAKI	Light Blue	H-D	Pink
APRILIA	Gray / Violet	MV	Gray / Yellow
BMW	Black	TRIUMPH	Red
BENNELLI	Gray / Violet		

NOTE The color listed above may differ depending on the model.

NOTE The temperature will disappear if you don't install & connect the temperature sensor with the meter.

NOTE When connecting the power wiring, please follow the instruction. If you connect the red & brown wiring in parallel will cause the meter work improperly.

⚠ The RPM wire installation
A. Please wrap the RPM wire at least 5 times around the spark plug.
A1. Please use tape to fix the RPM (Type **A**) wire onto the spark plug wire.
A2. Please use tape to fix the RPM wire (Type **A**) on the spark plug cap.
A3. Please use tape to fix the RPM wire (Type **A**) on the coil positive pole wire. For some models with the coil negative wire, please tape the RPM wire (Type **A**) on the negative wire to get the RPM signal. (For example, the YAMAHA V-max 1200)
B. Please connect the RPM wire (type **B**) to connect to the ignition coil positive pole.
B1. Please wrap the RPM wire (type **B**) on the spark plug wire by connecting the male and female connector.
C. Please connect the RPM wire (Type **A**) to the pick up.
D. Please parallel the RPM wire (Type **A**) with the original tachometer signal wire (This method is available only when the original speedometer comes with a tachometer on it. You could get the RPM wire information from the service manual of your bikes.)
E. For the models comes with the new ignition coil, please wrap the RPM wire (Type **A**) at least 5 times around the spark plug as the above drawing.
For multi-ignition models, we will suggest you to get the signal on the first ignition.
The best signal source will be in order as D>C>B>A, we will suggest you to check different ways if you have problems to get the RPM signal.

2-2 Installation instructions

When installing, please follow the process.

1. Lcd meter (Accessory 1)
2. Meter bracket (Accessory 7)
3. M5 washer X 2 (Accessory 13)
4. M5 X P0.8 nut X 2 (Accessory 11)
5. M6 X P1.0 screw (Accessory 12)
6. M6 washer (Accessory 14)

Ⓐ Use the meter bracket (Accessory 7), handle bar clamp (Accessory 8), rubber (Accessory 9) and the nut to install the speedometer on the handle bar.

Ⓑ Use the aluminum bush (Accessory 15) to install the speedometer on the handle bar stem.

3-1A Overview

9,000 RPM

Tachometer
● Display range: 0~9,000 RPM.
● Display unit: 100 RPM.

Temperature
● Display range: 0~150°C (32~302°F)
● Display unit: 0.1°C (°F)

Adjust button
● Press the **Adjust button** to switch the thermometer unit in main screen.
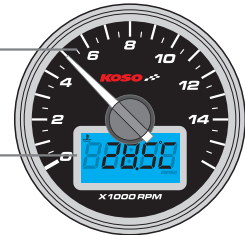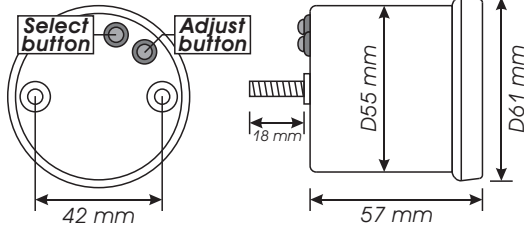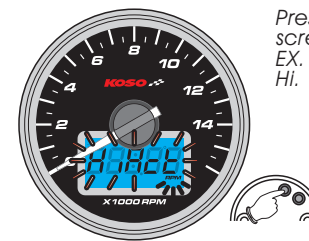
Select button

Adjust button

D55 mm

D61 mm

18 mm

42 mm

57 mm

3-1B Overview

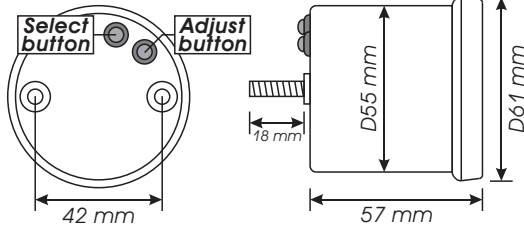**Tachometer**
- Display range: 0~1,6000 RPM.
- Display unit: 100 RPM.

Temperature
- Display range: 0~150°C (32~302°F)
- Display unit: 0.1°C (°F)

Adjust button
- Press the **Adjust button** to switch the thermometer unit in main screen.

Select button
Adjust button

D55 mm
D61 mm
18 mm
42 mm
57 mm

3-1C

Tachometer
- Display range: 0~1,6000 RPM.
- Display unit: 100 RPM.

Temperature
- Display range: 0~150°C (32~302°F)
- Display unit: 0.1°C (°F)

Adjust button
- Press the **Adjust button** to switch the thermometer unit in main screen.

Select button
Adjust button

D55 mm
D61 mm
18 mm
42 mm
57 mm

3-2 Specification

●Tachometer	Display range: 0~16,000 RPM	○Display internal	<0.5 second
	Display unit: 100 RPM	●Effective voltage	DC12V
○Display internal	<0.5 second	●Effective temperature range	-10~+60°C
○Stroke / piston setting	2 Stroke: 1, 2, 3, 4 pistons	●Meter standard	JIS D 0203
	4 Stroke: 1, 2, 3, 4, 5, 6, 8, 10, 12 pistons	●Meter size	D55 X 57 mm
●Temperature	Display range: 0~150°C (32~302°F)	●Meter weight	Around 190 g
	Display unit: 0.1°C (°F)		

NOTE Design and specification are subject to change without notice!
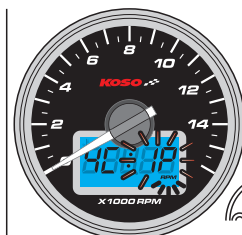
4 Cycle / Piston / Input signal setting

In main screen, press the **Select & Adjust X 3 seconds** to enter the stroke/piston/ Input signal setting screen.

⚠ **CAUTION!**
- Make sure the correct cycle and pistons before setting.
- Make sure the setting is correct, or the RPM output will be incorrect.
- We define the engine with the ignition system ignites every 360 degree as 2-cycle and the engine with the ignition system ignites every 720 degree as 4-cycle.
- 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.
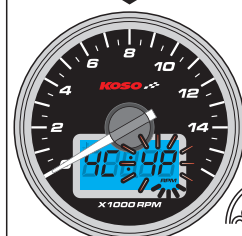
EX. To change the setting to 4 stroke.
Press the **Adjust button** to select the stroke.
EX. Now the setting is 2C (2 Stroke)1P (1 piston)

⚠ Now the stroke number is flashing!

NOTE You could set the stroke as 2 stroke or 4 stroke.

Press the **Select button** to enter the piston setting screen.
EX. Now the setting is changed from 2 stroke to 4 stroke.

Press the **Adjust button** to select the piston number.

⚠ Now the piston number is flashing.

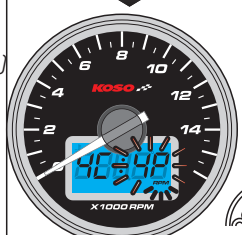**NOTE** 2 Cycle: 1,2,3,4 pistons
4 Cycle: 1,2,3,4,5,6,8,10,12 pistons

Press the **Select button** to enter the RPM signal input setting.
EX. The piston setting is changed from 1 P (piston) to 4 P (pistons).

Press the **Select button** to enter the RPM signal input setting.
EX. The piston setting is changed from 1 P (piston) to 4 P (pistons).

Press the **Adjust button** to choose the input signal you want to set.

⚠ Now the input signal setting is flashing!

NOTE The impulse setting range is between Hi (the positive impulse)& Lo (the negative impulse)

NOTE If the tachometer can't detect the signal (No RPM is displayed on the screen), you could choose another setting, and check it again.

Next page

Press **Select button** 3 times, to back the main screen.
EX. The impulse setting is changed from Lo to Hi.

5 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 **(DC 12V) to** make the meter work.	Temp does not appear or appear incorrectly. When switch off, the needle doesn't return to 0.	●Please check the sensor. →**Does the wiring break or falling off ?** ●It is possible that the positive wire is connected wrongly. →Please check is the red positive wire connect to the permanent power or battery and the brown positive wire is connected to the key on switch positive pole. ●It is possible that the permanent power wire is not connected well. →Please check the red positive wire is connect well or not.
The meter shows wrong information. Tachometer does not appear or appear incorrectly.	●Please check the voltage of your battery, and make sure the voltage is over DC 12V. ●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**.		

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

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