

Fiberswitches from Piezosystem Jena

# Switch your light

The easy way to upgrade your spectrometer



- Use multiple probes with one spectrometer
- Switch light in milliseconds
- Low insertion loss of max 1dB
- Wavelength independent: UV up to IR
- Switch cycles more than 100 millions
- Low power consumption
- Various standard connectors and fibers available

» Optical measurements | » Spectroscopy | » Environmental trace analysis | » Process Analytics

Fiberswitches are the perfect solution to analyze different light sources with only one spectrometer. Up to 9 channels (18 in combination) can be switched within milliseconds. Controlled by piezoelectric actuators fiberswitches have no internal optical components and therefore avoid any form of optical aberration. The switches support fiber core diameters from 50  $\mu\text{m}$  up to 600  $\mu\text{m}$ . The small size of switching box and the easy control make this system ideally suited as an add-on to

spectrometers or other metrology devices. By utilizing multiple channels of the detector system at the same time, the light quality remains high while costs are lower.

Fiberswitches by piezosystem jena have been used in a wide variety of industries, from biological research to end product quality control.

Users include:

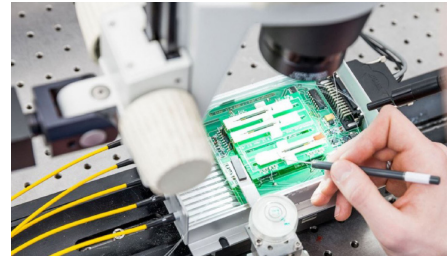


[www.piezosystem.com](http://www.piezosystem.com)

**piezosystem jena**  
incredibly precise

# Working principle

Fiber switches are based on the piezo principle. Piezo actuators allow the direct face to face coupling of the fiber. This high-precision mechanics requires no optical internal elements and is not susceptible to magnetic interference. The fiber switches can be equipped with fiber core diameters from 50  $\mu\text{m}$  up to 600  $\mu\text{m}$ .



Fiber switch 1x2 with analogue control

Features

FSM 1  $\times$  2 Fiber optic switches



- controlled by 5V TTL signal
- low insertion loss (0.7 dB)
- interface: optionally RS 232

Fiber switch 1x3 up to 1x9 with analogue control

FSM 1  $\times$  3 Fiber optic switches

FSM 1  $\times$  4 Fiber optic switches

FSM 1  $\times$  6 Fiber optic switches

FSM 1  $\times$  9 Fiber optic switches



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Fiber switch with PC control

FSM 1  $\times$  3 Fiber optic switches

FSM 1  $\times$  4 Fiber optic switches

FSM 1  $\times$  6 Fiber optic switches

FSM 1  $\times$  9 Fiber optic switches



- controlled by 5V TTL signal via USB, RS232 and optional: ethernet-interface
- PC interface with control software

Fiberswitches are highly customizable, including options such as:

- Bulk head fiber couplers
- 8 degree break for enhanced light transmission
- Steel armored fiber protection

Datasheets and manuals: [www.piezosystem.com/products/optical\\_fiber\\_switch](http://www.piezosystem.com/products/optical_fiber_switch)

Get in touch with us  
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the best solution.

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