

# Application Note Pneumatic Inker Controller Power Module History (fuse replacement and voltage selection)

# SIGNIFICANT DESIGN CHANGES AND TIMELINE

The Xandex pneumatic controller has been manufactured using three different AC power modules since its initial production release in 1989. The AC power module is consistent across all controller models during the timeframe of each revision.

This document describes fuse specifications, fuse replacement procedures and voltage selection procedure for each of the three AC power modules.

The three AC modules in the field can be described as one of the three types listed below in order of year of manufacture.

**Sliding door:** November 1989 (initial controller release) - December 1996

Fuse-in-door: January 1997- September 1999

Fuse Clip: October 1999-Present

The update of the power module and other revisions to the design in January 1997 were made to bring all controller models into conformity with the following EU directives:

- EMC Directive 89 / 336 / EEC
- Low Voltage Directive 73 / 23 / EEC

Standards to which conformity is declared:

- EN50081-2
- EN50082-2
- EN61010-1

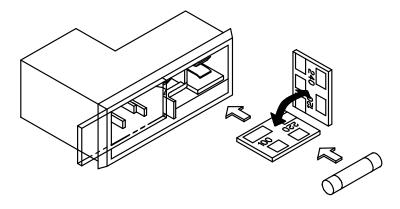
The power module was changed again in 1999 when the module then in use was no longer available in a CE compliant model.

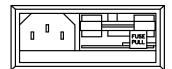
**Note:** There is no power switch on the Xandex pneumatic controller unit. If the controller unit loses power, memory of any hour or dot count programmed into the unit will be lost.

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### SLIDING DOOR TYPE POWER MODULE

This power module was used in manufacture from November 1989 (initial controller release) through December of 1996.



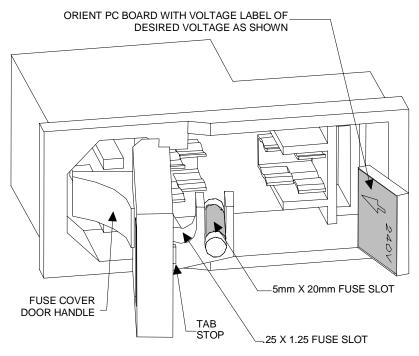


- 1. Unplug the AC power cord from the power module on the rear of the controller.
- 2. Slide the clear fuse/voltage selection cover door to the left, over the power cord jack.
- 3. Rotate FUSE-PULL lever to the left. The fuse will be pushed outward as the lever is rotated. Remove the fuse.
- 4. CAREFULLY remove the PC Board located in a slot below the fuse clips by pulling it straight back using a needle nose pliers.
- 5. Select operating voltage by orienting PC Board position so that desired voltage is on top left side (facing the rear of the controller.
- 6. Push board firmly into the slot in the module beneath the fuse.
- 7. Rotate FUSE-PULL back into normal position and re-insert a fuse into the holders.

Fuse is Xandex Part Number 158-0032, 3/4A 3AG 250V, Slo-Blo type, 0.25" diameter x 1.25" long glass body fuse.

### FUSE -IN-DOOR TYPE POWER MODULE

This power module was used in manufacture from January 1997 through September 1999.



- 1. Disconnect power cord from rear of controller.
- 2. Swing open Fuse cover door by pushing left on handle.
- 3. Remove *PC board* by pulling straight back using pliers.
- 4. Select operating voltage by orienting *PC* board position so that desired voltage is on front left side. See diagrams.
- 5. Push *PC board* firmly into module slot.
- 6. Center correct fuse (see fuse rating chart below) in appropriate fuse slot so that when fuse cover door is closed, fuse ends engage internal contacts.
- 7. CAREFULLY close fuse cover door. Verify that the red indicator shows through the correct voltage window on the right side of the fuse cover door. Reconnect power cord and verify controller power.

**Note:** Xandex supplied fuses match the dimensions and ratings listed in the chart above. The two fuse slots (0.25" X 1.25" and 5mm X 20mm) can be used interchangeably as long as the fuse input voltage and fuse amperage match the ratings in the chart for the operating voltage selected.

INPUT VOLTAGE AT 50-60HZ	FUSE RATING	FUSE TYPE: T OR TIME-LAG	XANDEX PART NUMBER
100 VAC	0.75A	0.25" X 1.25"	158-0032
120 VAC	0.75A	0.25" X 1.25"	158-0032
220 VAC	0.315A	5mm X 20mm	158-0359
240 VAC	0.315A	5mm X 20mm	158-0359

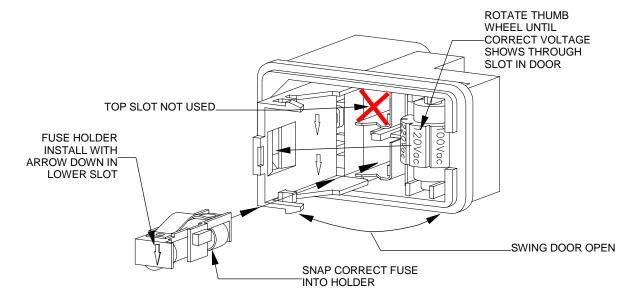
**Note:** Use extreme caution when closing door with fuse in 0.25" X 1.25" slot. Verify that the fuse is perfectly aligned with the contacts on the inside, below the door hinge, and the tab stop on the cover door. The door should slide closed smoothly with no resistance and only slight pressure. DO NOT FORCE THE DOOR CLOSED OR DAMAGE TO THE MODULE MAY OCCUR.

## FUSE CLIP TYPE POWER MODULE

This power module was used in manufacture from October of 1999 through present.

Note: All models are shipped with the voltage set for 120VAC. Two fuse types are included, one for 100/120VAC and one for 220/240VAC, however, the controller unit is shipped without a fuse installed. Select the correct fuse for your voltage rating from the chart below and install per instructions. Discard unused fuse.

- 1. Disconnect power cord from rear of controller (if connected).
- 2. Swing open the fuse cover door by lifting on tab on the right side of the door. (A small screwdriver may be necessary.)



- 3. To change voltage setting, rotate the thumbwheel until correct voltage listed on the thumbwheel is facing out (visible through the slot in the door when the door is closed.)
- 4. To change the fuse, remove the fuse holder from the module by pulling is straight out. Carefully pry the fuse from the holder and replace (see fuse rating chart below.)
- 5. Insert the fuse holder into the **bottom** (lower) slot in the module with the arrow on the fuse holder pointed down.
- 6. CAREFULLY close fuse cover door. Verify that the correct voltage shows through the window on the module door. Reconnect power cord and verify controller power.

*Note:* Xandex supplied fuses match the ratings listed in the chart below.

INPUT VOLTAGE AT 50-60HZ	FUSE RATING; 250 V	FUSE TYPE: T or Time Delay	XANDEX PART NUMBER
100/120VAC	0.75A	3AG (0.25" x 1.25")	158-0032
220/240VAC	0.375A	3AG (0.25" x 1.25")	158-0479