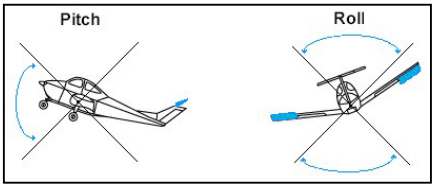
Jinzon

Standby Instrument Systems

Electronic Standby Instrument Systems are an integral part of aircraft safety systems. In case of an electronic or mechanical failure of the primary instruments, these standby systems provide the necessary information to help the pilot navigate and safely land the aircraft.

Originally, these standby systems utilized mechanical spinning gyro attitude indicators, which required regular overhauls by skilled technicians. As airlines and airframe manufacturers looked to reduce maintenance costs, they turned to the avionics manufacturers to develop a more cost-effective alternative. The result was the emergence of standby instrument systems that use internally mounted solid state rate sensors and accelerometers, which virtually eliminate all regularly scheduled maintenance. Compact, light, repeatable and reliable, these standby systems are capable of displaying such data as airspeed, altitude, heading and other navigational information, as well as attitude.

Like their predecessor, these standby attitude indicators must go through an "initial alignment" when the aircraft is first powered up. This is an internal calibration process involving the rate sensors and accelerometers. In order for this calibration to be accurate, the attitude (pitch and roll) of the aircraft during alignment must be precisely measured and accounted for. This is typically done with a tilt sensor, and is an excellent example of an application where accuracy and high reliability are paramount.



Spectron currently serves this market with the SH50056 Series Ceramic Electrolytic Tilt Sensor. For many avionics manufacturers it has become the sensor of choice. The accuracy and long-term stability provides unrivaled performance. The compact size is ideal for this space restrictive application, while the factory "reference surface" eases installation alignment concerns. The extended operating temperature range of ñ54 to +125 degC, and hermetically sealed construction afford superior environmental protection.