

Active Area (contact)	Electrical junction comprising a multitude of contact a- spots through which electrical current passes from one connector component to the other.
Actuation Force	The force required to change a switch actuator from one position to another. Measured exactly when switch changes state.
Actuator	A movable part of a switch which causes a change in the electrical configuration of the switch.
Actuation	Operating or releasing a switch by depressing or releasing its actuator or rotating its shaft.
Air Gap	The minimum distance between separated mating contacts in their fully open position.
Alternate Action	A pushbutton switch style in which the electrical state of the switch is maintained between actuations of the plunger.
Alternating Current	A current, the direction of which reverse at regularly recurring intervals.
Ambient	Surrounding operating conditions external to the switch. This includes physical atmosphere, as well as the form and nature of applied electrical and mechanical loads.
American Wire Gauge	A standard system used for designating the size of electrical conductors. Abbreviated AWG. Based on specified ranges of circular mil area. American Gauge numbers have an inverse relationship to size.
Ampere	A unit of electrical current.
Antistatic Switch	An antistatic switch will withstand a specified potential without conducting between the actuator and any conducting element, usually terminal or bushing.
Arc	Gaseous electrical discharge between separated contacts of a switch, involving a stream of electrons, metal vapors and ions.
AWG	A standard system used for designating the size of electrical conductors. Abbreviated AWG. Based on specified ranges of circular mil area. American Gauge numbers have an inverse relationship to size.
Bifurcated Contact	A wiping movable contact consisting of spring fingers that grip the fixed contact.
Break	An interruption in a circuit. Denotes the number of pairs of separated contacts the switch introduces into each circuit it opens.
Butt Contact	A contact mechanism in which the movable contact makes contact with the stationary contact without wiping motion between the surfaces. Typical of toggle and pushbutton switches.
Cadmium Oxide	A compound added to silver to make it more able to resist welding.
Conductive Rubber	Elastomer filled with carbon or metallic particles which render the material electrically conductive.
Contact	The component of the switch that disengages to cause the actual circuit interruption.
Contact Configuration	Poles, throws, and sequence designated by alpha characters.
Contact Pressure	The amount of force holding the movable and stationary contacts together. While this should be termed Contact Force, by convention in the United States, it is called Contact Pressure.
Contact Resistance	The junction resistance between 2 contacts. Usually measured at contact terminals. It is the total resistance provided by the Construction and Film Resistances.
Contact Wipe	Sliding of one contact on another during actuation of switch.
CSA	Canadian Standards Association
Current-Carrying Capacity	Specified maximum current which can flow through the switch contacts. Determined by contacts size, shape, material and the force with which they are pressed together.
Current Rating	The nominal or name plate current capacity of a device. The maximum current rating, listed by UL, is the current that can be carried continuously without causing the temperature of the switch terminals to rise more than 30 °C above the ambient temperature.
Cycle	The complete program of operations required to return switch to the same condition that existed at the beginning of the cycle.
Contacts	Switch element, which directly provide make-break operation (circuit interruption).
Detent	A mechanism intended to hold actuator and contacts in the fixed position after the actuation force is removed or reduced to less than specified value. It also identifies actuator position by means of tactile feel.
Dielectric	Non-conductive material, electrical isolation.
Dielectric breakdown	Rupture of insulating material when the electric stress exceeds the dielectric strength of the material (Voltage Breakdown).
Dielectric strength	A specific voltage that a switch can withstand without leakage current between insulated conductors. Most often applies to insulator between switch terminals and metal exposed to operator of the switch.
DIP	Dual-in-line package refers to a component with two rows of PC terminals. The terminals most commonly have pitch of 0.100" and located at 0.30" across the package.
Dome	Dome-shaped metal elastomer switch component used as tactile element/return spring.
Dry Circuit	Low power level or Logic circuit. Power levels do not cause arcing, melting or softening of contacts.
D.W.V.	Dielectric Withstanding Voltage.
Electrical Life	Life of a switch (number of operations) under a specified combination of electrical load, actuation, environment, and criterion of failure.
EMC	Electro-Magnetic Compatibility
EMI	Electro-Magnetic Interference
Erosion, Contact	The transfer or vaporization of contact material resulting from the arc due to breaking or opening the circuit.

Glossary

ESD	Electrostatic discharge, the static charge that is built up that can amount to several thousand volts. Can destroy electronic components.
Form A	A single pole, single throw, normally open contact or SPST NO.
Form B	A single pole, single throw, normally closed contact or SPST NC.
Form C	A single pole, double throw contact or SPDT.
Force, Contact	The force, holding closed contact together.
Gap	The shortest straight-line distance between two separate contacts.
Ground	Used to indicate a negative side or ground side of a battery or electrical supply (ac or dc).
Hall effect	A voltage generated across a current carrying conductor, when the conductor is placed in a magnetic field.
Heat Rise	An indirect measurement of a contact resistance used by rating agencies. The temperature rise of a contact carrying a prescribed current is measured to determine acceptable limit.
Horse power, HP	Unit of power. 1 HP=736 W=0.36 kW
Horse Power Rating	UL switch rating for the adequate motor load. Intended to simulate lock rotor conditions. Typical HP rating is 1/4HP, 1/2HP, 3/4HP, 1 HP at the nominal voltage. Switch is tested with specified current for the specified number of cycles; e.g. 1/4 HP tested with 35A current for 50 cycles.
Housing	A three dimensional enclosure, a container for a switch.
Hz	Unit of measure of frequency. Reciprocal of time period: 1 Hz= 1/sec
Inrush current	Current that drawn by electrical motor during start-up transitioning or by a lamp filament during heating to its operating resistance.
Insulation Resistance	The electrical resistance between two normally insulated parts; measured at a specific high potential (1000 Vrms). Typical value for switches is 1 G .
Life Electrical	The life of a switch, controlling a specified electrical load.
Life Mechanical	The number of cycles of operation that a switch will perform with no voltage applied to the contacts.
Make	Indicates that a switch has completed the dynamics of closing an electrical circuit.
Make & Break Contacts	Contacts that make/break current flow. They are differentiated from those that operate principally in a sliding mode.
Make-before-Break	The moving contact establishes a new circuit before interrupting the circuit previously established, while transferring to another position.
Momentary Action	The circuit is either opened, or closed, only as long as the switch is actuated.
Non-shorting contacts	Break-before-make.
Normally Closed	A term used to describe contacts which establish a circuit when in the normal position.
Normally Open	A term used to describe contacts which interrupt the circuit when in their normal position.
Passive components	Components which have no gain characteristics, such as capacitors and resistors.
Shorting Contacts	Make-before-break. Referred to rotaries and slides.
Sliding Contact	Contacts that make or interrupt current flow by means of tangential motion (rotary, slip ring).
Slow make-slow break	Purposely designed switch mechanism ("see-saw" type) with relatively slow operation to provide a slight time delay, permitting the ac wave to go through its zero energy level (natural current zero duration is 8.35 msec).
Pitch	The spacing between centers of adjacent leads.
Pole	The number of completely separate circuits that can pass through the switch at one time.
Resistance, electrical	Ability of the element, component, conductor or a system to obstruct current flow.
Resistance, insulation	Resistance of electrical isolator between two electrodes, defined by Ohms Law as result of division of the applied voltage and measured current. Not to be confused with dielectric strength.
Resistivity	(specific resistance): property of material that impedes electrical current when a sample of specified unit dimensions is considered.
Surface Mounting (SMT)	A method of soldering packages directly onto the surface of printed-circuit boards without insertion of the leads through hole in the board.
Switch Abbreviations	SPST: Single-pole single-throw SPDT: Single-pole double-throw DPST: Double-pole single-throw DPDT: Double-pole double-throw
Throw	Denotes the number of different circuits that each individual pole can control.
Total Travel	The sum of pretravel and overtravel for snap-and push-button switches.
Truth Tables	The output code or connection sequence from a thumbwheel switch.
UL	Underwriters Laboratories
VDE	Verband Dentscher Elektrotechniker Germany's equivalent to USA Underwriters' Laboratories.
Voltage Drop	Change in voltage that results from a current passing through a device. For switches Voltage drop is typically referred as Contact drop DV.
Wiping contact (action)	Lateral travel of movable contact over fixed contact while pressure between the two contacts exist. The action helps clean the contacts of contamination and oxidation film. It is very important in low energy circuits applications.