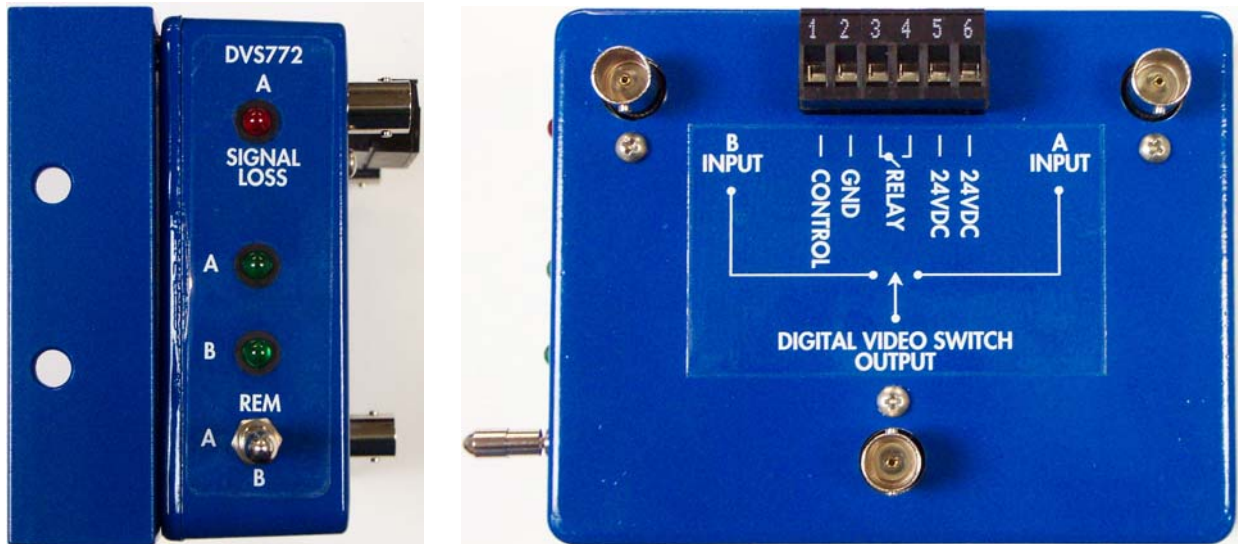


# DVS772



## DIGITAL VIDEO A/B SWITCH

INSTALLATION MANUAL

IB637201

## **DESCRIPTION**

The **DVS772 DIGITAL VIDEO SWITCH** is a high isolation high frequency relay used to switch digital signals such as SMPTE 310 and more. The switch has two inputs and one output in an A/B configuration. The switching function is controlled by an external switch contact, RS232, or TTL type signal. It also has the ability to sense signal loss on the A channel and automatically switch to the B channel. This feature is used when automatic transfer to an alternate channel is desired. There are no active elements in the data path to degrade the signal, and if a power failure occurs the data from the A channel will not be interrupted.

The unit comes equipped with a front panel selector switch. The operator can select the data switch to Channel A, Channel B, or Remote operation. When the front panel switch is in the Remote operation position, the unit is controlled by an external input signal or by signal loss on the A Channel if selected. There is a "C" form relay output to report the position of the A/B switch for remote telemetry.

The unit has BNC female connectors for the data inputs and output and a removable screw terminal connector for the power and control signals. The switch is housed in a sturdy aluminum die cast box which is completely RF shielded. The box can be mounted in the front or rear of your rack with the standard side mounting bracket.

The unit can be used to engage a hot standby digital source or to put up a test pattern when main data fails. This system will maintain your video data integrity and reduce trouble calls. It can also be used where unattended video switching must occur.

## **FEATURES**

Features of the DVS772 include a front panel three position command switch which is used to manually force either the primary (A) data channel, secondary (B) data channel, or (REM) remote external and automatic data switching.

The unit has front panel LEDs that indicate the status of the data switch. A Green LED indicates the switch is in the (A) channel position, another Green LED indicates when the switch is in the (B) channel position. There is also a Red LED indicator to monitor the data on the (A) channel. If the data signal ceases on the (A) channel the Red LED will go on indicating a failure of the primary (A) channel.

Standard BNC female connectors are used for the data inputs and the common output, and a plug-in style removable screw terminal connector is used for the power and status output relay contacts. This removable screw terminal plug can be pre-wired to reduce your installation time.

This switcher is housed in a sturdy aluminum die cast box which is completely RF shielded. The box can be mounted in the front or rear of your rack with the standard mounting bracket. An optional 19" mounting bracket is available. The ordering part number is PMS700-5A. It holds 5 units and has a common wall mount power supply to power all 5 units. When using the PMS700-5A you must use right angle BNC adaptors to make the abrupt turn to the rear of the unit for cables to route without kinking.

## **SET-UP AND INSTALLATION**

Remove the equipment from the packing materials. The following materials should be supplied with each order.

- QTY 1        DVS772 (Blue Box).
- QTY 1        Power Cube +24 VDC.
- QTY 1        6 Position screw terminal Connector (attached).
- QTY 1        Rack Mount Angle Bracket (attached) or PMS7005A.

Locate a convenient place in your rack and mount the unit using the handy Rack Mount Angle Bracket. Next attach the Primary data signal to the input BNC connector labeled (A INPUT). Then attach the Secondary data signal to the BNC connector labeled (B INPUT). The BNC connector labeled (DIGITAL VIDEO SWITCH OUTPUT) is the output of the data switch. The data that is selected either manually or automatically will appear at this connector. **The OUTPUT DATA MUST HAVE A 75 OHM TERMINATION AT THE END OF THE CABLE.** Without proper termination switch chatter can occur during automatic data loss switching, due to a change in level when switching to a non-terminated input. Be sure to terminate the output of this data switch.

The 6 position snap in screw terminal connector is numbered from left to right, 1 to 6. The following is a table of the connection inputs and outputs used on this connector. The data switch and telemetry output is accomplished by internal relay switching. In the event of power loss the data is switched to the Primary data channel.

1.        "CONTROL" Attach contact switch, RS232 +, or TTL +.
2.        "GND"    Attach contact switch, RS232 -, or TTL -.
  
3.        "RELAY" Telemetry C form relay output 1.
4.        "RELAY" Telemetry C form relay output 2.
  
5.        24 VDC power input + or -, either polarity.
6.        24 VDC power input - or +, opposite polarity.

### **CONNECTOR BLOCK DIAGRAM**

1 2 3 4 5 6

## **OPERATION**

With data present on the Primary channel (A) the red DATA LOSS LED will be off on the front of the unit. This indicates that data is present at the Primary (A) input.

On the front panel there is a Three Position **LOCKING SWITCH**, to move this switch it is necessary to **PULL OUT THE HANDLE OF THE SWITCH** before trying to change its position. **DO NOT FORCE THE SWITCH**. There are three command modes for the switch. The first is marked (A), this will cause the DVS772 to manually force the data switch to the A input source.

The second is marked (B), this position will cause a manual switch to the B input. The third position is (REM) which stands for REMOTE CONTROL. This position will allow a control signal on the 6 position screw terminal to operate the switch. This signal can be a remote switch contact, RS232, or TTL signal from other equipment.

Inside the unit there are jumper settings that allow the user to program the operating characteristics of the device. Jumper jacks are used to select the mode of operation. To select a feature simply connect the jumper jack so that it connects the two gold pins on the feature you want to select.

SW2 selects the operating characteristic of the input signal connected to terminals 1 and 2 of the 6 position screw terminal. If SW2 is selected on "NOR" the unit will switch to input B when a contact is closed or a + voltage is applied to terminal 1 of the 6 position screw terminal.

If SW2 is selected to the "INV" position then the input control is inverted and the unit will switch to the B channel input when a switch is open or a - appears at the terminal 1 of the 6 position screw terminal.

If SW2 is selected to the "TOG" position then the input control will toggle between A and B each time there is a change in the state of terminal 1 of the 6 position screw terminal. Example: if a switch was connected to control the relay, each time you closed the switch the relay would switch from one input to the other and back again when the switch was closed again.

The SW3 jumper pins select the automatic data loss switching function. When a jumper is placed onto both pins of the SW3 selector the unit will automatically switch from the A channel to the B channel if data is no longer at the A input connector. It will return automatically if the data re-appears on the A connector.

The SW5 jumper pins select the C form telemetry relay output. When the jumper is selected in the "NO" position the output contacts will be open when the data is switched to the A channel. If you select the "NC" position then the output contacts will be closed when the data is switched to the A channel. This selector lets you set the output relay telemetry contacts to interface with any other equipment.

## **MAINTENANCE**

There are no adjustments or calibration required with the DVS772.

**DATA**

Standard

Level

Input Impedance

Frequency Response

Cross-Talk (50MHz)

Signal to Noise Ratio

Front Panel Control

Front Panel Indicators

**SPECIFICATION**

SMPTE 310 or (all Standards)

0.0 to 20Vpp

75 Ohm (non-select input)  
Loop-through (select input)

DC to 100 MHz

 $\leq 70$  dB $\leq 90$  dB

Three Position (A, B, and Remote)

Three LED (A, B, A signal loss)

**MECHANICAL**

Power requirement

Current requirement

Connectors (Data)

Connectors (Power and Control)

Enclosure

Mounting

24 VDC Power Cube (included)

110 mA

BNC (Female)

Plug-in Screw Terminal (6 position)

3.5 x 4.5 x 1.5 Die Cast Aluminum

Side Rack Mounting Bracket