

The Kinetic Switch Leader

For more than 50 years, CIRCOR Aerospace & Defense-New York (formerly Aerodyne Controls), has been the leader in innovative design, development and manufacturing of Kinetic Switches.

- Innovative Design
- Development
- Manufacturing
- Top Reliability
- Hermetically Sealed
- Extreme Environments
- <1g to 80,000g Max

Military | Space | Commercial Aerospace

Ordnance Fuzes | Flight Recorders
Missiles | Guided and Unguided Rockets

➤ Quality Certifications

AS9100C
ISO 9001:2008
Boeing D6-82479
IPC-A-610
RoHs Compliant



Custom Solutions are Available

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Kinetic Switch Product Portfolio



Accelerating Growth
in Aerospace & Defense

Typical Inertia Switch Characteristics

Typical Acceleration Switch Characteristics

<1g to 80,000g's available

Damped and Undamped

Momentary Latching

Resettable Latching

Normally Open & Normally Closed Configurations:

Inertia Switch Type



Acceleration Switch Type



Acceleration

Style	TO-5	TO-18	TO-18 Extended
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Impact

Type	Tilt, Motion	Motion, Turnover	Turnover
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Spin

Latching

Features	Normally Open Normally Closed	Normally Open Normally Closed	Normally Open Normally Closed
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Linear

Planar

Hemispherically

Contact Rating	10 mA to 1.0A	50 mA to 500 mA (Other Values Available)	50 mA to 500 mA (Other Values Available)
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Negative G

G-Time Product

Contact Resistance	10 ohm Typical (Other Values Available)	10 ohm Typical (Other Values Available)	10 ohm Typical (Other Values Available)
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ELT

Seal	Hermetic 1X10 ⁶ sccs max. He @ 1 atm	Hermetic 1X10 ⁶ sccs max. He @ 1 atm	Hermetic 1X10 ⁶ sccs max. He @ 1 atm
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Velocity

Tilt

Turnover

Trembler

Disturbance

Style	TO-18 (Extended) with Formed Leads	TO-18 Extended with Linear Latching Contacts	TO-5 (Extended)	TO-5 Linear Latching Contacts
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Type	Linear Acceleration Linear Latching Contacts 1.0g to 2,000g	Linear Acceleration Planar Acceleration 2g to 4,000g Open 2g to 16,000g Closed	Linear Acceleration 0.3g to 100g	Linear Latching Contacts Linear Acceleration 2.0g to 18,000g
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Features	Normally Open Normally Closed Single Pole Single Throw	Normally Open Normally Closed Single Pole Single Throw	Normally Open Normally Closed Single Pole, Single Throw High Contact Rating Version Low Contact Resistance	Normally Open Normally Closed Single Pole, Single Throw High Contact Rating Version Low Contact Resistance
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Contact Rating	10mA to 1.0A (Other Values Available)			
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Contact Resistance	10 ohm Standard (Other Values Available)			
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Seal	Hermetic 1X10 ⁶ sccs max. He @ 1 atm			
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The CIRCOR Aerospace & Defense Motion Switch family is specification qualified, hermetically sealed, as light as 0.5 grams and designed for use in applications where reliability, weight and size are critical.

Typical Impact Switch Characteristics

Impact Switch Type



Style	TO-18	TO-5 ("Coned")	TO-18 ("Dimpled")	895 & 6895 Family of Switches for Cockpit Voice Recorders Lightweight Enclosure
Type	Impact Hemispherically Sensitive 25g to 250g	Tilt	Motion	Impact 1.5g to 5.0g 2 to 3 Axis Sensing
Features	Normally Open Contacts	Normally Open	Normally Open	Power Cut Off Upon Impact Normally Closed Normally Open Latching Relay
Contact Rating	200MA Continuous	50 mA to 500 mA (Other Values Available)	50 mA (Other Values Available)	28VDC and 110VAC Resistive Load: 5amp @ 28VDC 5amp @ 110VAC
Contact Resistance	10 ohm	10 ohm Typical (Other Values Available)	10 ohm Typical (Other Values Available)	28VDC and 110VAC Resistive Load: 5amp @ 28VDC 5amp @ 110VAC

➤ Switch Types

- Motion
- Miniature
- Acceleration
- Crash
- Impact
- Tilt
- Spin
- Launch
- Disturbance

➤ Active Military

- Hellfire II (patented)
- Hellfire
- SM-3 Missile
- SM-2 Surface to Air Missile
- Excalibur
- GMLRS/MLRS
- JDAM
- Military Fusing
- AIM-7 Sparrow
- AIM-9X
- Sea Sparrow
- TOW
- MK48 Torpedo
- FMU-139 Bomb Fuse
- FMU-143 Fuze
- FMU-152 Joint Programmable Fuze
- DAGR
- JAGM
- APKWS

➤ Active Aircraft

- Beechcraft
- Cessna
- Embraer
- Honda
- Bombardier

The Gold Standard in Kinetic Switches



CIRCOR Aerospace & Defense - New York Capabilities

- Laser Marking
- 2D Product Barcoding
- 3D Printing
- Rapid Prototyping
- CNC Machining for Rapid Prototyping
- 80,000g - Capable Centrifuges
- Engineering for Shock | Vibration | Lifecycle Testing | Accelerated Life Tests (Alts & Halts)
- Automatic Statistical Process Control (SPC) Data Collection
- Class 100 and Class 1000 Clean Room Capability
- Lean Manufacturing
- Six Sigma