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- › ELING Engine Tachometer 7000 RPM Gauge with Hour Meter (85mm, 12V/24V) Instruction Manual

ELING 0-7000RPM

ELING Engine Tachometer 7000 RPM Gauge with Hour Meter (85mm, 12V/24V) Instruction Manual

Model: 0-7000RPM

Brand: ELING

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your ELING Engine Tachometer with Hour Meter. Please read this manual thoroughly before installation and use to ensure proper function and longevity of the device. This tachometer is designed for use in various vehicles, including cars and boats, operating on 12V or 24V systems.

2. PRODUCT OVERVIEW

The ELING Engine Tachometer is an 85mm gauge designed to display engine revolutions per minute (RPM) and accumulated operating hours. It features a clear display with red backlight for visibility in various lighting conditions and is built with waterproof and anti-fogging protection for durability.



Figure 2.1: Front view of the ELING 7000 RPM Engine Tachometer with hour meter display.



Figure 2.2: Angled view of the ELING 7000 RPM Engine Tachometer with its red backlight illuminated.

3. PACKAGE CONTENTS

Upon unpacking, please verify that all items listed below are present and in good condition:

- ELING Engine Tachometer with Hour Meter (85mm)
- Wiring Harness
- Owner's Manual (Instruction Sheet)
- Mounting Bracket and Nuts



Figure 3.1: Contents of the ELING Tachometer package, including the gauge, wiring harness, and instruction manual.

4. SPECIFICATIONS

Feature	Specification
Measurement Range	0-7000 RPM
Gauge Diameter	85mm (3-3/8 inches)
Operating Voltage	9-32V DC (suitable for 12V/24V systems)
Operating Current	≤60mA
Backlight Color	Red
Waterproof Rating	100% Waterproof
Anti-fogging Protection	Yes
Speed Ratio Adjustment	1-300 adjustable
Hour Meter	Integrated, non-resettable
Product Dimensions (L x W x H)	3.35 x 3.35 x 2.76 inches
Item Weight	0.22 Kilograms (7.76 ounces)
Operating Temperature	-30°C to +75°C
Storage Temperature	-40°C to +85°C

5. INSTALLATION

Follow these steps for proper installation of the tachometer:

- 1. Prepare the Mounting Hole:** Open a 3-3/8 inch (85mm) diameter hole in your dashboard or mounting panel. Ensure there is at least 2-3/4 inches (70mm) depth behind the panel for the gauge body.
- 2. Insert the Gauge:** Carefully insert the tachometer into the prepared hole.
- 3. Secure the Gauge:** Use the provided U-shaped mounting bracket and nuts to fasten the gauge securely from the rear of the panel. Tighten the nuts until the gauge is firm but avoid over-tightening.

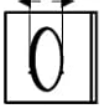


Figure 5.1: Rear view of the ELING Tachometer showing the mounting bracket and electrical connections.

OWNER'S MANUAL

106-00008-02 ECP

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



B

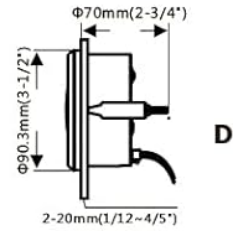
如B图, 将仪表放入开好孔的仪表面板中
PicB: Put the gauge in the hole

Button Adjust the speed ratio



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



D

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

速比调整 :

- 1) 按住仪表黑色橡胶按键3秒, 进入速比设置模式, 如果松开按键3秒, 退出速比设置模式, 并自动保存所设置的数据。
- 2) 进入设置模式后, 按住按键数值一直增加松开按键, 再按住按键, 数字一直递减; 速比调整范围: 1-300, 调整到您想要的速比值, 松开按键3秒, 数字自动保存, 1-12速比之间, 步进值0.1, 12-300速比之间, 步进值0.5。
- 3) 如果您的传感器安装在飞轮盘上, 速比值等于发动机齿数; 如果转速信号取自W点信号, 速比值等于电极数的一半(Poles/2)

典型速比设置参考 :

舷外机	
电极数	速比
4	2
6	3
8	4
10	5
12	6

舷内机或汽油机		
气缸数	冲程	速比
4	4	2
6	4	3
8	4	4
10	4	5
12	4	6

柴油发动机	
飞轮齿数	速比
速比=发动机飞轮齿数	

H-0096

表示设置速比=96

Speed ratio adjustment:

- 1) Press the black rubber button on the instrument for 3 seconds, then it will enter into the speed ratio setup mode, if the button is released for 3 seconds, it will exit the speed ratio setup mode, and automatically retain the setting data.
- 2) After entering the setup mode, press the button, the value will be increasing, and release the button, then press it again, the number will be decreasing; the adjustment range of speed ratio : 1-300, The stepping value is 0.1 for the range 1-12 and 0.5 for range 12-300. Adjust the ratio value to what you want, then release the button for 3 seconds, the digital automatic will automatically save.
- 3) If your transmitter is installed on the flywheel, the ratio value is equal to the number of the engine gear; if the speed signals come from w point signal, the ratio value is equal to half electrodeplate (Poles/2). If it is the gasoline engine, the speed ratio is equal to the number of cylinders (cylinder/2).

Typical ratio setting reference:

Outboard	
poles	speed ratio
4	2
6	3
8	4
10	5
12	6

Inboard or Gas engine		
cylinder	cycle	speed ratio
4	4	2
6	4	3
8	4	4
10	4	5
12	4	6

Diesel engine	
Gear number	speed ratio
speed ratio=Gear number	

H-0096

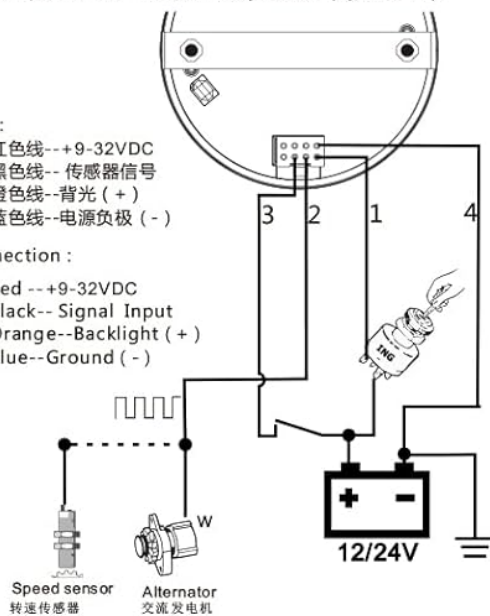
The set speed ratio=96

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--Backlight (+)
- 4、Blue--Ground (-)



Wires Connecting

E

技术参数 :

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

Specification :

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

Figure 5.2: Owner's Manual diagram for installation and wiring.

6. WIRING DIAGRAM

Refer to the wiring diagram below and the provided owner's manual for correct electrical connections. Ensure all connections are secure and insulated to prevent short circuits.

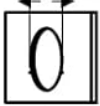
- **Red Wire:** Connect to +9-32V DC power supply.
- **Black Wire:** Connect to Ground (-).
- **Blue Wire:** Connect to Tachometer Signal Input. This signal can be sourced from the engine's ignition coil, crankshaft sensor, or a dedicated tacho sensor (sold separately, e.g., ASIN B07RN3HJ72 or B07RR8NQ45).
- **Orange Wire:** Connect to Backlight (+).

The tachometer is suitable for both diesel and gasoline engines. The signal input method may vary depending on your engine type.

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106-00008-02 ECP

Φ85-87mm(3-2/5")



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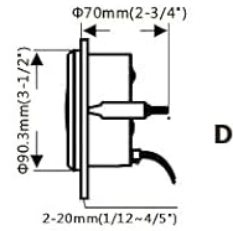
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柴油发动机	
飞轮齿数	速比
速比=发动机飞轮齿数	

H-0096

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Gear number	speed ratio
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H-0096

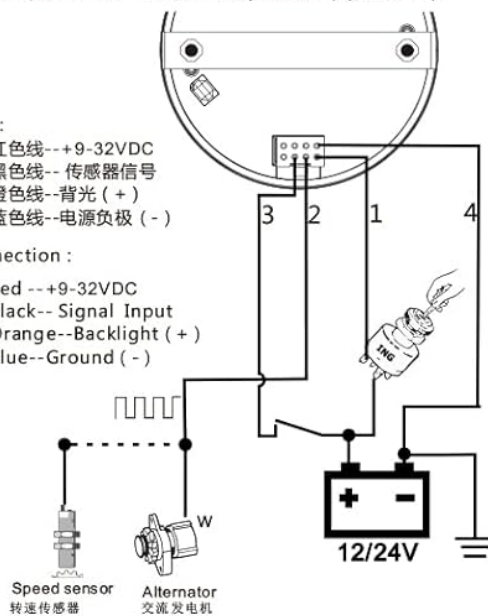
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接线 :

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Connection :

- 1、Red --+9-32VDC
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技术参数 :

工作电压 : 9~32VDC ,
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Specification :

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

Figure 6.1: Owner's Manual diagram for wiring connections.

7. OPERATION

7.1. Speed Ratio Adjustment

The tachometer requires a speed ratio setting to accurately display RPM. This ratio is adjustable from 1 to 300. The default idle speed is typically 600-800 RPM.

1. **Enter Setup Mode:** Press and hold the back button located on the rear of the tachometer for 3 seconds. The display will show the current speed ratio setting.
2. **Adjust Ratio:** While in setup mode, press the button repeatedly to increase the ratio value. The value will increment by 0.5 with each press.
3. **Save Setting:** Once the desired ratio is displayed, release the button for 3 seconds. The tachometer will automatically save the new setting and exit setup mode.

Note: If your tachometer signal is derived from the flywheel, the ratio value should correspond to the number of engine gear teeth divided by two (Poles/2). If the signal comes from the ignition coil in a gasoline engine, the ratio should be set to the number of cylinders divided by two (Cylinder/2).

7.2. Hour Meter Function

The tachometer includes an integrated hour meter that continuously records the total operating hours of the engine. This hour meter cannot be reset.

8. TROUBLESHOOTING

If you encounter issues with your tachometer, consider the following general troubleshooting steps:

- **No Power/Display:** Check all power connections (Red wire to +V, Black wire to Ground). Ensure the operating voltage is within 9-32V DC.
- **Incorrect RPM Reading:** Verify the speed ratio setting. Adjust it as described in Section 7.1. Ensure the signal input (Blue wire) is correctly connected to a reliable RPM signal source (ignition coil, crankshaft sensor, or tacho sensor).
- **No RPM Movement:** Confirm the signal wire is properly connected and receiving a signal. If using a tacho sensor, ensure it is functioning correctly.
- **Intermittent Readings:** Check for loose or corroded connections. Ensure the signal wire is not experiencing interference.

For persistent issues, consult a qualified technician or contact ELING customer support.

9. MAINTENANCE

The ELING Engine Tachometer is designed for durability and requires minimal maintenance.

- **Cleaning:** Clean the gauge face with a soft, damp cloth. Avoid abrasive cleaners or solvents that could damage the display or housing.
- **Connections:** Periodically inspect all electrical connections for tightness and corrosion.
- **Environmental Protection:** While the gauge is waterproof, prolonged exposure to extreme conditions or direct high-pressure water jets should be avoided.

10. WARRANTY AND SUPPORT

ELING products are manufactured to high-quality standards. For warranty information or technical assistance, please refer to the documentation included with your purchase or contact ELING customer support through their official channels. Keep your purchase receipt as proof of purchase for any warranty claims.

