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10. Model 10829B-96 Remote Controller

The 10829B-96 is a pushbutton controller that can be utilized to control a Universal Switching product from up to 1000 feet away. The unit is only 2RU high (3.50") and provides a total of 96 LED illuminated pushbuttons. Control between the units is accomplished via a high-speed serial link referred to as the US-Link, which utilizes a simple twisted pair and a ground.

10.1. Illuminated Pushbuttons

The pushbuttons on the 10829B-96 are LED illuminated, and provide a life of up to 5 million operations per button.

10.1.1.Button Functions

The buttons are arranged in a 4x24 array (4 high by 24 wide). The upper twenty-four are labeled 01 to 24, from left to right. The next lower row of buttons are labeled 25 to 48, then 49 to 72, and finally 73 to 96, on the bottom row. The button in the lower right corner (#96) is different from the rest. The #96 button has a yellow cap and a yellow LED. All the other buttons have a clear cap, with a green LED behind the cap.

When the 10829B-96 is used as part of the System 11457A-101-2, the buttons correspond to the input number desired. Buttons 01 to 95 select the associated input number on the switching system. The 96th button (with the yellow cap) is utilized as a clear or OFF condition operation, disconnecting all inputs.

10.1.2.Button Cap Labeling

The 10829B-96 is delivered from the factory without pre-set designators so the user can custom label them as desired. These button caps can be removed by snapping them from the panel. Once removed these caps can be disassembled, providing an area for a custom label.

> ***NOTE: Universal Switching can provide custom labeling for these caps upon request.***

10.2. Rear Panel Features

The rear panel of the 10829B-96 has an AC receptacle for power connection, an AC power switch, two US-Link connectors and a configuration switch.

10.2.1.AC Power Connection

On the rear of the 10829B-96 is the AC power input. It is labeled AC-1, and is located on the left-hand side as viewed from the rear. It is a standard IEC-320 that readily accommodates either North American or International power cord sets. Only the North American 15A type 6-foot power cord is supplied with the unit. The AC receptacle also incorporates an integral AC line filter.

10.2.2.Power Switch

The power switch for the unit is located adjacent to the AC power input (AC-1). It is a standard rocker type switch labeled 1 and 0, where 1 = ON and 0 = OFF.

10.2.3.US-Link Connection (J6A, J6B)

Control passes to and from the 10829B-96 via the two RJ-45 type connectors located on the rear of the unit, known as the US-Link connection. The US-Link is a Universal Switching high-speed serial interface standard developed to control various products in a remote fashion.

The US-Link needs to be terminated at the last device in the link. A termination plug is provided with the unit in the event that the unit is the last unit in the link. This plug must be installed for proper control operation.

10.2.4.Configuration Switch-Bank

A "piano" style DIP switch is visible on the rear of the 10829B-96 unit. The use of this switch is application specific. When the 10829B-96 is used in conjunction with the System 11457A-101-2, the following functions apply to the switch bank.

Switch Designation	Function - @ UP POSITION
Address 32	Device address switch, value = 32
Address 16	Device address switch, value = 16
Address 8	Device address switch, value = 8
Address 4	Device address switch, value = 4
Address 2	Device address switch, value = 2
Address 1	Device address switch, value = 1
SW2	No Function
SW1	In the factory pre-set position (down), the user must press the "clear" button (#96 - Yellow) to clear an input selection before selecting a new input for the output. If the switch is up, the user may clear an input by merely pressing the input selection again. Also, in the up position, if the system is set to the AUTOINTERLOCK: YES position, the user may select another input prior to disconnecting the previous input selection. The system automatically disconnects the previous one, in a "break-before-make" mode.

11. System 11457A-101-2 Specifications

• Configuration	101inputs by 1 output (using 6x1 elements)
• System Type	Nx1 Scanner
• Switching element technology	Coaxial relays
• Signal path type	Analog bi-directional
• Frequency range	DC-18GHz
• Transmission loss	<1/2dB @ 18Ghz per relay section plus supplied cabling (max of 3 any path)
• Crosstalk (channel/channel)	>60dB @ 18GHz
• Impedance	50 ohms
• I/O Signal connectors	Female SMA (stainless steel)
• Configuration cables	High performance semi-flex
• Command to action	<100mS
• Signal connector locations	Rear panel
• Module technology	Hot-swappable
• AC power (total)	90-264VAC, 47-440Hz, <230 Watts
• Power supply configuration	Redundant "smart" hot-swappable (monitored) with dual AC inputs
• Power cord	NEMA 15A (USA), 6 foot long (two)
• Remote control interface	IEEE-488 (GPIB) or RS-485/RS-232C/RS-422A
• Local control interface	Front panel VFD / LED illuminated keypad
• Contact Ratings	100 mOhms (initial) 40W Max@18GHz
• Relay life (per port)	Mechanical: >1,000,000 operations Electrical: >1,000,000 operations
• **US-Link** control	Firmware support included for one 96 position control panel assembly (Model 10829B-096)
• Firmware	Field upgradeable FLASH
• Configuration memory	200 complete configurations
• Memory retention	>10 years (lithium backed RAM)
• Operation temp range	0 to +60C
• Storage temp range	-25C to +75C
• Altitude	-200 to 10,000 ASL
• Humidity	0-90% no condensation
• Physical size	Standard 19.00" rackmount panel size 5.25"H (3RU) x 19.00"W x 20.50"D
• Front panel color	Switch Chassis:Fed-STD-595B #26440 (grey) Control Panel: Black Anodize
• Chassis slides	Mounting pattern for slides (Chassis-Trak)
• Weight	<45lbs

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