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SINCE 1975

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## INSTRUCTIONS

MODEL AVX-SIPB-PS

0.2 to 5.0 V<sub>P-P</sub>, 0 to 50 MHz

SINE-TO-PULSE CONVERTER

SERIAL NUMBER: \_\_\_\_\_

### WARRANTY

Avtech Electrosystems Ltd. warrants products of its manufacture to be free from defects in material and workmanship under conditions of normal use. If, within one year after delivery to the original owner, and after prepaid return by the original owner, this Avtech product is found to be defective, Avtech shall at its option repair or replace said defective item. This warranty does not apply to units which have been disassembled, modified or subjected to conditions exceeding the applicable specifications or ratings. This warranty is the extent of the obligation assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

### TECHNICAL SUPPORT

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Manual Reference: T:\instructword\avx-sip\AVX-SIPB-PS\_edition1.doc, created December 6, 2002

## INTRODUCTION

The AVX-SIP series is useful in experimental applications where a sine wave signal must be converted to logic-level pulses, to trigger other equipment. The AVX-SIPB-PS converts a sine-wave input with an amplitude in the range of 0.2V to 5V peak-to-peak to TTL levels (0 and +3 to +5V). The input frequency may be as high as 50 MHz. The output duty cycle is approximately equal to the input duty cycle (i.e., 50%).

The input impedance is 50 Ohms, and the input is DC-coupled. The trigger level is 0V. The input has a hysteresis of approximately +/- 30 mV, to eliminate false triggering on slowly varying inputs. The input should not exceed +/- 2.5V. Protection circuitry is present to reduce the possibility of damage from excessive input voltages.

The output can drive 50 Ohm (or higher) loads.

SPECIFICATIONS

Model:	AVX-SIPB-PS
Input frequency:	0 - 50 MHz
Input amplitude:	0.2 to 5 Volts, peak-to-peak
Input resistance:	50 Ohms
Output amplitude:	TTL levels: Low: 0V, High: +3 to +5V
Output pulse width:	One-half of input period, fixed
Output duty cycle:	50%, fixed
Connectors:	BNC
Power requirement:	120/240 Volts (switchable) 50-60 Hz
Dimensions:	100 mm x 215 mm x 375 mm (3.9" x 8.5" x 14.8")

## INSTALLATION

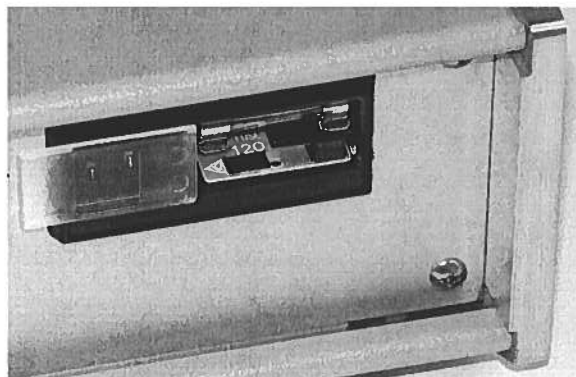
### VISUAL CHECK

After unpacking the instrument, examine to ensure that it has not been damaged in shipment. Visually inspect all connectors, knobs, and handles. Confirm that a power cord is with the instrument. If the instrument has been damaged, file a claim immediately with the company that transported the instrument.

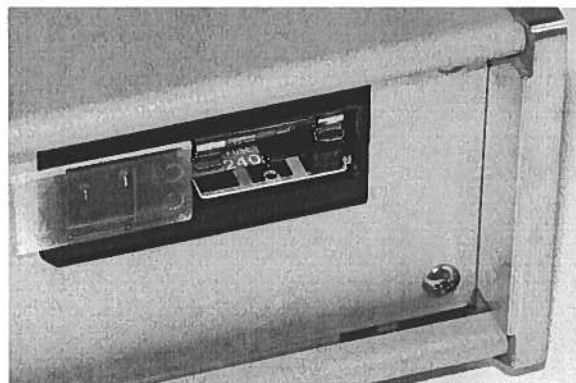
### PLUGGING IN THE INSTRUMENT

Examine the rear of the instrument. There will be a male power receptacle, a fuse holder and the edge of the power selector card visible. Confirm that the power selector card is in the correct orientation.

For AC line voltages of 110-120V, the power selector card should be installed so that the "120" marking is visible from the rear of the instrument, as shown below:



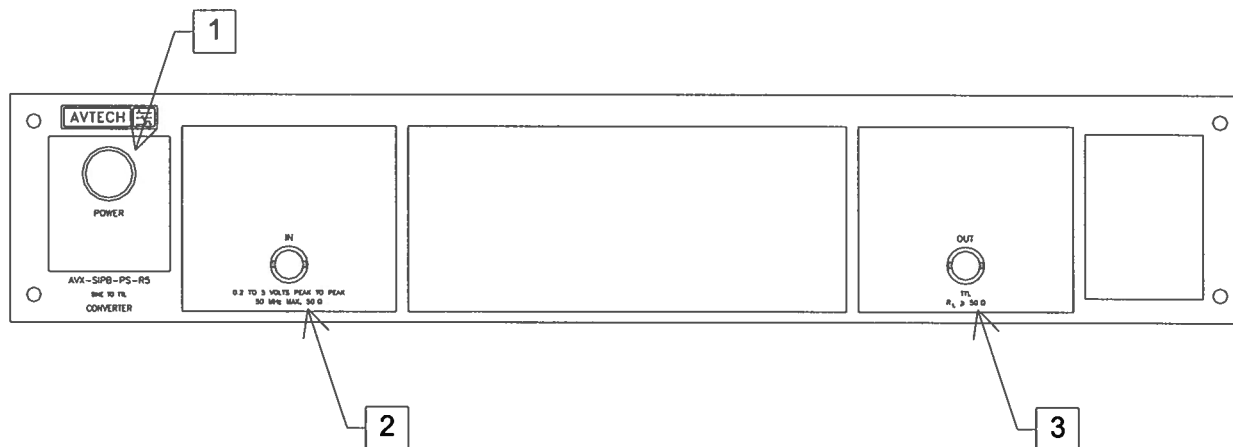
For AC line voltages of 220-240V, the power selector card should be installed so that the "240" marking is visible from the rear of the instrument, as shown below:



If it is not set for the proper voltage, remove the fuse and then grasp the card with a pair of pliers and remove it. Rotate horizontally through 180 degrees. Reinstall the card and the correct fuse.

In the 120V setting, a 1/4A slow blow fuse is required. In the 240V setting, a 1/8A slow blow fuse is required.

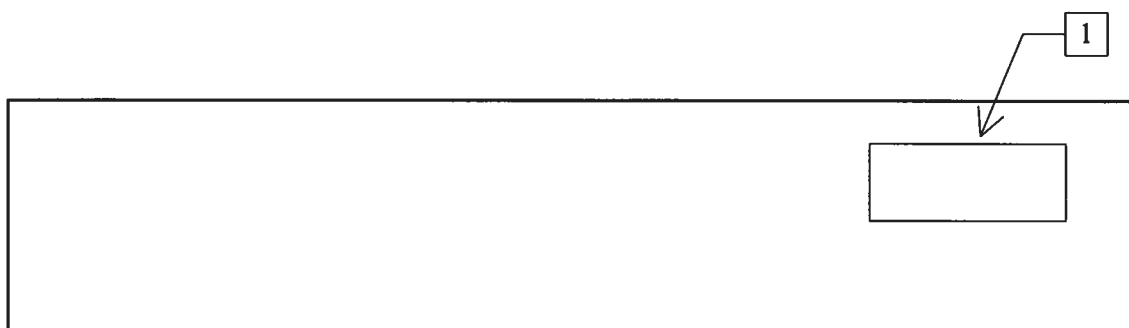
## FRONT PANEL CONTROLS



1. **POWER Switch.** The POWER push button switch applies AC prime power to the primaries of the transformer, turning the instrument on. The push button lamp is connected to the +15V DC supply.
2. **IN Connector.** The input signal is applied to this connector. The input impedance is 50  $\Omega$ . The input should not exceed  $\pm 2.5V$ .
3. **OUT Connector.** This BNC connector provides the output signal. This output can drive 50  $\Omega$  (or higher) loads.



## REAR PANEL CONTROLS



1. **AC POWER INPUT.** A three-pronged recessed male connector is provided on the back panel for AC power connection to the instrument. Also contained in this assembly is a slow-blow fuse and a removable power selector card that can be removed and repositioned to switch between 110-120V AC in and 220-240V.

For AC line voltages of 110-120V, the power selector card should be installed so that the "120" marking is visible from the rear of the instrument.

For AC line voltages of 220-240V, the power selector card should be installed so that the "240" marking is visible from the rear of the instrument.

If it is not set for the proper voltage, remove the fuse and then grasp the card with a pair of pliers and remove it. Rotate horizontally through 180 degrees. Reinstall the card and the correct fuse.

In the 120V setting, a 1/4A slow blow fuse is required. In the 240V setting, a 1/8A slow-blow fuse is required.

## OTHER INFORMATION

### TOP COVER REMOVAL

The top cover of the instrument may be removed by removing the four Phillips screws on the top panel. With these four screws removed, the top panel may be slid off by pulling it towards the rear.

The instrument should not be accessed internally unless it has been turned off for ten minutes, to allow all internal capacitors to discharge. The internal capacitor bank stores a considerable amount of energy.

### RACK MOUNTING

A rack mounting kit is available. The -R5 rack mount kit may be installed after first removing the one Phillips screw on the side panel adjacent to the front handle.

Dec 6/02