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Find the *Pickering 40-850-024* at our website: ***Click HERE***

40-850/852
MEMS Fiber Optic Multiplexer

- Single 8 to 1 or Single 4 to 1 Fiber Optic Multiplexer
- High Density 1 or 2 Slot Width Modules
- FC/APC, FC/PC or SC/PC Connectors
- Small Form Factor Connectors LC or MU (mini SC)
- 1240 to 1640nm Single Mode
- 700 to 1700nm Multi-Mode
- Return Loss >55dB
- Long Operating Life >10^9 Operations with High Repeatability ± 0.01dB and Good Temperature Stability
- Crosstalk -60dB Typical
- 1ms Typical Switching Time
- VISA, IVI & Kernel Drivers Supplied for Windows 2000/XP/Vista
- Supported by PXI or LXI Chassis
- 2 Year Warranty



40-852-018
8 Channel Fiber Optic Multiplexer

Pickering PXI Fiber Optic MEMS Switching modules are available in many high density formats with a choice of 5 different connector styles to suit most applications: FC/APC (for optimal performance), FC/PC and SC/PC for general applications and LC and MU for high density applications.

The fiber optic multiplexers connect the optical channel by redirecting the optical signal into a selected output fiber. This is achieved using Micro-Mechanical Mirrors driven by a highly precise mechanism and activated via an electrical control signal.

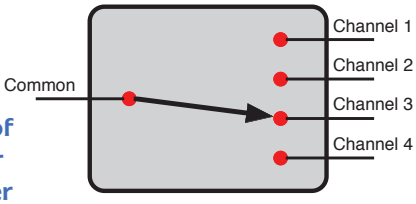
The range of MEMS (Micro-Electro-Mechanical-Systems) based optical switches is:

40-850 – Single 4 Channel Multiplexer

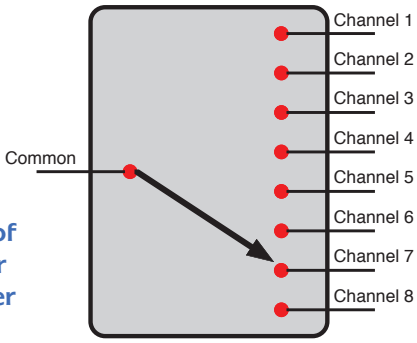
40-852 – Single 8 Channel Multiplexer

Pickering will construct custom optical systems to customers precise requirements. We have a large range of electrical switching modules which can form a complete PXI based telecom switching solution.

MEMS technology offers many advantages over traditional Optical Prism Technology as used in module types 40-810/815/820. MEMS offer similar optical performance but with lower price, higher packing density, faster operate time and much longer operating life.



Block Diagram of 4 Channel Fiber Optic Multiplexer



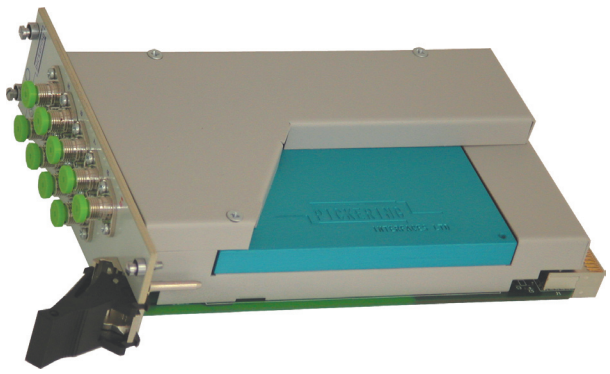
Block Diagram of 8 Channel Fiber Optic Multiplexer

Key Features

- Very fast operate time <1ms
- Very long life >10^9 operations
- Return loss greater than 55dB
- High repeatability over a broad range of environmental conditions
- High density

Applications

- Optical signal routing
- Fiber network configuration
- Fiber Optic Component Test



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General Specification (All Versions)

Fiber Switch Type:	**MEMS**
Internal Fiber Type:	**SM 9/125**
Wavelength:	1240 to 1640nm
Insertion loss (4 channel versions):	1dB Typ
Insertion loss (8 channel versions):	1.5dB Typ
Return loss (APC version):	60dB Min
Return loss (other versions):	55dB Min
Polarization dependent loss (PDL):	0.05dB Max
Repeatability:	±0.01dB Max
Crosstalk:	-60dB Max
Optical Input Power:	300mW Max
Thermal Stability: (-10 to 75°C insertion loss variation)	0.2dB Max
Expected Life:	>>10^9 operations
Maximum Switching Time:	1ms
Cycle Rate:	500/sec
Module Weight:	<0.8Kg typ.

Additional Specification (MM Versions)

Fiber Switch Type:	**MEMS**
Internal Fiber Type:	**MM 62.5/125**
Wavelength:	700 to 1700nm
Insertion loss (4 channel versions):	1dB Typ
Insertion loss (8 channel versions):	1.5dB Typ
Return loss (other versions):	55dB Min
Polarization dependent loss (PDL):	0.05dB Max

Power Requirements

+3.3V	+5V	+12V	-12V
0	300mA (typ 220mA)	0	0

Width and Dimensions

All modules are either 1 or 2 slot as indicated in model list.

Connectors

PXI bus via 32 bit P1/J1 backplane connector.
Signals via front panel fiber optic connectors (choice of FC/APC, FC/PC,SC/PC, MU or LC types).

Other Fiber Connector Styles

Pickering can manufacture Fiber Optic Switch modules with other connector styles, please contact sales office for further information.

Product Order Codes

8 Channel Multiplexer Versions

FC/APC, 1240 to 1640nm, Single-Mode Single 8 Channel Fiber MUX, 2 slot	**40-852-018**
FC/PC, 1240 to 1640nm, Single-Mode Single 8 Channel Fiber MUX, 2 slot	**40-852-118**
SC/PC, 1240 to 1640nm, Single-Mode Single 8 Channel Fiber MUX, 2 slot	**40-852-218**
MU (mini SC), 1240 to 1640nm, Single-Mode Single 8 Channel Fiber MUX, 1 slot	**40-852-318**
LC, 1240 to 1640nm, Single-Mode Single 8 Channel Fiber MUX, 1 slot	**40-852-418**
SC, 700 to 1700nm, Multi-Mode Single 8 Channel Fiber MUX, 2 slot	**40-852-218-M**
ST, 700 to 1700nm, Multi-Mode Single 8 Channel Fiber MUX, 2 slot	**40-852-518-M**

4 Channel Multiplexer Versions

FC/APC, 1240 to 1640nm, Single-Mode Single 4 Channel Fiber MUX, 1 slot	**40-850-014**
FC/PC, 1240 to 1640nm, Single-Mode Single 4 Channel Fiber MUX, 1 slot	**40-850-114**
SC/PC, 1240 to 1640nm, Single-Mode Single 4 Channel Fiber MUX, 2 slot	**40-850-214**
MU (mini SC), 1240 to 1640nm, Single-Mode Single 4 Channel Fiber MUX, 1 slot	**40-850-314**
LC, 1240 to 1640nm, Single-Mode Single 4 Channel Fiber MUX, 1 slot	**40-850-414**
SC, 700 to 1700nm, Multi-Mode Single 4 Channel Fiber MUX, 2 slot	**40-850-214-M**
ST, 700 to 1700nm, Multi-Mode Single 4 Channel Fiber MUX, 2 slot	**40-850-514-M**

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Programming

Pickering provide kernel, IVI and VISA drivers which are compatible with Windows 2000/XP/Vista operating systems. The VISA driver is also compatible with Real-Time Operating Systems such as LabVIEW RT. Additionally, QNX is fully supported, for other RTOS support contact Pickering.

These drivers may be used with a variety of programming environments and applications including:

- **National Instruments** products (LabVIEW/LabWindows/CVI/MAX/TestStand etc.)
- **Microsoft Visual Studio** products (Visual Basic/Visual C+)
- **Agilent VEE**
- **Mathworks Matlab**

Drivers for popular Linux distributions are available, other environments are also supported, please contact Pickering with specific enquiries.

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to +55°C
Humidity:	Up to 90% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 90% non-condensing
Altitude:	15000m

PXI & CompactPCI Compliance

The module is compliant with the PXI Specification 2.2. Local Bus, Trigger Bus and Star Trigger are not implemented.
Uses 33MHz 32-bit backplane interface.

Safety & CE Compliance

All modules are fully CE compliant and meet applicable EU directives: Low-voltage safety EN61010-1:2001, EMC Immunity EN61000-6-1:2001, Emissions EN55011:1998.

PXI & LXI Chassis Compatibility

Compatible with all chassis conforming to the 3U PXI and 3U cPCI specification. Compatible with Legacy and Hybrid peripheral slots in a 3U PXI Express chassis.
Compatible with Pickering Interfaces LXI Modular Switching chassis. For information on driving your switching solution in an LXI environment refer to the LXI Short Form Catalog.



Latest Details

Please refer to our Web Site for Latest Product Details.
www.pickeringtest.com

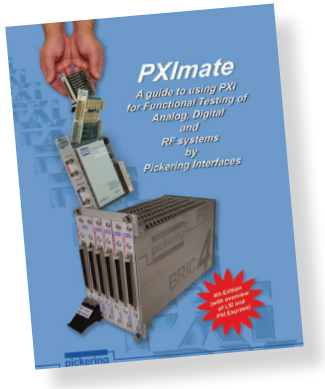


Please refer to the Pickering Interfaces "**Interconnection Solutions**" catalog for the full list of connector/cabling options, including drawings, photos and specifications. This is available in either print or as a download. Alternatively our web site has dynamically linked connector/cabling options, including pricing, for all Pickering PXI modules.



Refer to the "**PXI Shortform Catalog**" for descriptions of Pickering Interfaces' comprehensive range of PXI switching and instrumentation modules, including specifications and product selection guides

The PXI Shortform is available on request or can be downloaded from the Pickering website.



Ever wondered what PXI is all about?

Pickering Interfaces' "**PXImate**" Explains the basics of PXI and provides useful data for engineers working on switch based test systems.

The PXImate is available free on request from the Pickering website.

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