



## ***standalone optical switch solution***

### **OVERVIEW**

The **sercalo** *bs* series are all optical switch solutions for demanding applications in fiber optic instrumentation or communication. The table top instrument can switch up to 2 input fibers to any of up to 8 output fibers, independently of dataformat, wavelength or optical power. The switch is available either for 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.

The switch is controlled over an USB connection which also acts as power supply.

### **FEATURES**

- reliable
- low insertion loss
- superior repeatability
- single or multimode
- CE compliant

### **APPLICATIONS**

- Fiber Optic Telecom and Datacom
- Fiber optic Test and Measurement

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## 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 can be either blocking or non-blocking. In the blocking architecture when one input is set, the other inputs can only be set to a limited number of "free" ports. In the non-blocking architecture there is no such limitation. Any of the input ports can go to any of the free output ports. But the complexity of the non-blocking architecture is much higher.

## TECHNICAL SPECIFICATIONS

	Unit	Min	Typ	Max
<b>Switch</b>				
Wavelength Range <sup>1</sup>	nm	1240		1650
Insertion Loss <sup>2</sup>	dB		1.0	2.0
Return Loss <sup>3</sup>	dB		55	50
Cross Talk	dB	50		
Polarisation Dependent Loss	dB		0.1	0.25
Repeatability <sup>4</sup>	dB			0.001
Response Time <sup>5</sup>	ms		1	
Fiber Pigtail	µm	SMF or MM 50/125, 62/125		
Durability	cycles	no wear out		
<b>Package</b>				
Power Supply Voltage	V		USB	
Control interface			USB	
Operation Temperature	°C	0		70
Storage Temperature	°C	-40		85
Size (W x H x L) (up to 2x8)	mm	112x45x190		

<sup>1</sup> for multimode 700 – 1700 nm

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

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

<sup>4</sup> value for constant wavelength, temperature and polarisation

<sup>5</sup> value for Single Mode, for multimode: 20 ms

## ORDERING INFORMATION

