

Keywords: fan, fan failure, supervisor, microprocessor supervisor, supervisory circuit,  $\mu$ P, watchdog timeout

## APPLICATION NOTE 3289

# Supervisor IC Indicates Fan Failure

Jul 21, 2004

*Abstract: A fan is monitored for valid rotation by a single IC. The solution is accurate, reliable, small, and inexpensive.*

A similar article appeared in the November, 2003 issue of *EET*.

The brushless DC fans found in many types of equipment can be crucial to the performance and longevity of that equipment. A quick indication of fan failure, moreover, can be essential in preventing major damage. Among the many approaches for identifying and indicating stalled fans, the circuit of **Figure 1** is very simple and reliable.

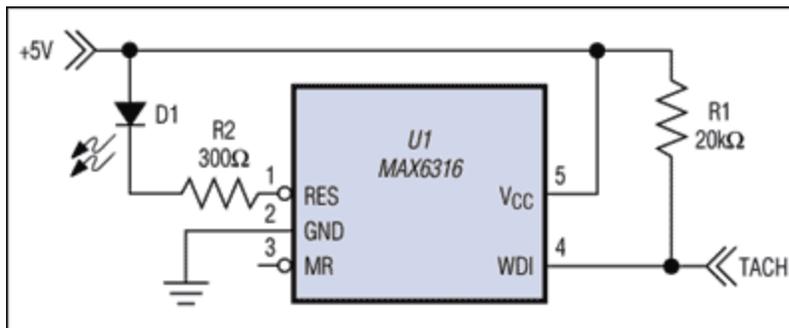


Figure 1. The MAX6316  $\mu$ P supervisor monitors a fan's tachometer output.

The fan's tachometer output connects to the watchdog input of a  $\mu$ P supervisor (U1). The LED remains off during normal operation. If the tachometer does not change state within a watchdog timeout period, U1 lights the LED by asserting its reset output. As a result, the LED pulses on and off as the supervisor goes through its watchdog/reset cycle. The LED in this example has a 200ms on-time and flashes with a period of 1.6s, which is suitable for most purposes.

## Related Parts

[MAX6316](#)[5-Pin  \$\mu\$ P Supervisory Circuits with Watchdog and Manual Reset](#)[Free Samples](#)

## More Information

For Technical Support: <http://www.maximintegrated.com/support>

For Samples: <http://www.maximintegrated.com/samples>  
Other Questions and Comments: <http://www.maximintegrated.com/contact>

---

Application Note 3289: <http://www.maximintegrated.com/an3289>  
APPLICATION NOTE 3289, AN3289, AN 3289, APP3289, Appnote3289, Appnote 3289  
Copyright © by Maxim Integrated Products  
Additional Legal Notices: <http://www.maximintegrated.com/legal>