

## **PIA-373** **Temperature Control Module**

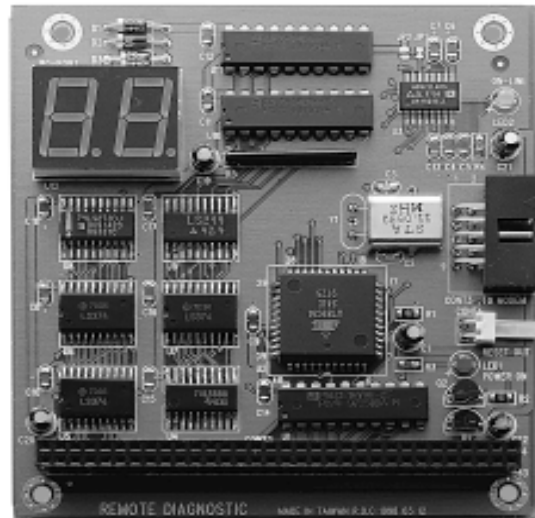
Simply by adding this PC/104 module you will be able to extend the acceptable temperature range outside your system to  $-20^{\circ}\text{C} \sim +80^{\circ}\text{C}$ .

The PIA-373 is capable of measuring your system's temperature and takes decisive action to keep its temperature within preset boundaries. The module has temperature measurement circuitry onboard that can regulate the power source for a heavy duty cooling fan and a power relay for a heating device. This enables you to use your system under temperature conditions that before where off limits.

There are two preset temperature values. One for high-level and one for low-level. If the internal temperature reaches one of the levels either the cooling fan will try to decrease the temperature or the heater will try to increase the temperature.

If, after a few minutes, the internal temperature still exceeds the low- or high-level preset value, (despite its cooling and heating function) than the module will sound an audible alarm. Low-level and high-level presets for the internal temperature can be subsequently configured from 0 to  $9^{\circ}\text{C}$  and from 0 to  $99^{\circ}\text{C}$ .

The internal cooling fan's 12 V power source comes from the system's standard power supply. The power relay for the heating device can support up to 1500 Watt.



## **PIA-372** **Remote Diagnostics Module**

The PIA-372 is a stand-alone device that independently can monitor the hardware/software state of your system. Its most simple function is to report POST codes during boot up of the system. Built-in logic together with a serial interface let the module be controlled remotely through a modem over a standard dialup connection. Diagnostic information is send through the dialup connection and matched with a BIOS database to give clear text information rather than codes. The remote user can reset the main system by issuing commands remotely through the dialup connection..

Besides hardware diagnostics, the module can surveil a running system by monitoring the systems I/O channels. It can either monitor the systems standard I/O ports or can use non-assigned I/O ports as interfaces to transfer information between software and diagnostic module.

The ability to remotely debug a running system has a wide field of application. Already in the development stage of a system this can be extremely helpful. However the most important feature of remote debugging is that it will reduce the maintenance costs and after sales service costs of a system dramatically since an engineer can dial-in a system and debug it from his own workplace.