



**All optical
switch for
1xN or fully
non blocking
NxM
architectures**

OVERVIEW

The **sercalo** rs series are all optical switch solutions for demanding applications in fiber optic instrumentation or communication. The rack mountable instrument can switch up to 36 input fibers to any of up to 36 output fibers, independently of dataformat, wavelength or optical power. The switch supports either single or multimode fibers.

The optical connections are set by a MEMS based switch network, where micromachined silicon mirrors redirect light to the selected ports. The use of MEMS technology offers solid state reliability together with long term stability and robustness for stable operation.

Different interface options are available. With the ethernet interface, the instrument can be controlled over an internet connection.

FEATURES

- reliable
- low insertion loss
- Non-blocking Cross Connect or 1xn architectures
- single or multimode
- CE compliant

APPLICATIONS

- Bypass or Redundancy Switch
- Fiber Optic Cross Connect
- Fiber Optic Test and Measurement

Contact:

Sercalo microtechnology ltd
Landstrasse 151, 9494 Schaan
Principality of Liechtenstein
Tel. +423 237 57 97 Fax. +423 237 57 48
<http://www.sercalo.com> e-mail: info@sercalo.com

DESCRIPTION

The switch instrument is built using sercalo's Telcordia qualified MEMS technology, which achieves superior reliability and repeatability when compared to traditional mechanical solutions.

The switch is fully bi-directional and transparent to the full wavelength range of the installed fiber.

When several input fibers are required, the switch architecture is non blocking. Any of the input ports can go to any of the free output ports.

When a duplex operation is required 2 switches are operated simultaneously and in parallel, ie. a first one for the "RX" signal and a second one for the "TX" signal.

TECHNICAL SPECIFICATIONS

	Unit	Min	Typ	Max
Switch				
Wavelength Range ¹	nm	1240		1650
Insertion Loss ²	dB		0.7	1.3
Return Loss ³	dB		55	50
Cross Talk	dB	50		
Polarisation Dependent Loss	dB		0.1	0.25
Repeatability ⁴	dB			0.001
Response Time ⁵	ms		5	
Fiber Pigtail	µm	SMF 28 or MM 50/125, 62/125		
Durability	cycles	no wear out		
Package				
Power Supply Voltage DC	V	24V or 48 V		
Power Supply Voltage AC	V	100-240 V		
Power Consumption	W	20 W		
Control interface		Ethernet		
Operation Temperature	°C	0		70
Storage Temperature	°C	-40		85
Size (W x H x L) (up to 2x16)	mm	484x45x280		
Size (W x H x L) (1x17 to 2x32)	mm	484x90x280		
Size (W x H x L) (4x32 to 32x36)	mm	484x135x280		

¹ for multimode 700 – 1700 nm

² including connectors, up to 1x4, more ports result in higher IL: Up to 16 ports: ILmax = 2 dB, Up to 48 ports: ILmax=3dB

³ value for single mode fiber (SMF) when using angle polished connectors; for MM fiber RL > 35 dB.

⁴ value for constant wavelength, temperature and polarisation

⁵ value for Single Mode, for multimode: 20 ms

ORDERING INFORMATION

Interface	Power Supply	Optical Ports Input x Output	Architecture	Fibre type	Connector location	Connector type
E = Ethernet U = USB R = RS232	D = DC 24 or 48V A = AC 100–240 V	1x 2 .. 1x48 8x8 32x32	- = simplex d = Duplex	9 = SMF28 50= MM 50 62= MM 62	B = back - = front	FC/PC or FC/APC SC/PC or SC/APC E2000/APC ST/PC LC/PC

sercalo