KOSO
Feel The Speed

INSTRUCTION

Thank you for purchasing speedometer, before operating the unit, please read the instruction thoroughly and retain it for the future reference.

⚠ Notice

1. **DC 12V** applications only.
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.

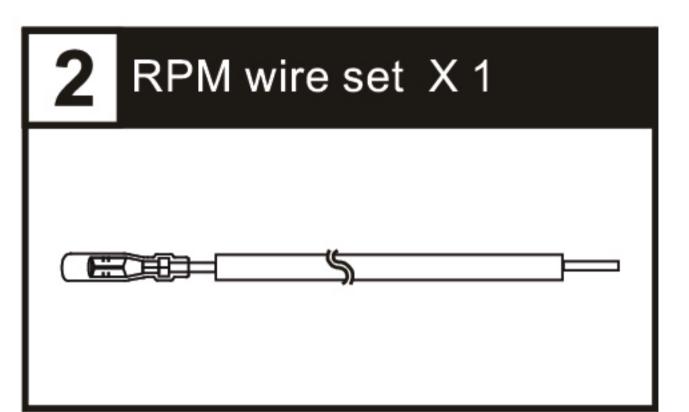⚠ **WARNING!** Some processes must be followed to avoid damages to yourself or the public.

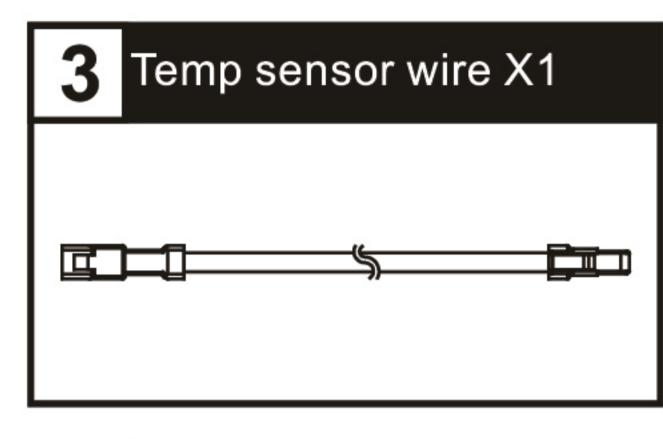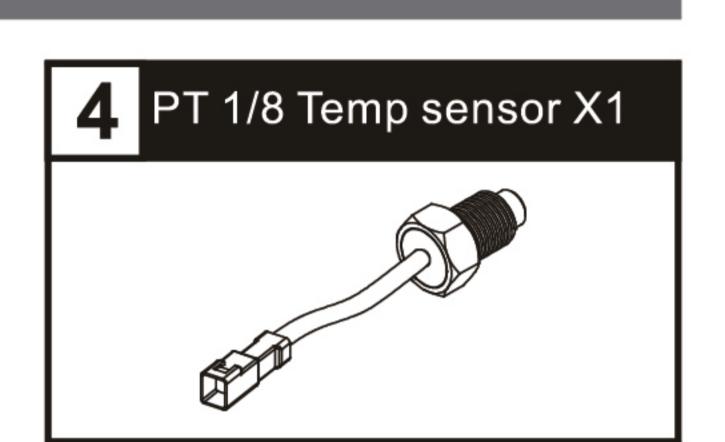⚠ **CAUTION!** Some processes must be followed to avoid the damage to the vehicle.
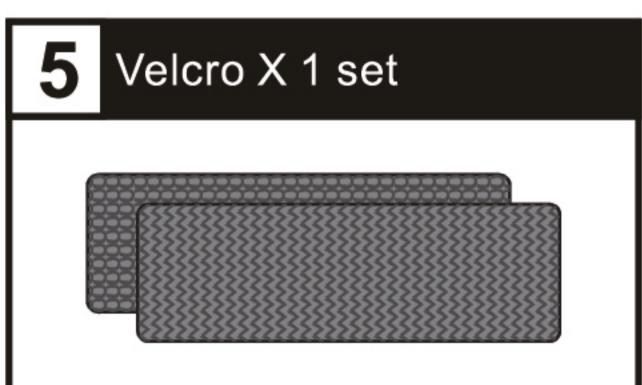
LIGHT ON | FLASH

PRESS THE BUTTON ONE TIME | PRESS THE BUTTON 3 SECONDS

1 Accessory

| 1 LCD meter X 1 | 2 RPM wire set X 1 | 3 Temp sensor wire X1 | 4 PT 1/8 Temp sensor X1 |

| 5 Velcro X 1 set | 6 Connect terminal X 2 | 7 Battery (CR2032) X1 |
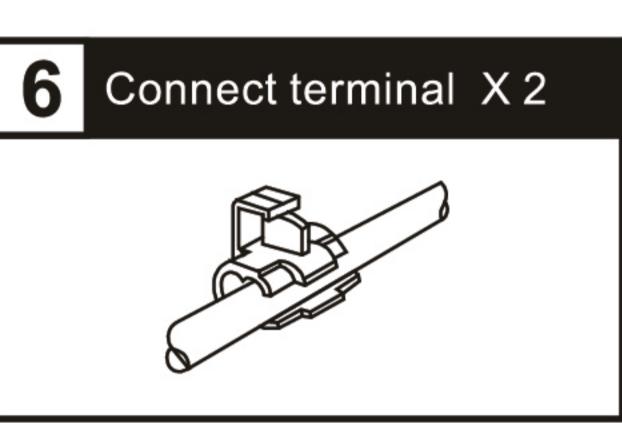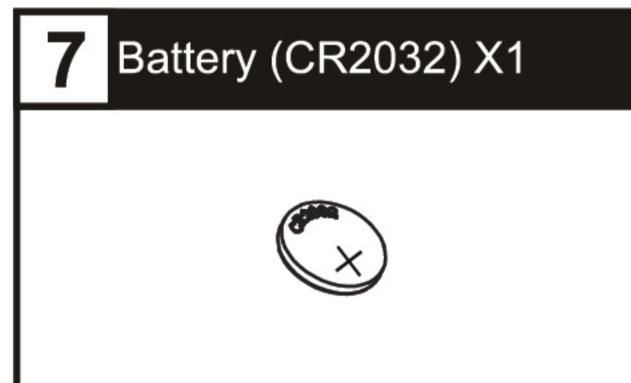
NOTE Please contact the local distributor if the items you open are not the same, with the above-listed one.

1-2 Option accessory

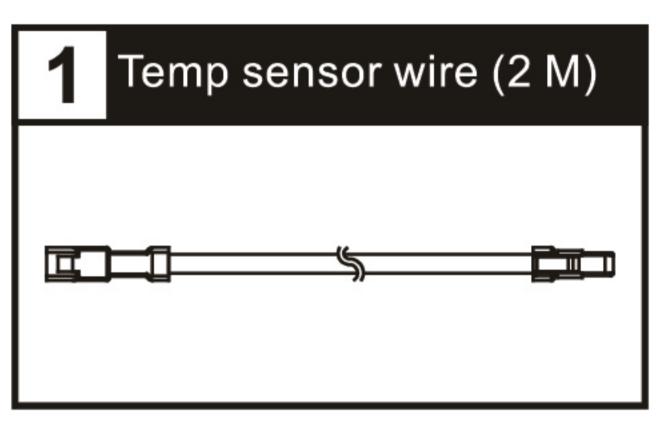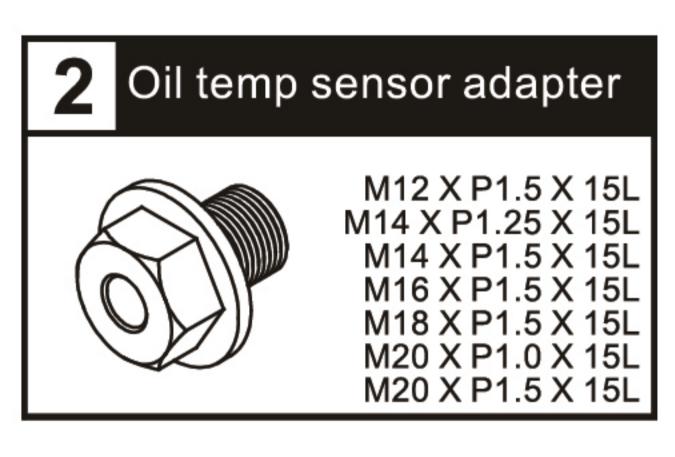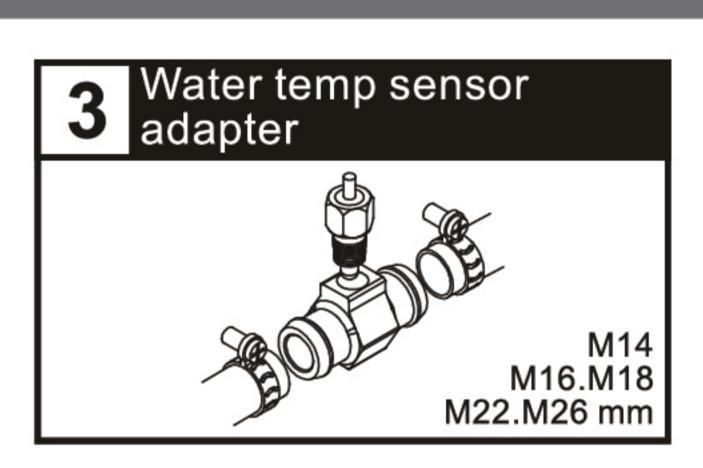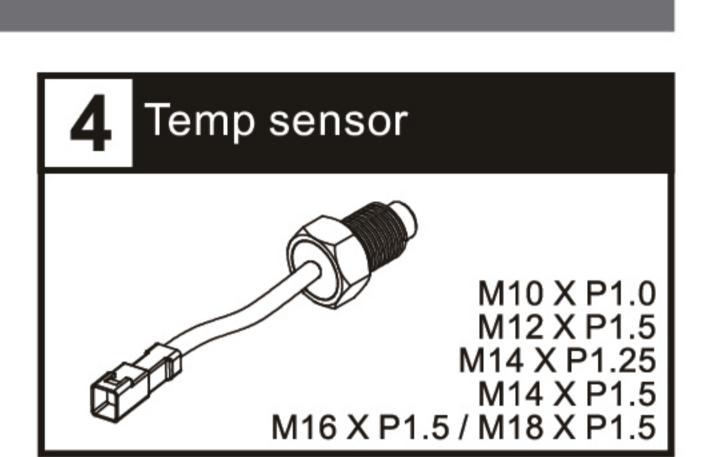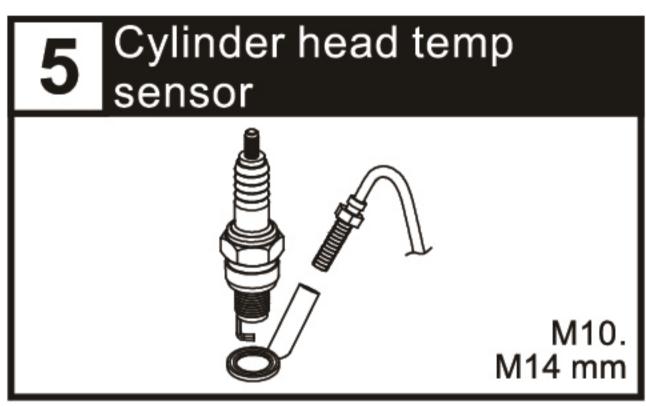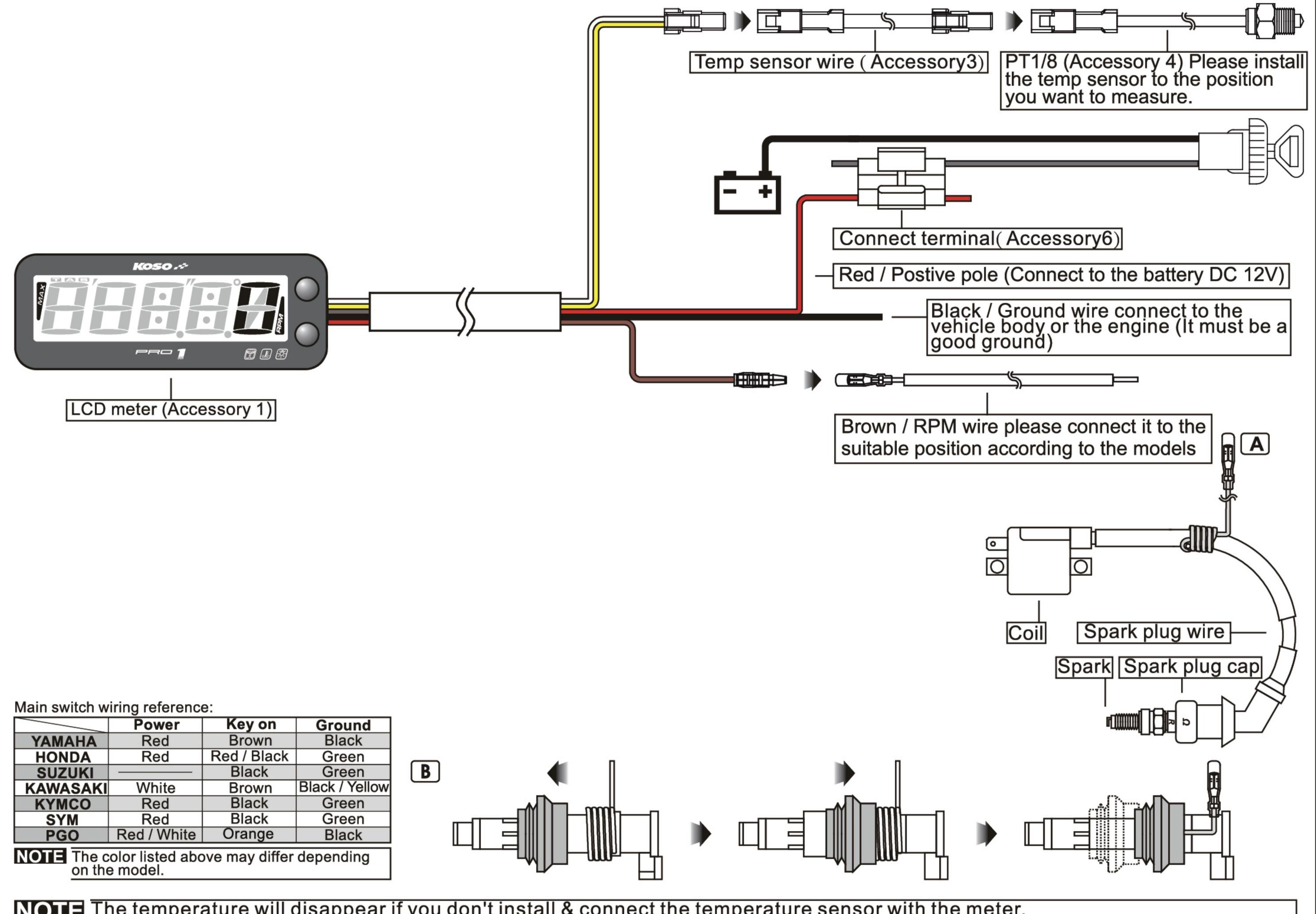| 1 Temp sensor wire (2 M) | 2 Oil temp sensor adapter | 3 Water temp sensor adapter | 4 Temp sensor |

2 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

3 Water temp sensor adapter:
M14
M16.M18
M22.M26 mm

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 Cylinder head temp sensor |

5 Cylinder head temp sensor:
M10.
M14 mm

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

2-1 Wiring installation instructions

Temp sensor wire (Accessory3)

PT1/8 (Accessory 4) Please install the temp sensor to the position you want to measure.

Connect terminal(Accessory6)

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

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

LCD meter (Accessory 1)

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

Coil | Spark plug wire

Spark | Spark plug cap

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.

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 brown wiring in parallel will cause the meter work improperly.
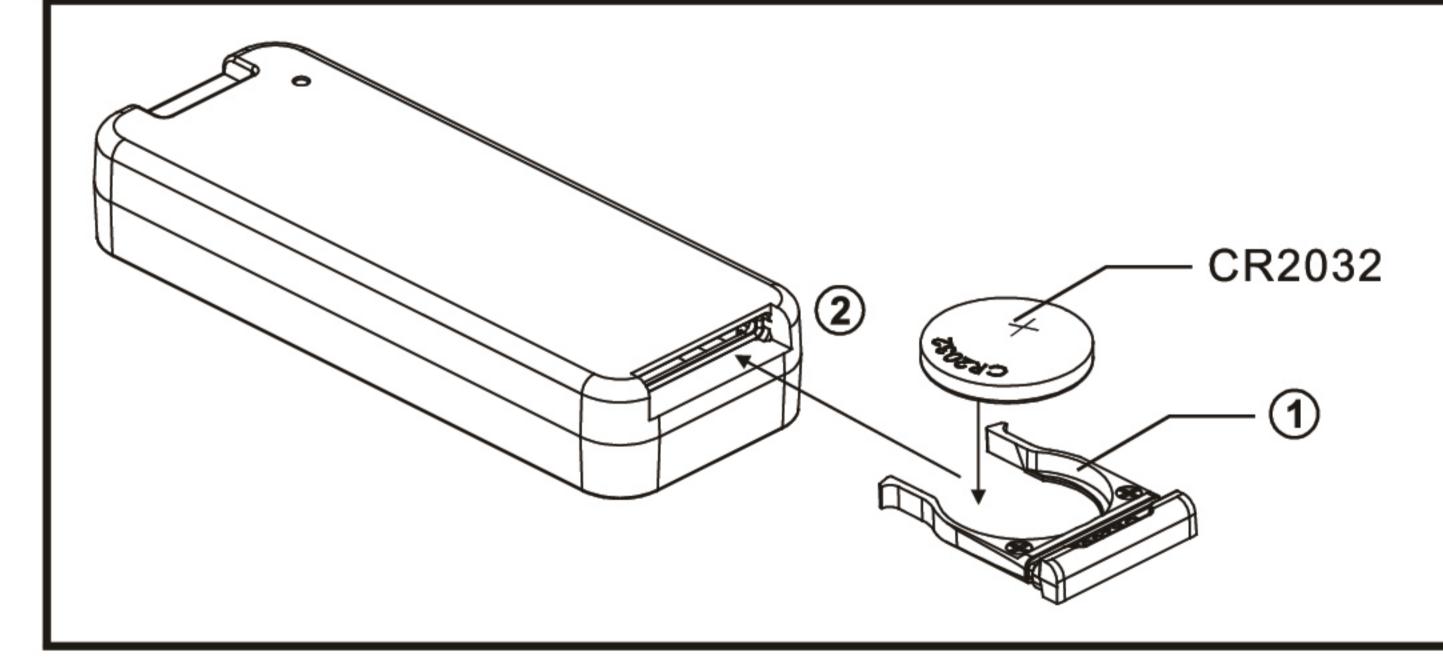
⚠ The RPM wire installation

A. Please wrap the RPM wire at least 5 times around the spark plug.
   Please check the spark plug is "R" type or not. If not, Please replace the spark plug with the "R" type spark plug.
B. 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.

2-2 Battery replancement

Follow this procedure for proper installation

● Please open the battery slot first, then put the battery in the position shown in Figure①. Finally push the battery slot back in the meter in the position shown as figure②.

CR2032

⚠ **WARNING!** Not following this procedure could result in permanent damage to the meter.

3-1 Basic function instruction

MAX RPM / Temperature record
● The meter will record the top RPM and temperature automatically.

Thermometer
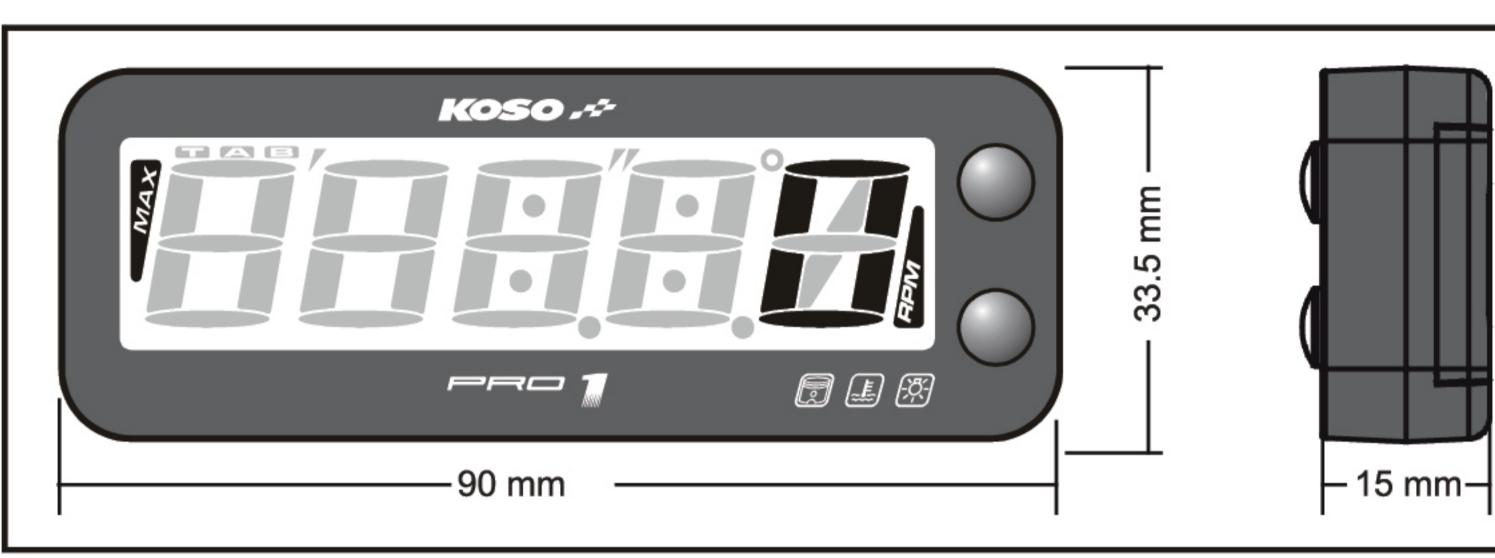● Display range：0~250 °C(32~482 °F)
● Display range：0.1 °C (°F)

● Select button

Tachometer
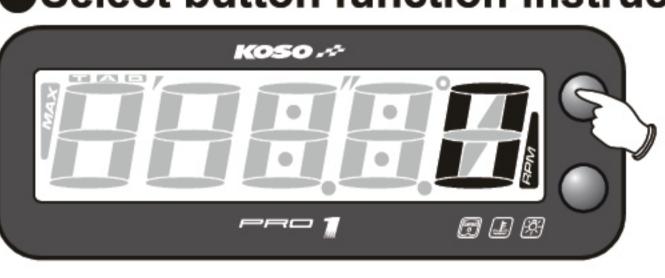● Display range：20,000 RPM
● Display range：100 RPM

● Adjust button

3-2 Function, setting instruction

● Tachometer	Display range：0~20,000 RPM	● Thermometer	Display unit:°C & °F for alternative
	Display unit：100 RPM	○ Thermometer	Display range：0~250 °C (32~482 °F)
○ Display internal	<0.5 second		Display unit：0.1 °C (°F)
○ Max. RPM record	Display range：0~20,000 RPM	○ MAX temperature record	Display range：0~250 °C (32~482 °F)
	Display unit：1 RPM	○ Thermometer alarm	Setting range：60~250 °C (140~482 °F)
○ Total hour meter	Display range：99,999 (HOUR),reset automatically after 99,999 (HOUR)		Setting unit：0.1 °C (°F)
	Display unit：1 HOUR	● Backlight brightness	Setting range：1-5 (Darkest)~5-5 (Brightest)
○ Hour meter A / B	Display range：9999.9 (HOUR),reset automatically after 9999.9 (HOUR)		Setting unit：Each level represents 20%
		● Effective voltage	CR 2032 Lifetime around 10 mont
	Display unit：0.1 HOUR	● Effective temperature range	-10~+60 °C
○ RPM input pulse	Setting range：0.5、1~6	● Meter standard	JIS D 0203 S2
○ Warning	Setting range：5,000~20,000 RPM	● Meter size	90 X 33.5 X 15 mm
	Setting unit：100 RPM	● Meter weight	Around 330g

NOTE Design and specification are subject to change without notice!
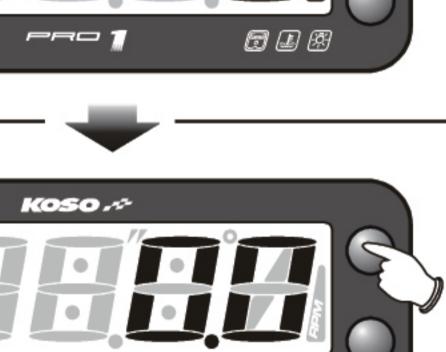
33.5 mm
90 mm — 15 mm

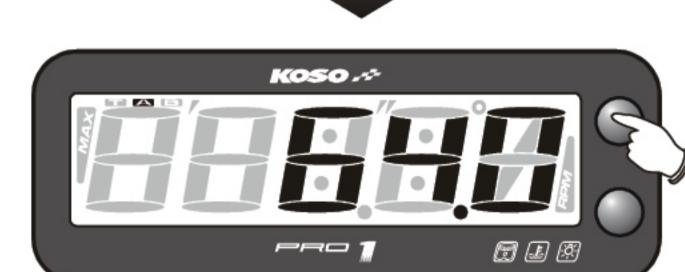## 3-3 Function switch instruction
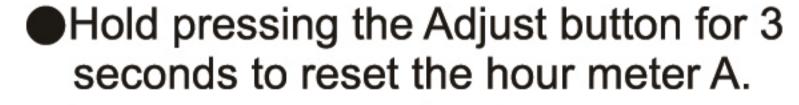
● Select button function instruction

● In RPM screen, Press the Select button once to switch function from RPM to total hour meter.

● In total hour screen, Press the Select button once to switch function from total hour to hour meter A.

● In hour meter A screen, Press the Select button once to switch function from hour meter A to hour meter B.
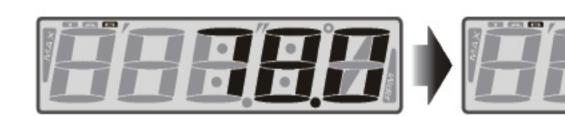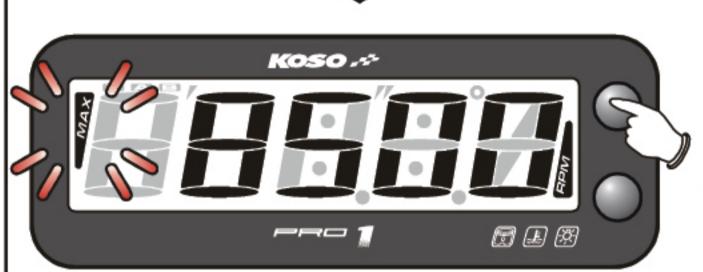● Hold pressing the Adjust button for 3 seconds to reset the hour meter A.

● In hour meter B screen, Press the Select button once to switch function from hour meter B to MAX.
● Hold pressing the Adjust button for 3 seconds to reset the hour meter B.

● Max. RPM record screen, Press the Select button one time to go back to the RPM screen.
● Hold pressing the Adjust button for 3 seconds to reset the MAX.
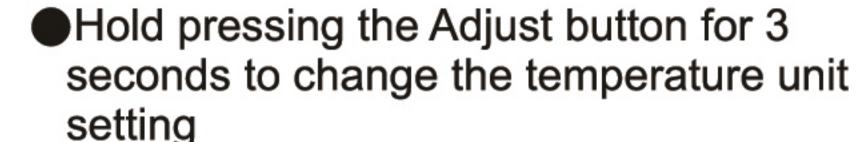
● In RPM screen.

● Select button for 3 seconds function instruction

● In RPM screen, Hold pressing the Select button for 3 seconds to switch function from RPM to thermometer.

● In thermometer screen, Press the Select button once to switch function from thermometer meter to MAX temperature record.
● Hold pressing the Adjust button for 3 seconds to change the temperature unit setting

● In MAX temperature record screen, Hold pressing the Select button for 3 seconds to go back to the RPM screen.
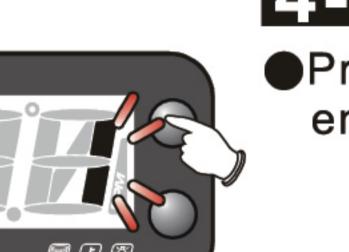● Hold pressing the Adjust button for 3 seconds to reset the MAX temperature record.
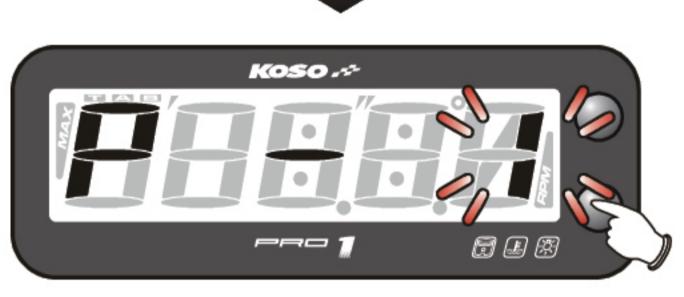
● In RPM screen。

4 Function setting instruction

● In main screen, hold pressing the Select + Adjust button for 3 seconds to enter the setting screen.

4-1 RPM pulse setting

● Press the Select button one time to enter the RPM pulse setting.

● EX. You want to change the current setting value from 1 to 2.
● Press the Adjust button to enter the corresponding value for the RPM signal number per ignition. (Please check the reference table below!)

NOTE Default:P-1

⚠ Now the default is flashing

NOTE The piston type can be set is 0.5、1、2、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 signal per 1 ignition.
1	2C-1P	4C-2P	1 RPM signal per 1 ignition.
2	2C-2P	4C-4P	1 RPM signal per 2 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	1 RPM signal per 5 ignition.
6	2C-6P	4C-12P	1 RPM signal per 6 ignition.

⚠ CAUTION!
Some 4 stroke engine with single cylinder also generate 1 ignition signal per revolution of the engine. In this case the setting should be set as same as 2 stroke engine with single cylinder type of bike.

NOTE Pvalue is how many ignition signal the engine will generate per revolution (360°)
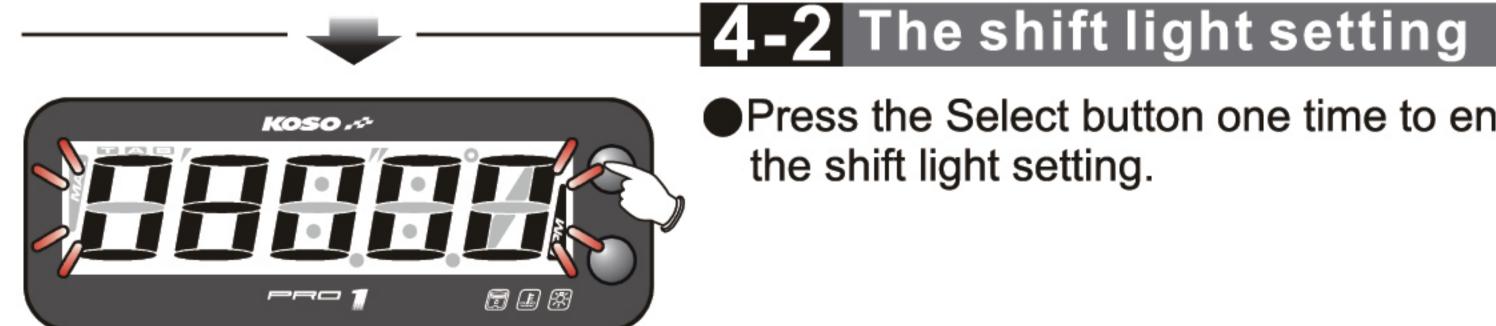
● Press the Select button to go back to the RPM pulse setting.
● EX. The ignition angle setting is changed from 1 to 2 (4C-4P).

● Press the Adjust button to enter the shift light setting.

4-2 The shift light setting

● Press the Select button one time to enter the shift light setting.

● EX: You want the shift light to light on at 8000 RPM Please change the shift light setting value to 8500 directly.
● Press the Select button to move to the digit you want to set.

NOTE Default:8,000RPM

⚠ Now the default is flashing

NOTE Setting range：5,000~20,000 RPM
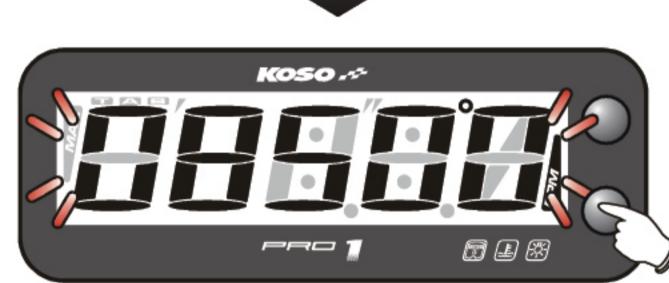Setting unit：100 RPM

● Press the Adjust button to choose the setting number.

● Press the Select button to choose the Shift light setting.
● EX: Now the shift light setting is changed from 8,000RPM to 8,500 RPM.

● Press the Adjust button to enter the temperature alarm setting.

4-3 Temperature alarm setting

● Press the Select button one time to enter the temperature alarm setting.

● EX: You want to set the temperature alarm at 95 °C.
● Press the Select button to move to the digit you want to set.

NOTE Default:90 °C

⚠ Now the default is flashing

NOTE Setting range：60 ~ 250 °C (140~482 °F)

● Press the Adjust button to choose the setting number.

● Press the Select button to go back to the temperature alarm screen.
● EX: The temperature alarm setting is changed from 90°C to 95 °C.

●Press the Adjust button to enter the Backlight setting.

4-4 Backlight setting

●Press the Select button one time to enter the backlight setting.

●EX. You want to set the backlight at 3-5 (60%).
●Press the Adjust button to choose the setting number.

NOTE Default:5-5

⚠ Now the default is flashing

NOTE Setting range:1-5(Darkest)~5-5 (Brightest),5 different levels available.
Setting unit:20% per level.
The backlight brightness will change immediately after you set the value.

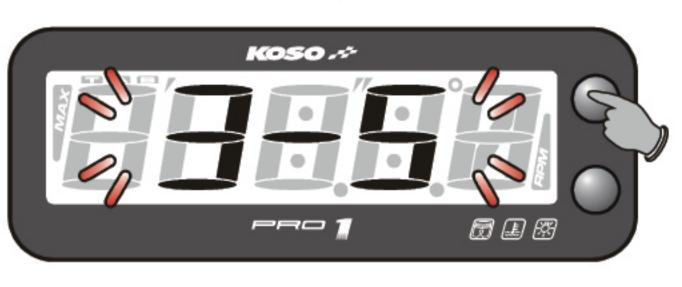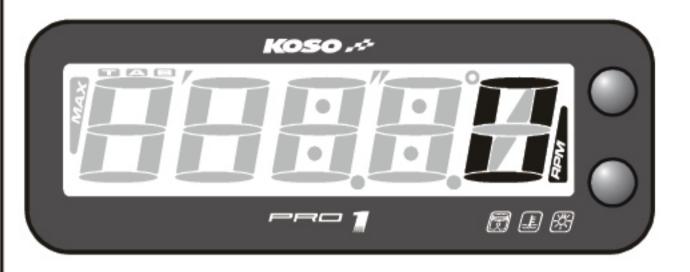●Press the Select button one time to enter the backlight setting.
●EX:The backlight setting setting is changed from 5-5 (100%) to 3-5 (60%).

●Press the Select button X3 seconds to go back to the main screen.

●The main screen.

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
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.
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 ●Please check your setting. →Please refer to the manual 4-1.

Trouble	Check item
Temp does not appear or appear incorrectly.	●Check the temp sensor →Did the wire broke or disconnect?

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