

Electro-mechanical switch, 2x4, single mode and multi mode

Features

- Wide choice of configurations
- Compact size
- Low crosstalk
- Latching and non-latching type
- RoHS compliance

Applications

- Optical communications
- Network monitoring
- Automatic optical testing
- Test equipment
- Research and development
- Signal routing



Description

Cubo's 2x4 Optical Switches are based on opto-mechanical technology with proven reliability. With the state-of-the-art technology, the performance is optimized for a wide range of fiber-optic applications.

The design is based on worldwide telecommunications, data communications, system monitoring and computer testing requirements.

Fully compliant with Telcordia GR-1073-CORE and compliant with applicable items of Telcordia GR-1221-CORE standard.

Technical Specifications

Electro-Optical Characteristics		
Parameter	single mode	multi mode
Wavelength Range (nm)	1260-1630	850 / 1300
Insertion Loss (dB), typ.	≤ 0.6	≤ 0.3
Insertion Loss (dB), max.	≤ 1.0	≤ 0.6
Return loss (dB), typ.	≤ -55	-
PDL (dB)	≤ 0.1	-
Cross-Talk (dB)	≤ -80	
Switching Time (ms), max.	≤ 4.0	≤ 4.0
Repeatability (dB)	± 0.05	

Mechanical & Environmental	
Parameter	2x4
Operating Temperature Range (°C)	- 5 - +70
Humidity (%RH)	5 - 85
Durability (cycles)	> 3.10 ⁷
Fiber cabling	Check the order code
Dimensions (HxWxL mm)	7.6x11x22.6
Weight (g)	10

1. All Specifications referenced without connectors
2. Measured at 1550 nm
3. Add 0.2 dB for Insertion loss in 1310/1550 nm dual wavelength

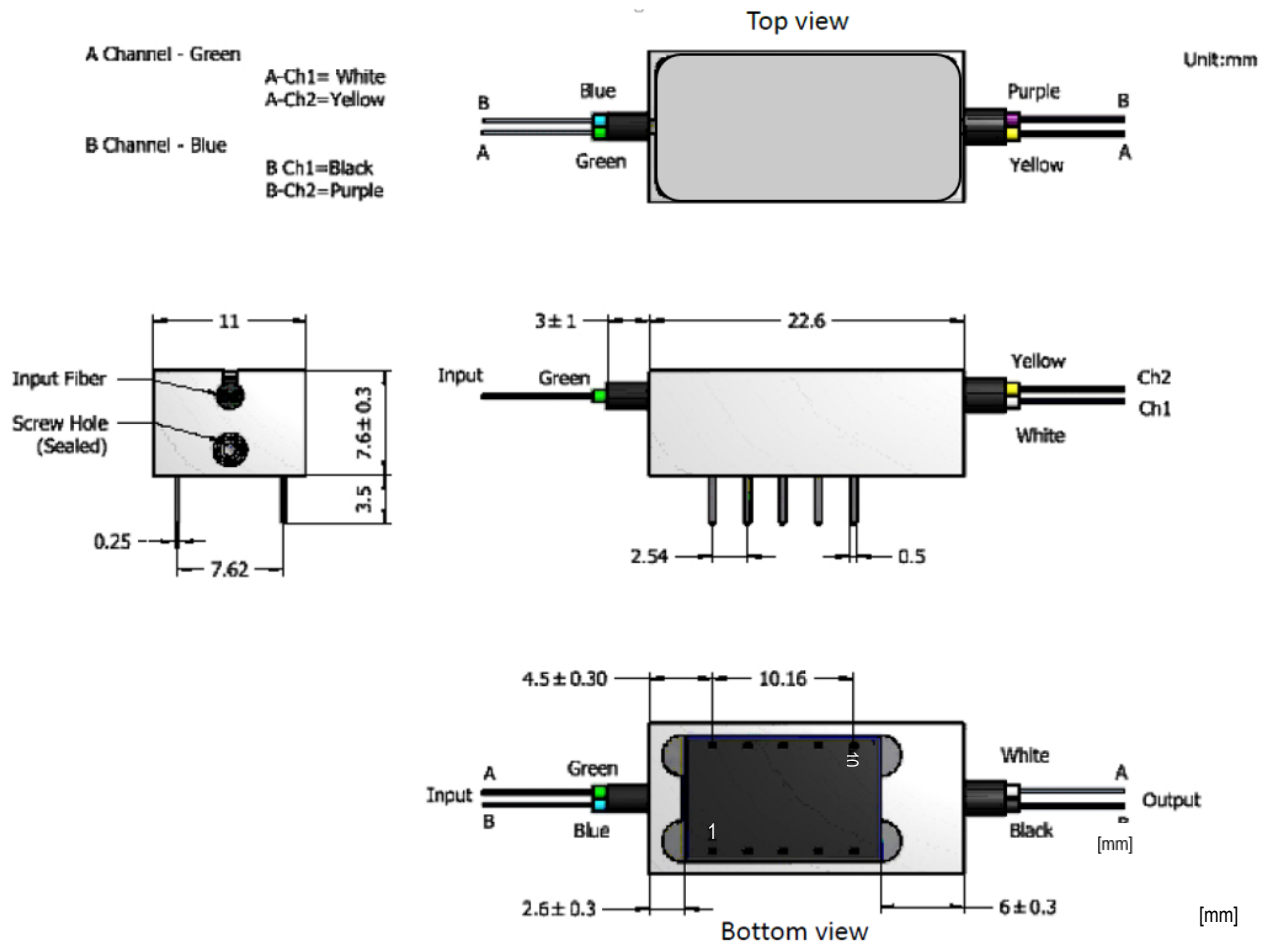
SWITCH Cubes

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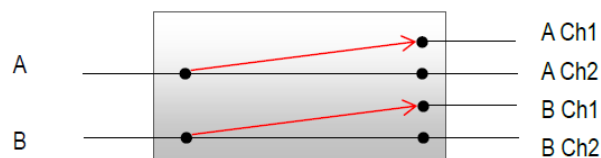
Electrical Characteristics	
Parameter	2x4
Coil Resistance (Ω)	125 ($\pm 10\%$)
Operating Current (mA), typ	Latching $40 \pm 10\%$, non-latching $28 \pm 10\%$
Operating Voltage (V), typ.	5.0
Operating Voltage (V), range	4.5 - 5.5
Power-Consumption (mW), typ	Latching $200 \pm 10\%$, non-latching $140 \pm 10\%$

* When + 5V DC signal is applied to only coil

Outline Drawing



Functional diagram



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PIN Description

PIN Number	Latching PIN Function	Non-Latching PIN Function
1	Dual Ch 1 activation terminal (+)	N/C
2	Dual Ch 2 Monitor	Dual Ch 2 Monitor
3	Monitor Common	Monitor Common
4	Dual Ch 1 Monitor	Dual Ch 1 Monitor
5	Dual Ch 1 activation terminal (-)	Dual Ch 2 activation terminal (+)
6	Dual Ch 2 activation terminal (-)	Dual Ch 2 activation terminal (-)
7	Dual Ch 1 Monitor	Dual Ch 1 Monitor
8	Monitor Common	Monitor Common
9	Dual Ch 2 Monitor	Dual Ch 2 Monitor
10	Dual Ch 2 activation terminal (+)	N/C

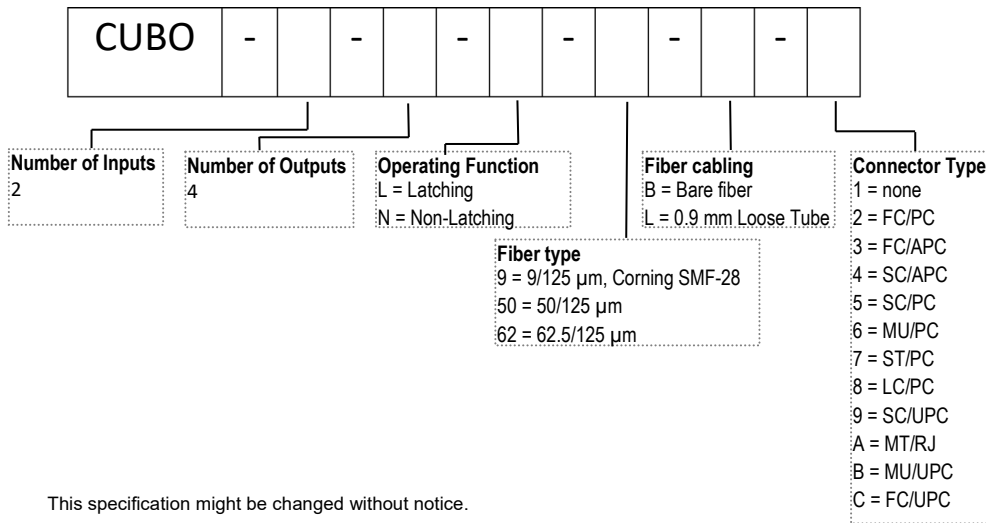
Operation of the Optical Switch

Relay type	PIN					PIN connection	Remark
	OSW State	1	5	6	10		
Latching Type	A Ch 1	H	L	-	-	3,4 pin closed; 2,3 pin open 7,8 pin closed; 8,9 pin open	
	B Ch 1	H	L	-	-	3,4 pin closed; 2,3 pin open 7,8 pin closed; 8,9 pin open	
	A Ch 2	-	-	L	H	2,3 pin closed; 3,4 pin open 8,9 pin closed; 7,8 pin open	
	B Ch 2	-	-	L	H	2,3 pin closed; 3,4 pin open 8,9 pin closed; 7,8 pin open	
Non-latching type	A Ch 1	-	-	-	-	3,4 pin closed; 2,3 pin open 7,8 pin closed; 8,9 pin open	Default
	B Ch 1	-	-	-	-	3,4 pin closed; 2,3 pin open 7,8 pin closed; 8,9 pin open	Default
	A Ch 2	-	H	L	-	2,3 pin closed; 3,4 pin open 8,9 pin closed; 7,8 pin open	
	B Ch 2	-	H	L	-	2,3 pin closed; 3,4 pin open 8,9 pin closed; 7,8 pin open	

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Ordering Information



This specification might be changed without notice.

HUBER+SUHNER Cube Optics AG
is certified according to ISO 9001.

WAIVER

It is exclusively in written agreements that we provide our customers with warrants and representations as to the technical specifications and/or the fitness for any particular purpose. The facts and figures contained herein are carefully compiled to the best of our knowledge, but they are intended for general informational purposes only.

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