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SINCE 1975

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INSTRUCTIONS

MODEL AVX-R5

HIGH-VOLTAGE, HIGH SPEED

POLARITY-INVERTING

PULSE TRANSFORMER

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: /files/officefiles/instructword/avx-r/AVX-R5,ed1.odt.
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INTRODUCTION

The AVX-R5 transformer is a polarity-inverting transformer suitable for input voltages of up to $\pm 700\text{V}$. The AVX-R5 is typically used with the Avtech AVRZ-5W-B series of high-voltage pulse generators (<http://www.avtechpulse.com/medium/avrz-5w>). It can also be used with other Avtech high-voltage pulse generators, such as the AVR-5B and AVR-7B families.

The maximum pulse width when for input amplitudes of 0-500V is 10 us. The maximum pulse width is reduced to 5 us for amplitudes of 500-700V.

The rise time of the AVX-R5 transformer is < 5 ns, 20%-80%.

This instrument is intended for use in research and development laboratories.

SPECIFICATIONS

Model:	AVX-R5
Maximum input voltage:	700V
Maximum pulse width:	10us at 500V, 5us at 700V
Rise time (20%-80%):	< 5 ns
Impedance:	50 Ohms
Droop:	5% maximum
H x W x D:	mm: 55×121×171 inches: 2.2×4.8×6.7
Connectors:	BNC female

EUROPEAN REGULATORY NOTES

EC DECLARATION OF CONFORMITY

We Avtech Electrosystems Ltd.
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declare that this pulse generator meets the intent of Directive 89/336/EEC for Electromagnetic Compatibility. Compliance pertains to the following specifications as listed in the official Journal of the European Communities:

EN 50081-1 Emission

EN 50082-1 Immunity

and that this pulse generator meets the intent of the Low Voltage Directive 72/23/EEC as amended by 93/68/EEC. Compliance pertains to the following specifications as listed in the official Journal of the European Communities:

EN 61010-1:2001 Safety requirements for electrical equipment for measurement, control, and laboratory use



DIRECTIVE 2002/95/EC (RoHS)

This instrument is exempt from Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the Restriction of the use of certain Hazardous Substances (RoHS) in electrical and electronic equipment. Specifically, Avtech instruments are considered "Monitoring and control instruments" (Category 9) as defined in Annex 1A of Directive 2002/96/EC. The Directive 2002/95/EC only applies to Directive 2002/96/EC categories 1-7 and 10, as stated in the "Article 2 - Scope" section of Directive 2002/95/EC.

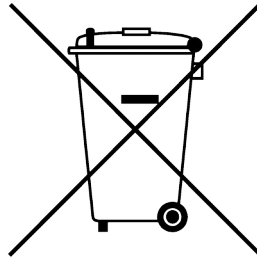
DIRECTIVE 2002/96/EC (WEEE)

European customers who have purchased this equipment directly from Avtech will have completed a "WEEE Responsibility Agreement" form, accepting responsibility for WEEE

compliance (as mandated in Directive 2002/96/EC of the European Union and local laws) on behalf of the customer, as provided for under Article 9 of Directive 2002/96/EC.

Customers who have purchased Avtech equipment through local representatives should consult with the representative to determine who has responsibility for WEEE compliance. Normally, such responsibilities will lie with the representative, unless other arrangements (under Article 9) have been made.

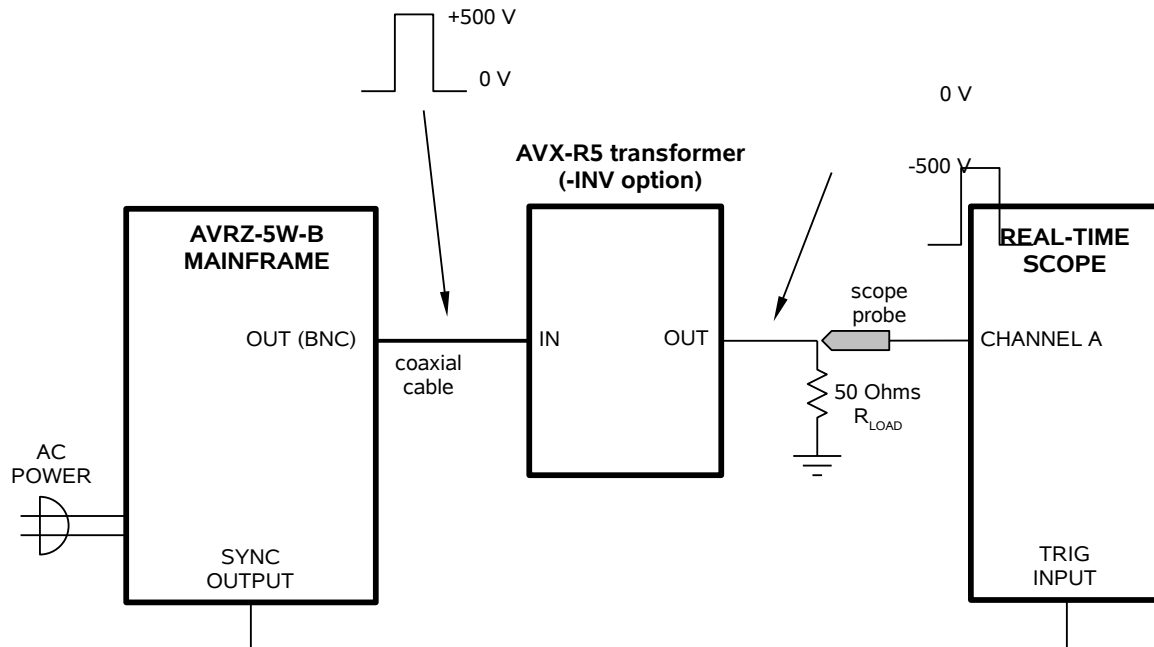
Requirements for WEEE compliance may include registration of products with local governments, reporting of recycling activities to local governments, and financing of recycling activities.



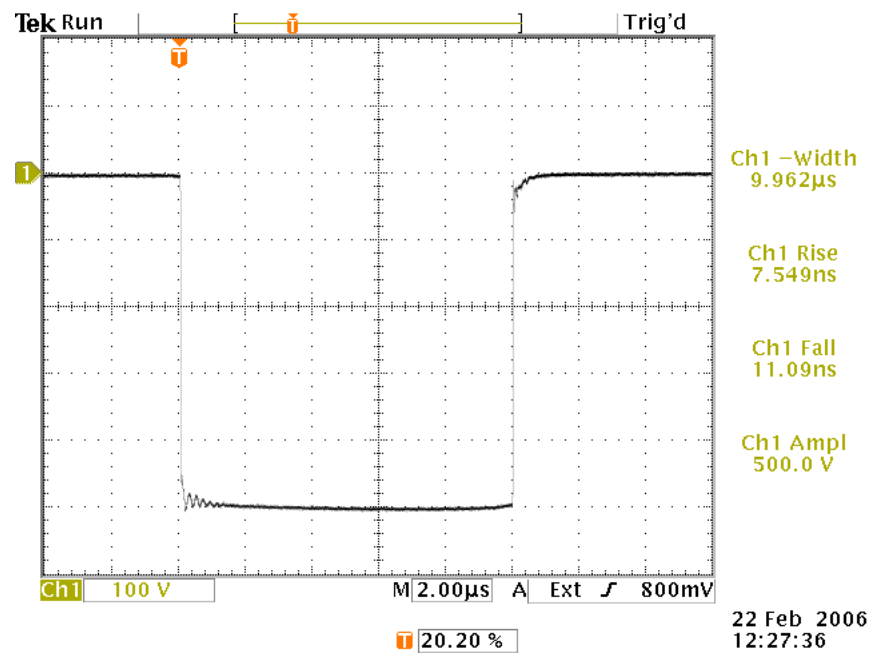
GENERAL INFORMATION

The AVX-R5 is typically used with the Avtech AVRZ-5W-B or AVRZ-5A-B. The AVRZ-5W-B and AVRZ-5A-B mainframes normally generate positive amplitudes in the range of 0 to +500V. It can also be used with other Avtech high-voltage pulse generators, such as the AVR-5B and AVR-7B families.

In this application, the AVX-R5 transformer is connected to the output of the AVRZ-5W-B mainframe using standard coaxial cable. (This cable should be as short as possible to minimize possible reflections.) The basis test arrangement is shown below:



The transformer is capable of operating up to the maximum rated pulse width of the AVRZ-5W-B and AVRZ-5A-B (10 μ s). The transformer may introduce slight rounding and ringing to the output waveform, and it may degrade rise and fall times slightly (by 1-3 ns, typically). A typical waveform photo is shown below:



100 V/div, 2 us/div.
(Rise and fall times measured at 20%-80%)

PERFORMANCE CHECK SHEET