sateco xt

SXTSC1 Silicone force sensor.

The intelligent electronic skin.

SXTSC1 SILICONE FORCE SENSOR

The elastomer sensor works according to the **capacitative operating principle** and can **continuously measure both touch and compressive force**. It is soft and flexible, can be shaped three-dimensionally, and is suitable for various applications such as automotive, VR, AR, gaming, robotics, medical technology and general industry.

Product overview

Size	Measuring principle	Force range	Travel	Temperature range	Durability
> 5 mm	Capacitative	1...10 N	Up to 1.0 mm	-40...+85 °C	> 0.5 million cycles

Applications: Haptics, seat and/or bed occupancy, body posture, gripping force control, collaborative robots, exoskeletons, prostheses, intelligent soles, bandages, VR/AR gloves, occupational safety equipment

BENEFITS

New design options

Both the sensor's footprint and dimensions can be freely designed. As a result, it can be customized to curved surfaces and integrated seamlessly between the body structure and surface. This enables an **ergonomic design** of input devices, prostheses and exoskeletons both on small and large surfaces.

Reduced manufacturing costs

When used as a measuring cell, the sensor can be easily integrated directly in the surface away from a circuit board using electrical connectors. Its elastomer material makes additional damping, preload and tolerance compensation elements unnecessary. **This simplifies the design** and reduces manufacturing costs.

Space-saving and predictive

The sensor combines **two measurement functions** in one component. It can detect the approximation of a body part at a short distance and precisely measure its exerted force as well. This keeps the combination compact and enables predictive operating and measurement systems.

High durability

Thanks to its elastomer material, the SXTSC1 sensor is **robust, shock and impact-resistant**, and it also enables high durability, even in rough environments at high (+85 °C) and low temperatures (-40 °C).

Skin and food compatibility

Silicone is gentle on the skin. Optional texturing of the surface can make it even more **comfortable to wear**. Silicone is chemical and temperature-resistant with regard to food.

ADDITIONAL INFORMATION

› satecogroup.com/SXTSC1

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