

AJ300 Internal Components

The AJ300 has several internal components – The main components are the circuit boards and the drive motors.

Motherboard

The Motherboard is the main circuit board which contains the power supply, main processor and input circuitry. There can be different Motherboards for different model AJ300 recorders such as: 1 pen recorder, 2 pen recorder, recorder only or recording controller (the Anderson-Negele Vat Pasteurization Controls Package requires a 2 pen system for legal use).

AC Supply voltage is connected to TB1 of Motherboard. TB3 is a 24 VDC power supply source that can be utilized to power external devices such as CT8V display heads or temperature transmitters. The input signals are connected to TB4 and TB5. There are 2 ribbon cables and a multi-conductor cable that connect from the Motherboard to the Stepper Driver Board. The long ribbon cable connects J2 on the Motherboard to J2 on the Stepper Driver Board. The short ribbon cable connects J3 on the Motherboard to J3 on the Stepper Driver Board. The multi-conductor cable connects J8 on the Motherboard to J9 on the Stepper Driver Board.

Stepper Driver Board

The Stepper Driver Board Receives signals from the Motherboard, outputs drive signals to pen/chart motors and feeds signals to and from Display/Keypad Board. The Stepper Driver Boards are now universal – The same board is used for all model recorders.

The Chart Motor plugs into J4 on the stepper driver board, Pen 1 Motor plugs into J5 on the Stepper Driver Board and Pen 2 Motor plugs into J6 on the Stepper Driver Board. A heavy duty ribbon cable connects J10 on the Stepper Driver Board to the Display Board.

Display Board

The Display Board is mounted inside the door assembly below the window and is connected to the stepper driver board with a ribbon cable which plugs into J10. The display board functions as a digital display and a keypad interface. There can be different display boards for different model AJ300 recorders such as: 1 pen recorder, 2 pen recorder, recorder only or recording controller (the Anderson-Negele Vat Pasteurization Controls Package requires a 2 pen system for legal use).

Option Boards

The AJ300 is available with or without relay outputs and or current outputs.

Relay Board (SPST Dry Contact) - If equipped the Relay Board will plug into J7 on the top right side of the motherboard. Relays can be utilized for alarm outputs or process control depending on the exact recorder model number and the program settings. Relay A output connections are TB6 terminal 1 and 2, Relay B output connections are TB6 terminal 3 and 4, Relay C output connections are TB7 terminal 1 and 2, Relay D output connections are TB7 terminal 3 and 4. Relay Boards are available with 1, 2, 3 or 4 relays.

Current Output Board (4-20mA) – If equipped the Current Output Board will plug into J6 on the bottom right side of the motherboard. Current outputs can be utilized for process retransmission or control depending on exact recorder model number and program settings. Current Output A connections are TB8 terminal 1 and 2, Current Output B connections are TB9 terminal 1 and 2. Current Output Boards are available with 1 or 2 outputs.

Chart Motor – The same chart motor is utilized for all AJ300 recorders – The chart rotation time is fully programmable for any chart speed. The Chart motor mounts to the back of the chart platen and plugs into J4 on the stepper driver board.

Pen Motors – All AJ300 pen motors are the same – The chart range is fully programmable. The chart motors mount to the pen mechanism located on the back of the chart platen. Pen 1 motor plugs into J5 on the stepper driver board and pen 2 motor plugs into J6 on the stepper driver board.

Exploded View

