

KUS KY08109

KUS Digital GPS Speedometer Gauge User Manual

Model: KY08109

1. PRODUCT OVERVIEW

The KUS Digital GPS Speedometer Gauge is a high-precision instrument designed for marine applications, including boats and yachts. It provides accurate speed readings, mileage accumulation, and direction/compass information directly from satellite signals. This gauge is built for durability with a waterproof design and an anti-fogging function, ensuring reliable performance in various conditions.

Key features include a wide indicating range of 0-999 knots (with options for km/h and mph), 12V/24V working voltage compatibility, and selectable red or yellow backlight for enhanced visibility.



Figure 1: Front view of the KUS Digital GPS Speedometer Gauge, displaying speed in knots and mileage/course information. The gauge features a clear digital display and a polished stainless steel bezel.

2. FEATURES

- **Indicating Range:** 0-999 knots (knot, km/h, and mph available).
- **Working Voltage:** Compatible with 12V/24V electrical systems.
- **Backlight Options:** User-selectable red and yellow backlight.
- **Functions:** Displays current speed, accumulated mileage, and direction/compass.
- **Durability:** 100% waterproof (IP67 protection grade) and excellent anti-fogging function.
- **Construction:** 316 Stainless steel bezel with curved glass.
- **Signal Source:** Receives signal directly from satellite signal receiver (GPS antenna included).
- **Installation:** Convenient multi-plug socket connecting way for easy setup.

3. PACKAGE CONTENTS

Upon opening the package, please verify that all the following components are present and in good condition:

- KUS Digital GPS Speedometer Gauge (85mm)
- Mating GPS Antenna
- Multi-plug Socket Wiring Harness
- Instrument Installation Accessories (mounting bracket, nuts)



Figure 2: Contents of the KUS Digital GPS Speedometer Gauge package, showing the main gauge unit, the GPS antenna with its cable, and the electrical wiring harness.

4. SETUP AND INSTALLATION

Proper installation is crucial for the accurate and reliable operation of your GPS speedometer. It is recommended that installation be performed by a qualified technician.

4.1 Mounting the Gauge

1. Choose a suitable location on your dashboard or panel that is flat, stable, and provides clear visibility.
2. Ensure there is sufficient space behind the panel for the gauge body and wiring.
3. Cut a mounting hole with a diameter of 85mm (3-3/8 inches).
4. Insert the gauge into the mounting hole.
5. Secure the gauge using the provided mounting bracket and nuts from the rear of the panel. Tighten securely but do not overtighten.

4.2 Wiring Connections

Connect the multi-plug socket wiring harness to the back of the gauge. Ensure connections are secure and

waterproofed where necessary.

- **Red Wire:** Connect to +12V/24V DC power supply (ignition switched).
- **Black Wire:** Connect to ground (-).
- **Yellow/Orange Wire:** Connect to dashboard illumination for backlight control (optional, can be connected to +12V/24V for constant backlight).
- **Blue Wire:** (If present) Connect to external switch for unit change or other functions as per specific model.

4.3 GPS Antenna Installation

The GPS antenna is critical for signal reception. Install it in a location with a clear, unobstructed view of the sky. Avoid placing it under metal structures or near other electronic devices that may cause interference.

- Mount the GPS antenna securely using its adhesive base or mounting screws.
- Route the antenna cable to the back of the speedometer, ensuring it is protected from damage and moisture.
- Connect the antenna cable to the designated port on the speedometer.

5. OPERATION

5.1 Powering On

Once properly installed and wired, turn on the vessel's ignition. The speedometer will power on and begin searching for GPS satellite signals. This process may take a few moments, especially during the first use or after a long period of inactivity.

5.2 Reading the Display

The digital display shows several pieces of information:

- **SOG (Speed Over Ground):** This is the primary speed reading, typically displayed in large digits.
- **Units:** The speed unit (Knots, Km/h, or Mph) will be indicated next to the SOG value.
- **COG (Course Over Ground):** Indicates the current direction of travel.
- **Odometer/Trip Meter:** Displays accumulated mileage or trip distance.

5.3 Changing Units and Backlight

The gauge typically has a button or a sequence of button presses to cycle through speed units (Knots, Km/h, Mph) and to change the backlight color (red/yellow). Refer to the specific button on your gauge or consult the wiring diagram for external switch functionality if applicable.

6. MAINTENANCE

The KUS GPS Speedometer is designed for low maintenance. Follow these guidelines to ensure its longevity:

- **Cleaning:** Clean the gauge face with a soft, damp cloth. Do not use abrasive cleaners or solvents, as they may damage the display or bezel.
- **Connections:** Periodically check all electrical connections for corrosion or looseness. Ensure waterproof seals are intact.
- **GPS Antenna:** Keep the GPS antenna free from obstructions and dirt. Ensure its mounting is secure.
- **Storage:** If the vessel is stored for an extended period, ensure the power to the gauge is disconnected.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Gauge does not power on.	No power supply; loose wiring; blown fuse.	Check power connections, ensure proper voltage (12V/24V). Inspect wiring for damage. Check and replace fuse if necessary.
No GPS signal / "No Signal" displayed.	GPS antenna obstructed; faulty antenna; poor satellite visibility.	Ensure GPS antenna has a clear view of the sky. Check antenna cable connection. Relocate antenna if necessary. Allow more time for signal acquisition.
Inaccurate speed reading.	Interference; GPS signal degradation.	Ensure no strong electromagnetic interference near the antenna. Verify antenna placement.
Backlight not working or incorrect color.	Wiring issue; internal fault.	Check backlight wiring connection. Cycle through backlight options using the gauge button.

8. SPECIFICATIONS

Brand	KUS
Model Number	KY08109
Fixing Dimension	85mm (3-3/8 inches)
Indicating Range	0-999 knots (selectable units: knot, km/h, mph)
Working Voltage	12V / 24V DC
Backlight Colors	Red, Yellow
Protection Grade	IP67 (completely waterproof)
Antifogging Function	Excellent
Bezel Material	316 Stainless Steel
Glass Material	Curved Glass
Item Weight	399 g (approx. 0.88 lbs)

9. WARRANTY AND SUPPORT

KUS products are manufactured to high-quality standards. For specific warranty information, please refer to the warranty card included with your product or contact your authorized KUS dealer. In case of technical issues or support inquiries, please reach out to the seller or manufacturer's customer service department.

For further assistance, you may visit the official KUS website or contact their support channels. Please have your model number (KY08109) and purchase details ready when contacting support.

