

Zero Speed Detection of Blower Motor



PRODUCT

GT1 Hall effect gear tooth sensor and FEC-AD2-M w/ on-off delay

FEATURES/BENEFITS

- Senses ferrous metal targets
- Digital current sinking output (open collector)
- Sensor electronically self-adjusts to slight variations in runout and temperature, simplifying installation and maintenance
- GT1 probe style package simplifies mounting
- Metal bolt-down feature for secure mounting
- Wide continuous operating temperature range (-40 to +150°C)
- 24 VDC supply voltage range
- Reverse polarity and transient protection (integrated into Hall IC)

APPLICATION DESCRIPTION

A blower feed system delivers plastic pellets through warmed pipes. If the blower stops, pellets melt and plug the feed system, requiring costly and time consuming shutdown and cleanout. It is important to detect when the blower motor stops and blow a horn to alert staff to tend to the system.

To monitor the blower to help prevent problems, a keyway with steel key on the motor shaft serves as a target. The key (target) passes in front of the GT1 to produce a digital output. The GT1's output will always turn off after 22 msec when the target stops rotating, regardless of target presence or absence. If the shaft stops with the target in front of the sensor, the sensor will turn off. With an off delay set on the FEC, the GT1 digital pulses keep the output relay open until the shaft stops. 120VAC and 1 amp for horn operation are needed.

MARKET

Industrial Extruder OEMs