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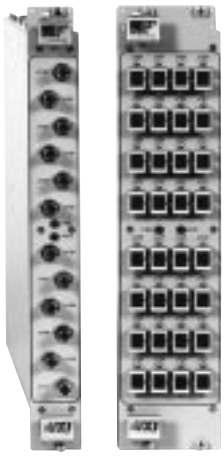
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Find the *Ametek / VTI Instruments / VXI Technology SM8102* at our website: *Click HERE*

Optical Switch Modules SM8001, SM8002 and SM8003

- First Modular Optical Switch Family for VXI
- Building Blocks Include 1xN, 2xN, SPST and SPDT Switches
- Mix and Match Optical Building Blocks for Final Configuration
- Includes all the Features of the SMIP™ Family



Step 1: Start with the SM8001, SM8002 or SM8003 Base Unit. The SM8001 and SM8002 house the 1xN and 2xN multi-channel switches. The SM8003 houses the SPST and SPDT prism switches. Up to two 1xN or 2xN multi-channel switches can be housed in either an SM8001 single-slot or SM8002 double slot VXIbus card. The SM8002 has more connector space on the front panel and can accommodate a larger number of N channels.

Step 2: Select the combination of 1xN and 2xN switches for the SM8001/SM8002, or select a combination of SPST and SPDT switches for the SM8003.

Step 3: Contact VXI Technology for price and delivery

Overview

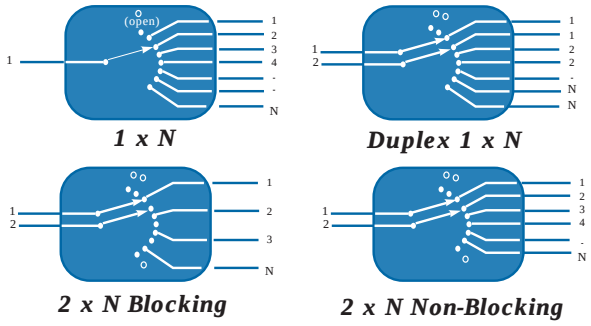
The SM8000 optical switch modules are part of the SMIP™ family, offering the extensive control and interfacing features provided by SMIP™. The latest optical relay technology, combined with the modular approach of VXI and SMIP™, finally provides optical switching solutions that are open architecture and modular in design. Combined with other SMIP™ switch products, a complete switching solution "From DC to Light" can now be configured in a single VXIbus mainframe, with a consistent driver interface.

Precise switching of optical channels is achieved in the SM8001 and SM8002 multi-channel switch modules using diffraction limited collimating lenses, which enhance both thermal stability and repeatability. The SM8003 single-mode prism switches provide channel selection from one input fiber to either one or two output fibers using a moving prism between fixed collimator pairs.

SM8001 and SM8002

The SM8001 and SM8002 can each hold up to 2 optical switch modules. Each switch module can be either a 1xN (where N ranges from 2 to 17) or a 2xN (where N ranges from 2 to 8). Selecting between the SM8001 and SM8002 is dependent on the required number of front panel I/O connectors for the desired configuration.

Configurations:



The total numbers of available connectors per base unit are:

SM8001 Single-slot, Multi-channel Base Unit:
12 ST connectors
16 SC connectors
12 FC connectors

SM8002 Double-slot, Multi-channel Base Unit:
24 ST connectors
32 SC connectors
24 FC connectors

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Optical Switch Modules SM8001, SM8002 and SM8003

Some examples of typical configurations are:

SM8001 with dual (1 x 5) switches using FC connectors (12 total)
SM8002 with 1x12 using ST connectors (13 total)
SM8002 with 1 x 17 switches using SC connectors (18 total)
SM8002 with dual (1 x 8) switches using FC connectors (18 total)
SM8001 with dual (1 x 4) switches using ST connectors (10 total)

Specifications[1] for SM8001 and SM8002

Insertion Loss:[2]	0.5 dB typ., 1.2 dB max.
Back-reflection:[3]	-60 dB typ.,-55 dB max. (Singlemode) -20 dB typ. (Mult-mode)
Switching Time:	100 msec. +16 msec. per channel
Isolation:	-80 dB max.
Durability:	10 million cycles min.
Repeatability:[4]	±0.01 dB max. sequential ±0.03 dB max. random
PDL:[5]	0.05 dB max. (single-mode)
Wavelength Range:	780 – 1650 nm
Operating Temperature:	0˚C to 50˚C max.
Storage Temperature:	-20˚C to +70˚C max.
Humidity:	40˚C /90% RH /5 days

1. All specifications referenced without connectors.
2. Measured at 23 ±5˚C.
3. Based on standard 1 meter pigtail length. –60 dB max. by request.
4. 100 cycles measured at constant temperature after warm-up.
5. Measured at 1550 nm. Lower PDL available by request.

Ordering Information for SM8001 and SM8002

SM800 -- [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

VXIbus Module

1	SM8001 Single slot
2	SM8002 Double slot

Switch Configuration 1

1xN	1xN (specify N)
1xN/DS	Synchronous Duplex 1xN
2xN/LB	Low-loss 2xN Blocking
2xN/LN	Low-loss 2xN Non-blocking

Switch Configuration 2

1xN	1xN (specify N)
1xN/DS	Synchronous Duplex 1xN
2xN/LB	Low-loss 2xN Blocking
2xN/LN	Low-loss 2xN Non-blocking
Ø	None

Fiber Type

9	9/125
50	50/125
62	62.5/125
100	100/140
X	Specify

Wavelength Range (nm)

8	780-950 (MM only)
13	1290-1360
8/13	780-1360 (MM only)
15	1480-1570
13/15	1290-1570
16	1600-1650
13/16	1290-1650
X	Specify

Connector Type

FC	FC
SC	SC
ST	ST

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Optical Switch Modules SM8001, SM8002 and SM8003

SM8003

The SM8003 can house up to 4 SPST and/or SPDT switches. SPST and SPDT switches can be mixed and matched within the same unit.

Configurations



SPST



SPDT

The total numbers of available connectors per base unit are:

SM8003 Single-slot Prism switch Base Unit:

12 ST connectors
16 SC connectors
12 FC connectors

Some examples of typical configurations are:

SM8003 with 4 SPDT prism switches using SC connectors
SM8003 with 2 SPDT and 2 SPST prism switches using FC connectors

Specifications[1]

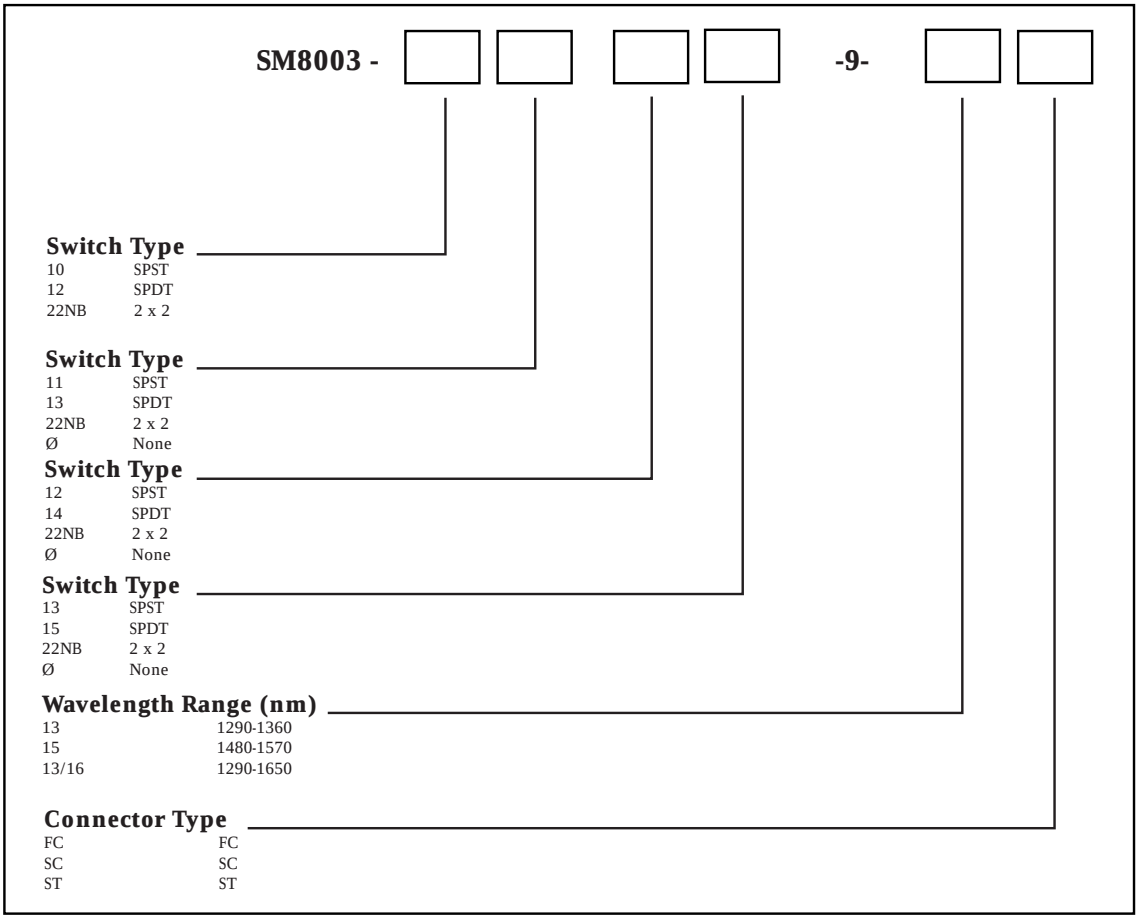
Wavelength Range:	1290 - 1650 nm
Insertion Loss:[2]	0.5 dB typ., 1.2 dB max.
Back-reflection:[2]	-55 dB max.
Switching Time:	25 msec. max.
Isolation:	-80 dB max.
Crosstalk:	-80dB max.
Durability:	10 million cycles/min.
Repeatability:[3]	±0.015 dB max. (Latching)
PDL:[4]	0.05 dB max.
Switching Voltage:	4.3 VDC min., 6.0 VDC max.
Switching Current:	120 mA @ 5.0 VDC to switch
Coil Resistance:	40 ohm min., 44 ohm max.
Operating Temperature:	0˚C to 50˚C max.
Storage Temperature:	-20˚C to +70˚C max.
Humidity:	40˚C /90% RH /5 days

1. All specifications referenced without connectors.
2. Measured at 1310 and 1550nm at 23 ±5˚C.
3. Short-term repeatability for 100 cycles at constant temperature.
4. Measured at 1550 nm. Lower PDL available by request.

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Optical Switch Modules SM8001, SM8002 and SM8003

Ordering Information for SM8003



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