

# Autotransformers

Educational Training Equipment for the 21st Century

Bulletin 253-110

## H-ACTS-100 Autotransformer Starter

### Purpose

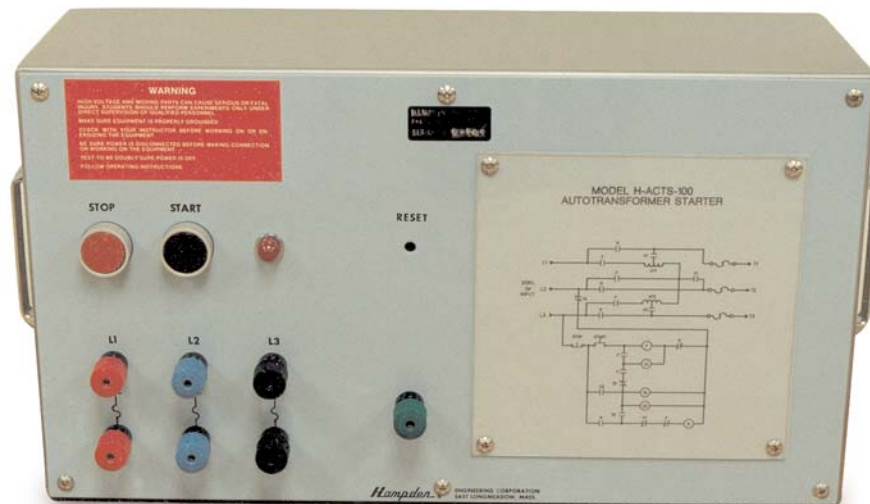
The Hampden **Model H-ACTS-100** Autotransformer Voltage Starter is much the same in principle of operation as the primary resistor type. The difference being that a transformer is used in place of the resistor for reducing line voltage to the motor during starting.

### Description

The Hampden **Model H-ACTS-100** contains two contactors, "R" and "S" which are mechanically interlocked, a third contactor, "C1," a time delay relay, "TD," a three coil thermal overload relay and a lockout relay, "C2."

The operation of the starter is as follows: When the "Start" button is depressed, the time delay relay "TD," relay "C2," and then the contactors "S" and "C1" are energized applying power through the windings of the autotransformer to the motor. When the time delay relay times out, the normally closed contact opens and the normally open contact closes, the "S" contactor drops out and the "R" contactor is energized, switching the motor to full line voltage.

If the "R" contactor should fail to close, the sustained load on the autotransformer would cause it to overheat. The autotransformer design incorporates a thermal protector switch imbedded in the winding of each of the two transformer coils. This device senses the heat rise in the coils and opens its N.C. contact if the temperature limits are reached. This breaks line voltage to the lockout relay, "C2," and opens its N.O. contact which cuts power to the motor windings. The lockout relay has to be hand reset to restore power to the line. This is a safety feature to protect the intermittent duty windings of the autotransformer from overheating.



Hampden **MODEL H-ACTS-100** Autotransformer Starter  
18"L x 6"W x 10"H - Shipping Weight 35 lbs.

All Hampden units are available for operation at any voltage or frequency

**Hampden**  
ENGINEERING CORPORATION

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