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Gebildet E424 (AK3-AT1-GL-M-X)

Gebildet 8-Piece Pre-wired LED Illuminated Rocker Switch User Manual

Model: E424 (AK3-AT1-GL-M-X)

1. INTRODUCTION

Thank you for choosing Gebildet pre-wired LED illuminated rocker switches. This manual provides essential information for the safe and effective installation, operation, and maintenance of your new switches. These switches are designed for DC 12V-24V applications, commonly used in automotive, marine, and household appliances.

Package Contents:

- 2 × Red LED Round Rocker Switches (Pre-wired)
- 2 × Yellow LED Round Rocker Switches (Pre-wired)
- 2 × Blue LED Round Rocker Switches (Pre-wired)
- 2 × Green LED Round Rocker Switches (Pre-wired)



Figure 1.1: The complete set of eight pre-wired LED illuminated rocker switches, featuring two switches each in red, yellow, blue, and green.

2. SPECIFICATIONS

Understanding the technical specifications of your switches is crucial for proper application and safety.

Feature	Specification
Switch Operation	ON-OFF (SPST)
Rated Voltage	DC 12V-24V
Rated Current	10A
Light Source	LED (Red, Yellow, Blue, Green)
Wire Length	10cm (18AWG)
Electrical Life	10,000 cycles
Contact Resistance	50 mΩ
Insulation Resistance	100 MΩ
Mounting Diameter	20mm (0.8 inches)
Contact Material	Silver, Copper
Actuator Type	Push Button (Rocker)
Terminal Type	Pre-soldered Wires

Mounting Diameter: 20mm/0.8"

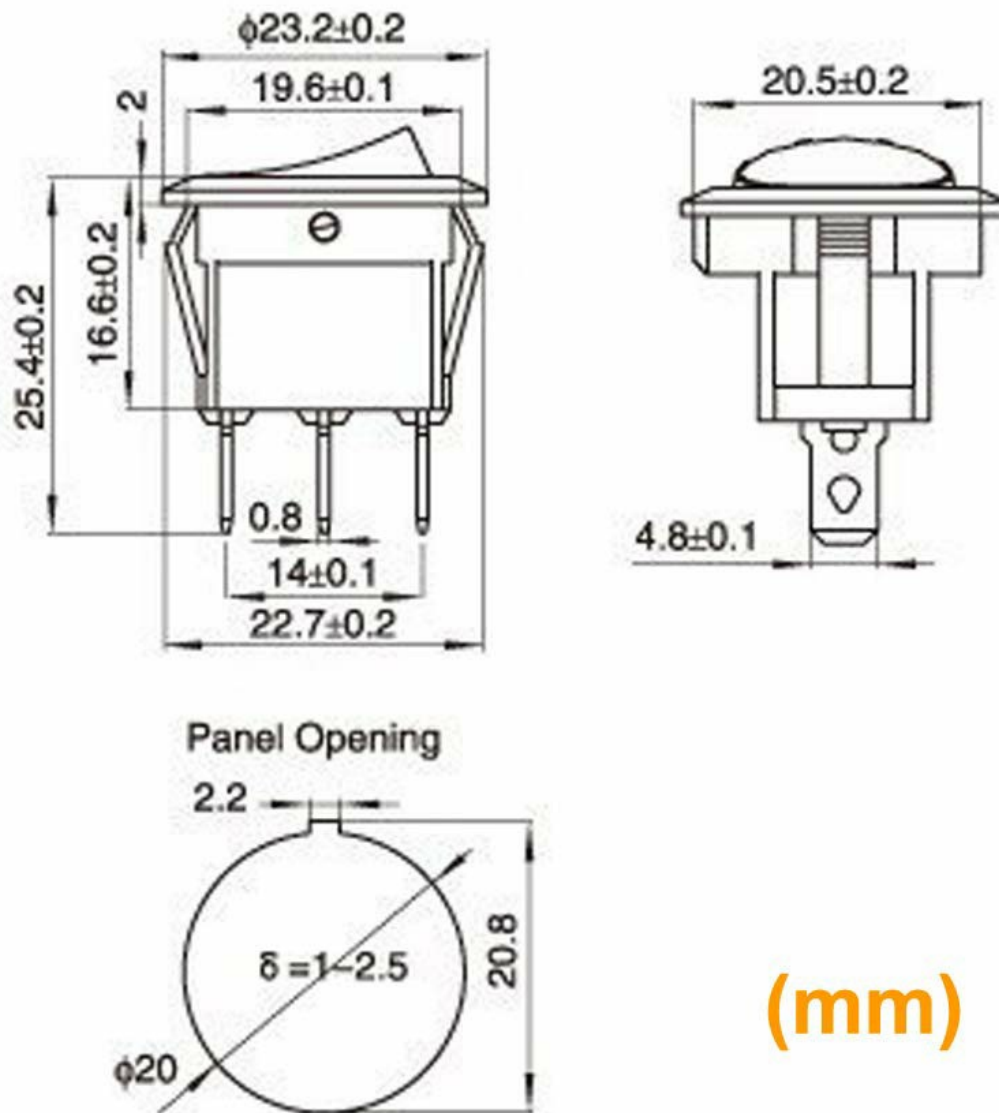


Figure 2.1: Technical drawing providing precise measurements for installing the round rocker switch, indicating a mounting diameter of 20mm (0.8 inches) and other critical dimensions for panel opening.

3. INSTALLATION AND SETUP

These switches feature a pre-wired design for simplified installation. Follow these steps for proper setup:

1. **Safety First:** Before beginning any electrical installation or maintenance, ensure that the power source is completely disconnected and appropriate insulation protection measures are in place. It is highly recommended that operators possess relevant electrical qualifications.
2. **Prepare Mounting Hole:** Create a round mounting hole with a diameter of 20mm (0.8 inches) in your desired panel or surface. Refer to Figure 2.1 for detailed dimensions.
3. **Insert Switch:** Gently push the rocker switch into the prepared mounting hole until it snaps securely into place.
4. **Wire Connections:** The switch comes with three pre-soldered wires:
 - **Red Wire:** Connect to the positive (+) terminal of your DC 12V-24V power source.

- **Black Wire:** Connect to the negative (-) terminal (ground) of your DC 12V-24V power source.
- **Middle Wire (often Red or Green, depending on LED color):** Connect to the positive (+) terminal of the device or load you wish to control.

5. **Secure Connections:** Ensure all wire connections are secure and properly insulated to prevent short circuits.



Figure 3.1: This diagram illustrates the correct wiring for the rocker switch, connecting it to a 12V-24V DC power source (battery) and a load, with the LED indicator wired to illuminate when the switch is in the ON position.

Rocker Switch with Pre-soldered Wires 18AWG / 10cm length wire



Figure 3.2: A single Gebildet rocker switch with its pre-soldered 18AWG wires, approximately 10cm in length, highlighting the ready-to-install design.

4. OPERATING INSTRUCTIONS

Operating the Gebildet rocker switch is straightforward:

- **Turning On:** Press the rocker switch to the 'ON' position. The connected device will receive power, and the integrated LED on the switch will illuminate, indicating that the circuit is closed and active.
- **Turning Off:** Press the rocker switch to the 'OFF' position. The connected device will lose power, and the integrated LED on the switch will turn off, indicating that the circuit is open and inactive.

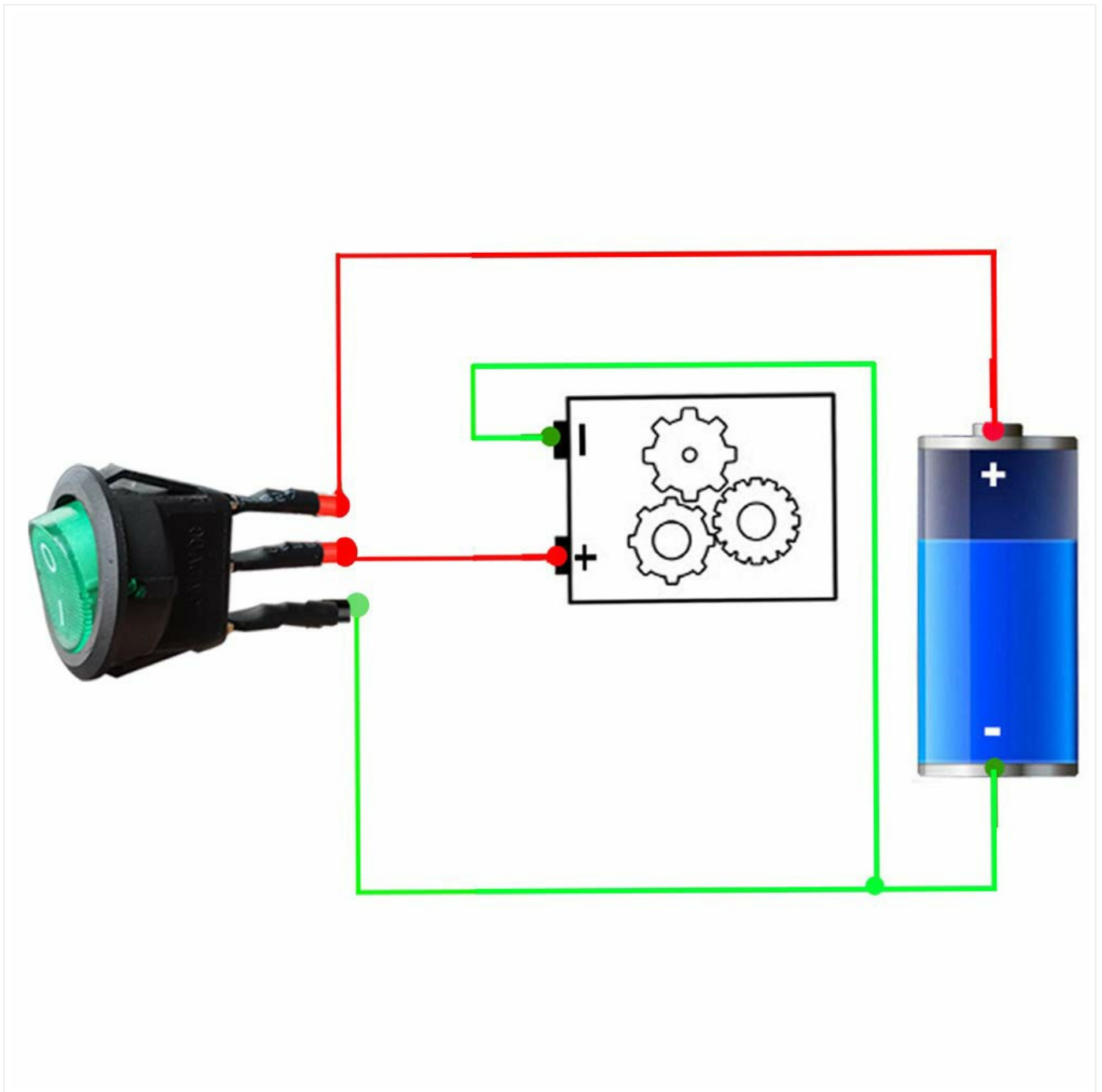


Figure 4.1: This image demonstrates the functionality of the switch: the top panel shows an LED strip and the switch in the 'off' position with no light, while the bottom panel shows the same LED strip and switch in the 'on' position, with both the strip and the switch's integrated LED illuminated.

5. MAINTENANCE

These switches are designed for durability and require minimal maintenance. However, regular checks can ensure optimal performance and longevity:

- **Cleaning:** Periodically wipe the surface of the switches with a clean, dry cloth to remove dust or debris. Avoid using abrasive cleaners or solvents.
- **Connection Check:** Occasionally inspect the wiring connections to ensure they remain tight and free from corrosion. Loose connections can lead to intermittent operation or overheating.
- **Environmental Conditions:** Ensure the switches are not exposed to extreme temperatures, excessive moisture, or corrosive environments beyond their specified operating conditions.

6. TROUBLESHOOTING

If you encounter issues with your Gebildet rocker switches, consider the following troubleshooting steps:

- **Switch Not Activating Device:**

- Check if the power source (12V-24V DC) is active and providing sufficient voltage.
- Verify all wire connections are secure and correctly wired according to the diagram in Figure 3.1.
- Ensure the connected device is functioning correctly and not drawing excessive current that could trip a fuse or circuit breaker.

- **LED Not Illuminating:**

- Confirm the switch is in the 'ON' position.
- Check the wiring of the LED (the third wire) to ensure it is correctly connected to the ground.
- If the switch functions but the LED does not light, the LED itself might be faulty.

- **Intermittent Operation:**

- Inspect for loose or corroded wire connections.
- Ensure the switch is firmly seated in its mounting hole.

If these steps do not resolve the issue, please contact Gebildet customer support for further assistance.

7. SAFETY PRECAUTIONS

Adherence to safety guidelines is paramount when working with electrical components:

- Always disconnect power before installing, inspecting, or maintaining the switches.
- Ensure proper insulation for all connections to prevent electrical shock or short circuits.
- Do not exceed the specified voltage (DC 12V-24V) or current (10A) ratings to avoid damage to the switch or connected devices.
- Install switches in environments that are within their operating temperature and humidity ranges.
- If you are unsure about any part of the installation process, consult a qualified electrician.

8. WARRANTY AND SUPPORT

Gebildet stands behind the quality of its products. While specific warranty details may vary, please retain your proof of purchase for any warranty claims.

For technical support, troubleshooting assistance, or warranty inquiries, please contact Gebildet customer service through the official channels where you purchased the product or visit the Gebildet brand store:

Visit the Gebildet Brand Store

