



CIT Relays and Switches for the Emergency Vehicles Industry

Switches, relays, and solid-state relays play crucial roles in the operation and control of various systems in emergency vehicles. These components help manage electrical loads, ensure reliable operation of critical systems, and provide safe and efficient control. Here's how they are typically used:

1. Control of Lighting Systems

- **Switches:** Manual or automatic switches control emergency lighting systems, including sirens, flashing lights, and spotlights. These switches are usually located within easy reach of the driver or operator for quick activation.
- **Relays:** Electromechanical relays are used to manage the high currents required by these lighting systems, allowing low-power control circuits to activate powerful lights.
- **Solid-State Relays (SSRs):** SSRs offer fast switching, durability, and no mechanical wear, making them suitable for controlling LED lighting systems, which are increasingly used in emergency vehicles for their efficiency and longevity.

2. Siren and Communication Systems

- **Switches:** Toggle or push-button switches are often used to control siren modes, PA systems, and communication radios. These switches enable operators to quickly switch between different audio signals and communication channels.
- **Relays:** Relays can be used to switch between different siren tones or to activate external communication systems, ensuring that the right signals are used in different situations.

3. Power Management and Distribution

- **Relays:** Electromechanical relays are used to manage power distribution to various components within the vehicle, such as auxiliary power outlets, vehicle-mounted equipment, and emergency medical devices. They allow for the safe switching of high-power loads.
- **Solid-State Relays:** SSRs can be used for power distribution and control, offering silent operation and resistance to vibration, which is beneficial in the harsh environments that emergency vehicles often operate in.

4. Control of Specialized Equipment

- **Switches:** Emergency vehicles may be equipped with specialized equipment like winches, hydraulic tools, and onboard computers. Switches provide manual control over these devices.



- **Relays and SSRs:** These components are used to handle the electrical demands of specialized equipment, ensuring that they can be safely activated and deactivated as needed.

5. Safety and Monitoring Systems

- **Switches:** Emergency stop switches and other safety switches are crucial for quickly shutting down vehicle systems in case of an emergency.
- **Relays and SSRs:** These components can be integrated into monitoring systems that check the status of vehicle equipment, battery levels, and other critical parameters, ensuring that the vehicle is always ready for action.

6. User Interface and Control Panels

- **Switch Panels:** Emergency vehicles are often equipped with control panels that house various switches and indicators, allowing operators to manage all systems from a central location. These panels use switches, relays, and SSRs to control different aspects of the vehicle's operation.

In summary, switches, relays, and solid-state relays are integral to the functionality of emergency vehicles, providing control, power management, and safety for critical systems. Their reliability and durability are essential for the demanding conditions in which these vehicles operate.

CIT Switches used in Emergency Vehicles:

- [Anti-Vandal Switches](#)
- [Toggle Switches](#)

CIT Relays used in Emergency Vehicles:

- [PC775 Series](#)
- [PC776 Series](#)
- [A2H Series](#)
- [A17 Series](#)
- [A6 Series](#)
- [Relay Sockets](#)

CIT Solid State Relays used in Emergency Vehicles:

- [PCS28 Series](#)
- [PCS34 AC Input Series](#)
- [PCS34 DC Input Series](#)
- [PCS53 Series](#)