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› **ELING 6-Gauge Set: GPS Speedometer, Tachometer, Fuel Level, Water Temp, Oil Pressure, Voltmeter Instruction Manual**

ELING EL00180054

ELING 6-Gauge Set Instruction Manual

Model: EL00180054

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ELING 6-Gauge Set. This set includes a GPS Speedometer, Tachometer, Fuel Level Gauge, Water Temperature Gauge, Oil Pressure Gauge, and Voltmeter. Please read this manual thoroughly before installation and use to ensure proper function and longevity of the product.

PRODUCT FEATURES

- **Comprehensive Set:** Includes GPS Speedometer, Tachometer, Fuel Level, Water Temperature, Oil Pressure, and Voltmeter.
- **Versatile Application:** Suitable for various vehicles, boats, and off-road applications.
- **High Precision:** Utilizes satellite signal reception for accurate speed measurement and stepper motors for precise gauge readings.
- **Durable Design:** IP67 waterproof and dustproof rating ensures reliability in harsh environments.
- **Red Backlight:** Provides clear visibility in all lighting conditions.
- **Efficient Operation:** Stepper motors offer low power consumption and extended lifespan.

SETUP AND INSTALLATION

Proper installation is crucial for the accurate operation of your gauge set. Follow these steps carefully.

1. Gauge Installation

The set includes gauges of two different sizes: 85mm and 52mm.

For 85mm Gauges (GPS Speedometer, Tachometer)

1. Cut an 85mm (3-3/8 inch) diameter hole in your dashboard or panel.
2. Ensure there is at least 70mm (2-3/4 inch) of

clearance behind the panel for the gauge body.

3. Insert the gauge into the prepared hole.

4. Secure the gauge using the provided M4 nut and C-type bracket to seal it firmly in place.

For 52mm Gauges (Fuel Level, Water Temp, Oil Pressure, Voltmeter)

1. Cut a 52mm (2-1/16 inch) diameter hole in your dashboard or panel.

2. Ensure there is at least 70mm (2-3/4 inch) of clearance behind the panel for the gauge body.

3. Insert the gauge into the prepared hole.

4. Secure the gauge using the provided M4 nut and C-type bracket to seal it firmly in place.
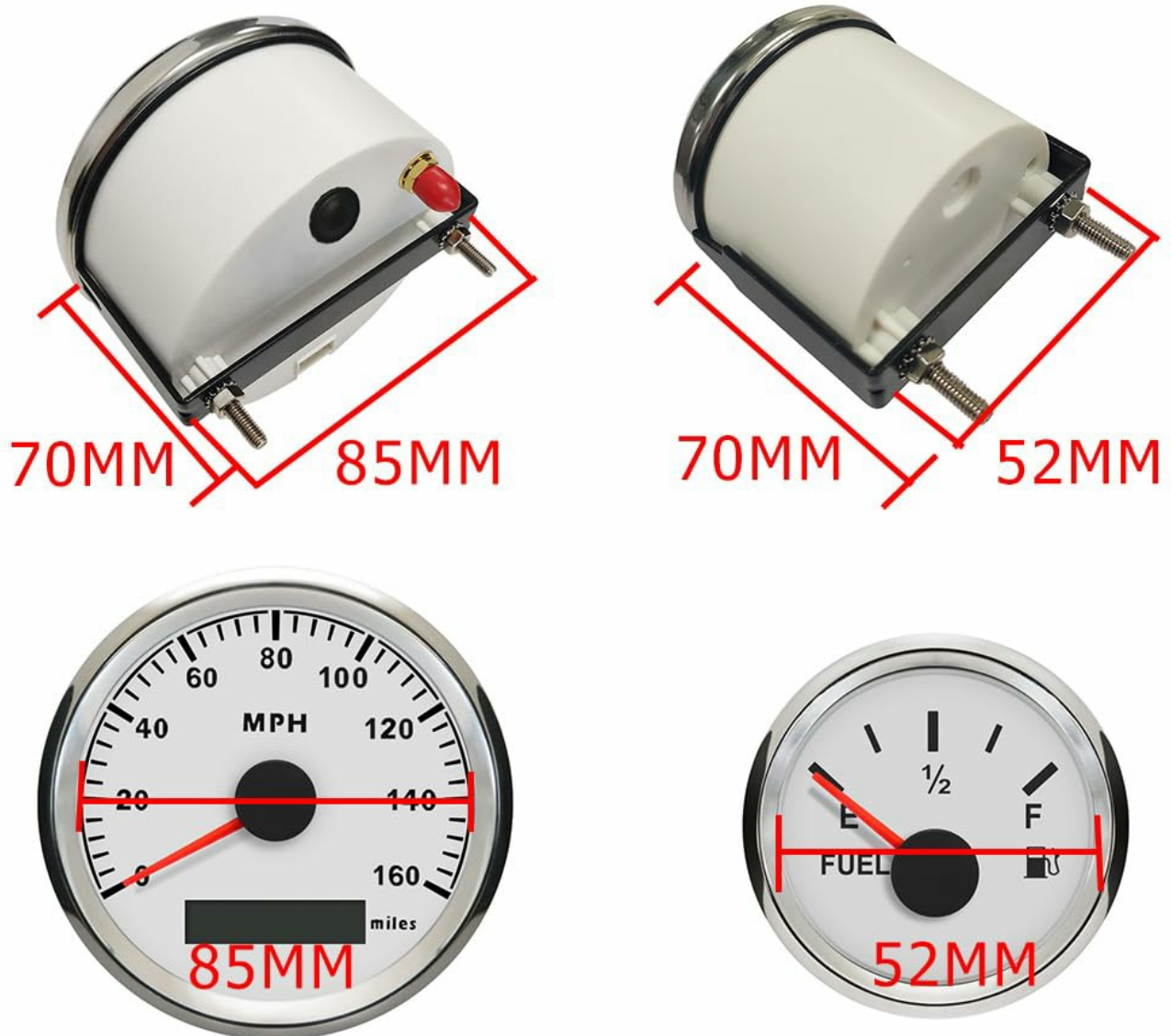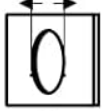

Image: This diagram illustrates the required cutout dimensions (85mm and 52mm) and the necessary 70mm clearance behind the panel for gauge installation.
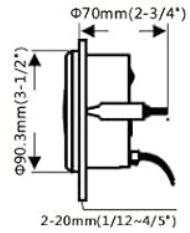
Φ85-87mm(3-2/5")

A

如A图，在准备安装仪表面板上开孔Φ85~87mm，
并保证面板后面有至少70mm的空间。

Pic A : Before installation , firstly ,to open a hole
(Dia:85~87mm) of the panel, make sure there is
a space with (70mm backyard of panel) as well

Φ70mm(2-3/4")

Φ90.3mm(3-1/2")

2-20mm(1/12~4/5")

B

如B图，将仪表放入开好孔的仪表面板中
PicB: Put the gauge in the hole

如D图，关于外形尺寸的标注说明
Pic D: Size and annotations

Button:Adjust the speed of the unit

C

如C图，用M4螺母和C型固定扣将仪表锁紧在仪表面板上
Pic C: Using M4 nut and C type bracket to seal up the gauge

gps installation instructions/天线安装说明:

技术参数：
工作电压：9~32VDC，
工作电流：≤100mA;
工作温度：-30~+75℃
存储温度：-40~+85℃。

Specification :
Operating Voltage : 9~32VDC ,
Operating current : ≤100mA;
Operating temperature : -30~+75℃
Storage temperature : -40~+85℃。

GPS天线正面安装:
Installed in front:

GPS天线反面安装
Installed in reverse:

此面要求是塑
胶或不能屏蔽
GPS信号的材
质。
this surface
mateiral required
plastic or can
not shield GPS signal
material

最好的安装方式
Best

一般安装方式
General

可能收不到GPS信号
Cann't receive
GPS signals

GPS天线反向安装
Reverse the GPS antenna installation

GPS 天线
GPS antenna

9

1、参考E图连接电线，然后打开电源，仪表即可开始工作,
仪表开始工作时，处于搜索信号状态，COG会自动计数，
计数到300，如果没有搜索到GPS信号，COG会显示Err。

SOG: 表示对地速度-航速；COG: 表示相对于地面位置
的移动方向，表示相对于正北顺时针方向的角度
ODO: 累计里程

2、故障代码：Err 表示上电后GPS搜索不到GPS信号.

接线：
1、红色线-- +9-32VDC
2、NC
3、橙色线--背光（+）
4、蓝色线--电源负极（-）

Connection :
1、Red -- +9-32VDC
2、NC
3、Orange--Blacklight (+)
4、Blue--Ground (-)

3 2 1 4

ING

1. Refer to figure E connection wires。 Turn it on , then
the meter start to search the signal and   COG will count
automatically.   If there is still no GPS signal when it
count to 300,the COG displays "Err",

SOG:Speed Over Ground;
COG: Course Over Ground
ODO:Odometer
Fault code: Err , indicate that it couldn't
search any GPS signal or GPS signal loss

12/24V

E

Wires Connecting

Image: A page from the owner's manual detailing the installation process for the 85mm gauges, including cutting the hole, inserting the gauge, and securing it with the M4 nut and C-bracket. It also shows a wiring diagram.

Φ52-53mm(2")

如A图，在准备安装仪表面板上开孔Φ52~53mm，
并保证面板后面有至少70mm的空间。

Pic A : Before installation , firstly ,to open a hole
(Dia:52~53mm) of the panel, make sure there is
a space with (70mm backyard of panel) as well

A

如B图，将仪表放入开好孔的仪表面板中

PicB: Put the gauge in the hole

B

如C图，用M4螺母和C型固定扣将仪表锁紧在仪表面板上

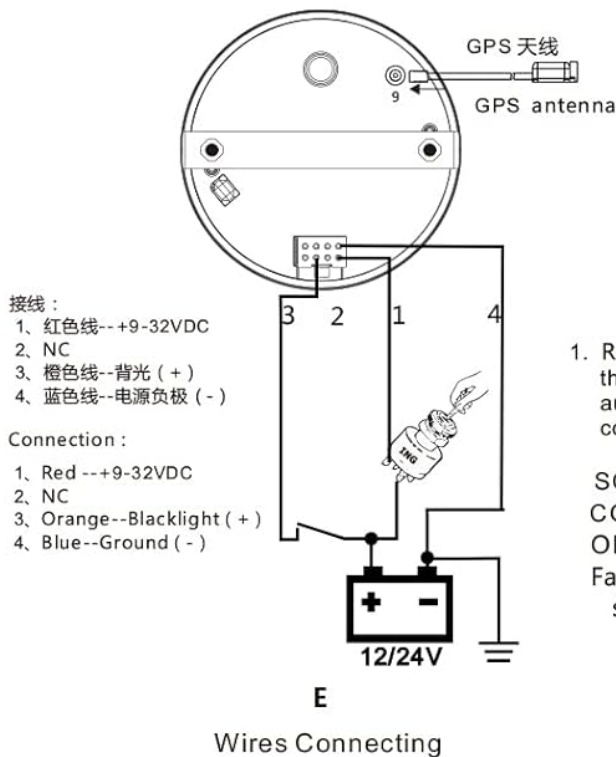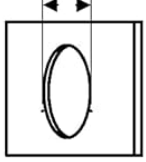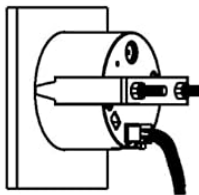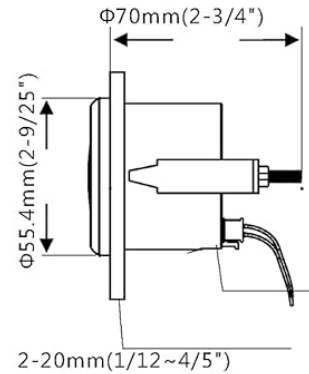Pic C: Using M4 nut and C type bracket to seal up the gauge

C

Φ70mm(2-3/4")
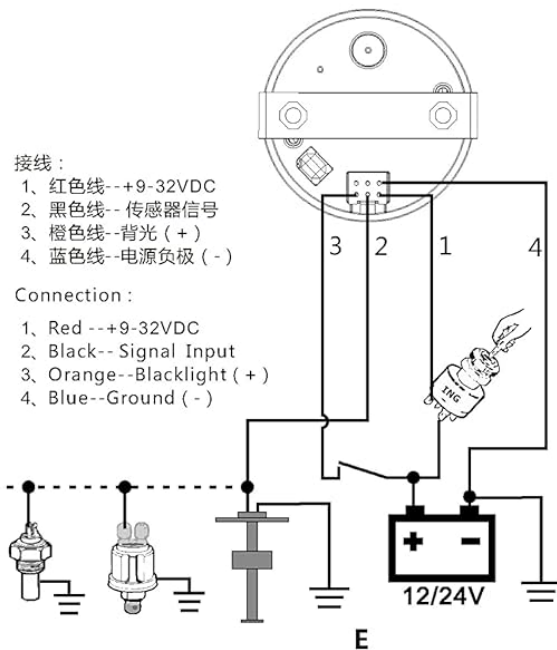
Φ55.4mm(2-9/25")

2-20mm(1/12~4/5")

D

如D图，关于外形尺寸的标注说明
Pic D: Size and annotations

接线：
1、红色线--+9-32VDC
2、黑色线-- 传感器信号
3、橙色线--背光（+）
4、蓝色线--电源负极（-）

Connection :
1、Red --+9-32VDC
2、Black-- Signal Input
3、Orange--Blacklight（+）
4、Blue--Ground（-）

3 2 1 4

ING

12/24V

E

技术参数：
工作电压：9~32VDC，
工作电流：≤60mA;
工作温度：-30~+75℃
存储温度：-40~+85℃。

Specification :
Operating Voltage : 9~32VDC ,
Operating current : ≤60mA;
Operating temperature : -30~+75℃
Storage temperature : -40~+85℃。

参考E图连接电线，如果是电压表和小时计，则没有黑色电线
Pic E(Wires Connecting) : Generally,pls note the black wires is not included in volt gauge and hourmeter.

Image: A page from the owner's manual detailing the installation process for the 52mm gauges, including cutting the hole, inserting the gauge, and securing it with the M4 nut and C-bracket. It also shows a wiring diagram.

2. GPS Antenna Installation

1. Fix the GPS antenna securely in a flat position. The black side of the antenna must face upwards.

2. For optimal signal reception, place the antenna outside the vehicle or boat, or inside the front windshield, ensuring it has a clear view of the sky.

3. Connect the antenna cable to the designated socket on the rear of the GPS speedometer.

4. **Important:** Do not cut or modify the antenna cable.

3. Wiring Connections

Refer to the wiring diagrams provided in the owner's manual images (PT04 and PT05) for specific connections. General wiring instructions are as follows:

- **Red Wire:** Connect to +9-32VDC power supply.
- **Black Wire:** Signal Input (typically for tachometer pulse signal).
- **Orange Wire:** Connect to Backlight (+).
- **Blue Wire:** Connect to Ground (-).

Note: Some gauges, such as the voltmeter or hour meter, may not include a black signal input wire.

OPERATING INSTRUCTIONS

1. Initial Power-On

After completing the wiring, turn on the power supply. The gauges will perform a self-test. The GPS speedometer will search for satellite signals. Once a signal is acquired, it will display the current speed and total mileage.

2. GPS Speedometer Functions

- **Speed Display:** Shows current speed in MPH (0-160 MPH range).
- **Odometer:** Displays total accumulated mileage (0-999999 miles). This is a total odometer and cannot be reset.
- **COG (Course Over Ground):** Indicates the direction of travel relative to true north.
- **SOG (Speed Over Ground):** Displays the current speed derived from GPS.

3. Tachometer Functions

- **RPM Display:** Shows current engine revolutions per minute (0-8000 RPM range).
- **Hour Meter:** Displays total accumulated engine operating hours. This hour meter cannot be reset.
- **Speed Ratio Adjustment:** The tachometer's speed ratio is adjustable from 1 to 300 to match various engine types. Refer to the specific instructions included with your tachometer for adjustment procedures.

4. Other Gauges

- **Fuel Level Gauge:** Displays fuel tank liquid level (E-1/2-F range) based on a 0-190ohm signal.
- **Water Temperature Gauge:** Displays water tank temperature (40-120 °C range) based on a 287.4-22.4 ohm signal.
- **Oil Pressure Gauge:** Displays oil pressure value (0-10 Bar / 0-145 Psi range) based on a 10-184ohm signal.
- **Voltmeter:** Displays system voltage (8-16V range).

MAINTENANCE

To ensure optimal performance and longevity of your ELING 6-Gauge Set, follow these general maintenance guidelines:

- **Cleaning:** Use a soft, damp cloth to clean the gauge faces. Avoid abrasive cleaners or solvents that could damage the display or housing.
- **Connection Checks:** Periodically inspect all wiring connections to ensure they are secure and free from corrosion. Loose connections can lead to inaccurate readings or intermittent operation.
- **Environmental Protection:** While the gauges are IP67 rated for water and dust resistance, avoid prolonged exposure to extreme temperatures or direct high-pressure water jets.

TROUBLESHOOTING

If you encounter issues with your gauge set, refer to the following common problems and solutions:

- **No Display/Power:**

    - Check power connections (Red wire to +VDC, Blue wire to Ground).
    - Verify the power source is providing the correct voltage (9-32VDC).
    - Check for blown fuses in the power circuit.

- **GPS Speedometer Displays "Err" or No Signal:**

    - Ensure the GPS antenna is securely connected to the speedometer.
    - Verify the GPS antenna is placed in a location with a clear, unobstructed view of the sky.
    - Allow sufficient time (up to 300 seconds) for the GPS module to acquire satellite signals upon initial power-on or after relocation.

- **Inaccurate Gauge Readings (Fuel, Water Temp, Oil Pressure):**

    - Check the signal wire connections from the respective sensors to the gauges.
    - Ensure the sensors themselves are functioning correctly and are compatible with the gauge's signal range (e.g., 0-190ohm for fuel, 287.4-22.4 ohm for water temp, 10-184ohm for oil pressure).

- **Tachometer Not Reading/Inaccurate RPM:**

    - Verify the black signal input wire is correctly connected to the engine's RPM signal source.
    - Check the tachometer's speed ratio setting to ensure it matches your engine's specifications.

SPECIFICATIONS

Feature	Specification
Manufacturer	ELING
Model Reference	EL00180054
Product Dimensions	26 x 17 x 10 cm
Product Weight	1 Kilogram
Material Type	Plastic
Operating Voltage	12 VDC (9-32VDC operating range)
Backlight Color	Red
Waterproof/Dustproof Rating	IP67
GPS Speedometer Range	0-160 MPH
Odometer Range	0-999999 miles
Tachometer Range	0-8000 RPM
Tachometer Speed Ratio	1-300 (Adjustable)
Fuel Level Gauge Signal	0-190ohm

Feature	Specification
Water Temperature Gauge Range	40-120 °C
Water Temperature Gauge Signal	287.4-22.4 ohm
Oil Pressure Gauge Range	0-10 Bar / 0-145 Psi
Oil Pressure Gauge Signal	10-184ohm
Voltmeter Range	8-16V
Operating Mode	LCD display, Stepper motor

WARRANTY AND SUPPORT

ELING products are designed for durability and performance. For specific warranty information, please refer to the documentation included with your purchase or contact ELING customer support directly. Installation instructions are provided within the product packaging.
For further assistance or technical support, please visit the official ELING website or contact your retailer.