AVTECH ELECTROSYSTEMS LTD.
NANOSECOND WAVEFORM ELECTRONICS

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INSTRUCTIONS

MODEL AVX-D-PL1 DELAY GENERATOR

S.N.:

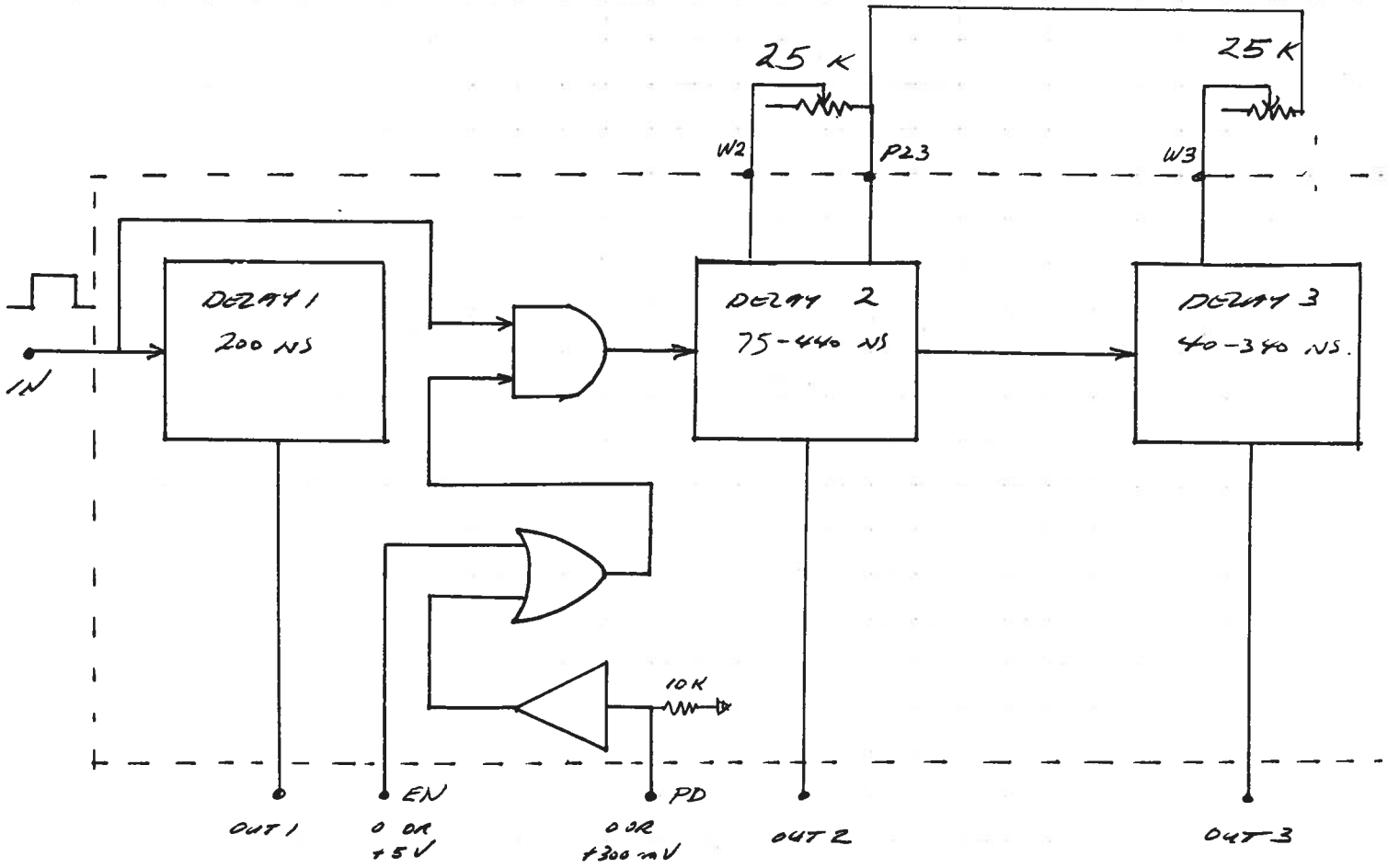
WARRANTY

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 dissembled, modified or subjected to conditions exceeding the applicable specifications or ratings. This warranty is the extent of the obligation or liability assumed by Avtech with respect to this product and no other warranty or guarantee is either expressed or implied.

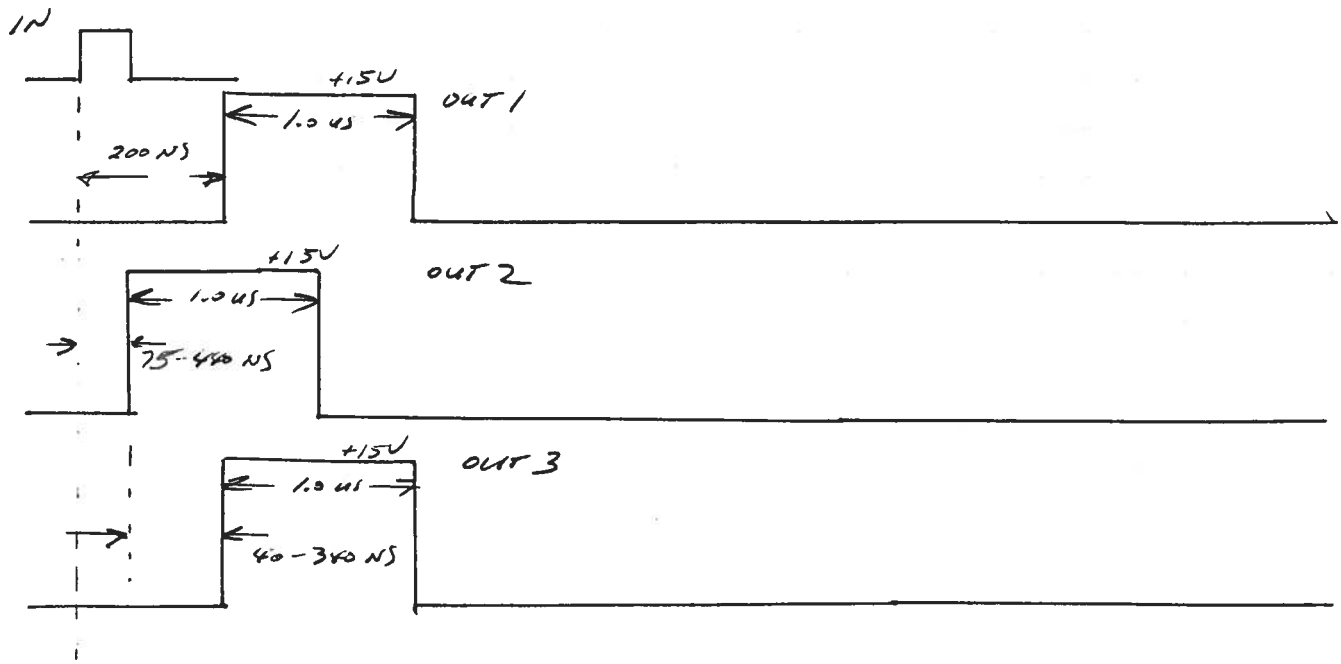
SPECIFICATIONS

Model designation:			AVX-D-PL1
Input trigger: (V_{IN})			TTL pulse, PW $\geq$ 25 ns
Output delay:	1)	Output 1:	Fixed at 200 ns WRT the leading edge of input pulse
	2)	Output 2:	Variable from 75 ns* to 440 ns WRT input pulse. Controlled by user-supplied 25 K pot which connects to two solder terminals (P23 and W2). Enable function controlled by +5V DC applied to solder terminal (EN) or by +300 mV DC supplied to a second solder terminal (PD)
	3)	Output 3:	Variable from 40 ns to 340 ns WRT the leading edge of 2 out. Controlled by user-supplied 25 K pot which connects to two solder terminals (P23 and W3)
Output amplitude: (1, 2 and 3)			Fixed at +15 Volts to 50 Ohms (will withstand open or shorted output)
Output pulse width: (1, 2 and 3)			Fixed at 1.0 us
Jitter: (input trigger to output)			$\leq$ +200 ps
Input prime power:			+24 VDC, 250 mA
Connector:	1)	Input & output pulses:	SMA
	2)	Prime power & delay pots:	Solder terminal
	3)	+5V, +300 mV inputs:	Solder terminal
Package size:			1.7" x 2.6" x 4.3" (Avtech style A, see page 109, Cat. No. 8)

* CHANGED TO 75 NS FROM 40 NS ON ORIGINAL QUOTE BECAUSE 40 NS COULD NOT BE ATTAINED



MX-D-PC1 FUNCTIONAL BLOCK DIAGRAM



MX-D-PC1 OUTPUT WAVEFORMS

GENERAL PRECAUTIONS

To reduce the likelihood of failures, take the following general precautions:

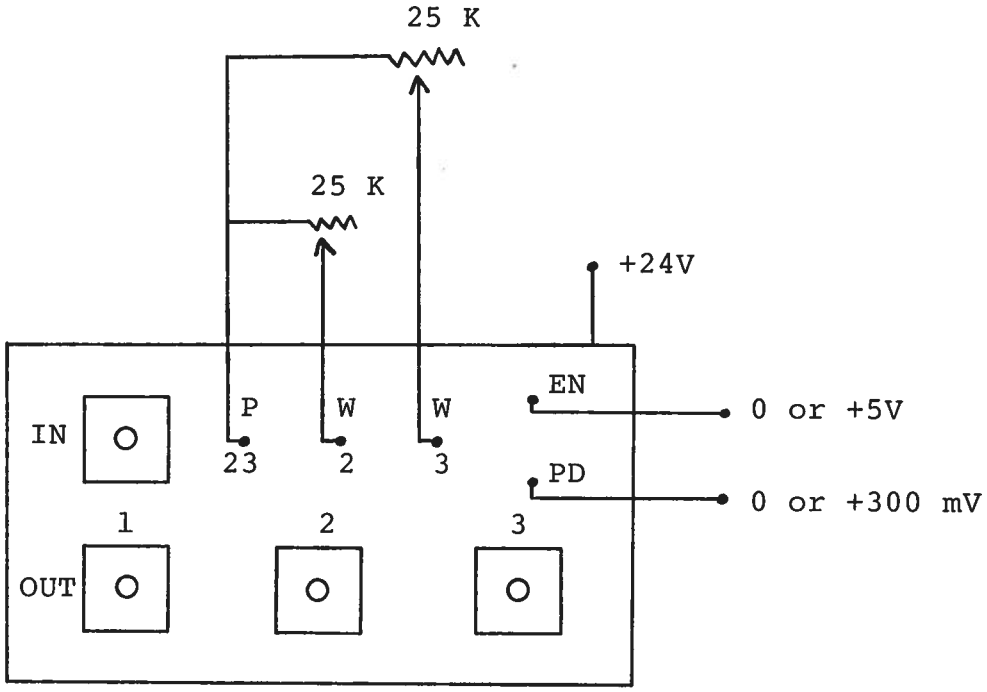
1) Input trigger amplitude
This must not exceed +5 Volts (or < 0 Volts). If using a 50 Ohm lab pulse generator, it may be wise to shunt the IN port with 50 Ohms to insure that you do not accidentally apply 10 Volts.

2) Input PRF
Limit the PRF to under 10 kHz (and certainly avoid 100% duty cycle). Our tests are all conducted at 10 kHz and less.

3) Output load
Insure that the units are operating into a 50 Ohm load and that the load is passive (i.e. no significant externally generated transients or potentials). We test the units into a short circuit for 1 minute and we believe that they will withstand a short indefinitely but try to avoid shorted outputs.

4) +24 Volts
The supply voltage must not exceed +25 Volts (or less than +23 Volts). The 1N4750 diode is intended to protect against severe overvoltage application or reverse voltage application.

5) Pots
Insure that the delay pots are installed as per the instructions (and that no external potentials are applied to the pot solder terminals).



AVX-D-PL1 CHASSIS CONNECTIONS

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