KOSO®
Feel The Speed

INSTRUCTIONS

●Thank you for purchasing our product. This product is a multifunction meter and is easy to install. Before using, please read the instructions carefully and retain them for future reference.
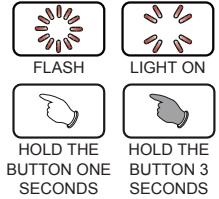
⚠ Attention!

● For installation, please follow the steps described. Any damage caused by wrong installation shall be imputed to the users.
● To avoid a short circuit from occuring 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:

FLASH	LIGHT ON

HOLD THE BUTTON ONE SECONDS	HOLD THE BUTTON 3 SECONDS

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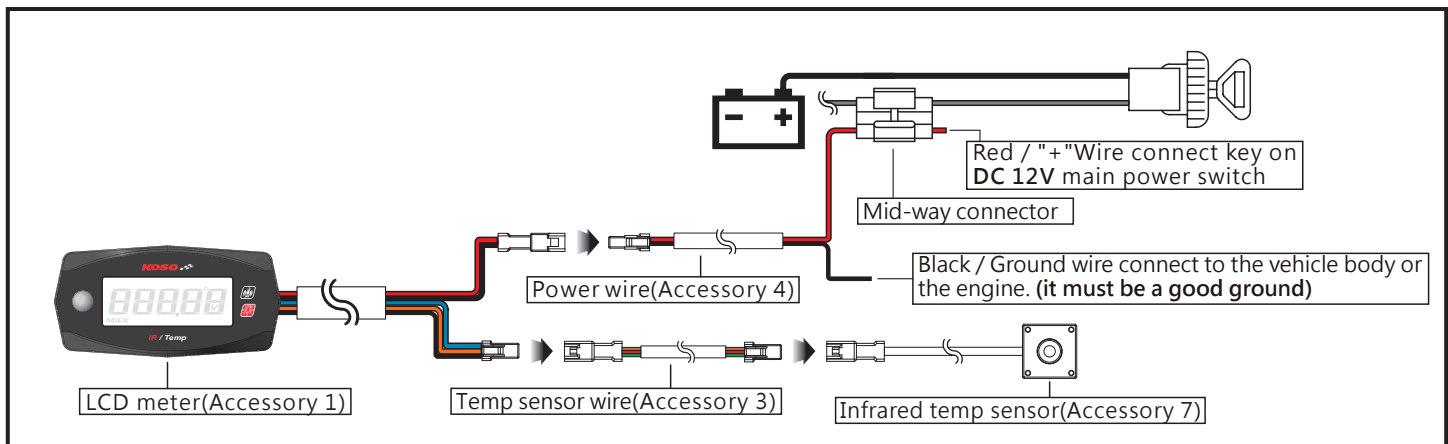⚠ Some procedures must be followed to avoid damages to the instrument.
⚠**WARNING!** Certain procedure must be followed to avoid damages to yourself, to the vehicle or others.

1-1 Accessories

1 LCD meter X1	**2** Meter cover X1	**3** Temp sensor wire X1	**4** Power wire X1	**5** M3 X L20 screw X2(A) M3 X P0.5 nut X2(B)
				(A) (B)

6 Velcro X1 set	**7** Infrared temp sensor X1	**8** Bolted cover X1	**9** M2x5LxP0.4 screw X6(A) M3X5XP0.5 screw X2(B)	**10** 1.3 mm Allen key X 1
			(A) (B)	

2-1 Wiring Installation Instructions

Red / "+"Wire connect key on **DC 12V** main power switch
Mid-way connector
Black / Ground wire connect to the vehicle body or the engine. **(it must be a good ground)**
Power wire(Accessory 4)
LCD meter(Accessory 1)
Temp sensor wire(Accessory 3)
Infrared temp sensor(Accessory 7)

2-2 Installation Instructions

Follow the steps below during installation.

Ⓐ 1.LCD meter(Accessory 1)
  2.M3 X L20 screw(Accessory 5-A)
  3.M3 X P0.5 nut(Accessory 5-B)
  4.Meter cover(Accessory 2)

Ⓑ 1.LCD meter(Accessory 1)
  2.Meter cover(Accessory 2)
  3.Velcro-male(Accessory 6)
  4.Velcro-female(Accessory 6)

NOTE Choose either Method A or B according to your need.

2-3 Infrared Temp Sensor Installation Instructions

(May install in the front and the back.)
(May install in the right and the left.)
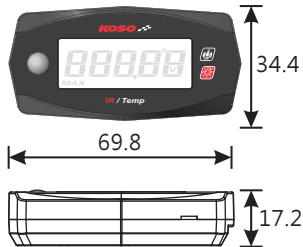
Follow the steps below during installation.

Ⓐ 1.Infrared temp sensor(Accessory 7)
  2.Bolted cover(Accessory 8)
  3.M2x5LxP0.4 screw(Accessory 9-A)
Ⓑ 1.Infrared temp sensor (Accessory 7)
  2.M3X5XP0.5 screw(Accessory 9-B)

NOTE Choose either Method A or B according to your need.

⚠ The screw hole concaves are the fixing place for the bolted cover(Accessory 8).

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3 Functions, Settings Description

●Temperature	Display range : -4.0 ~ 302.0 °F , Display unti : 0.1 °F
●Temperature warning	Setting range : 140 ~ 302 °F , Setting unit : 1 °F
●Volt meter	Display range : 8.0 v~18.0 v , Display unti : 0.1 v
●Effective voltage	DC 12V
●Effective temperature range	-10~60 ℃
●Water-Proof Standard	JIS D 0203
●Meter size	W69.8 X L34.4 X H17.2 mm
●Meter weight	About 47.5 g

NOTE Design and specifications are subject to change without notice!

4-1 Display Switching Instruction

●In the temperature display screen, **press the button once** to enter the voltage screen.

●When not connected to the Temp sensor, the screen will show ---.-°F 。

●When the temperature > temperature warning value, the value will blink.

●In the voltage screen, **press the button once** to enter the Max. temperature record screen.

●When the voltage ≦ 11.5 V, the value will blink.

●When the voltage ≧1 5 .5 V, the value will blink.

●In the Max. temperature record screen, **press the button once** to go back to the temperature display screen.

●**Press and hold the button for 3 seconds** to reset the Max. temperature record and return temperature display screen.

●Back to temperature display screen.

4-2 Brightness Switching Instruction

●In the temperature display screen, **press and hold the button for 3 seconds** to switch brightness.

NOTE Setting range : Full brightness, half brightness.3
Default value : Full brightness

4-3 Temperature Warning Settings

●In temperature display screen, **press and hold the button for 6 seconds** to enter the temperature warning settings screen.

●Example : To set the temperature warning settings to 185 ˚C.
●**Press and hold the button for 3 seconds** to move to the digit you want to set.

NOTE Setting range : 140 ~ 302 °F
Default value : 194 °F
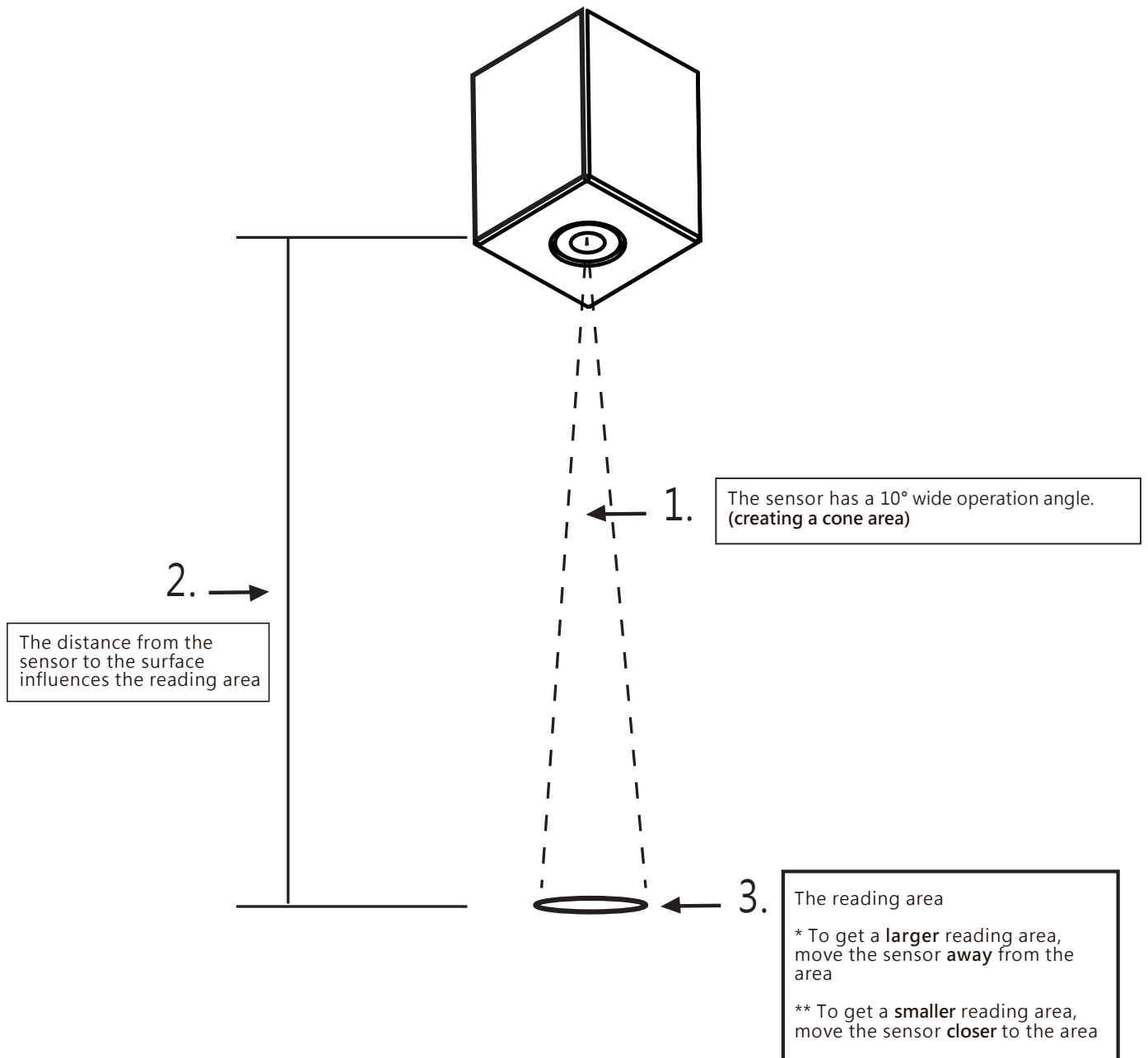
●**Press the button once** to choose the setting number.

●EX : Set temperature warning value from 194 °F to 185 °F.
●**Press and hold the button for 3 seconds** to go back to the temperature display screen.

NOTE If no operation is made within 5 seconds, the setting will be automatically recorded and the screen will return to the temperature display screen.

●Back to temperature display screen.

1. The sensor has a 10° wide operation angle. **(creating a cone area)**

2. →

The distance from the sensor to the surface influences the reading area

3. The reading area

* To get a **larger** reading area, move the sensor **away** from the area

** To get a **smaller** reading area, move the sensor **closer** to the area

5-1 Trouble Shooting

The following situation does not necessary indicate malfunction of the device. Please check the following points, before taking it in for maintenance.

Trouble	Check item	Trouble	Check item
Meter does not display or display error.	●Maybe poor connection of the sensor. →Make sure the sensor is connected correctly.	Temperature does not display or display error.	●May be poor connection of the harness. →Make sure the wires are connected correctly.

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