Headend Optics Platform

AB02S1S
A/B Alternate Routing Switch (5-250 MHz)

ARRIS

FEATURES

- Electronic switching between two RF inputs for reliable output
- 5-250 MHz pass band
- Fast switching speed (< 10 ms typical)
- Powered by DC voltage levels on RF inputs
- Supports multiple configurations of redundant RF receivers
- Small form factor requiring no rack space
- Low insertion loss
- LED indicators for DC power presence and selected switch position
- Optional 2RU mounting frame (for up to 16 AB02S1S return path switches)

PRODUCT OVERVIEW

The AB02S1S-0-00 Alternate Routing Switch is an external A/B switch designed to select an RF signal from one of its two inputs and deliver that signal to its output. With a 5-250 MHz pass band, the switch provides economic and reliable support for implementing optical return path redundancy between various portions of the network where indoor receivers are deployed.

Route selection is based on DC voltages from the analog receivers, and the switch position is determined by the presence or absence of voltages at the inputs of the switch.

The AB02S1S is designed to operate with all ARRIS products that have external A/B switch drive logic such as the AR3001 Analog Dual Return Receiver, DR3002 Dual Digital Receiver or DR3021 Dual Return Channel Digital Receiver.
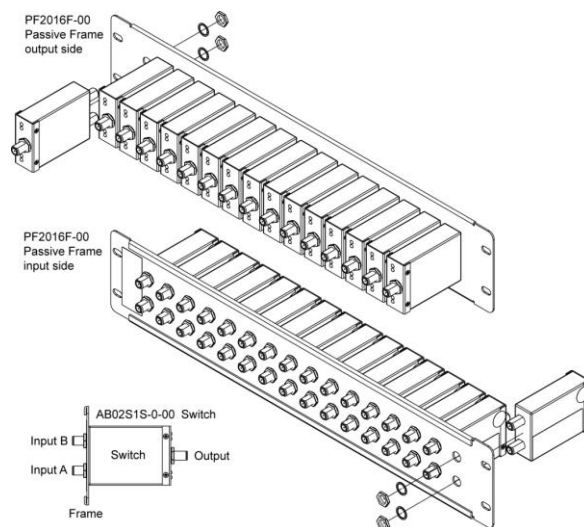
An optional 2RU high mounting frame (model PF2016F) is available for attachment to a standard 19" EIA rack that can hold up to 16 AB02S1S switches.
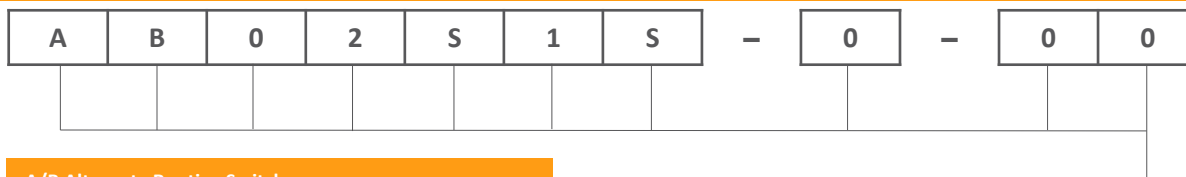
SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions (without connectors)	• 2.9" L x 2.1" W x 1.0" H (7.4 cm x 5.3 cm x 2.5 cm) • L = 4.1" (10.4 cm) with connectors
Weight	0.3 lbs (0.1 kg)
Environmental	
Operating Temperature Range	−20° to +65°C (−4° to 149°F)
Storage Temperature Range	-40°C to +85°C (-40°F to +185°F)
Humidity	5% to 95% non-condensing
RF Interface	
2 RF inputs	F-type (female connectors at A and B inputs)
RF output	F-type (female connector at front panel)
Power Requirements	
Input voltage (from chassis mid-plane)	10 V_{DC} via A and B RF inputs
Current consumption	• A position: < 20 mA • B position: 80 ± 20 mA
Electrical	
Pass band	5–250 MHz
Frequency response	± 0.5 dB (excluding slope)
Nominal slope, 250 / 5 MHz	0.2 dB
Insertion loss	0.1 ± 0.05 dB (at 65 MHz)
Insertion loss at 250 MHz	0.3 dB maximum
Return loss	20 dB minimum
Port isolation	> 75 dB
Shielding effectiveness	120 dB
Switching time	< 20 ms
Front Panel LED Indicators	
STATUS A	Illuminated green when primary receiver OK
STATUS B	Illuminated green when backup receiver OK
A ON	Illuminated green when switch in A position
B ON	Illuminated yellow when switch in B position

Switch Position Table and LED Indicator Status

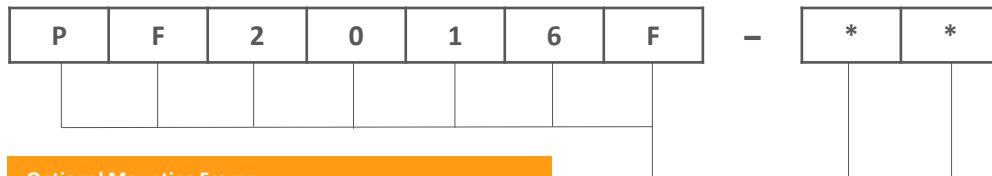| (for specified DC voltage levels on center pins of A and B inputs)	A Input	B Input		Active Switch Position	LED Indicator			
					Status A	Status B	A On	B ON
	10V	10V	(A OK, B OK)	A	on	on	on	off
	10V	0V	(A OK, B fail)	A	on	off	on	off
	0V	10V	(A fail, B OK)	B	off	on	off	on
	0V	0V	(A fail, B fail)	A	off	off	off	off

Optional Mounting Frame

The PF2016F is a 2RU mechanical frame designed for standard 19" EIA rack mounting that can hold up to 16 AB02S1S return path switches.

PF2016F-00 Passive Frame output side

PF2016F-00 Passive Frame input side

AB02S1S-0-00 Switch

Input B

Input A

Switch

Output

Frame

ORDERING INFORMATION

A	B	0	2	S	1	S	–	0	–	0	0

A/B Alternate Routing Switch

P	F	2	0	1	6	F	–	*	*

Optional Mounting Frame

** = 00 (AB02S1S return path switches not included)
   = 16 (16 AB02S1S return path switches pre-installed)

RELATED PRODUCTS

Optical Transmitters	Optical Passives
Digital Return	Optical Patch Cords
BP Back plates	Installation Services

Note: Specifications are subject to change without notice.

Customer Care

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

03/2016   ECO9660

Fiber-Deep   **DOCSIS® 3.1**   **Node Segmentation**   **HPON™/RFoG**   **FTTx**