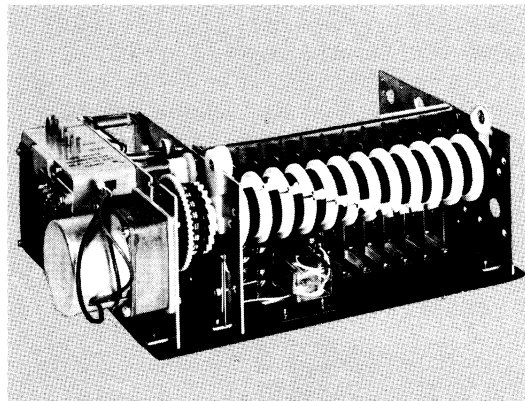


ADVANCING A STEP AT A TIME IN RESPONSE TO EXTERNAL INPUT PULSES, THE ATC 1800 CLOSSES AND OPENS UP TO 20 LOAD SWITCHES AT EACH STEP, IN A PREDETERMINED BUT FULLY ADJUSTABLE PATTERN OF 2 TO 20 INTERRELATED STEPS. WITH ITS TWO OPTIONAL TAP SWITCHES, THE 1800 CAN RESPOND TO A SEPARATE EXTERNAL PULSE AT EACH STEP OF THE PROGRAM, THUS PROVIDING INTERLOCKED SEQUENCE CONTROL OF COMPLEX OPERATIONS WITHOUT THE USE OF RELAYS.

SERIES  
**atc** 1800 STEPSWITCH  
MOTOR-DRIVEN STEP PROGRAMMER



## PRODUCT HIGHLIGHTS

### SLIDING-SEGMENT CAMS

The unique ATC cam consists of 20 sliding segments. To actuate a load switch at any step in the program, merely slide the appropriate segment to the right; or slide it to the left, if the switch is *not* to be actuated. No tools or parts are required; the segments are held securely in position but are readily changed to the opposite position at any time.

### PROGRAM STORAGE

The entire cam shaft assembly can be easily removed, when desired, without tools and without disturbing the program . . . and replaced with a separate assembly (optional.) The cam shaft assembly thus provides storable memory of a complete program and is easily replaced when needed.

### LONG LIFE

For optimum life and reliability, the ATC 1800 employs a pulse motor drive rather than the commonly used solenoid; the high-torque AC pulse motor is rated for continuous duty. Use of heavy-duty precision-type load switches and optional tap switches avoids the problems that are frequently encountered with open blade switches.

### APPROVALS

U.L. Recognized  
1800C: CSA

### ONE OR TWO OPTIONAL TAP SWITCHES

These factory-installed, permanently-lubricated, twenty-position rotary switches greatly expand the usefulness of the 1800 Step Programmer (see section on Applications.) Rated at 5 amps, they are protected against decay due to arcing by a plug-in interruptor relay.



# SPECIFICATIONS

## NUMBER OF STEPS

2 to 20.

## STEPPING SPEED

For 60 Hz operation — 180 ms  
For 50 Hz operation — 215 ms

## CAMS

6, 12 or 20 cams as specified; each 1-3/4" dia; molded, high-impact plastic.  
Sliding-segment type, programmable without parts or tools.  
Camshaft assembly removable without tools and without changing programs.

## LOAD SWITCHES

NUMBER: One for each cam (6, 12 or 20.)  
CONTACT RATING: 10 A at 115V AC (non-inductive.)  
CONTROL ACTION: SPDT (form C), precision type.  
LIFE EXPECTANCY: 200,000 operations at 10 A; 1,500,000 at 5 A (average).

## PULSE DRIVE

AC motor, rated for continuous duty.  
Steps on *make*; min. pulse required: 0.030 sec; no limit on max. pulse duration.

## POWER REQUIREMENTS

120V, 50/60 Hz.  
15 watts.

## LIFE

20,000,000 steps

## TEMPERATURE RATING

0° to 125°F.

## WEIGHT

### NET:

1806 — 5 lbs., 8 oz.  
1812 — 6 lbs., 12 oz.  
1820 — 10 lbs., 8 oz.  
SHIPPING:  
1806 — 6 lbs., 2 oz.  
1812 — 7 lbs., 6 oz.  
1820 — 11 lbs., 2 oz.

## TERMINALS

LOAD SWITCHES: accept .250" push-on connectors.

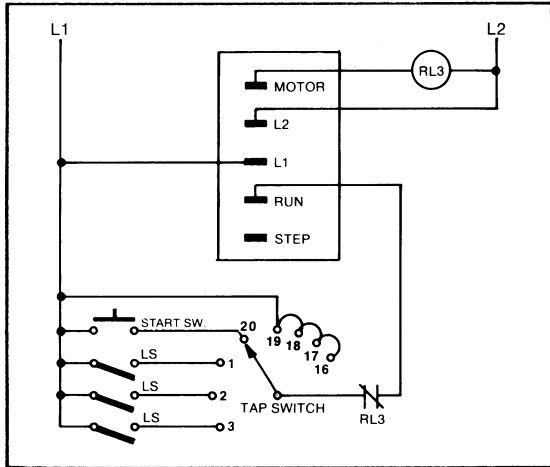
TAP SWITCH: accept .110" push-on connectors.

CONTROL: accept one .250", or two .110" push-on connectors.

## TAP SWITCHES (Optional)

One or two, as specified.  
Rated 5 A at 115V AC (non-inductive) as supplied with interruptor relay.  
Mechanically synchronized to step position.  
Min. open circuit (between steps); 100 ms.

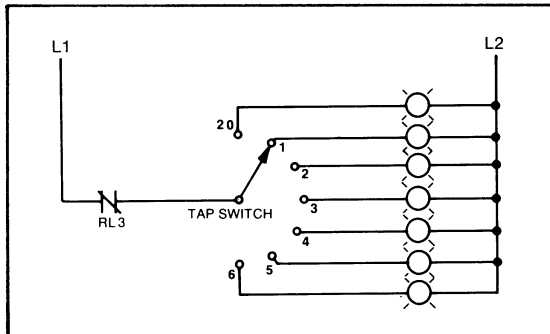
**Before starting your design, read the safety statement in the front of the ATC catalog.**



### Homing through unused steps

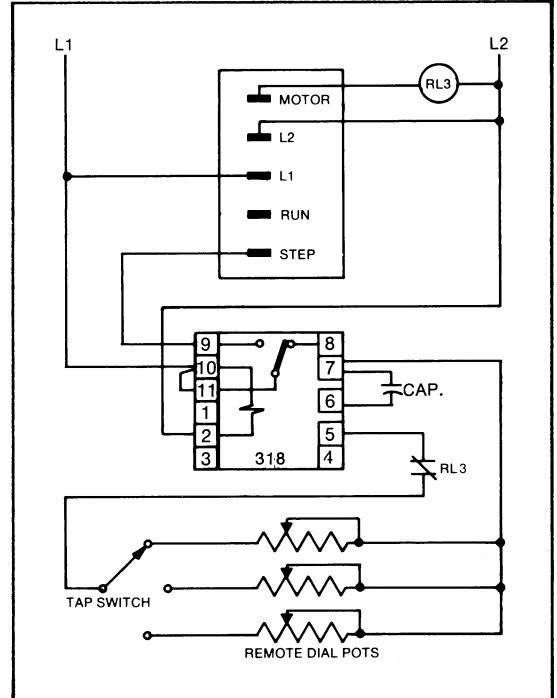
The program illustrated here has 16 steps. In order to make the 1800 "home" through the unused steps, the tap switch terminals for these steps are jumpered and connected between the L1 and Run terminals of the 1800. When the programmer arrives at step 16, it will drive without pause until it reaches step 20, and then stops.

An unused load switch can be used to accomplish the same purpose, by programming it to the *closed* position in steps 16 through 19. The load switch is wired the same way as in the drawing between the L1 and Run terminals of the programmer.



### Remote indication of step number

Remote pilot lights can be used to indicate which program step is active, as the 1800 steps through the program. Each light is wired between the appropriate position on the tap switch and the L2 terminal on the 1800.



### Different timed steps with a single timer

For each timed step, the tap switch is used to connect one of the remote dial assemblies to the timing network of a single ATC series 318 timer. The dial setting determines the length of time the programmer "holds" in that step. If the time need not be adjustable, a fixed resistor can be used instead of a dial assembly.

In addition to the timed steps, if other steps must be controlled by a limit switch closure, use a second tap switch. Or, pulse "step" terminal from remote switches.

