

KUS EL0231

KUS GPS Speedometer Odometer Gauge Meter (Model EL0231) User Manual

Model: EL0231 | Brand: KUS

1. INTRODUCTION

The KUS GPS Speedometer Odometer Gauge Meter is a high-precision instrument designed to accurately display vehicle speed and total accumulated mileage. Utilizing satellite signals for data acquisition, this gauge offers quick location confirmation and a short startup time. Its robust design ensures reliability across various applications, including automotive, marine, and off-road vehicles. This manual provides detailed instructions for the installation, operation, and maintenance of your KUS GPS Speedometer.



Image 1.1: Front view of the KUS GPS Speedometer Odometer Gauge Meter. This image shows the gauge face with markings from 0 to 200 km/h, a needle indicating speed, and a digital display for accumulated mileage. The KUS logo is visible below the center.

2. KEY FEATURES

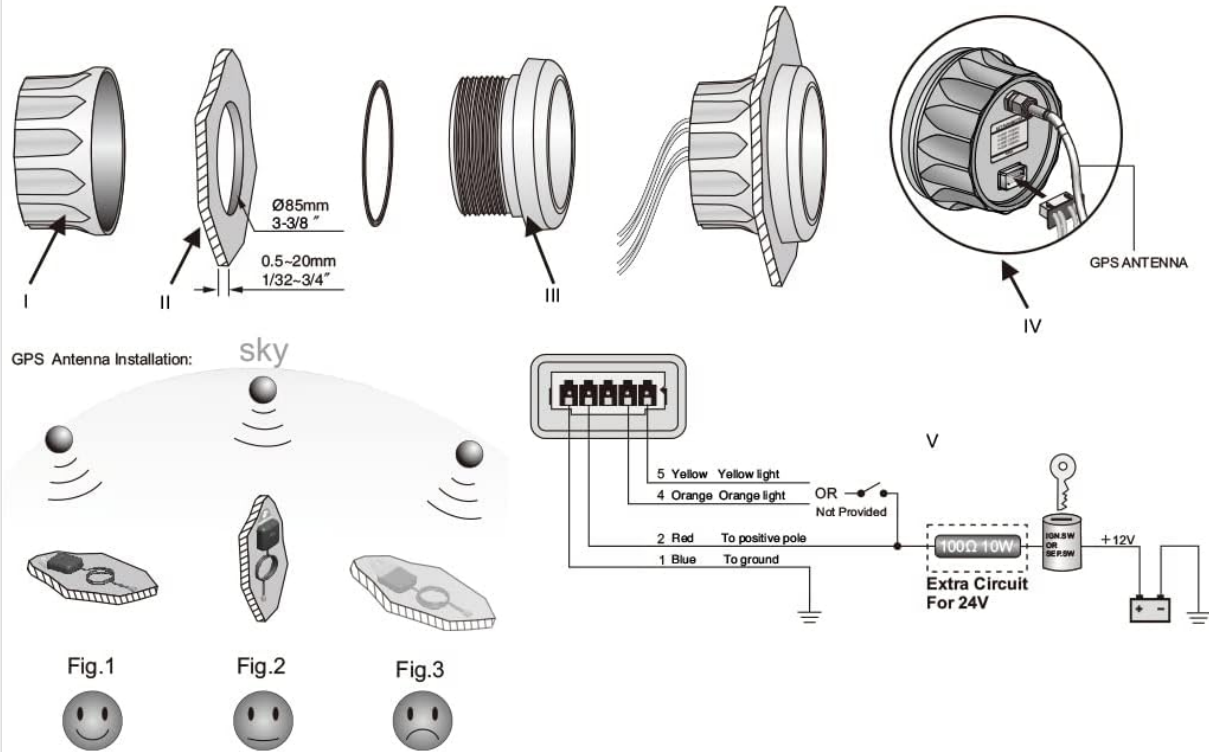
- **High Precision GPS Signal Reception:** Ensures accurate speed and mileage display.
- **Quick Location Confirmation:** Rapid acquisition of satellite signals for immediate use.
- **Versatile Application:** Suitable for all vehicles, boats, and off-road applications.
- **Standard Installation Dimension:** 85mm (3-3/8 inches) fixing dimension.
- **Wide Indicating Range:** 0-200 km/h.
- **Flexible Power Input:** Operates on 12V/24V systems.
- **Selectable Backlight:** Choice between red and yellow backlight colors.
- **Advanced Display Technology:** LCD display with stepper motor operation for smooth needle movement.
- **Robust Protection:** IP67 protection grade, ensuring complete waterproofing and excellent anti-fogging function.
- **Durable Construction:** Features a 316 Stainless steel bezel with curved glass.
- **Easy Installation:** Convenient multi-plug socket connection method.

3. PACKAGE CONTENTS

Please verify that all the following items are included in your KUS GPS Speedometer Odometer Gauge Meter package:

- 1x GPS Speedometer Gauge
- 1x Multi-plug Socket
- 1x GPS Antenna
- 1x Installation Instruction Manual

INSTALLATION INSTRUCTIONS



INSTALLATION STEPS

1. Cut an 85mm (3 3/8") hole in the panel (II) allow a clearance of 55mm (2 3/16") behind the panel.
2. Remove fastening ring (I), insert gauge from front. Tighten gauge (III) using fastening ring (I)
3. Insert the wire harness (IV) firmly in the gauge (III)
4. Connect cables according to the diagram. Choose either red or yellow background light.
5. Securely fasten the GPS antenna (V), preferably outdoors (or inside front windscreen) so that it has a clear view of the sky to pick up satellite signals. Connect the antenna cable to socket on the gauge. Do not cut cable.
6. After turning power on, allow the gauge to sample satellite signal for 1 minute. The pointer of the instrument indicates the speed over ground (SOG) when the boat is moving. If the boat does not move, accumulative mileages displayed on the LCD, and the values are saved even the instrument is power down.
When the boat is moving. While boat is lying still all data is frozen, so the compass cannot be used as a reference until the boat is moving, when the signal is recovered.
7. All data is for reference only and should not be trusted as sole navigation source.

安装步骤

- 1、在仪表板(II)上开一个直径为 $\Phi 85\text{mm}$ (3 3/8")的孔，并确保仪表板后面至少要有55mm(2 3/16")的空间来放置仪表。
- 2、去掉固定圈(I)，从前面放入仪表，调整好位置后用固定圈(I)锁紧仪表(III)。
- 3、将线束和GPS天线连接到仪表上(IV)。
- 4、根据接线图将电线连接好，并请选择红色或黄色背光灯。
- 5、将GPS天线安装到户外，并确保固定好的GPS天线接受信号一面面对着天空，如图Fig.1。如果GPS天线安装如图Fig.2，GPS信号的接收将会受到影响。如果GPS天线安装如图Fig.3，则GPS信号将受到非常大的影响，信号较弱时可能完全接收不到信号。
- 6、通电之后，仪表需要1分钟左右的时间去接受卫星信。信号强的时候一般40秒以内即可完成定位(初次定位可能需要1~2分钟的时间)。
当船移动时，仪表指针指示相对地的速度(SOG)，LCD显示累计里程数据，这个数据在仪表掉电情况下不会丢失。
在船停靠期间，所有的数据将不会变化，所以指针不能作为参考使用，要直到船开始移动，仪表上显示的数据才准确。
- 7、所有的数据仅仅作为参考，不应作为唯一的导航指示数据。

Image 3.1: Package contents of the KUS GPS Speedometer. This image displays the main gauge, the wiring harness with a multi-plug socket, the GPS antenna with its cable, and a small instruction sheet.

4. SPECIFICATIONS

Brand	KUS
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Model Number	EL0231
Material	Glass, Stainless Steel
Installation Dimension	85mm (3-3/8 inches)
Indicating Range	0-200 km/h
Working Voltage	12V/24V
Backlight Options	Red, Yellow
Operation Mode	LCD display, Stepper motor
Protection Grade	IP67 (Fully waterproof)
Product Dimensions (L x W x H)	3.35 x 3.35 x 2.17 inches
Item Weight	0.3 Kilograms (10.6 ounces)
UPC	790996371757

5. INSTALLATION INSTRUCTIONS

This section details the steps for installing your KUS GPS Speedometer. Refer to the provided diagrams for visual guidance. The installation diagram is part of the included instruction manual (Image 3.1).

- 1. Prepare the Mounting Hole:** Cut an 85mm (3-3/8") diameter hole in the panel. Ensure a clearance of 55mm (2-3/16") behind the panel for the gauge body.
- 2. Secure the Gauge:** Remove the fastening ring (labeled 'I' in diagrams) from the gauge. Insert the gauge into the prepared hole. Reinstall the fastening ring from the rear and tighten it to secure the gauge firmly.
- 3. Wire Connections:** Connect the multi-plug socket (labeled 'V' in diagrams) to the gauge. Refer to the wiring diagram for correct connections:
 - **Red wire:** Connect to positive power supply (+12V/24V).
 - **Blue wire:** Connect to ground (-).
 - **Yellow/Orange wire:** Connect to a switch for backlight selection (Red or Yellow). If only one backlight color is desired, connect the corresponding wire.
- 4. GPS Antenna Installation:** Securely fasten the GPS antenna (labeled 'IV' in diagrams) in a location with a clear, unobstructed view of the sky to pick up satellite signals. Connect the antenna cable to the socket on the gauge. Do not cut the antenna cable.
- 5. Initial Power-On and Calibration:** After turning power on, allow the gauge to sample satellite signals for approximately 1 minute. The pointer will indicate the speed over ground (SOG) when the vehicle is moving. If the vehicle is stationary, the accumulated mileage display will remain unchanged.
- 6. Power Down:** When the vehicle is powered down, the gauge will retain the last recorded mileage.
- 7. Important Note:** All data provided by the GPS speedometer is for reference only and should not be solely relied upon for navigation.



Image 5.1: Side view of the KUS GPS Speedometer. This image highlights the threaded body and fastening nut mechanism used for securing the gauge into a dashboard or panel.

6. OPERATION

The KUS GPS Speedometer operates by receiving signals directly from satellites to display real-time speed and total accumulated mileage.

- **Speed Display:** The main needle indicates the current speed in kilometers per hour (km/h).
- **Odometer Display:** The LCD screen at the bottom of the gauge displays the total accumulated mileage in kilometers (km). This value is stored even when power is off.
- **Backlight Selection:** The gauge features a selectable backlight (red or yellow). This can be controlled by connecting the appropriate wire (yellow or orange) to a switch, as detailed in the installation section.



Image 6.1: Gauge with Red Backlight.



Image 6.2: Gauge with Yellow Backlight.

7. MAINTENANCE

To ensure the longevity and optimal performance of your KUS GPS Speedometer, follow these maintenance guidelines:

- **Cleaning:** Clean the gauge surface with a soft, damp cloth. Avoid using abrasive cleaners or solvents, which can damage the display or bezel.
- **Waterproofing:** The gauge has an IP67 waterproof rating. While designed to withstand water exposure, ensure all connections are secure and the back of the gauge is properly sealed during installation to maintain this protection.
- **GPS Antenna:** Keep the GPS antenna free from obstructions and debris to ensure optimal signal reception.
- **Electrical Connections:** Periodically check all electrical connections for tightness and corrosion.

8. TROUBLESHOOTING

If you encounter issues with your KUS GPS Speedometer, refer to the following troubleshooting guide:

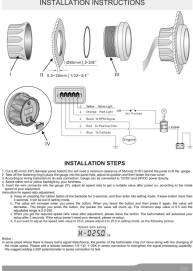

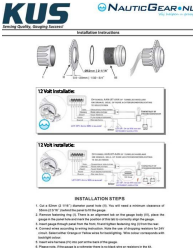
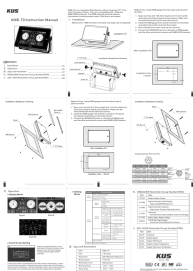
- **No Speed Reading / "No Signal" on LCD:**
 - Ensure the GPS antenna is securely connected to the gauge.
 - Verify the GPS antenna is installed in a location with a clear, unobstructed view of the sky.
 - Allow sufficient time (up to 1 minute) after power-on for the gauge to acquire satellite signals.
 - Check power connections to the gauge.
- **Inaccurate Speed Reading:**
 - Ensure the GPS antenna is correctly positioned and not obstructed.
 - Compare the reading with another reliable GPS device if possible. Minor discrepancies can occur due to environmental factors or signal quality.
- **Backlight Not Working or Incorrect Color:**
 - Check the wiring for the backlight (yellow and orange wires) to ensure they are correctly connected and receiving power.
 - Verify the switch controlling the backlight is functioning correctly.
- **Gauge Not Powering On:**
 - Check the main power (red wire) and ground (blue wire) connections.
 - Ensure the vehicle's power supply is active and providing the correct voltage (12V/24V).

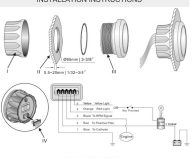
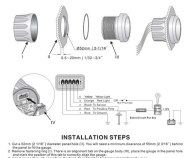
9. WARRANTY AND SUPPORT

For warranty information, technical assistance, or customer support regarding your KUS GPS Speedometer Odometer Gauge Meter, please contact KUS customer service. Refer to the KUS official website or your purchase documentation for the most current contact details and warranty terms.

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Related Documents - EL0231

	<p>KUS 85mm Digital Tachometer Installation Guide</p> <p>Comprehensive installation instructions for the KUS 85mm digital tachometer gauge, covering wiring, mounting, and speed ratio adjustment for 12V/24V systems.</p>
	<p>KUS 52mm Gauge Installation Instructions</p> <p>Detailed installation guide for KUS 52mm car and boat gauges, covering wiring and mounting procedures for optimal performance and safety.</p>
	<p>KUS Gauges Installation Instructions</p> <p>Detailed installation guide for KUS gauges, including wiring diagrams and step-by-step instructions for 12V and 24V systems, with options for backlighting.</p>
	<p>KUS KMB-70 Integrated Data Monitor Instruction Manual</p> <p>Comprehensive instruction manual for the KUS KMB-70 Integrated Data Monitor, detailing installation methods, operation modes, touch screen settings, technical specifications, and NMEA2000/SAE-J1939 parameter group numbers. Features TFT display and compatibility with marine data networks.</p>

<div><p>INSTALLATION INSTRUCTIONS</p><p>INSTALLATION STEPS</p><ol style="list-style-type: none">1. Check the tachometer and speedometer for any damage before installation.2. Connect the tachometer to the engine's ignition system.3. Connect the speedometer to the vehicle's speed sensor.4. Connect the power source (12V/24V) to the tachometer and speedometer.5. Mount the tachometer and speedometer in a suitable location.6. Adjust the tachometer and speedometer for optimal performance.<p>Model: K-8252</p></div>	<p>KUS 85mm Digital Tachometer Installation Guide</p> <p>Comprehensive installation instructions for the KUS 85mm digital tachometer gauge, covering wiring, mounting, and speed ratio adjustment for 12V/24V systems.</p>
<div><p>INSTALLATION INSTRUCTIONS</p><p>INSTALLATION STEPS</p><ol style="list-style-type: none">1. Check the gauge for any damage before installation.2. Connect the gauge to the engine's ignition system.3. Connect the gauge to the vehicle's speed sensor.4. Connect the power source (12V/24V) to the gauge.5. Mount the gauge in a suitable location.6. Adjust the gauge for optimal performance.<p>Model: K-8252</p></div>	<p>KUS 52mm Gauge Installation Instructions</p> <p>Detailed installation guide for KUS 52mm car and boat gauges, covering wiring and mounting procedures for optimal performance and safety.</p>