KOSO Feel The Speed

INSTRUCTIONS

Thank you for purchasing our product. Before installing/operating the product, read the instructions carefully and retain them for future reference.

⚠ Attention!

- For installation, follow the steps described. Any damage caused by wrong installation shall be imputed to the users.
- To avoid a short circuit from occurring do not pull or modify the wires during installation.
- Do not disassemble or change any parts. Opening and dissassembling this unit will void any warranty.
- Maintenance and repairs should be executed by our professionals only.

Symbol description:

NOTE

⚠ **Some procedures must be followed to avoid damages to the product.**

⚠WARNING! **Certain procedure must be followed to avoid damages to yourself, to the vehicle or to others.**

1-1 Accessories

1 LCD Meter X1

2 RPM wire (Type A) X1

3 RPM wire (TYPE B) X1

4 Extension wire X1

5 Temperature sensor X1

6 Meter bracket X1

7 M5 washer X2

8 M5x16LxP0.8 Allen screw X2

9 Rubber strip X1

10 Handlebar clamp X1

11 M8x20LxP1.25 Allen screw X1

12 M8 washer X1

13 M8xP1.25 nut X1

1-2 Optional accessories

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

BG******

2 Water temp sensor adapter

M14
M16. M18
M22. M26 mm

BG0*****

2 Wiring Installation Instructions

NOTE When connecting the power wire, carefully follow the instructions. If the red & brown wires are connected in parallel, the meter won' t work properly.

⚠ The RPM wire installation

We recommend installing the R type spark plug or low-resistance spark plug cap at the same time.

A. Connect the RPM wire (Type A) on the spark plug wire by connecting the male and female connectors.

B. Connect the RPM wire (Type B) to the pick up sensor.

C. Connect in parallel the RPM wire (Type A) with the original tachometer signal wire.

The best signal source is in order as C>B>A. We suggest that you check different ways if you have problems getting the RPM signal.

3 Installation instructions

Follow the steps below during installation.

1. Handlebar
2. Rubber strip (Accessory 9)

⚠ CAUTION! Refer to the list below for use of the rubber strip.

Handle bar SIZE	Use Rubber strip
7/8”(22.2 mm)	NO
1”(25.4 mm)	YES

3. Handlebar clamp (Accessory 10)
4. Meter bracket (Accessory 6)
5. M8x20LxP1.25 Allen screw (Accessory 11)
6. M8 washer (Accessory 12)
7. M8xP1.25 nut (Accessory 13)
8. LCD Meter (Accessory 1)
9. M5 washer X2 (Accessory 7)
10. M5x16LxP0.8 Allen screw X2 (Accessory 8)

3-1 Meter Size

3-2 Basic Function Instructions

Tachometer (RPM)
- Display range : 0~12,000 RPM
- Display unit : 1,000 RPM (Large grid), 500 RPM (Small grid)

Indicator
- Shift light warning (Red)

Max. RPM
- Display range : 0~12,000 RPM
- Display unit : 1,000 RPM (Large grid), 500 RPM (Small grid)

Max. temperature record
- Display range : 0.0~250.0 °C (32.0~482.0 °F)
- Display unit : 0.1 °C (°F)

Thermometer
- Display range : 0.0~250.0 °C (32.0~482.0 °F)
- Display unit : 0.1 °C (°F)

Voltmeter
- Display range : DC 8.0 ~ 18.0 V
- Display unit : DC 0.1 V

Button

3-3 Specifications

●Tachometer (RPM)	Display range : 0 ~ 12,000 RPM Display unit : 1,000 RPM (Large grid) , 500 RPM (Small grid)
○Pre-Shift Light warning	Setting range : 1,000 ~ 11,000 RPM, when setting value is reached or above, warning light will iluminate. Setting unit : 100 RPM
○Shift Light warning	Setting range : Pre-Shift Light warning setting value +100 ~ 12,000 RPM, when setting value is reached or above, warning light will iluminate. Setting unit : 100 RPM
○Max. RPM	Display range : 0~12,000 RPM Display unit : 1,000 RPM (Large grid), 500 RPM (Small grid)
●The RPM input signal number setting	Setting range : P-0.5, 1 ~ 6
○The RPM input pulse	Setting range : LO-ACT, HI-ACT
●Temperature	Display range : 0.0~250.0 °C (32.0~482.0 °F) Display unit : 0.1 °C (°F)
○Overheat warning	Setting range : 60~250 °C(140~482 °F) , when setting value is reached or above, warning light will iluminate. Setting unit : 1 °C (°F)
○Max. temperature record	Display range : 0.0~250.0 °C (32.0~482.0 °F) , can return to zero manually Display unit : 0.1 °C (°F)
●Voltmeter	Display range : DC 8.0 ~ 18.0 V Display unit : DC 0.1 V
○Low voltage warning	Setting range : DC 8.0~13.0 V, when setting value is reached or below, warning light will illuminate. Setting unit : 0.1 V
●Backlight color	Setting range : white, red, yellow, green, blue, light blue, purple Loop switch
●Unit	Temperature unit : ˚C (Celsius) and ˚F (Fahrenheit)
●Operating voltage	DC 12V
●Operating temperature	-10~ +60 °C
○Storage temperature	-20~ +80 °C
●Specification	JIS D 0203(S2)
●Meter Size	D 48 mm
●Meter Weight	± 89 g
●Indicator	Shift light warning (Red)

NOTE Design and specifications are subject to change without notice.

4 Main Menu Switching Description

- In the temperature screen, press the **button** to enter the voltage screen.
- In the temperature screen, press the **button for 3 seconds** to enter the setting screen.

When the voltage function is turned off

- In the voltage screen, press the **button** to enter the MAX screen.

NOTE When the function is turned on, it will only be displayed on the screen.

- In the MAX screen, press the **button** to go back to the temperature screen.
- Press the **button for 3 seconds** to reset Max. record screen.

- In the temperature screen.

5 Setting Screen Switching Description

- Press the **button for 3 seconds** in the main screen(temperature) to switch to the setting screen.
- Press the **button** to select

❶Unit(Temperature) ❷Backlight(Color) ❸RPM input pulse, signal impulse ❹Shift Light warning ❺Overheat warning ❻Voltage

NOTE During setting, if no button is not pressed for 30 seconds, it will automatically return to the startup screen.

5-1 Unit (Temperature) Setting

- In the unit screen, press the **button for 3 seconds** to enter the unit setting.

- **Example : To set temp. unit to ˚C (Celsius).**
- Press the **button** to choose the setting options.

⚠ Now the setting value is flashing.

NOTE Setting range : ˚C (Celsius) and ˚F (Fahrenheit).
Default value : ˚F (Fahrenheit).

- EX : Set temp. unit from ˚F (Fahrenheit) to ˚C (Celsius).
- Press the **button for 3 seconds** to go back to the unit screen.

- The unit screen.

5-2 Backlight (Color) Setting

●In the backlight screen, press the **button for 3 seconds** to enter the backlight color setting.

●**Example : To set backlight color to yellow.**
●Press the **button** to choose the color.

⚠ Now the setting value is flashing.

NOTE Setting range : white, red, yellow, green,blue, light blue, purple
Default value : White.

NOTE The backlight color will change immediately after you set the value.

●EX : Set backlight color from white to yellow.
●Press the **button for 3 seconds** to go back to the backlight screen.

●The backlight screen.

5-3 RPM input pulse

●In the RPM input pulse & signal type screen,press the **button for 3 seconds** to enter the RPM input pulse & signal type settings.

●**Example : You want to set the RPM input pulse to 2 (4 Stroke, 4 piston).**
●Press the **button** to choose the setting number.

⚠ Now the setting value is flashing.

NOTE Setting range : P-0.5, 1 ~ 6.
Default value : P-1.

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.
1.0	2C-1P	4C-2P	1 RPM signal per 1 ignition.
2.0	2C-2P	4C-4P	1 RPM signal per 2 ignition.
3.0	2C-3P	4C-6P	1 RPM signal per 3 ignition.
4.0	2C-4P	4C-8P	1 RPM signal per 4 ignition.
5.0	——	4C-10P	1 RPM signal per 5 ignition.
6.0	2C-6P	4C-12P	1 RPM signal per 6 ignition.

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

●EX : The RPM input pulse setting is changed from1.0 to 2.0.
●Press the **button for 3 seconds** to enter the signal impulse setting.

●**Example : Set the signal type to Low-Act.**
●Press the **button** to choose the setting options.

⚠ Now the setting value is flashing.

NOTE Setting range : Hi-Act, Low-Act.
Default value : Hi-Act.

●EX : Set the signal impulse from Hi-Act to Low-Act.
●Press the **button for 3 seconds** to go back to the RPM input pulse & Signal impulse.

●The RPM input pulse

5-4 Shift Light Warning Setting

●In the shift light warning screen, press the **button for 3 seconds** to enter the Pre-Shift Light warning(Flash) setting.

●**Example : To set Pre-Shift Light warning (Flash) value to 9,000 RPM.**

●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

NOTE Setting range : 1,000~11,000 RPM.
Default value : 8,000 RPM.

●Press the **button** to choose the setting number.

●EX : Set Pre-Shift Light warning(Flash) value from 8,000 RPM to 9,000 RPM.

●Press the **button for 3 seconds** to enter the shift light warning(Steady) setting.

●**Example : To set shift light warning (Steady) value to 11,000 RPM.**

●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

NOTE Setting range : Pre-Shift Light warning setting value +100 ~ 12,000 RPM.
Default value : 9,000 RPM.

●Press the **button** to choose the setting number.

●EX : Set shift light warning(Steady) value from 9,000 RPM to 11,000 RPM.

●Press the **button for 3 seconds** to go back to the shift light warning screen.

●The shift light warning screen.

5-5 Overheat Warning Setting

●In the overheat warning screen, press the **button for 3 seconds** to enter the overheat warning setting.

●**Example : To set overheat warning value to 248 ˚F.**

●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

NOTE Setting range : 60 ~250 ˚C (140 ~482 ˚F).
Default value : 90 ˚C(194 ˚F).

●Press the **button** to choose the setting number.

●EX : Set overheat warning value from 194 ˚F to 248 ˚F.

●Press the **button for 3 seconds** to go back to the overheat warning setting.

●The overheat warning screen.

5-6 Voltage Setting

●In the voltage screen, press the **button for 3 seconds** to enter the voltage setting.

●**Example : To set voltage function to ON .**
●Press the **button** to choose the setting options.

⚠ Now the setting value will blink.

NOTE Settings range : ON, OFF.
Default value : OFF.

●EX : Set voltage function from OFF to ON .
●Press the **button for 3 seconds** to enter the low voltage warning setting.

●**Example : To set low voltage warning value to DC 11.0 V.**
●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

NOTE Setting range : DC 8.0~13.0 V.
Default value : DC 11.5 V.

●Press the **button** to choose the setting number.

●EX : Set low voltage warning value from DC 11.5 V to DC 11.0 V.
●Press the **button for 3 seconds** to go back to the voltage warning screen.

●The voltage screen.

6 Trouble Shooting

The following situations do not indicate malfunctions of the product. Check the following before taking it in for repair.

Trouble	Check item
The meter doesn't work when the power is on.	**●The power isn't supplied to the meter.** **→Make sure the wiring is connected. The wiring and fuse are not broken.** **→The battery is too old to supply needed power (DC 12 V).**
The meter shows wrong information.	**●Check the voltage of your battery, and make sure the voltage is over DC 12 V.**
Tachometer doesn't appear or appears incorrectly.	**●Make sure the RPM wire is connected properly.** **→Check if the RPM wire wire is connected correctly.** **●Check if the spark plug is R type or not. If not, replace the spark plug with the R type spark plug.** **●Check the setting.** **→Refer to the manual 5-3 RPM input pulse & Signal impulse & RPM range.**
Thermometer doesn't display or displays incorrectly.	●Make sure the temperature wire is connected properly. →Check if the temperature wire is connected correctly. ●Check the setting. →Refer to the manual 5-5 Overheat Warning Setting.
The meter indicator doesn't display.	**●Check the setting.** **→Refer to the manual 5-4 Shift Light Warning Setting.**

※ If the problems still cannot be solved, contact our technical department for assistance.