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# Electronics®

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## New products

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Industrial

### Units control heaters, coolers

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Digital temperature controllers  
use solid-state relays  
to switch heat-pump power

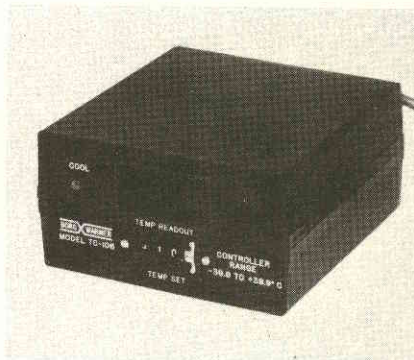
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A digital temperature controller may cycle so fast that if it is using relays, it can run through their expected lifetime number of operations very rapidly. Solid-state relays not only add to reliability, but also let the device cycle faster, shortening the time between detection of the set temperature and the moment the power is switched.

The TC-106 and -107 from Borg-Warner use solid-state relays to control the solid-state coolers and heat pumps made by the firm. A thumb-wheel switch sets and displays the desired temperature, and light-emitting diodes show the actual temperature as read by an external sensor, making the \$265 controllers easy to use. The power line of the cooler or heater to be controlled is plugged into the controller, which is plugged

in turn into a 110-V ac power outlet. The TC-106 is intended to control a cooler; the TC-107 is for heating.

The standard TC-106 has a temperature range of  $-39.9^{\circ}$  to  $+39.9^{\circ}\text{C}$ , a resolution of  $0.1^{\circ}\text{C}$ , and  $0.1^{\circ}$  hysteresis. The TC-107 has a  $-50^{\circ}$ -to- $+150^{\circ}\text{C}$  range and the same resolution and hysteresis specifications. The temperature range of each is offered as an option on the



other; some other options are hysteresis of  $2^{\circ}$ ,  $4^{\circ}$ , or  $8^{\circ}$  for use where slower cycling is desired. The controllers include a power cord and one integrated-circuit temperature sensor. Additional sensors are available at a cost of \$20 each. The line from the sensor plugs into the back of the controller.

The \$265 price is for single units. Delivery is from stock.

Borg-Warner Thermoelectrics, 3570 N. Avondale Ave., Chicago, Ill. 60618. Phone (312) 588-5120