

ENGINEERED FOR TOUGH & TIGHT SPACES 914CE SERIES

Application Brief



Honeywell

The Honeywell MICRO SWITCH 914CE Series compact limit switch is a robust and versatile electromechanical switch designed to provide precision position detection and reliable control in a wide variety of industrial and transportation applications.

Built with a rugged metal housing and sealed to IP67 standards, the 914CE limit switch is engineered for performance in harsh environments, making it ideal for demanding applications in logistics, heavy-duty vehicles, manufacturing, and packaging.

KEY FEATURES

- Compact size with multiple actuator options
- Wide operating temperature range (-40°C to 85°C)
- IP67-rated environmental sealing
- High mechanical durability (up to 10 million operations)
- Snap-action contact mechanism for fast, accurate switching
- CE, UL, and CSA approvals

PERFORMANCE IN KEY APPLICATIONS

Many of these applications demand the use of a compact, rugged, and precise limit switch like the Honeywell MICRO SWITCH 914CE Series due to space constraints, exposure to harsh environmental conditions, and the need for highly repeatable actuation. The miniature form factor of the 914CE limit allows it to be integrated into tight mechanical assemblies without compromising performance. Additionally, its IP67 sealing ensures reliable operation in dusty, wet, or high-vibration environments—making it ideal for both stationary and mobile equipment applications across industrial and transportation applications.

Dock Locking Systems

The 914CE limit switch is typically installed on the frame or guide rail of dock locking systems, where it monitors the physical position of the locking arm or restraint hook. When a trailer backs into the dock and engages with the locking device, the switch actuates to confirm secure engagement. This status can then be fed into dock management systems to prevent premature loading or unloading. The switch's environmental sealing and rugged design ensure reliable operation despite exposure to moisture, dirt, and temperature fluctuations.





Machine Tools

In machine tools, the 914CE switch is mounted at the travel endpoints of moving parts such as tool carriages, slides, or spindle heads. It detects the precise end-of-travel positions to stop or reverse the motion of these components, acting as both a control input and a safety interlock. For example, in a CNC milling machine, it can be placed at the X/Y/Z-axis travel limits to prevent crashes. Its snap-action contacts ensure consistent and rapid response even under high-vibration conditions.

Off-road Vehicles

The 914CE limit switch is strategically positioned near hinged or sliding joints on components such as stabilizers, booms, or dump beds. For example, in an agricultural sprayer or construction loader, the switch might be used to confirm when the arm is fully retracted or deployed. This signal can be used to enable or disable hydraulic controls or trigger alerts for unsafe conditions. The IP67 rating and robust housing allow it to withstand dust, mud, and washdowns common in off-road environments.

Forklifts

Forklifts use the 914CE switch in several key safety and control locations. Common placements include the base of the mast assembly to detect lift height limits, or near the operator cabin door to ensure safety gates are closed before lift operation. It can also be used to monitor tilt cylinder positions. These installations help prevent overextension, unsafe operation, or structural interference, and the switch's durability supports continuous daily use in warehouse environments.

Scissor Lifts

On scissor lifts, the 914CE is typically mounted at the scissor arm junctions or on the frame near platform limit positions. It serves to detect full retraction or extension of the lift arms, enabling safe operation and preventing motor overrun or structural stress. Additionally, it may be used on access gates to ensure the lift cannot be moved or elevated unless the gate is closed. Its compact size allows for easy integration into tight mechanical spaces.



Packaging Equipment

In packaging machinery, the 914CE limit can be located along conveyor paths, at guard doors, or near the end-of-line ejection mechanisms. The switch can detect the position of cartons, verifies whether safety covers are closed, or identifies jams by detecting misaligned product movement. For example, on a wrapping machine, the switch might be used to ensure the wrapping arm is in the home position before activation. Its reliable performance under high-speed cycles contributes to improved line efficiency and uptime.

CNC Milling and Lathe Safety

In CNC milling and lathe machines, the 914CE switch is deployed as a safety interlock and travel limit detector. Common placements include the interior of safety enclosures, where it verifies door closure before enabling spindle operation, and at axis travel endpoints to prevent overtravel. On lathes, it can be placed near the tailstock or carriage travel limits to avoid mechanical overrun. The switch's precision and durability ensure safe and repeatable operation even in high-speed machining environments, protecting both equipment and operators.

Plasma Cutter Travel Control

In automated plasma cutting systems, the 914CE Series switch can be mounted at the travel extremes of the gantry or cutting torch carriage. It detects when the torch reaches the limits of its programmed motion and signals the controller to stop or reverse direction. This prevents hardware collisions and ensures accurate cuts. Additionally, the switch can be used to confirm the homing position at system startup. Its sealed design withstands metal dust, high temperatures, and sparks common in cutting environments.

Handicap Accessible Van Ramp Deployment

In wheelchair-accessible vans, the 914CE limit switch plays a vital role in the deployment and retraction of powered accessibility ramps. Common installation points include the hinge mechanism and full extension position of the ramp. The switch detects when the ramp is fully deployed to allow safe boarding or when fully retracted to confirm vehicle readiness for travel. Additionally, the switch can serve as a safety interlock to prevent the vehicle from moving while the ramp is extended. The 914CE Series' sealed, rugged construction ensures reliable operation in varying weather conditions and during repeated daily use.

SOLUTION

The Honeywell MICRO SWITCH 914CE Series limit switch combines rugged construction, environmental sealing, and mechanical precision to meet the needs of various challenging applications. Whether used in safety-critical systems or high-cycle industrial environments, the 914CE limit delivers consistent and reliable performance that enhances system uptime and operational safety.

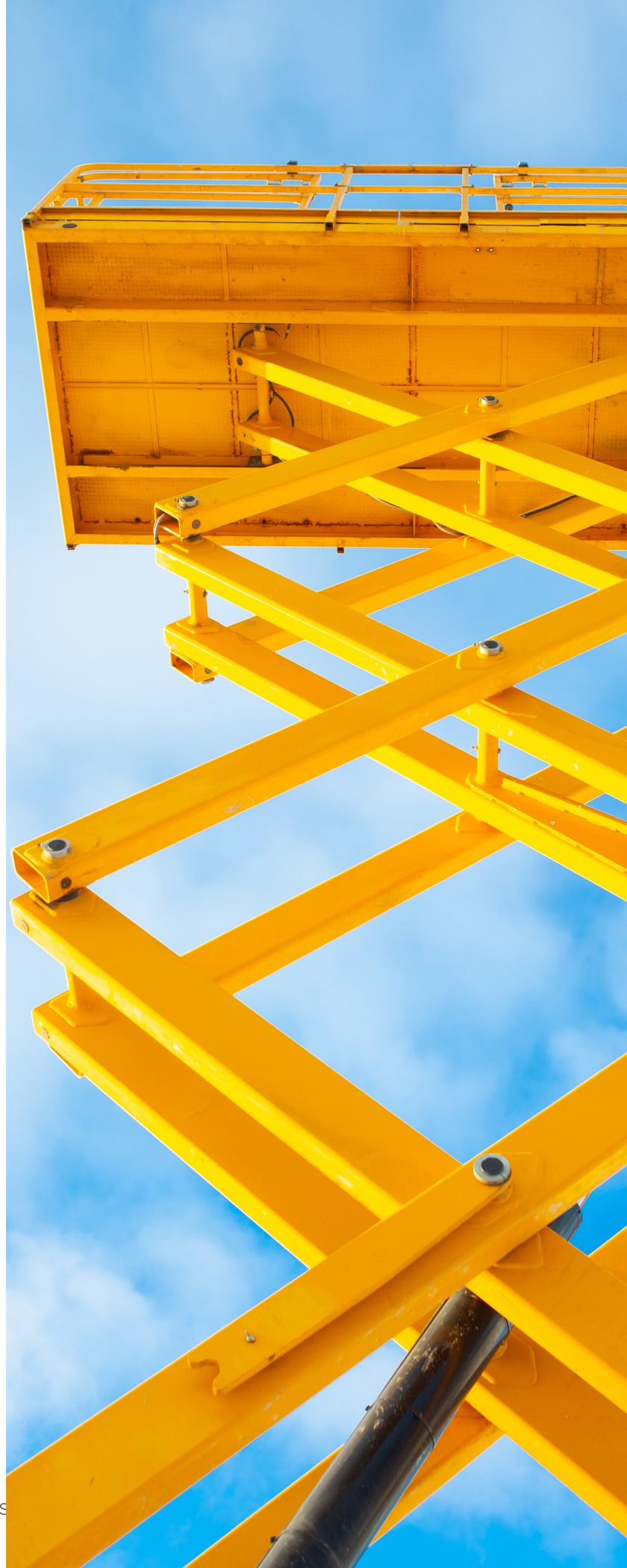
With a compact footprint, this switch is designed to fit into tight or constrained installation areas without sacrificing durability or function. Its snap-action contacts enable rapid and dependable switching, while its long mechanical life—rated up to 10 million operations—minimizes maintenance frequency and reduces downtime. These features translate directly into increased productivity, especially in automated or critical operations where every cycle counts.

The IP67 environmental sealing further extends the 914CE switch's usability in dirty, wet, or wash-down environments, including off-road machinery, vehicle lift systems, and food or packaging lines. Its availability with multiple actuator styles allows for customization to suit specific mechanical movements and interface requirements, offering exceptional versatility in both OEM and retrofit applications.

Engineered and tested to meet global certifications such as CE, UL, and CSA, the 914CE Series provides a dependable and standardized solution across regional and international markets. It is ideal for engineers seeking a rugged, compact, and easy-to-integrate limit switch that doesn't compromise on performance.

As automation and control systems continue to demand higher reliability and flexibility, the Honeywell 914CE Series stands out as a trusted component that meets modern industrial expectations with precision, resilience, and ease of use.

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⚠️ WARNING IMPROPER INSTALLATION

- Consult with local safety agencies and their requirements when designing a machine control link, interface and all control elements that affect safety.
- Strictly adhere to all installation instructions.

Failure to comply with these instructions could result in death or serious injury.

WARRANTY/REMEDY

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