

Multimode Fiberswitch 1x3 to 1x9 fiber core diameter 400 and 600µm



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

applications:

- optical measurement systems
- spectroscopy
- optical engineering
- telecommunications



technical data:

OPTICAL CHARACTERISTICS

insertion loss:	typ.* 1.0 dB (max. 1.3 dB) for 1 x 3 switch
	typ.* 2.0 dB (max. 3.0 dB) for 1 x 4 to 1 x 9 switch
cross talk:	typ.* -60 dB (max. -55 dB)
repeatability (1000 cycles over 20 h):	typ.* 0.02dB (max.0.03dB)
insertion loss stability	20 x 10 ⁶ cycles

TECHNICAL CHARACTERISTICS

switching time:	typ. 5 ms (max. 7 ms)
lifetime:	10 ⁹ cycles
operating temperature:	0°C to 60 °C
storage temperature range:	-40 to +80 °C
humidity:	55 % RH >55 % RH-special version

ELECTRICAL CHARACTERISTICS

operating voltage:	5 V DC
power consumption	100 mA (f=0Hz 50mA ; f=50Hz 300mA)
control signal	binary code (BCD)

*depends on fiber core diameter

HOUSING (L x W x H) :	320 x 234,5 x 92,5 mm ³ for 1x3 channel
	360 x 448 x 92,5 mm ³ for 1x4 to 1x9 channel

types of switches

No. of channels	1x3		1x4 to 1x9	
Fiber core diameter	400/440 µm	600/660 µm	400/440 µm	600/660 µm
Housing L/B/H	320/234,5/92,5 mm ³	320/234,5/92,5 mm ³	360/448/92,5 mm ³	360/448/92,5 mm ³
Part.-No.	F-143-11	F-163-11	1x4 F-144-12	1x4 F-164-12
			1x6 F-146-12	1x6 F-166-12
			1x9 F-149-12	1x9 F-169-12

Ordering Instructions:

Please note: when ordering you will need the part number of the switch and the fiber (which includes the optical connector).

All fibers must be assembled with a connector, otherwise piezosystem jena can not determine the optical parameters of insertion loss and back reflection.

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.

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				
400	440	Step-index	0.22	350-2600nm	C-160- *
400	440	Step-index	0.22	180-1100nm	C-260- *
600	660	Step-index	0.22	350-2600nm	C-180- *
600	660	Step-index	0.22	180-1100nm	C-280- *

* 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

Accessories

description	part.no.
control cable for fiberswitch 1x3 - 1x9	Z-950-10
pc cable RS232	Z-009-00
power supply for fiberswitch	Z-950-20