Optical Node Series (NC)
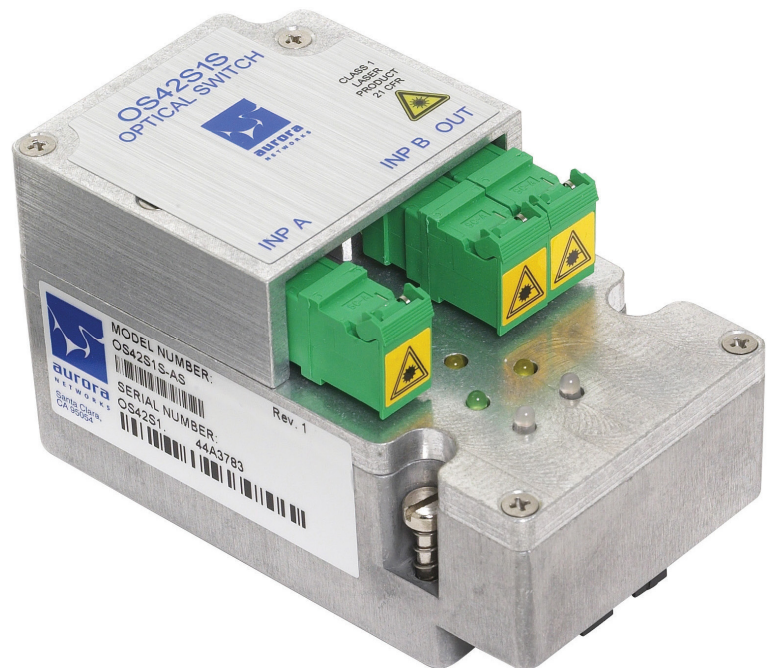## OS42S1S-AS
Optical Switch

COMMSCOPE®

FEATURES

- Non-latching 2x1 optical switch
- Fast switching speed (< 5 ms typical)
- User-settable switching thresholds for analog and digital transport applications
- Low insertion loss
- 1263.5–1357.5 nm and 1423.5-1617.5 nm operating wavelength window
- Remote status monitoring and control
- Hot plug-in/out
- Single Compact plug-in module for NC4000™, NC2000, and VHub platforms

The CommScope OS42S1S is a robust, non-latching 2x1 optical switch that allows rapid and economic deployment of optical switching anywhere in the network without the expense of a facility or OTN cabinet. It allows signals to be fed over diverse routes, providing a highly reliable network infrastructure, and offers fast switching times and low insertion loss.

The OS42S1S switch has a guaranteed switching time of less than 10 milliseconds (and typically less than 5 milliseconds) and will only switch to the secondary fiber route when the primary route optical input power is below the threshold level and optical power on the alternate route is above the threshold level. The switch can operate either with factory-set default threshold levels or with user-settable thresholds for each input (or can be forced to operate with the input from either its A or B input). The wide dynamic threshold adjustment range supports any combination of both analog and digital transmission applications including telephony traffic.

The OS42S1S can operate over a temperature range from -40 to +85°C and can be fully monitored and remotely controlled.

SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	4.0" L x 2.2" H x 2.3" W (10.2 cm x 5.6 cm x 5.8 cm)
Weight	0.6 lbs (0.3 kg)
Environmental	
Operating Temperature Range	-40° to +85°C (-40° to 185°F)
Storage Temperature Range	-40° to +85°C (-40° to 185°F)
Humidity	5% to 95% non-condensing
General	
	Hot plug-in/out
Switch Configuration	2x1
Switch Type	Non-latching
Switching Speed	< 5 ms typical, 10 ms max
Modes of Operation	Fixed Threshold, Settable Threshold
Optical Interface	
Optical Connectors	SC/APC
Power Requirements	
Input Voltage	24 V_{DC}
Power Consumption	1.6 W
Optical	
Wavelength Range	1263.5–1357.5 nm 1423.5-1617.5 nm passband
Input Power	25 dBm max
Insertion Loss	1.2 dB typical, 1.6 dB max
Isolation	70 dB typical, 60 dB min
Return Loss	55 dB typical, 45 dB min
Directivity of Tap-Photodiode	25 dB min
Status Indicator LEDs	
	INP STAT (input status indicators, two separate indicators for Inputs A and B); lighted green when OK, red for alarm condition, off when operating in OVERRIDE (forced) mode
	OUT POS (two switch position LED indicators), "A" LED lighted green when operating from Input A, "B" LED lighted yellow when operating from Input B
	OVERRIDE = Lighted yellow when switch forced to operate from Input A or B (user-settable)
Remote Monitoring/Control Parameters	
	Optical input power levels A and B (operational range -24 to +24 dBm), switch status, operational mode, threshold levels (when operating in Settable Threshold mode, -20 to +20 dBm in 1 dB steps)

ORDERING INFORMATION

Model Name	Description
OS42S1S-AS	Optical Switch, dual wavelength, for NC4000 and NC2000 Series Virtual Hubs and Nodes in a single slot module and uses SC/APC connectors.

RELATED PRODUCTS

NC4000	Optical Patch Cords
NC2000	Optical Passives
VHub	Installation Services

Contact Customer Care for product information and sales:
- United States: 866-36-ARRIS
- International: +1-678-473-5656

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