- OPTICAL MEASUREMENTS
- SPECTROSCOPY
- PROCESS ANALYTICS
- ENVIRONMENTAL
- TRACE ANALYSIS
- HIGH LINEAR MOTION

OPTICAL FIBER SWITCHES

Fiber switches are the perfect solution to analyze different light sources. Up to 9 channels can be switched within milliseconds. Controlled by piezoelectric actuators fiber switches have no internal optical components and therefore avoid any form of optical aberration.

Switches support fiber core diameters from 50 µm up to 600 µm. Their small size and ease of use make these systems ideally suited to add on to spectrometers or other metrology devices.

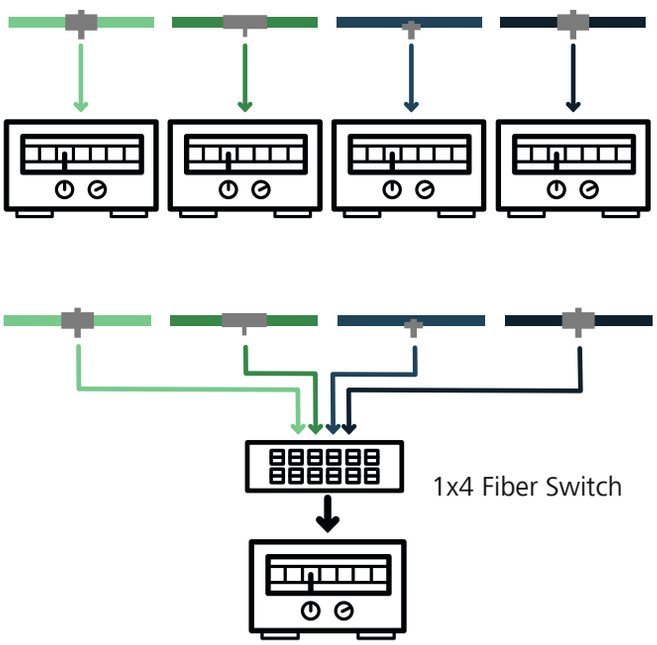
- *USE MULTIPLE PROBES WITH ONE SPECTROMETER*
- *SWITCH LIGHT IN MILLISECONDS*
- *LOW INSERTION LOSS OF MAX 1 DB*
- *WAVELENGTH INDEPENDENT: UV UP TO IR*
- *LIFETIME SWITCH CYCLES OF 100+ MILLION*
- *LOW POWER CONSUMPTION*
- *MULTIPLE CONNECTORS AND FIBER SIZES*

Working Principle

Fiber switches are based on the piezo principle. Piezo actuators allow the direct face to face coupling of the fiber. These high precision mechanisms require no internal free space optical elements, and they are not susceptible to magnetic interference.

Reduce equipment costs by eliminating multiple spectrometers and adding a single fiber switch.

An optical fiber switch can receive up to nine input signals and send output to a single spectrometer. The cost of a single fiber switch is considerably less expensive than the cost of multiple spectrometers. This will reduce your start up costs and increase your ROI.



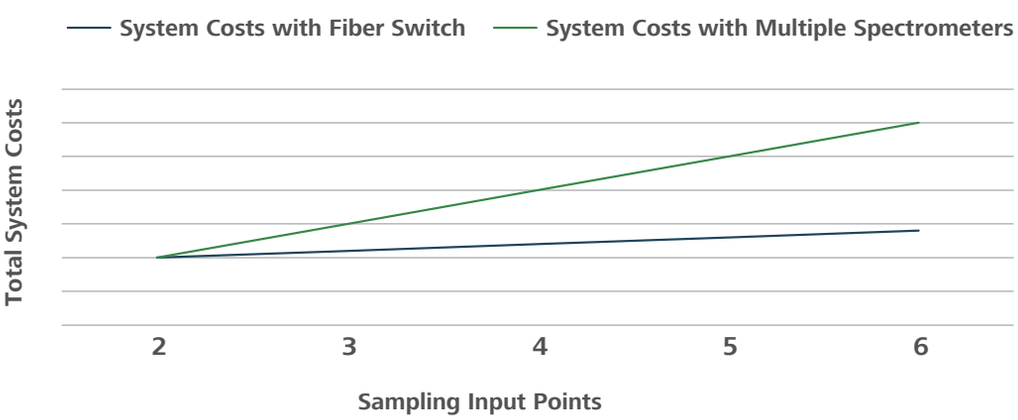
Traditional Multi-Sepctrometer Equipment Strategy:

4 process streams processed separately by 4 spectrometers (top)

Less Expensive Fiber Switch Equipment Strategy:

Process streams first bundled by fiber switches and processed by one spectrometer (bottom)

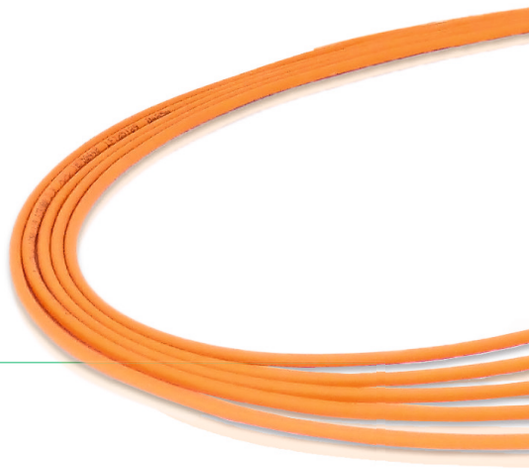
Sampling Input Points	*System Costs with Fiber Switch*	*System Costs with Multiple Sepctrometers*
2	10000	10000
3	11000	15000
4	12000	20000
5	13000	25000
6	14000	30000



Using a fiber switch in-place of 3+ spectrometers will reduce your start-up costs from day 1.

Humidity Resistant Models

Fiber switches are also available in special humidity resistant models. This greatly increases their ability to withstand relative humidity up to 98% before failure. These special humidity resistant fiber switches are ideal for humid industrial environments, and applications involving operation in non climate controlled spaces. This functionality is available in all fiber switch configurations, will not increase lead time, and adds minimal cost.



Fiber switch 1x2 with analogue control

		Features
FSM 1 x 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 × 3 Fiber optic switches FSM 1 × 4 Fiber optic switches FSM 1 × 6 Fiber optic switches FSM 1 × 9 Fiber optic switches		• controlled by 5V TTL signal • low insertion loss (0.7 dB) • interface: optionally RS 232

Fiber switch with PC control

FSM 1 × 3 Fiber optic switches FSM 1 × 4 Fiber optic switches FSM 1 × 6 Fiber optic switches FSM 1 × 9 Fiber optic switches		• controlled by 5V TTL signal via USB, RS232 and optional: ethernet-interface • PC interface with control software

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