

High Precision Independent Switches



Summary of Content

High precision independent switches are devices capable of detecting extremely small displacements or signals with micron-level accuracy, available in mechanical, solid-state, and MEMS-based designs.

Overview

High precision independent switches are designed to provide accurate, repeatable switching in applications where even minimal deviations must be detected. They are widely used in industrial automation, instrumentation, medical devices, and electronics. These switches can be mechanical, solid-state, or MEMS-based, depending on the application requirements and environmental conditions.

Mechanical Precision Switches

Mechanical high-precision switches, such as the My-Com limit switches, are engineered for minimal moving parts—typically just three—and use high-quality materials to ensure long service life and consistent repeatability. They can detect micron-level displacements, with repeat accuracy as fine as 1 μm , making them ideal for position sensing, robotics, and precision machinery. Their short, linear travel and sensitivity to slight activating forces enhance reliability and durability in over 1 million applications worldwide (Baumer) .

Solid-State and MEMS Switches

Article Content

Precision Motion Control of Independent Metering Hydraulic Swing

Precision Motion Control of Independent Metering Hydraulic Swing System With Large Inertia Loads: A Case Study on a Rotary

Snap Action Microswitch | Sealed Microswitch | High temperature ...

We offer custom and standard micro precision and safety limit switches, for automation, food processing, machinery, military, medical

E47 precision limit switches

E47 precision limit switches – Eaton's E47 precision switches provide high-accuracy switching at an

HAL 13xy | TDK-Micronas GmbH

The HAL 13xy family consists of factory-programmable Hall-effect switch sensors specifically engineered for high-precision speed

High-side switches | TI

Our industrial high-side switches offer smart solutions for enabling smaller and more power-efficient factory modules with increased

Precision Limit Switch, High Precision Position Switch | RS

Precision position switches are a type of limit switch designed to determine the position of machinery or a mechanical part with a high

High-side switches | TI

Basics of High-Side Switches and Controllers Explore the features and capabilities of TI's high-side switch and controller portfolio in

Broad Portfolio of Electrical Switches | TE Connectivity

TE Connectivity offers reliable electrical switches engineered for cost-effective high-performance. TE

Analog & precision switches & muxes | TI

Our precision switches offer a size competitive solution to traditional mechanical relays and photorelays, while still maintaining a low

Precision Limit Switches

The E47 precision limit switches provide high accuracy switching at an affordable price. A variety of

Precision Limit Switches

With a service life of up to three million cycles, these precision switches are perfect for robotic and machine

Precision Limit Switches

Limit switches are popular for presence sensing in industrial controls. Metrol miniature limit switches offer

Switch ICs & Multiplexers (Muxes) | Analog Devices

Align your applications ranging from Smart Industry to Instrumentation, Electrification to Digital Health, to exactly the right precision

High Precision Basic / Snap Action Switches – Mouser

High Precision Basic / Snap Action Switches are available at Mouser Electronics. Mouser offers inventory, pricing, & datasheets for

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Switches and latches

Discover Infineon's broadest energy-saving portfolio of high-precision magnetic switches for automotive, industrial, and consumer

Guide to High Precision Contact Switches | MISUMI

Learn about the different series types of precision contact switches by Metrol, offered

APPLYING PRECISION SWITCHES

The application of precision switches is an intriguing technical subject. It draws upon many disciplines, including solid-state physics,

Switches & multiplexers | TI

Our analog switches and multiplexers help you improve system design with better accuracy, reliability and platform scalability, while

Precision mechanical switches | Baumer USA

Short, linear travel in just two directions and sensitive to even the slightest activating force further increase

High and Low Side Switches

Protected High & Low-Side Switches for 12 V & 24 V applications You choose, we switch! Infineon 's smart high-side switches

High-precision Switches

These Limit Switches can detect micron displacements. They are available in solid-state models and models with contacts.

MAX303 Datasheet and Product Info | Analog Devices

These monolithic switches operate with a single positive supply (+10V to +30V) or with split supplies ($\pm 4.5\text{V}$ to $\pm 20\text{V}$)

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://benniedesignstudio.co.za>

Email: sales@benniedesignstudio.co.za

Phone: +27 82 391 4765

Address: The Towers, 1 St Georges Mall, Cape Town, 8001, South Africa

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