

TECHNICAL SOURCE GUIDE

THE AUTOMATER®

By Elbin Cleveland, University of South Carolina

The Automater ® is a solid state electronic automatic power controller for tool accessories and other applications. For example, the Automater will automatically turn power on and off to such things as lights, conveyors, or vacuums whenever the equipment they service is turned on or off. Aside from the simple convenience of only having to control one machine, there are several added advantages:

1. **Increased safety.** Since the accessories are controlled by the power supply to the primary machine, they always operate in tandem and there is no chance that operators can forget to "power up" the accessory or start operating a machine before the accessory is ready and working.
2. **Increased economy.** The accessory will only be running when the machine it serves is running. There is no need to run equipment such as dust collectors constantly in case the dust or chip-producing machine is turned on.
3. **Increased productivity.** The operator does not have to go back and forth from machine to accessory turning each on and off. That saves steps and time.

The Automater has another feature which produces further benefits. Because it momentarily delays power to the accessory, the primary machine achieves full operating speed more quickly and the initial power surge on the line is reduced, thereby helping to prevent blown fuses and tripped circuit breakers.

The Automater is available in two models. The Model DC-1200 is designed for 110 VAC, 60 Hz current and has a maximum capacity of 8 amps on the switched (secondary) outlet and 15 amps total on both primary and secondary outlets. The DC-1200 fires when it senses .25 amps of current to the primary machine and has a one-second delay. It is designed to plug into any standard 110 v receptacle.

The DC-2400 is a more heavy duty device which can be used on 110/115 VAC or 220/230 VAC single-phase equipment. It fires when it senses 2.5 amps of current. It can accommodate primary tool loads of 20 amps @ 110 VAC or 17 amps at 220 VAC and secondary loads of 16 amps and 12 amps respectively. It also has an adjustable delay time of 0.5 to 5.0 seconds to allow larger tools to reach full speed. The DC-2400 must be wired into the machine inside a standard electrical box. Since the Automater has no moving parts, it should last indefinitely as long as its maximum capacities are not exceeded.

To use the Automater DC-1200, check the various loads of the tools and accessories to insure they are within the capacity of the device. Then plug the Automater into a standard grounded outlet and plug the primary machine and the switched accessory into the respective outlets clearly marked on the face of the Automater. Then turn the accessory switch to the "on"

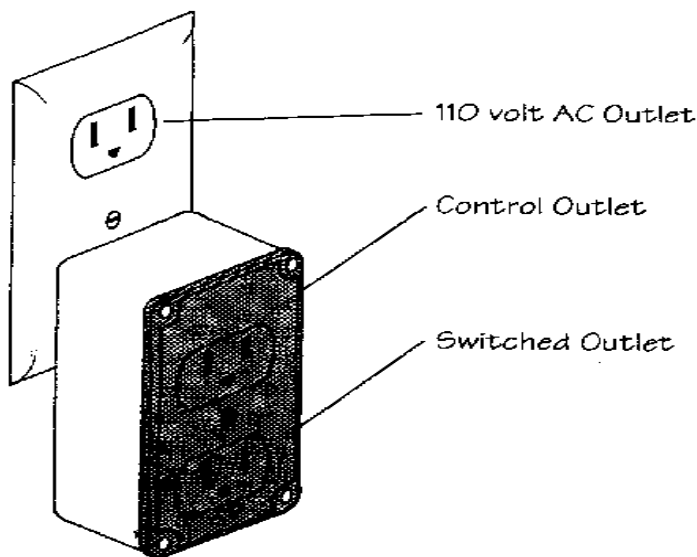
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position and leave it there. The accessory will be turned on and off in response to the primary machine.

We tested the Automater OC-1200 in our studio on several stationary power tools with our shop vacuum anchor work lights as the switched accessories. We were not able to test the DC-2400, since all our 220 v equipment is in three-phase. However, the DC-1200 worked reliably as the manufacturer promised, on all our compatible machines. After carefully checking the combined load for the lights and the shop vacuum, we found we could operate both accessories on all our 120 v tools. (Note: Since our testing, we have received information from the company indicating that they have developed a new wiring plan for the Model DC-2400 which permits its use with three-phase wiring.)

There are only two limitations. If you want to use your dust collector with different tools, you have to move the Automater to each tool in turn. If you want to use the dust collector (or shop vacuum) independently, you have to unplug it from the Automater and plug it into a separate outlet. That's a small price to pay for all the benefits. The only alternative is to have an Automater for every power tool in the studio, which could get expensive at \$42 to \$45 each. The Automater is available from:

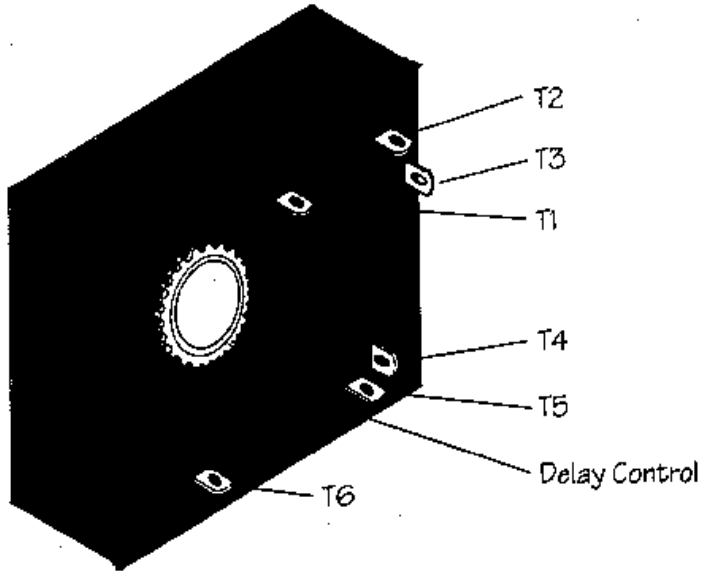
R. F. St. Louis Associates
135 Morris Avenue
Mountain Lakes, NJ 07046
1-800-526-0602



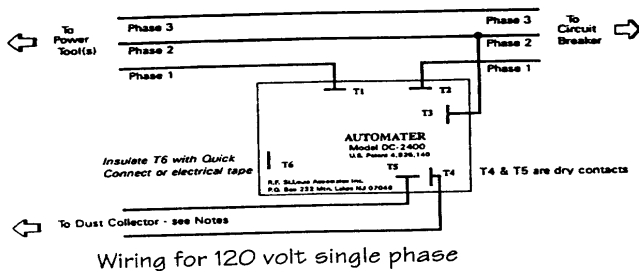
Automater Model DC-1200

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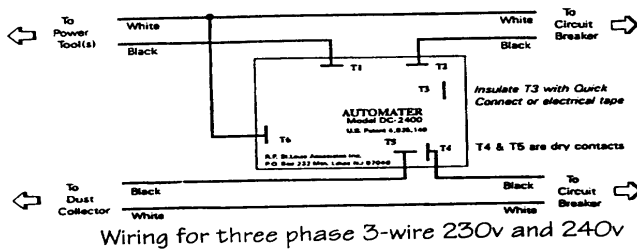
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Automater Model DC-2400



Wiring for 120 volt single phase



Wiring for three phase 3-wire 230v and 240v

Wiring Schematics for Automater Model DC-2400

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