

**DALLAS**  
SEMICONDUCTOR

## DS1830 Programmable MicroMonitor

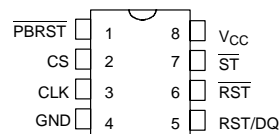
### FEATURES

- Halts and restarts an out-of-control microprocessor
- Holds microprocessor in check during power transients
- Automatically restarts microprocessor after power failure
- Monitors pushbutton for external override
- Major function parameters programmable through simple 3-wire interface, stored in nonvolatile memory
- Reset time programmable from 5 ms to 2.5 seconds
- Watchdog timeout programmable from 25 ms to 12.5 seconds
- Power trip points programmable 4.75V to 2.7V
- Pin compatible with the DS1232
- Low cost 8-pin DIP and 8-pin SOIC packages available
- Operating temperature of  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

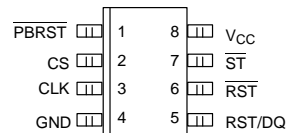
### DESCRIPTION

The DS1830 Programmable MicroMonitor monitors three vital conditions for a microprocessor: power supply, software execution, and external override. All monitored parameters are programmable, with values stored in nonvolatile EPROM. This allows parameters such as reset time, watchdog timeout period, and power supply tolerance to be programmed into the device and tailored

### PIN ASSIGNMENT



DS1830 8-PIN DIP  
(300 MIL)  
See Mech. Drawing  
Pg. 480



DS1830 8-PIN SOIC  
(150 MIL)  
See Mech. Drawing  
Pg. 483

### PIN DESCRIPTION

PBRST	– Pushbutton Reset Input
CS	– Chip Select for Serial Port
CLK	– Clock for Serial Port
GND	– Ground
RST/DQ	– Active High Reset Output/Serial Data Input
$\overline{\text{RST}}$	– Active Low Reset Output
$\overline{\text{ST}}$	– Strobe Input
$V_{CC}$	– Power Supply

to the application circuit and microprocessor which is to be monitored.

In addition, the watchdog timer, reset, and pushbutton functions may be disabled via software. This allows maximum flexibility for use in new product development and system application testing.