

BNC Coaxial Switches for IF Applications (cont.)

Selection Guide

Control Voltage is specified by a single digit:

0	5V d.c. common positive
1	12V d.c common positive
2	24V d.c common positive

IF Amplifier Blocks

- 50-300MHz
- 50Ω and 75Ω options
- 24V d.c. power
- Fault monitoring
- Various gain options
- BNC Connectors



DrawCom can offer a range of IF amplifier blocks in both 50Ω and 75Ω configurations, with a variety of gain options. Each amplifier includes fault monitoring (based on power supply current), with two relay contact outputs.

The amplifiers can be supplied ready built into a rack-mount unit, including power supplies, optional redundancy controller and optional input or output splitter/combiner.

These configurations are described in the DDA226 data sheet.

The amplifiers require a nominal 24V d.c. power supply with a wide tolerance range, and are fitted in screened aluminium cases.

Mounting uses the BNC connector fixings.

The power and fault output connector may be mounted either on the same face as the BNC connectors, or on the opposite face. This is an order option.

Selection Guide

DDS0303-cg	75Ω amplifier block
DDS0304-cg	50Ω amplifier block

c - power/alarm connector position:

- 0 - same face as BNC connectors
- 1 - opposite face to BNC connectors

g - amplifier gain as per specification table

Note: The DDS0303 replaces the DDS0113, and the DDS0304 replaces the DDS0115. Connector positions are different; other specifications are unchanged.

IF Amplifier Blocks (cont.)

Specification			
Configuration:		DDS0304-XX	DDS0303-XX
Impedance		50	75
Connectors		BNC	BNC
Supply Voltage		20 – 28V d.c. 100mA max	
Gain options (minimum) Typical gain 2dB higher	-X1	+12.0dB	+10.0dB
	-X2	+14.0dB	+12.0dB
	-X3	+16.0dB	+14.0dB
	-X4	+18.0dB	+16.0dB
	-X5		
Output power (1dB compression)	-X4	+8dBm	+6dBm
	others	+10dBm	+8dBm
Max input power (no damage)		+10dBm	+10dBm
Input Return Loss (typical for -X1)	0-200MHz	>13dB	>20dB
	0-300MHz	>10dB	>15dB
Size (excluding connectors)	mm	92 (W) X 86 (D) X 27.5 (H)	
Fixings		By nuts on BNC connectors	
Control Connector		9-way D-plug	9-way D-plug
Fault output		2 x Form C relay contact rated 30V d.c. 0.1A – indicate amplifier power supply current outside limits	

Waveguide Switch Buffers

- Control of non-standard Waveguide Switch
- Interface to “common positive” coils
- Isolation of supplies
- Support for different supply voltages
- Compatible with DDA70 and other controllers
- Booster/isolator for low power drive circuits

The DDS0506 and DDS0509 provide a simple interface between the DDA70 (and similar waveguide switch controllers) and waveguide switches which require a drive with a common positive. They also allow use of alternative drive voltages and power supplies.

Each buffer comprises a strip of circuit board carrying five identical circuits. This can be plugged directly onto the outputs of a DDA70 to convert the interface, or wired appropriately. The strip may be cut into individual buffers if required.

Waveguide Switch Buffers (cont.)

The drive circuit on both buffers is electrically isolated from the output, giving the capability to solve ground loop, isolation and supply voltage issues.

On the DDS0509 the tellback and lock signals are simple through links (isolated from each other and both sides of the drive circuit), which is sufficient for many applications.

The DDS0509 implements electrical isolation on the tellback and lock signals.

These buffers are directly compatible with the range of waveguide switch controllers produced by DrawCom, including the DDA70, DDA86, DDA219 and DDA224, including connector types and pinouts. They can be used with virtually any industry-standard switch having common positive coil drive and at least one set of tellbacks. Switch lock status inputs are also available.

Specification

Physical:	Strip of five identical circuits on unprotected PCB 67.5 x 173mm.
Power:	24-28V d.c. (Other voltages on request). Current consumption <100mA quiescent. Up to 3A peak when switching, dependent on waveguide switch being controlled. May be derived from a low-current supply and large reservoir capacitor (typically >47,000µF).
Connectors:	Power - 2-way pluggable terminal block Control - 9-pin D-plug (direct connection to WGS connector on DDA70 etc) Waveguide Switch - 9-pin D-socket (compatible with DDA70 WGS connector)
Control:	Switched +24V pulse for each direction of switch - controls output buffer. Control inputs also provide power to switch if capacity available. DDS0506 - tellback and lock inputs have electrically isolated interface. DDS0509 - tellback inputs, lock inputs individually wired through from WGS connector to control connector.

Selection Guide

DDS0506-01	Strip of five buffers with electrical isolation on drive circuit, lock circuits and tellbacks.
DDS0509-01	Strip of five buffers with electrical isolation on drive circuit. Lock and tellback connections taken straight through.