

Multimode Fiberswitch 2/1x9



- **fast switching time**
- **low insertion loss**
- **high optical isolation**
- **no additional wavelength dependence**

applications:

- optical measurement systems
- spectroscopy
- optical engineering



technical data:

OPTICAL CHARACTERISTICS

insertion loss:	typ.* 1.4 dB (max. 1.8 dB)
cross talk:	typ.* -60 dB (max. -55 dB)
repeatability (1000 cycles over 20 h):	typ.* 0.02 dB (max. 0.03 dB)

TECHNICAL CHARACTERISTICS

switching time:	typ. 2 ms (max. 3 ms)
lifetime:	10.000.000 cycles
operating temperature:	0°C to 60 °C
storage temperature:	-40 to +80 °C
humidity:	55 % RH >55 % RH-special version

ELECTRICAL CHARACTERISTICS

power supply	100 – 240 VAC/10W
control signal	binary code (BCD), TTL-level

*depends on fiber core diameter

Many applications in optical measurement systems or data communication networks require distribution and modulation of light, guided in optical fibers. piezosystem jena, well known as a supplier of a wide range of one and more dimensional piezoelectrical translation systems for highest positioning accuracy, now presents a new optical multimode fiber switch.

The new product, the 2 by 9 multimode fiber switch was developed mainly for applications in spectroscopy and measurement techniques. The switch is ideally suited to combine up to 9 measurement points with only one spectrometer. Therefore, the end-user derives a cost benefit, and is able to directly compare different optical channels using only one measurement device.

The system works with multimode fibers with a core diameter up to 220µm.

Other fiber parameters can be offered on special request. The optical fiber switch works with piezoelectrical elements providing short switching times down to 2ms. The system is very compact in a 19" industrial casing. The typical insertion losses are < 1.4dB.

types of switches

part.no.	F-299-07	F-299-09
connector	SMA, ST, FC/PC	E 2108.6/K
number of 1by9 switches	2	
fiber core diameter	up to 200/280µm	
housing L/B/H	429x360x82mm	429x320x126 mm
controlling	parallel port	
TTL-level	Low=0V (<0.9V); high=5V (>3.8V)	

Ordering Instructions:

Please note: when ordering you will need the part number of the switch and also the part no. of the fiber (which includes the optical connector). For each switch you need one input fiber and various numbers of output fibers depending of the switching channels.

All fibers must be assembled with connector!

For custom configuration, piezosystem jena retains the right to cancel an order if unforeseen additional efforts are needed which may cause the cost of the systems to exceed the quoted cost. This is related especially to special fiber types piezosystem jena has never worked with or which are supplied by our customers.

Standard fiber length will be 1m ($\pm 15\%$). Cost for additional fiber length will be added.

piezosystem jena is using the following types of fibers and connectors for all standard applications:

Fiber [µm]		Index-Profile	Numerical aperture	Wavelength range	part. no. for fiber (without optical connector)
Core	Cladding				
50	125	Graded-index	0.22	850/1300nm	C-319-*
62.5	125	Graded-index	0.28	850/1300nm	C-329-*
100	140	Graded-index	0.29	850/1300nm	C-339-*
100	110	Step-index	0.22	180-1100nm	C-230-*
100	140	Step-index	0.22	350-2600nm	C-130-*
200	220	Step-index	0.22	350-2600nm	C-140-*
200	220	Step-index	0.22	180-1100nm	C-240-*

* when ordering please use the end number of the optical connectors as follows:

ST = end number -10; SMA = end number -20
FC/PC= end number -30; FC/APC= end number -50

Accessories

Description	part.no.
polishing surface	C-800-00

Additional fiber extension or a reduction of fiber length available on request.

piezosystem jena GmbH

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