



## FIBER OPTIC MEMS SWITCH

### *Low Loss SLTS with position monitor*

#### OVERVIEW

The SLTS series are opto-mechanical latching switches for the most demanding applications in fiber optic communication networks. The switch is available in 1×1, 2×1 and 2×2 variants and offers solid state reliability, accurate precision, and fast response time. The switch mechanism has a very fast response time below 10 ms and below 0.9 dB insertion loss.

The small package withstands rugged environments and is well suited for direct mounting on printed circuit boards. The switch is qualified according to Telcordia GR 1221. The latching variant is available with an integrated state sensor which gives a read-out of the switch position for selftest and monitoring.

#### DESCRIPTION

The **sercalo** SL switches are powered by a 4.75 – 5.25 V voltage on the supply pin. To set the state of the switch TTL or CMOS logic levels are applied on the selector pins: When the logic level on bar selector pin 2 is set to high (5 V) for at least 20 ms, the switch toggles into the bar state. To set the cross state a HIGH pulse is applied on pin 3. At rest pin 1 to 4 should be set to a defined potential. A capacitive sensor allows to read out the switch position. The sensor's output is a pulled-up collector. The sensor output is LOW (0 V) in cross and HIGH (5 V) in bar state. Available as bare fiber (250 μm) and loose tube (900 μm) configuration.

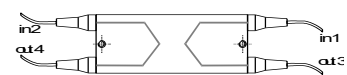
#### FEATURES

- reliable
- 10 ms speed
- latching
- capacitive state sensor
- 2×2, 2×1, 1×1 variants

#### APPLICATIONS

- Protection Switching
- Reconfiguration
- Test and Measurements

*Bar state (sensor = 5 V)*



*Cross state (sensor = 0 V)*

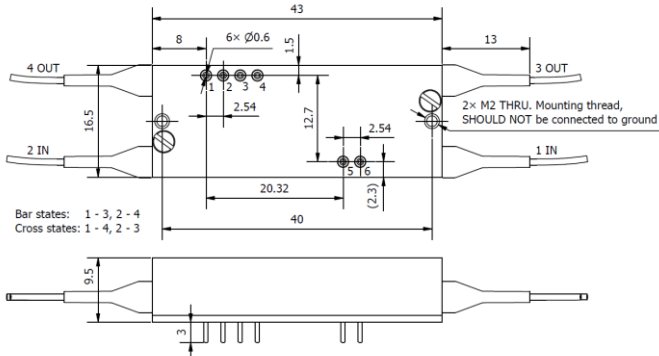


## TECHNICAL SPECIFICATIONS

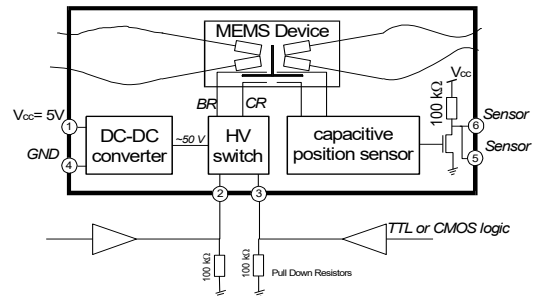
	Unit	Min	Typ	Max
<b>Optical Switch</b>				
Wavelength Range	nm	1240		1640
<b>Insertion Loss</b>	<b>dB</b>		<b>0.3</b>	<b>0.9<sup>1</sup></b>
Crosstalk	dB		75	60
Backreflection	dB		55	50
Polarisation Dependent Loss	dB		0.03	0.07
Repeatability <sup>2</sup>	dB			0.002
Switching Time	ms		0.5	1
Fiber Pigtail	µm		9/125/250	
Durability	cycles		no wear out	
<b>Integrated Driver</b>				
Supply Voltage $V_{cc}$	V	4.75	5	5.25
Current Consumption $I_{cc}$	mA		2	10
Current sink Sensor $I_{sensor}$	mA			10
Logic Level Low ( <i>BR and CR select</i> )	V			0.5
Logic Level High ( <i>BR and CR select</i> )	V	3.0		
Selection Pulse Width	ms	20		
Response Time SENSOR OUTPUT			15	30
<b>Package</b>				
Operation Temperature	°C	-5		70
Storage Temperature	°C	-40		85
Size (L x W x H)	mm		43 x 16.5 x 9.5	
<sup>1</sup> value excluding connector, measured at 0°C 25°C and 40°C.				
<sup>2</sup> value for constant temperature and polarisation				

### Pin Location and Outline (dimensions in mm)

- 1 5 V supply    2 Bar select    3 Cross select  
4 Ground 0 V    5 Sensor output    6 Sensor output



### Electrical Schematic Diagram



### ORDERING INFORMATION

SLTS-RI-2x2-9B

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