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General

The Blanking Adapter Unit is designed to accept trigger pulses from various emitters and produce blanking pulses with adjustable pulse width and delay. These pulses are used to disable sensitive electronic equipment during the strong transmission periods produced by equipment such as radar and RF transmitters. The composite output combines blanking pulses from any combination of single ended inputs or from all of the twelve single ended inputs. These pulses are combined into an RS-422 differential composite serial pulse stream. The composite output is made available on the Triaxial connector, J14. Each of the twelve inputs are equipped with threshold, delay, and pulse width adjustments accessible from the front panel. The eight additional blanking outputs available on the multi-pin circular connector J15 are differential RS-422 outputs, which can be mapped to any of the twelve single ended inputs. Each of these eight output drivers can be mapped to any one or any combination of up to all twelve inputs circuits. Mapping of the input circuits to the composite output is accomplished through a twelve position dip-switch located under the mapping switch access plate. The user simply closes the switch corresponding to the input that is to be included in the composite output pulse stream. Mapping of the input circuits to any of the eight single outputs is accomplished through eight, twelve position dip-switch located under the mapping switch access plate. The user simply closes the switch corresponding to the input that is to be included in the output pulse stream of that particular output.

Circuit Operation

When a pulse appears at an input meeting the threshold level settings of the comparator, the comparator transfers the pulse to the input of an adjustable delay circuit. When this adjustable delay circuit times out it initiates another pulse with an adjustable width that is fed to the mapping circuitry. All inputs selected for the composite output through the mapping switches are OR'd together. The output of the OR gate is fed to an RS-422 differential driver whose output is accessible on the Triaxial output connector J14. Any input or combination of inputs selected for output through one of the eight, twelve position dip-switches are OR'd together and then fed to that particular RS-422 differential driver. Each of the eight differential driver outputs has a corresponding twelve-position dip-switch. All eight of these RS-422 differential driver outputs are accessible on the multi-pin circular connector J15. Pulse width and delay are adjustable from a minimum of $1\mu\text{S}$ to greater than $100\mu\text{S}$ and the threshold level is adjustable from less than 0.3 VDC to greater than 10.0 VDC.

Input

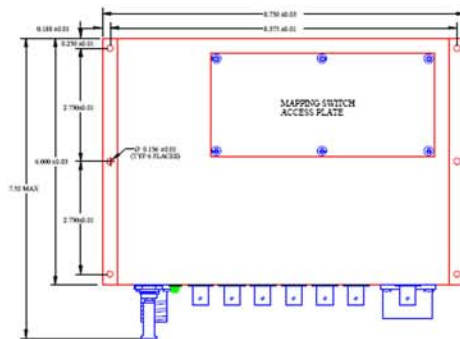
- Inputs: Twelve, Single Ended Inputs with 125Ω Impedance, J2 through J13, BNC connectors.
- Input Threshold Level: Adjustable, 0.3 to 10.0 VDC. One adjustment for each input.
- Delay: Adjustable from 1μS to 100μS. One adjustment for each input.
- Pulse Width: Adjustable from 1μS to 100μS. One adjustment for each input.

Output

- Composite Blanking Channel Output: One differential RS-422 driver output located on the triax connector J14. This is a composite output of the pulses produced by any combination of or all twelve of the input circuits selected by the composite mapping dip-switch.
- Blanking Channel Outputs: Eight differential RS-422 driver outputs located on J15, a 26 pin D38999 series IV connector. These differential output pulses originate from any combination of the twelve input circuits. Any one or combination of up to all twelve inputs circuits can be mapped to any of the eight output drivers.

Mechanical

- Weight: < 8 LBS.
- Size: Depth 7.500" Max, Width 8.780" Max, Height 2.900" Max.
- Mounting: 6 each 0.156 diameter through holes.



Environmental

- Non -Operating Altitude: Sea Level to 40,000 feet.
- Operating Altitude: Sea Level to 10,000 feet.
- Operating Temperature: -30°C to +55°C
- Storage Temperature: -51°C to +71 °C
- Humidity: 95% Relative Humidity, -30°C to +55°C, non-condensing.
- Salt Fog: Per MIL-STD-810 Method 509.2, 48 hour exposure.
- Vibration: Per MIL-STD-167, Type 1 Equipment.
- Functional Shock: 20 G (6-9 mS duration).
- Explosive Atmosphere: Per MIL-STD-810, Method 511.2 Procedure 1, Operate without igniting explosive environment.
- Environmental Stress Screening (ESS): All units are subjected to Environmental Stress Screening.
- Cooling: Conduction, through base plate.

System

- Throughput Delay: < 2μS.

Primary Power

- Primary Power: 28 ±6 VDC, Isolated from signal ground, J1 M38999 Series III connector.
- Power Consumption: < 14 Watts
- Power Switch: Locking Toggle Switch.

Connectors

- J1 Primary Power, D38999/20WA98PN
- J2-J14 BNC Type Input
- J15 Main Output, D38999/42WE26PN

