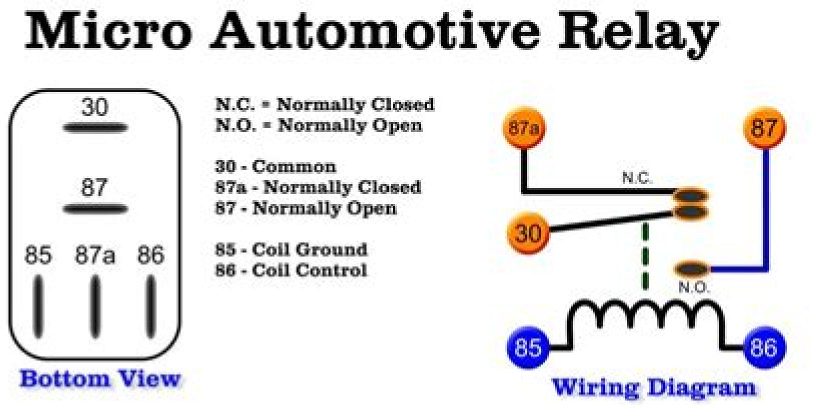
5 Pin Micro Relay Wiring Diagram


Micro Automotive Relay
30
87
85
87a
86
Bottom View
N.C. = Normally Closed
N.O. = Normally Open
30 - Common
87a - Normally Closed
87 - Normally Open
85 - Coil Ground
86 - Coil Control
87a
87
N.C.
30
N.O.
85
86
Wiring Diagram

5 pin micro relay wiring diagram is a crucial topic for anyone interested in electronics, automotive applications, or DIY projects involving automation and control systems. Relays are electromagnetic switches that allow you to control a high voltage circuit with a low voltage signal. A 5 pin micro relay is one of the most common relay types used in various applications due to its compact size and efficiency. In this article, we will dive into the details of 5 pin micro relay wiring diagrams, explain the components of a relay, explore how to wire it correctly, and provide some practical applications.

Understanding the Basics of a Relay

Relays serve as essential components in many electronic and electrical circuits. They are used to control a high power load with a low power signal. The basic function of a relay involves:

- Electromagnetism: When an electric current passes through the coil, it generates a magnetic field that activates the switch.
- Isolation: Relays can isolate different parts of a circuit, providing safety and protection for sensitive components.
- Switching: They can switch circuits on and off, enabling or disabling the flow of electricity.

Components of a 5 Pin Micro Relay

A standard 5 pin micro relay consists of the following components:

1. Coil Pins: Typically, two pins are used to connect the coil of the relay. When voltage is applied to these pins, the relay activates.
2. Common Pin (COM): This pin serves as the common point for the switch and

connects to either the Normally Open (NO) or Normally Closed (NC) contacts.
3. Normally Open Pin (NO): This pin connects to the common pin when the relay is activated. When the relay is off, there is no connection.
4. Normally Closed Pin (NC): This pin connects to the common pin when the relay is not activated. When the relay is activated, the connection is broken.

Wiring a 5 Pin Micro Relay

Wiring a 5 pin micro relay is relatively simple, but it's important to follow the right steps to avoid any potential damage or malfunction. Below is a comprehensive guide on how to wire a 5 pin micro relay.

Materials Needed

Before you begin wiring, gather the following materials:

- 5 pin micro relay
- A power source (can be a battery or a DC power supply)
- Load device (e.g., motor, light bulb, etc.)
- Connecting wires
- Switch (for manual control)
- Multimeter (optional, for testing)

Wiring Steps

1. Identify the Pins: First, refer to the relay’s datasheet or marking on the relay itself to identify the pins. The typical pin configuration is:
- Pin 1: Coil (+)
- Pin 2: Coil (-)
- Pin 3: Common (COM)
- Pin 4: Normally Open (NO)
- Pin 5: Normally Closed (NC)

2. Connect the Coil: Connect one end of the coil (Pin 1) to the positive terminal of the power source and the other end (Pin 2) to the negative terminal. This setup will allow the relay to be energized when power is supplied.

3. Connect the Load:
- For Normally Open (NO): Connect one terminal of your load device to the NO pin (Pin 4) and the other terminal to the power source (or ground, depending on your circuit).
- For Normally Closed (NC): Connect one terminal to the NC pin (Pin 5) and the other to the power source.

4. Integrate a Switch: If you wish to control the relay with a switch:
- Connect one terminal of the switch to the positive terminal of your power source.
- Connect the other terminal of the switch to Pin 1 (Coil +) of the relay.

5. Test the Circuit: After wiring, double-check all connections. Use a multimeter to test for continuity if necessary. Power the circuit and activate the switch to see if the relay engages and the load operates as expected.

Common Wiring Diagrams for 5 Pin Micro Relays

Here are a few common wiring diagrams for different applications of a 5 pin micro relay:

Basic On/Off Control

This diagram is used for simple on/off control of a device, such as a light bulb or motor.

- Components: Relay, switch, load (light bulb), power supply.
- Wiring: As described in the previous section, where the switch controls the relay coil.

Using a Microcontroller (e.g., Arduino)

Microcontrollers can be used to control relays for automation tasks.

- Components: Microcontroller, relay, load, diode (for flyback protection), resistor.
- Wiring:
- Connect the relay coil to a digital output pin of the microcontroller.
- Use a diode across the relay coil to protect against voltage spikes.
- Connect the load as described before.

Practical Applications of 5 Pin Micro Relays

5 pin micro relays find uses in a variety of applications, including:

1. Automotive: Relays are commonly used in vehicles for controlling lights, horns, and other electrical systems.
2. Home Automation: They enable control over appliances and lighting systems through smart home setups.

3. Industrial Automation: Relays are used in machines for controlling motors and other high-power equipment.
4. Safety Systems: They can be employed in alarm systems to control sirens and notifications.
5. Remote Control Systems: Used in remote-controlled devices to switch on/off motors and other components.

Troubleshooting Common Issues

If you encounter issues while working with a 5 pin micro relay, consider the following troubleshooting tips:

- No Activation: Ensure that the relay is receiving enough voltage at the coil pins. Check the power supply and connections.
- Load Not Operating: Verify that the load is correctly wired to the relay. Check the load specifications to ensure it is compatible with the relay.
- Relay Sticking: If the relay seems to stick and does not return to the off state, it may be damaged or stuck. Replace the relay if needed.
- Noise or Flickering: This might indicate a poor connection. Check for loose wires and secure them.

Conclusion

The 5 pin micro relay wiring diagram is an essential part of understanding how to incorporate relays into various electronic and electrical projects. By following the wiring steps outlined in this article, you can easily set up a relay for different applications, ensuring efficient control over high-power devices using low-power signals. Whether you are working on automotive systems, home automation, or industrial applications, mastering the wiring of a 5 pin micro relay can enhance your project's functionality and reliability. Always remember safety first, and ensure all connections are secure to prevent any mishaps.

Frequently Asked Questions

What is the purpose of a 5 pin micro relay in an electrical circuit?

A 5 pin micro relay is used to control a high current or high voltage device with a low voltage signal, allowing for safe switching of electrical loads.

How do I identify the pins on a 5 pin micro relay?

Typically, the pins on a 5 pin micro relay are labeled as follows: 85 and 86 for the coil, and 30, 87, and 87a for the switch contacts. You can refer to the relay's datasheet for specific pin configurations.

What is the wiring configuration for connecting a 5 pin micro relay to a car's lighting system?

To wire a 5 pin micro relay for a car's lighting system, connect pin 85 to ground, pin 86 to the switch, pin 30 to the power source (battery), and pin 87 to the load (light). Pin 87a is typically left unconnected in this configuration.

Can a 5 pin micro relay be used for both DC and AC applications?

Yes, a 5 pin micro relay can be used for both DC and AC applications, but it is important to choose a relay rated for the specific voltage and current of your application to ensure safe operation.

What are common troubleshooting tips for a malfunctioning 5 pin micro relay?

Common troubleshooting tips include checking the relay for proper pin connections, ensuring the coil is receiving voltage, confirming the load is functioning correctly, and testing the relay with a multimeter to verify its operation.

Find other PDF article:
https://soc.up.edu.ph/01-text/pdf?trackid=XDN49-1664&title=12-universal-laws-of-success-herbert-harris.pdf

5 Pin Micro Relay Wiring Diagram

大乐透的中奖规则 - 百度知道

Aug 19, 2024 · 大乐透的中奖规则1、一等奖。中奖规则：前区5个号码命中5个，后区2个号码命中2个。奖金：最高奖金1000万元，追加最高奖金800万元（80%）。2、二等奖。中奖规则：前区5个号码命中5个，后区2个号码命中1个。奖金：最高

2025年 7月显卡天梯图（更新RTX 5060）

Jun 30, 2025 · 显卡游戏性能天梯 1080P/2K/4K分辨率，以最新发布的RTX 5060为基准（25款主流游戏测试成绩取平均值）

中间点“•”怎么打？ - 百度知道

Dec 27, 2022 · 中间点“•”可以利用中文输入法、Word或WPS进入插入，或是可以使用中文输入法时按下数字最左边的顿号键输入小中间点，步骤如下：所需材料：电脑、Word或WPS、中文输入法。一、最简单的输入办法就是使用任意一种中文输入法的时候按下大键盘“1”左边的“顿号”可以输入一个很小的“· ...

bigbang一天一天的歌词、要原版歌词和中文版翻译的如题 谢谢 ...

Aug 15, 2014 · bigbang一天一天的歌词、要原版歌词和中文版翻译的如题 谢谢了BigBang 《一天一天》歌词 一天一天 离开吧 Ye the finally I realize that I'm nothing without you I was so wrong forgive me ah ah ah ah- [V

2025年笔记本电脑CPU天梯图（7月）
Jul 1, 2025 · 2025年笔记本电脑CPU天梯图，笔记本电脑CPU排行，是按照CPU的跑分进行排序，进行综合性能对比。可以一定程度上反应CPU的性能优劣，方便进行笔记本电脑CPU对比。

2025年运动相机推荐 | Gopro 13、大疆ation 5 Pro、Insta360 运 ...
Jan 14, 2025 · 运动相机在这几年不断的更新迭代、不仅在功能上不断升级使用场景也发生了很大的变化，从纯粹的极限运动慢慢开始向大众场景辐射。Gopro、Insta360、大疆这些运动相机 哪个运动相机性价比最高，下面会详细分析对这些运动相机评测，先点赞收藏起来以防错过精彩啦。一、运动相机分类 二、如何 ...

英语的1～12月的缩写是什么？_百度知道
英语的1～12月的缩写是：1、Jan. January 一月；2、Feb. February 二月；3、Mar. March 三月；4、Apr. April 四月；5、May 无缩写 五月；6、Jun. June 六月；7、Jul. July 七月；8、Aug. August 八月；9、Sep. September九月；10、Oct. October 十月；11、Nov. November 十一月；12、Dec. December 十二月。英文缩写词，是用一个单词 ...

我的世界切换生存和创造模式的命令是什么？_百度知道
Oct 3, 2024 · 切换生存和创造模式的命令：在我的世界中，切换生存和创造模式的命令如下：1. 切换至生存模式：/gamemode survival。2. 切换至创造模式：/gamemode creative。详细解释：关于生存模式 生存模式是我的世界中最经典的游玩模式。在此模式下，玩家需要收集资源、建造庇护所、狩猎、制作工具等以保证 ...

2024年了，江南的《龙族》是彻底烂尾了吗？ - 知乎
另一个角度来说，从龙族5（个人是实体书的拥趸，只看过1-4，之后实在是看不下去了）多次改版的情况入手的话，其实从江南的角度出发也是很难下笔的。

计算器运算结果为几**E+**几（比如**1e+1**）是什么意思_百度知道
计算器运算结果为几E+几（比如1e+1）是什么意思这个是科学计数法的表示法，数字超过了计算器的显示位数而使用了科学计数法。 E是exponent，表示以10为底的指数。aEb 或者 aeb (其中a是浮点数，b是整数)表示a乘以10的b

大乐透的中奖规则 - 百度知道
Aug 19, 2024 · 大乐透的中奖规则1、一等奖。中奖规则：前区5个号码命中5个，后区2个号码命中2个。奖金：最高奖金1000万元，追加最高奖金800万元（80%）。2、二等奖。中奖规则：前区5个号码命中5个，后区2个号码命中1个。奖金：最高

2025年 **7**月 显卡天梯图（更新**RTX 5060**）
Jun 30, 2025 · 显卡游戏性能天梯 1080P/2K/4K分辨率，以最新发布的RTX 5060为基准（25款主流游戏测试成绩取平均值）

中间点**“•”**怎么打？ - 百度知道
Dec 27, 2022 · 中间点“•”可以利用中文输入法、Word或WPS进入插入，或是可以使用中文输入法时按下数字最左边的顿号键输入小中间点，步骤如下：所需材料：电脑、Word或WPS、中文输入法。一、最简单的输入办法就是使用任意一种中文输入法的时候按下大键盘“1”左边的“顿号”可以输入一个很小的“· ...

bigbang一天一天的歌词、要原版歌词和中文版翻译的如题 谢谢了_ ...

Aug 15, 2014 · bigbang一天一天的歌词、要原版歌词和中文版翻译的如题 谢谢了BigBang 《一天一天》歌词 一天一天 离开吧 Ye the finally I realize that I'm nothing without you I was so wrong forgive me ah ah ah ah- [V

2025年笔记本电脑CPU天梯图（7月）
Jul 1, 2025 · 2025年笔记本电脑CPU天梯图，笔记本电脑CPU排行，是按照CPU的跑分进行排序，进行综合性能对比。可以一定程度上反应CPU的性能优劣，方便进行笔记本电脑CPU对比。

2025年运动相机推荐 | Gopro 13、大疆ation 5 Pro、Insta360 运动 ...
Jan 14, 2025 · 运动相机在这几年不断的更新迭代、不仅在功能上不断升级使用场景也发生了很大的变化，从纯粹的极限运动慢慢开始向大众场景辐射。Gopro、Insta360、大疆这些运动相机 哪个运动相机性价比最高，下面会详细分析对这些运动相机评测，先点赞收藏起来以防错过精彩啦。一、运动相机分类 二、如何 ...

英语的**1～12**月的缩写是什么？_百度知道

英语的1～12月的缩写是：1、Jan. January 一月；2、Feb. February 二月；3、Mar. March 三月；4、Apr. April 四月；5、May 无缩写 五月；6、Jun. June 六月；7、Jul. July 七月；8、Aug. August 八月；9、Sep. September九月；10、Oct. October 十月；11、Nov. November 十一月；12、Dec. December 十二月。英文缩写词，是用一个单词 ...

我的世界切换生存和创造模式的命令是什么？_百度知道

Oct 3, 2024 · 切换生存和创造模式的命令：在我的世界中，切换生存和创造模式的命令如下：1. 切换至生存模式：/gamemode survival。2. 切换至创造模式：/gamemode creative。详细解释：关于生存模式 生存模式是我的世界中最经典的游玩模式。在此模式下，玩家需要收集资源、建造庇护所、狩猎、制作工具等以保证 ...

2024年了，江南的《龙族》是彻底烂尾了吗？ - 知乎

另一个角度来说，从龙族5（个人是实体书的拥趸，只看过1-4，之后实在是看不下去了）多次改版的情况入手的话，其实从江南的角度出发也是很难下笔的。

计算器运算结果为几*E*+几（比如*1e+1*）是什么意思_百度知道

计算器运算结果为几E+几（比如1e+1）是什么意思这个是科学计数法的表示法，数字超过了计算器的显示位数而使用了科学计数法。 E是exponent，表示以10为底的指数。aEb 或者 aeb (其中a是浮点数，b是整数)表示a乘以10的b

Discover how to easily wire a 5 pin micro relay with our detailed wiring diagram. Master your project today! Learn more for clear steps and tips.

Back to Home