IQS-9100B MEMS Optical Switch

Provides highly accurate and repeatable fiber-to-fiber switching.

SPEC SHEET

KEY FEATURES

- Singlemode 1 x N up to 1 x 32
- Fast switching time of ≤30 ms
- Lifetime expectancy of more than 1 x 10^9 cycles
- Variety of connector options

COMPLEMENTARY PRODUCTS

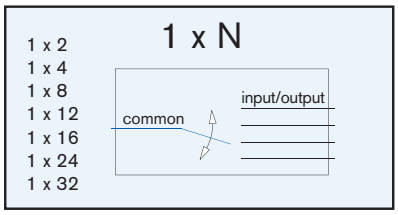
Integrated Qualification System
IQS-600

Optical Switch
IQS-9100

EXFO

MEMS-BASED DESIGN

With its MEMS-based design, EXFO's IQS-9100B delivers durable performance in a compact package. Fast switching time and a 1-billion-cycle lifetime expectancy make it the perfect optical switch for demanding manufacturing applications. The IQS-9100B MEMS Optical Switch is available for singlemode fibers with a choice of 1 x 2, 1 x 4, 1 x 8, 1 x 12, 1 x 16, 1 x 24 and 1 x 32 modules.

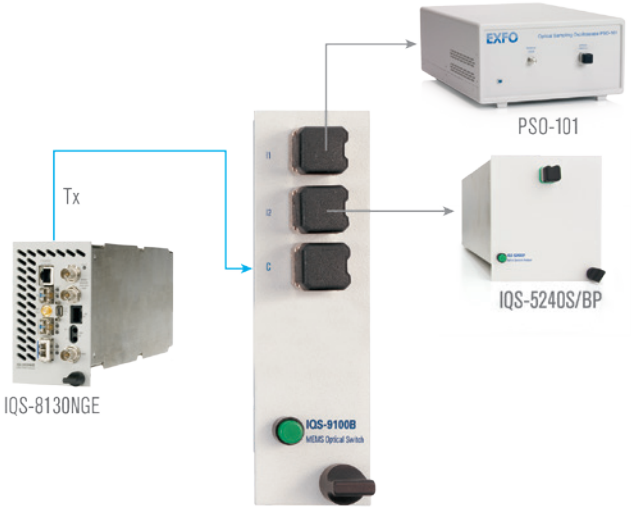


The 1 x N configurations provide precise optical switching between one common port and N input/output ports– perfect for multiple-component or ribbon-fiber testing.

SUPPORTING VARIOUS APPLICATIONS

Optical switches are basic components integrated in almost every test station. The IQS-9100B offers the specifications and features to support a wide variety of applications. Choose it to:

- Test at multiple wavelengths by switching between different light sources, eliminating measurement variations due to connection repeatability
- Analyze transmitted signals using several types of test instruments, such as the IQS-5240S Optical Spectrum Analyzer and IQS-8130NGE Power Blazer Multiservice Test Module
- Reconfigure an R&D or manufacturing test station to allow testing of several types of devices



THE IQS-600 PLATFORM

The IQS-600 platform provides a flexible approach to optical, transport and datacom test and measurement for manufacturing, automation, optical qualification and R&D. It combines powerful features and control capabilities for up to 100 different modules.

The IQS-9100B can easily be controlled remotely via the standard LAN or optional GPIB interfaces available on the IQS-600 using SCPI commands, LabVIEW drivers or any other automation software.

SPECIFICATIONS [a]

Switch	1 x 2, 1 x 4	1 x 8	1 x 12	1 x 16	1 x 24, 1 x 32
Operating wavelength (nm)	1290 to 1650				
Insertion loss (dB) at 1310 nm [b, c]	0.9	1.2	1.6	1.8	2.0
Insertion loss (dB) at 1530 nm to 1650 nm [b, c]	0.7	1.0	1.2	1.4	1.5
Repeatability (dB) [d]	0.02				
Backreflection (dB) (typical)	–50 (–55)				
Crosstalk (dB) (typical)	50 (60)				
Polarization-dependent loss (dB) (typical) [e]	0.09 (0.06)			0.11 (0.08)	
Switching time (ms) [c]	20	30			
Fiber type	Singlemode 9/125 µm				
Input power (damage threshold) (dBm)	27				

GENERAL SPECIFICATIONS

Switch		1 x 2, 1 x 4	1 x 8	1 x 12	1 x 16	1 x 24, 1 x 32
Number of slots		1	2	2 [f]	3	5
Dimensions	Width	3.6 cm (1 7⁄16 in)	7.4 cm (2 15⁄16 in)	7.4 cm (2 15⁄16 in)	11.2 cm (4 7⁄16 in)	18.8 cm (7 7⁄16 in)
	Height	12.5 cm (4 15⁄16 in)	12.5 cm (4 15⁄16 in)	12.5 cm (4 15⁄16 in)	12.5 cm (4 15⁄16 in)	12.5 cm (4 15⁄16 in)
	Depth	28.2 cm (11 1⁄8 in)	28.2 cm (11 1⁄8 in)	28.2 cm (11 1⁄8 in)	28.2 cm (11 1⁄8 in)	28.2 cm (11 1⁄8 in)
Weight		0.8 kg (1.1 lb)	0.8 kg (1.8 lb)	1.1 kg (2.2 lb)	1.1 kg (2.2 lb)	1.8 kg (3.9 lb)
Switch life		1 billion (10^9) cycles minimum				
Temperature	operating	0 °C to 40 °C (32 °F to 104 °F)				
	storage	–40 °C to 70 °C (–40 °F to 158 °F)				
Maximum relative humidity		80 % non-condensing at 40 °C				

Instrument Drivers
LabVIEW™ drivers, SCPI commands and COM/DCOM libraries.

Remote Control
With IQS-600: GPIB (IEEE-488.1, IEEE-488.2) Ethernet and RS-232.

Standard Accessories
User guide, certificate of compliance and calibration certificate.

Notes

a. Specifications valid at 23 °C ± 5 °C.
b. Insertion losss per module, including one connector.
c. Typical specifications.
d. Repeatability values are for 100 cycles per switch module at constant temperature with stabilized source/meter.
e. At 1550 nm.
f. 1 x 12 switches with EUI connectors use three slots.

ORDERING INFORMATION

IQS-9100B-01-XX-B-XX

Channel configuration
02 = 2 channels
04 = 4 channels
08 = 8 channels
12 = 12 channels
16 = 16 channels
24 = 24 channels
32 = 32 channels

Connector
58 = FC/APC narrow key
88 = SC/APC
89 = FC/UPC
90 = ST/UPC
91 = SC/UPC
EI-EUI-89 = UPC/FC narrow key [b]
EI-EUI-90 = UPC/ST [b]
EI-EUI-91 = UPC/SC [b]
EI-EUI-95 = UPC/E-2000 [b]
EI-EUI-98 = UPC/LC [b]
EA-EUI-89 = APC/FC narrow key [b]
EA-EUI-91 = APC/SC [b]
EA-EUI-95 = APC/E-2000 [b]
EA-EUI-98 = APC/LC [b]

Example: IQS-9100B-01-04-B-EI-EUI-89

Notes

a. For 2 x N and multimode configurations, please refer to the IQS-9100 ordering information.

b. Available on 1 x 2, 1 x 4, 1 x 8, 1 x 12, 1 x 24.

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