

WHY CUSTOMERS CHOOSE OMRON SWITCHES

Basic switches are essential for detecting the presence or absence of an object, controlling electrical circuits, and ensuring safety in different devices. Primarily designed for detection purposes, basic switches can also be used as manual switches in applications. OMRON offers basic switches in four sizes general-purpose, miniature, subminiature, and ultra subminiature. Basic switches are integral to a wide array of applications, particularly where reliable position detection and durability are paramount.

Three Reasons Why Customers Choose OMRON Switches

① Crisp Feeling

A Satisfying Click

OMRON has established technology to create an “exquisite operational feeling” by adding several parameters in addition to load and stroke. The wide variation of the feeling improves the operability of the customer’s equipment.



② Long Life

Strong Durability and long life switching

OMRON has achieved “strong durability” through its proprietary switch production technologies accumulated over more than 90 years, as well as through its technologies for properly adjusting and managing these technologies. Please consider OMRON products for applications that require long life switching.

③ Easy Design

Less Variation, easy equipment design

Over the years, OMRON has refined its technology for adjusting changes in characteristics of each process from raw materials to finished products by feeding back to the previous process, thereby making switches with “negligible variation between individuals or lots.” We help our customer design their devices more easily.



A snap-action switch is distinct from other basic switches primarily due to its snap-action mechanism. This mechanism allows the contacts within the switch to change state instantaneously at a specific point in the actuator's travel, regardless of the speed and force applied. This results in high-speed switching, which minimizes the wear on the contacts and enhances the reliability of the connection. In contrast, other basic switches might use a slow-action mechanism, where the speed of the switch's operation directly corresponds to the speed at which the actuator is moved.



This difference makes snap-action switches particularly valuable in applications requiring quick and reliable operations. Snap-action switches can handle large currents even in compact sizes and provide a distinct clicking sound and feel, which confirms operational responsiveness. Snap-action switches are recognized for their exceptional quality, primarily due to their high-speed contact switching. This feature significantly minimizes the duration of any electrical arc between the contacts, which not only reduces contact wear but also enhances the switch's reliability. Even small-sized snap-action switches can handle large currents, thanks to this rapid switching mechanism. Additionally, the swift action helps in cutting off arcs more effectively with AC currents, leading to less contact damage compared to DC currents. The consistent performance, coupled with durability—attributed to the minimal contact damage from short-duration arcs—makes snap action switches highly reliable.

Key Features of OMRON Switches

Compact Design

The compact size and flexible actuators of snap-action switches make them exceptionally suitable for applications where space is limited. They adeptly detect movements and positions in confined spaces, which is essential in densely packed electronic environments.

High Durability

The "snap" mechanism which allows for quick contact switching. This feature is crucial in applications where rapid and reliable switching is necessary. Without the use of snap-action switches, several problems can arise, significantly impacting the functionality and reliability of these applications. One of the primary issues is the increased likelihood of electric arcing between contacts when the switch closes the electrical circuit, particularly at higher current amplitudes.

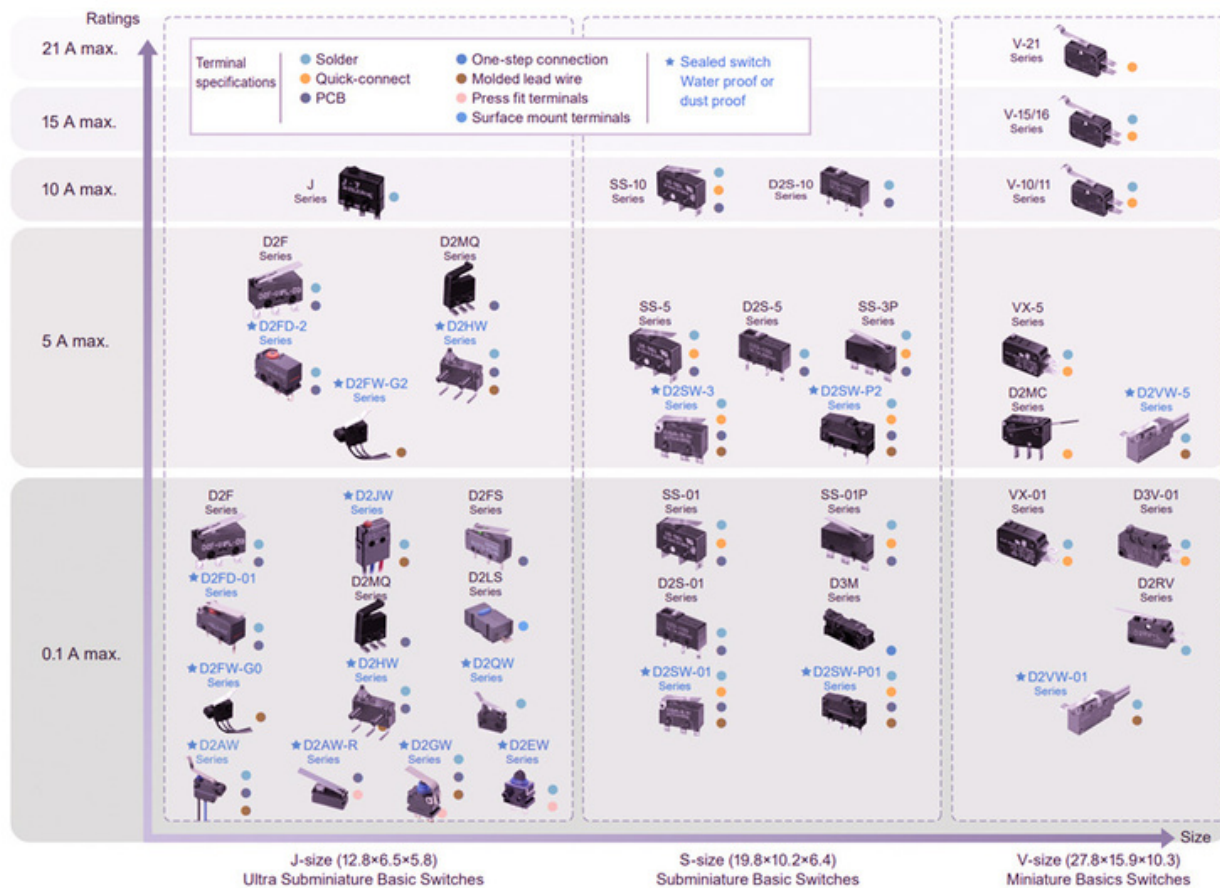
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Detection Switches Lineup



Unique Benefits

- **Cost-Effective:** Reduces maintenance and replacement costs.
- **Versatile:** Suitable for a wide range of applications, from industrial to consumer electronics.
- **Environmentally Sealed Options:** Offers switches with IP67 rating, ensuring operation in harsh environments.

Applications

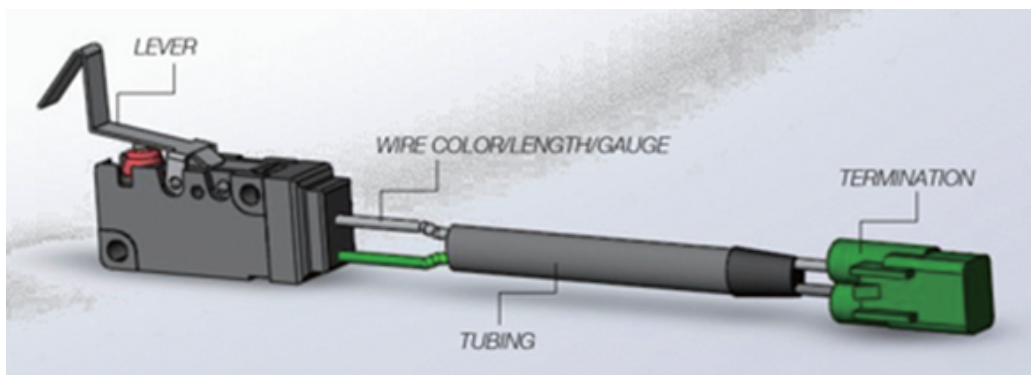
Basic switches are used in a wide range of applications across various industries such as use in electric appliances, machines, and mechanical equipment. They can detect the presence or absence of an object and its position by activating a plunger when the object physically comes into contact. This functionality is key in home appliances like washing machines, where they can detect whether the door or lid is open or closed. In industrial machinery, they ensure high repeat accuracy and reliability, making them suitable for monitoring the position of machine parts or safety covers.

- **Automotive:** Door locks, seat detection, engine sensors.
- **Industrial:** Machinery, emergency stop controls, automation systems.
- **Consumer Electronics:** Appliances, gaming consoles, personal devices.

What to expect with Omron Switches?

The availability of different sizes and types of basic switches, including sealed variants, ensures that there is an appropriate switch for nearly any application. This flexibility allows designers and engineers to develop efficient and safe systems.

- **Innovative Technology:** Incorporating the latest advancements for enhanced performance.
- **Reliability:** Trusted by industry professionals worldwide.
- **Customization:** Options available to meet specific needs and requirements.
 - **Custom Levers**
 - **Terminal Bends**
 - **Cable assembly**
 - **Wire Harnesses**



Basic switches are indispensable in modern technology due to their adaptability, reliability, and precision. Their ability to function in diverse environments and applications, from simple manual switches to complex IoT systems, underscores their significance. The availability of different sizes and types of basic switches, including sealed variants, ensures that there is an appropriate switch for nearly any application. This flexibility allows designers and engineers to develop efficient and safe systems. As technology evolves, the role of basic switches in ensuring the correct and safe operation of devices becomes increasingly critical, solidifying their position as a cornerstone in the field of electrical and electronic engineering. OMRON is renowned for the high quality and reliability of electronic components. OMRON offers high-quality switches with a satisfying click feeling, strong durability, and ease of design, engineered to meet the rigorous demands of various applications, ensuring optimal performance and longevity.

Our Team



Roland Hiso

Product Manager of Switches and Connectors

Roland Hiso is the Product Manager for Switches & Connectors at Omron Electronic Components. He has a Bachelor of Science Degree in Electrical Engineering from DeVry University. Roland has been with Omron for 7 years and started out on the Application Support team handling technical inquiries before moving to Product Management.



Jazmine Correa

Content Specialist

Jazmine Correa attended University of North Texas obtaining a Bachelor of Science degree in Sociology. Previously, Jazmine worked as a Product Manager at a leading electronic components distribution company. She is currently the content specialist at OMRON focusing on marketing and promotion of Relays, Switches, Connectors and Sensors through social media, written and visual content.

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