

Antimicrobial Switches!

Switches that disinfect themselves. Sound too good to be true? No. It is possible. Antimicrobial coatings inhibit the growth of microorganisms and even kill them. Perfectly suited for medical technology, sanitation areas, and the food service industry.



Completely sealed switches such as the SCHURTER PSE are ideal for antimicrobial coating

Antimicrobial? What does this mean? Antiviral and antibacterial are familiar to most of us. They fight viruses and bacteria, respectively. Consequently, antimicrobial stands for microbes. Microbes or microorganisms include bacteria, many fungi and spores, microscopic algae and protozoa. Viruses are also usually included, although these are not living organisms in the true sense of the word (they have no metabolism of their own).

Antimicrobial substances

Antimicrobial substances are substances that inhibit the growth of microorganisms or even kill them. This approach is not new, and consequently various solutions coexist on the market.

All disinfectants, for example, are classified as antimicrobial substances. However, there are also high-tech surface structures that have an antimicrobial effect through the disinfecting action of silver and copper

or by means of nanostructures made of titanium dioxide.

Photodynamic self purification

The principle of photodynamics is based on the excitation of a photocatalyst by means of light waves from the visible spectral range (400 - 700 nm). The transfer of energy to the ambient oxygen produces what is known as singlet oxygen (1O_2). This particularly reactive oxygen species effectively kills microorganisms by oxidation.

Fight the smear infections

A large number of infectious diseases is transmitted via contaminated surfaces. This is called smear infection. Antimicrobial coatings, varnishes and paints can be applied to countless surfaces. They are therefore ideal for facilities where high and the highest standards of hygiene are

required: Hospitals, the food industry, schools and kindergartens, or even retirement homes. Depending on the particular pathogen, microorganisms can remain active for up to 16 months: on the door handle, in public transport, on the computer keyboard or at the automatic pay station.

Tested on switches

In cooperation with a traditional German company that manufactures paints and varnishes for highly specialized applications, SCHURTER put the product to the test. The effect of a coating on switches that works according to this photodynamic principle was tested. The results were very convincing. Only switches with a circumferential groove - i.e. switches with a mechanical stroke - are somewhat more difficult to coat, since the coating could flow into the interior of the switch. For these, the coating would have

to be limited to the actuator and would have to be applied before final assembly. All completely sealed SCHURTER switches (piezoelectric, capacitive or ToF) are perfectly suited for this upgrade.

Available on request

SCHURTER has therefore decided to offer this extremely effective upgrade as a customer-specific variant. After all, switches are one of the most common interfaces between man and machine ([Metal Line Switches](#)^[1]). This makes it all the more important to find the ideal switch for a given application. SCHURTER is known for its customized solutions. Nothing is impossible.

About SCHURTER

The SCHURTER Group is a globally successful Swiss family business. With our components ensuring the clean and safe supply of power, input systems for ease of use and sophisticated overall solutions, we impress our customers with agility and excellent product and service quality.

SCHURTER AG
Werkhofstrasse 8-12
6002 Lucerne
CH-Switzerland
+41 41 369 31 11
contact.ch@schurter.com
schurter.com

References

[1]: [SCHURTER Metal Line Switches](#)