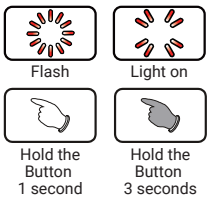
KOSO Feel The Speed

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

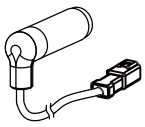
⚠ Some procedures must be followed to avoid damages to the product.

⚠**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 Active speed sensor X1



3 M8 / S type speed sensor bracket X 1

4 M10 / S type speed sensor bracket X 1

5 M5x5xP0.8 Hexagon screw X 2

6 2.5 mm Allen key X 1

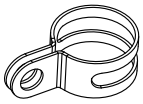
7 Meter bracket X1

8 M5 washer X2

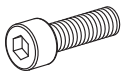
9 M5x16LxP0.8 Allen screw X2

10 Rubber strip X1

11 Handlebar clamp X1



12 M8x20LxP1.25 Allen screw X1

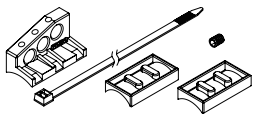


13 M8 washer X1

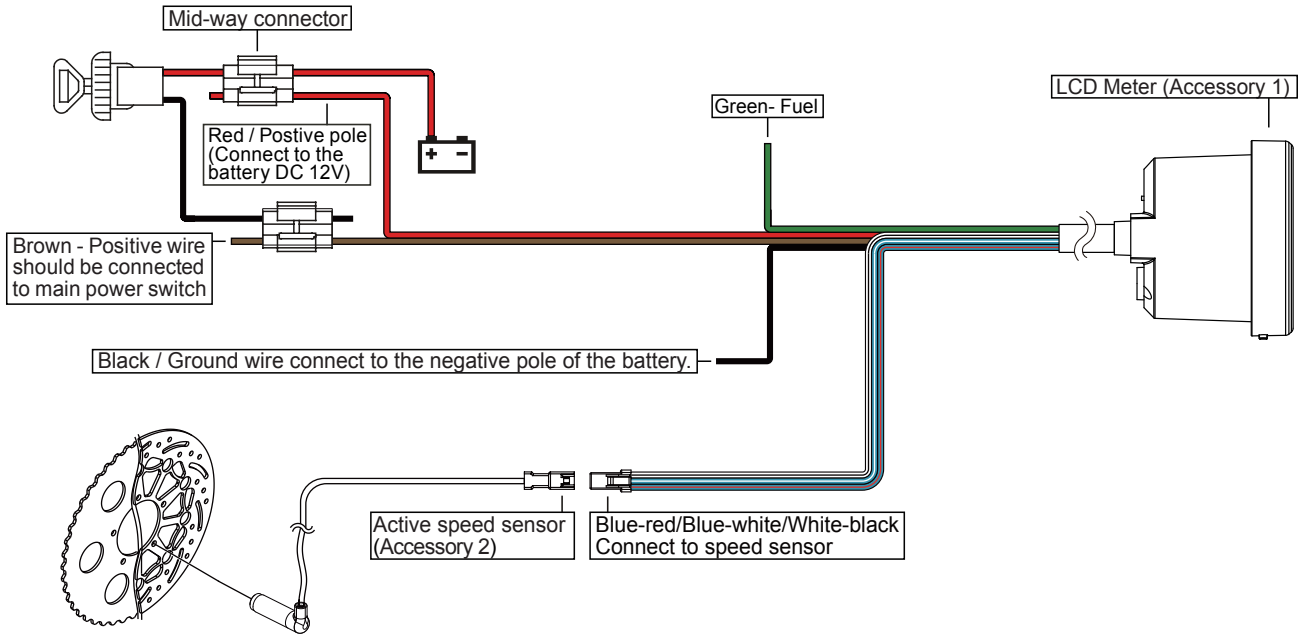
14 M8xP1.25 nut X1

1-2 Optional accessories

1 L type speed sensor bracket

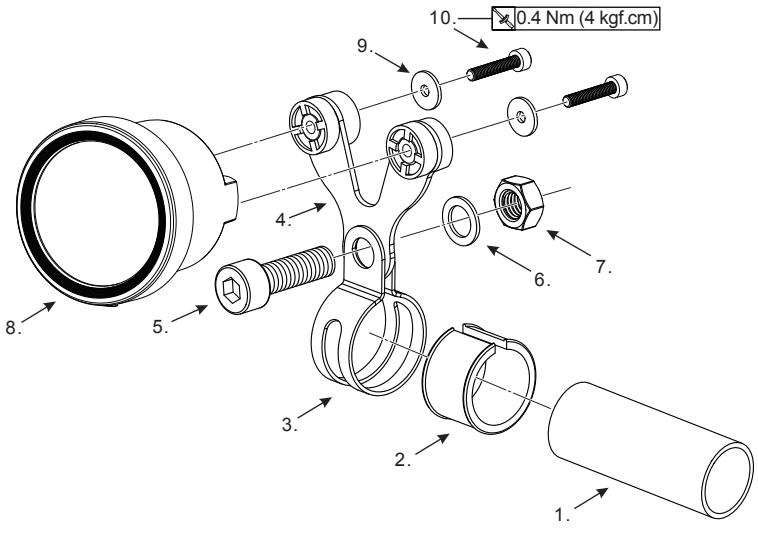


2 Wiring Installation Instructions



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.

3 Installation instructions



Follow the steps below during installation.

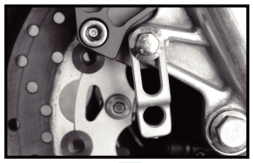
1. Handlebar
2. Rubber strip (Accessory 10)

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

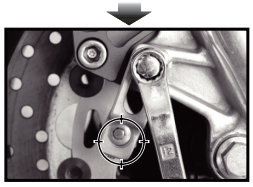
Handle bar SIZE	Use Rubber strip
7/8"(22.2 mm)	NO
1"(25.4 mm)	YES

3. Handlebar clamp (Accessory 11)
4. Meter bracket (Accessory 7)
5. M8x20LxP1.25 Allen screw (Accessory 12)
6. M8 washer (Accessory 13)
7. M8xP1.25 nut (Accessory 14)
8. LCD Meter (Accessory 1)
9. M5 washer X2 (Accessory 8)
10. M5x16LxP0.8 Allen screw X2 (Accessory 9)

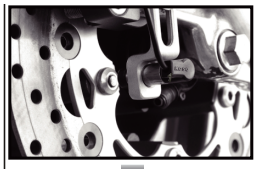
MOTO / SCOOTER S type speed sensor bracket instruction



Install the S type sensor bracket .



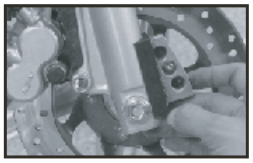
Adjust the sensor bracket position to make sure that the sensor faces the magnet to prevent bad speed signal or no signal.



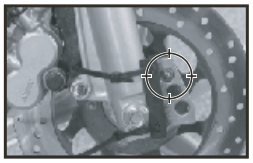
Install the speed sensor on the bracket .

Adjust the distance between sensor and magnet. We suggest you make sure the distance is under **1 mm** for an optimal speed signal.

MOTO / SCOOTER L type speed sensor bracket instruction

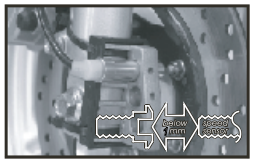


Install the L bracket and the anti-slip rubber on the front fork and adjust it to the proper height and angle.



Use the zip tie to fix the bracket on the front fork. Make sure the disc screw can pass the hole on the bracket for you to install the sensor into the same hole to catch the speed signal.

Install the speed sensor into the proper hole on the bracket.



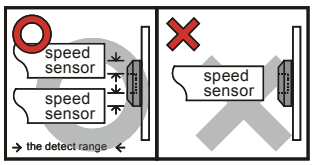
Adjust the distance between the sensor and screw to get the best speed signal. Make sure the distance is under 1 mm to get the best signal.

P.S. Try it!

The active speed sensor needs to be facing a metal surface to detect the speed.
EX. 1 The disc screw.
EX. 2 The disc to detect the disc gap. (Make sure the distances between the gaps are the same in advance to avoid improper speed signal.)
EX. 3 The sprocket to detect the disc gap. (Make sure the distances between the gaps are the same in advance to avoid improper speed signal.)
EX. 4 Rear disc - detect the gap between the disc.
We suggest you obtain the speed from the disc screws. The more sensor points are, the better the speed accuracy is. The maximum sensor points the speed sensor could detect is 40 points per turn.

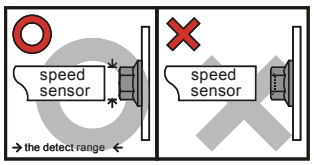
⚠ **After installation, use your hand to turn the tire to see if everything is ok. The LED on the active speed sensor will light up once the signal is detected.**

EX. 1



The hexagon socket disc screw
The best detection area: The edge of the hexagon socket screw.

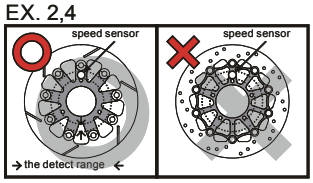
⚠ Don't pick-up the signal from the middle hole of the hexagon socket screw to avoid wrong signal.



The hexagon screw
The best detection area: The middle of the screws.

⚠ Some hexagon screw centers have a small hole in this case,we suggest you to obtain the signal from the edge of the screw like the hexagon socket screw.

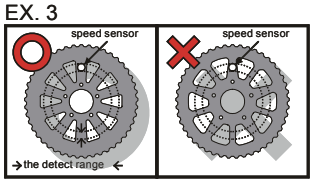
EX. 2,4



The disc
The best detection area: Detect the speed signal from the gaps of the disc.

⚠ Note that there are discs with the gaps in different locations, so this method may not work.

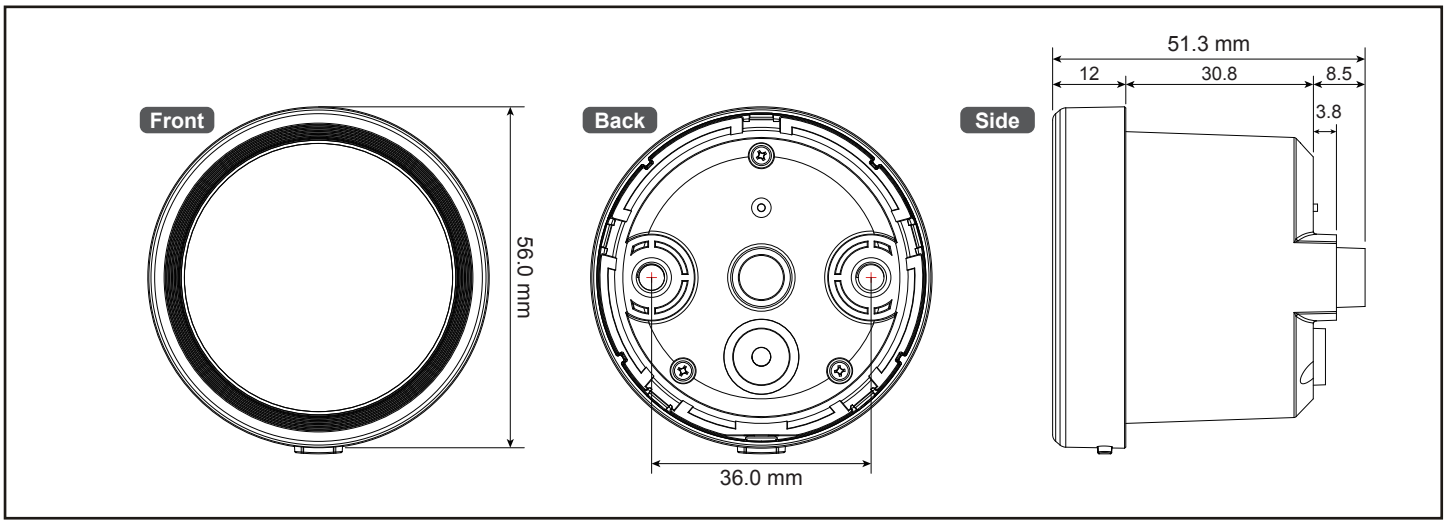
EX. 3



The sprocket
The best detection area: Detect the speed signal from the gaps of the sprocket.

⚠ Note that there are sprockets with the gaps in different locations, so this method may not work.

3-1 Meter Size

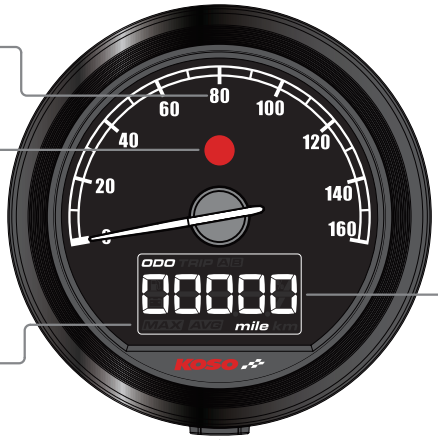


3-2 Basic Function Instructions

Speedometer
- ●Display range : 0 ~ 160 km/h (MPH)
- ●Display unit : 20 km/h (MPH) (Large grid), 10km/h (MPH) (Small grid)

Indicator
- ●Speed warning (Red)

Max. speed record
- ●Display range : 0~160 km/h (MPH)
- ●Display unit : 1 km/h (MPH)



Button

Odometer
- ●Display range : 0 ~ 99,999 km (mile)
- ●Display unit : 1 km (mile)

Trip meter
- ●Display range : 0.0~9,999.9 km (mile)
- ●Display unit : 0.1 km (mile)

Fuel meter
- ●Display range : 10 levels (100%)
- ●Display unit : 1 level (10 %)

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

3-3 Specifications

●Speedometer	Display range : 0 ~ 160 km/h (MPH) Display unit : 20 km/h (MPH) (Large grid), 10km/h (MPH) (Small grid)
○Speed warning setting	Display range : 30~160 km/h (19~100 MPH), when setting value is reached or above, warning light will illuminate. Display unit : 1 km/h (MPH)
○Max. speed record	Display range : 0~160 km/h (MPH), can return to zero manually Display unit : 1 km/h (MPH)
○Odometer	Setting range : 0 ~ 99,999 km (mile) Setting unit : 1 km (mile)
○Trip meter	Display range : 0.0~9,999.9 km (mile), can return to zero manually Display unit : 0.1 km (mile)
○Circumference	Setting range : 300~2,500 mm Setting unit : 1 mm
○Sensitive point	Setting range : 1~20 P Setting unit : 1 P
●Fuel meter	Display range : 10 levels (100%) Display unit : 1 levels (10%)
○Fuel Gauge Resistance(Ω)	Setting range : 100 Ω, 250 Ω, 270 Ω, 390 Ω, 510 Ω,1200 Ω, Sw, Custom(learning mode), OFF
○Low Fuel warning	Setting range : 0~30%, when setting value is reached or below, warning light will illuminate. Setting unit : 10%
●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	Speed unit : km, mile
●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	± 90 g
●Indicator	Speed warning (Red)

NOTE Design and specifications are subject to change without notice.

4 Main Menu Switching Description

●In the total mileage screen, press the **button** to enter the TRIP screen.
●In the total mileage screen, press the **button for 3 seconds** to enter the setting screen.

●In the TRIP screen, press the **button** to enter the Fuel screen.
●Press the **button for 3 seconds** to reset Trip record.

●In the Fuel screen, press the **button** to enter the voltage screen.

NOTE When the fuel wire is not connected, the fuel meter will display --%.

When the voltage functions are 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. speed record screen, press the **button** to go back to the total mileage screen.
●Press the **button for 3 seconds** to reset Max. record screen.

●In the total mileage screen.

5 Setting Screen Switching Description

●Press the **button for 3 seconds** in the main screen(ODO) to switch to the setting screen.
●Press the **button** to select
❶Unit(Speed) ❷Backlight(Color) ❸Tire circumference, Sensing point ❹Speeding warning ❺Voltage ❻Fuel resistance, Low Fuel warning ❼Internal and External ODO

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

●Main screen(ODO)

●Enter the setting screen.

❶Unit(Speed)

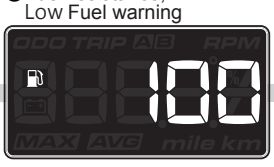
❷Backlight(Color)

❸Tire circumference, Sensing point

❹Speeding warning

❺Voltage

❻Fuel resistance, Low Fuel warning



❼Internal and External ODO

5-1 Unit (Speed) Setting

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

●**Example : To set speed unit in km.**
●Press the **button** to choose the setting options.

⚠ Now the setting value is flashing.

NOTE Setting range : km, mile.
Default value : mile.

●EX : Set speed unit from mile to km.
●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 Tire Circumference and sensing point setting

●In the tire circumference and sensing point screen, press the **button for 3 seconds** to enter the tire circumference and sensing point setting.

⚠ CAUTION!
●Measure the tire circumference (The tire you will install the sensor on) to confirm the sensor point value.
●The speed displayed on the meter will be affected by the setting, make sure the setting number is correct before you enter the setting.

⚠ Reset this setting value if you change to a different tire size.

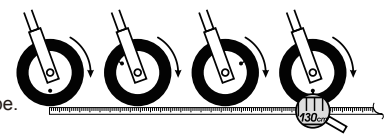
●**Example : If the tire circumference is 1,300 mm.**
●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

NOTE Setting range : 300~2,500 mm.
Default value : 1,000 mm.

P.S. Try it!

●You can use the tire valve as the starting point and the terminal point to measure the wheel circumference with a measuring tape.



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

●EX : Set the tire circumference value from 1,000 mm to 1,300 mm.
●Press the **button for 3 seconds** to enter the sensor point setting.

●**Example : To set the sensor point value to 06 P .**
●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

NOTE Setting range : 01 P~20 P.
Default value : 01 P.

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

●EX : Set the sensor point value from 01 P to 06 P.
●Press the **button for 3 seconds** to go back to the tire circumference and sensing point screen.

●The tire circumference and sensing point screen.

5-4 Speed Warning Setting

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

●**Example : To set speeding warning value to 51 MPH.**
●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

NOTE Setting range : 30~160 km/h (19~100 MPH).
Default value : 60 km/h (38 MPH).

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

●EX : Set speed warning value from 38 MPH to 51 MPH.
●Press the **button for 3 seconds** to go back to the speed warning screen.

● The speeding warning screen.

5-5 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.

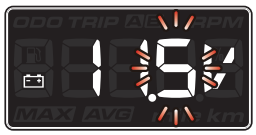
NOTE Settings range : ON, OFF.
Default value : ON.

●EX : Set voltage function 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.

5-6-1 Fuel Setting (Fuel Gauge Resistance (Ω) / Low Fuel Warning)

●In the fuel screen, press the **button for 3 seconds** to enter the fuel gauge resistance setting.

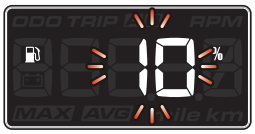
●**Example : If the vehicle is a YAMAHA T-MAX 530, its resistance is 100 Ω according to the service manual.**
●Press the **button** to choose the setting number.

⚠ Now the setting value will blink.

NOTE Settings range : 100 Ω, 250 Ω, 270 Ω, 390 Ω, 510 Ω,1200 Ω, SW, Custom, OFF.
Default value : 100 Ω.

●EX : Set fuel gauge resistance value to 100 Ω.
●Press the **button for 3 seconds** to enter the low fuel warning setting.

NOTE If the setting is Custom, it will enter the 5-6-2 (auto) and 5-6-3(manual) operation setting.



●**Example : To set low fuel warning value to 30% .**
●Press the **button** to choose the setting number.

⚠ Now the setting value is flashing.

NOTE Setting range : 0~30%.
Default value : 10%.

●EX : Set low fuel warning value from 10% to 30%.
●Press the **button for 3 seconds** to go back to the fuel screen.

●The fuel screen.

5-6-2 Fuel Gauge Resistance Setting (Auto Detection)

●Press the **button for 3 seconds** to enter the fuel gauge resistance setting(auto detection).

⚠ CAUTION!
●Before detection, ensure that your current fuel level is in the lowest position that you would like to have.
●Stop the vehicle for a few seconds to allow the fuel surface to become steady, then start the detection of the resistance.

P.S. Try it!

●If the fuel surface sensor floats in the lowest position then press the **button**, it will detect the resistance around 90 Ω.

The lowest position

●EX : Auto Detection the lowest fuel level resistance value is 90 Ω.
●Hold and press the **button 5 times** to enter the highest fuel level resistance auto detection screen.

P.S. Try it!

The highest position

●If the fuel surface sensor floats in the highest position then press the **button**, it will detect the resistance around 10 Ω.

●EX : Auto Detection the highest fuel level resistance value is 10 Ω.
●Hold and press the **button 5 times** to enter the low fuel warning setting.

5-6-3 Fuel Gauge Resistance Setting (Manual)

●In the fuel gauge resistance setting(auto detection), press the **button for 3 seconds** to enter the fuel gauge resistance setting (manual).

●**Example : To set the lowest fuel level resistance value as 90 Ω.**
●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

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

●EX : Set the lowest fuel level resistance value from 80 Ω to 90 Ω.
●Hold and press the **button twice** to enter the highest fuel level resistance setting.

●**Example : To set the highest fuel level resistance value as 10 Ω.**
●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

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

●EX : Set the highest fuel level resistance value to 10 Ω.
●Press the **button for 3 seconds** to enter the low fuel warning setting.

5-7 Internal and External ODO Setting

Internal ODO

●In the internal and external ODO screen, press the **button for 3 seconds** to enter the internal and external ODO setting.

●Press the **button for 3 seconds** to enter the internal ODO screen.

●The internal ODO screen.

⚠ User unable to adjust or clear internal ODO.

NOTE Display range :0 ~ 99,999 km (mile).

External ODO

●In the internal and external ODO screen, press the **button for 3 seconds** to enter the internal and external ODO setting.

●Press the **button for 3 seconds** to enter the external ODO setting.

●**Example : To set external total distance value to 12,500 km.**
●Press the **button for 3 seconds** to move to the digit you want to set.

⚠ Now the setting value is flashing.

NOTE Cursor's order : one hundred thousand→ten thousands→thousand →hundred→ten→digit.

NOTE Setting range : 0~99,999 km (mile).

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

●EX : Set external total distance value from 00,000 km to 12,500 km.
●Press the **button for 3 seconds** to go back to the internal and external ODO screen.

●The internal and external ODO screen.

6 Troubleshooting

The following situations do not indicate malfunctions of the product. 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 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).**	**Fuel meter doesn't display or display error.**	**●Check your fuel tank.** **●May be poor connection of the harness.** **→Make sure the wires are connected correctly.** **●Check the setting.** **→Check the settings menu if the fuel settings are correct.**
The meter shows wrong information.	●Check the voltage of your battery, and make sure the voltage is over DC 12 V.	The meter indicator didn't display.	●Check the setting. →Refer to the manual 5-4 Speeding Warning Setting.
Speed meter doesn't appear or appears incorrectly.	**●May be poor connection of the speed sensor.** **→Check if the speed sensor is connected correctly.** **●Check the setting.** **→Refer to the manual 5-3 Tire Circumference and sensing point setting.**		

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