Symmetricom

DATA SHEET

9611B

Switch & Distribution Unit

Key Features

- Automatic selection of redundant inputs
- 12 Outputs
- Flexible signal configuration
- RS-232 control port
- High channel isolation

Key Benefits

- Distributes multiple signal types
  - 100 Hz – 10 MHz
  - Any IRIG timecode
  - 1 PPS – 10 MPPS
- Comprehensive alarm reporting
- CE/UL compliant

OVERVIEW

The 9611B Switch & Distribution Unit is an intelligent switching, monitoring and distribution system, packaged in a 1U, rack-mount chassis.

The 9611B can be set up to distribute a wide range of signal formats; low noise sine waves, IRIG timecodes or pulse formats from either one of two inputs to all twelve outputs. The 9611B allows the user to deploy one model type to support multiple signaling formats which lowers support and logistics costs.

The 9611B provides for both manual and autoswitching. When in autoswitching mode, the 9611B will detect any input or output failure based on the signal type being propagated. In the Auto mode, any primary source input failure causes the unit to switch from primary to secondary source. Alarms will be indicated by all user interfaces including the front panel and Command Line Interface.

User Interfaces

The 9611B is controlled via two user interfaces. Front panel controls and indicators and a command line interface (CLI) over a RS 232 Serial port connection.

Front Panel Controls and Indicators

The 9611B processes two signal inputs (A and B). Either input may be designated primary and the other as secondary. In the auto mode, the unit will automatically switch from primary to secondary in the event that the primary input fails. There are three push buttons (input A, Auto, and input B) that allow the input mode to be selected. Pressing input A or input B will force the selected input to be sent to all channels to use the selected input. Pressing Auto will activate the automatic switchover mode. The twelve LED's numbered one through twelve are either green to indicate that the channel signal is present and active, or red to indicate that the channel signal has failed.

When any alarm (A, B or 1-12) is set, the alarm indicator turns from green (normal) to red (alarm). Once the failure is remedied, the alarm can be deactivated by pressing the alarm pushbutton, or issuing a command over the CLI. If the alarm is cleared, all alarm indicators, return to the normal green color.

Command Line Interface

The 9611B instrument has a serial port interface. Communication between the instrument is achieved by running a communications program on a PC, and connecting the RS 232 serial ports of the PC and 9611B via a serial cable.

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Specifications

INPUTS (2)

- RF
  - Frequency: 100 Hz - 10 MHz
  - Level: 1 V rms (15 dBm max)
  - Impedance: 50 Ω or 1 kΩ
  - Isolation A to B: >85 dB
- Pulse/DC IRIG time code
  - Frequency: 1 PPS to 10 MPPS
  - Level: 0 - 6 V p-p
  - Duty Cycle: 0 to 100%
  - Impedance: 50 Ω or 1 kΩ
- AM IRIG timecode
  - Frequency: 1 PPS to 10 MPPS
  - Level: 0 - 6 V p-p
  - Modulation Frequency: Up to 1 MHz
  - Code Format: Any IRIG Format, IEEE 1344,NASA 36, 2137, XR3
  - Impedance: 50 Ω or 1 kΩ

OUTPUTS (12)

- RF
  - Frequency: 100 Hz to 10 MHz
  - Level: 1 V rms (15 dBm max)
  - Gain: 0 dB, Jumper selectable -3 dB, +1.5 dB, + 2.5 dB
  - Harmonic: <-40 dBc
  - Non-Harmonic: <-80 dBc
  - Load Impedance: 50 Ω
  - Isolation: >80 dB
- Additive Phase Noise: Measured at 10 MHz, +10 dBm input level
  - 1Hz: -125 dBc/Hz
  - 10Hz: -135 dBc/Hz
  - 100Hz: -135 dBc/Hz
  - 1kHz: -145 dBc/Hz
  - 10kHz: -155 dBc/Hz
- Pulse/DC IRIG
  - Frequency: 1 PPS - 10 MPPS
  - Level: 5 V peak
  - Rise Time: <20 ns
  - Fall Time: < 20 ns
  - Jitter: <200 ps rms
  - Skew: <+/-2 ns output to output
  - Load impedance: 50 Ω
- AM IRIG Timecode
  - Frequency: 1 PPS to 10 MPPS
  - Level: 0 - 6 V p-p
  - Modulation Frequency: Up to 1 MHz
  - Code Format: Any IRIG Format, IEEE 1344,NASA 36, 2137, XR3
  - Load Impedance: 50 Ω
- Alarm Input
  - Normal State: 2.2 to 5.0 V (TTL High) Configured via CLI. Can be High or Low
  - Alarm State: <0.8 V (TTL Low)
  - Connectors: BNC
  - Qty: 2 (1 for A input & 1 for B input)
  - Enable/Disable: Confgiured via CLI. Default is disabled

Status

- Senses signal presence on all inputs and outputs
- Green/Red LEDs on front panel
- Relay contact close on rear panel
- RS-232 interface for monitor and control

Environmental & Physical Specifications

- Operating Temperature: 0 C to +50 C
- Storage Temperature: -40 C to +70 C
- Humidity
  - Operating: 10% to 90% non-condensing
  - Non-operating: 5% to 95%
- Altitude
  - Operating: 0 to 5,000 feet

Power Requirements

100 - 240 VAC, 20 W, 50 - 60 Hz

Dimensions

- Height: 1.725"
- Width: 16.98"
- Depth: 15.00"
- Weight: 7 lbs

Standards

- CE
  - Emissions: EN 55022
  - Immunity: EN 55024
  - Safety: EN 60950-1
- UL: UL 60950-1
- FCC: Part 15 Subpart B

9611B Back View

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