

Alternating current (AC) An electric current that reverses its direction regularly and continually. The voltage alternates its polarity and direction at current flow negative to positive. AC current.

American National Standards Institute (ANSI) A federation of trade, technical and professional organizations, government agencies and consumer groups that coordinates standards development publishes standards and operates a voluntary certification program.

American Society for Testing Material (ASTM) An organization that tests materials and attempts to set standards various materials for industry.

American Wire Gauge (AWG) The standard system in the United States for designating wire (diameter of metal).

Ampere (amp) The unit of measurement for the rate of electrical current flow characterized by the symbols I (in Ohm's law formulas) or A. One ampere is the current flowing through one ohm of resistance at one volt potential.

Annunciator An audible and visual signaling device.

Anti-passback A means of preventing the sharing of an access control credential. Anti-passback can be based upon disabling a credential for a period of time after it is used, or by remembering the credential-holder's in/out status.

Audit trail A means of recording and saving access control event history for later review.

Authorized release device A device that when activated allows authorized persons to enter or exit monitored and controlled openings without triggering an alarm. The authorized released may be a keyed switch, a card reader, a digital code reader and so forth.

Badge, Badging Use of a card for identification purposes. Cards used to unlock doors may sometimes be printed to serve also as I D. badges.

Battery standby A means of automatically switching over to stored battery power during local primary power failure.

Biometrics The measurement of a physical trait that is unique, such as a fingerprint, hand geometry or iris pattern. In access control this is used to identify authorized users and to grant or deny access.

Break To open an electrical circuit.

Brownout Low line voltage that can cause misoperation of and possible damage to equipment. For example a motor that tries to start at low voltage can actually be in a lock-rotor condition and can overheat.

Cam A rotating eccentric piece attached to the end of a cylinder plug to actuate a lock or latch mechanism.

CAT 5 A very common cable type that consists of several twisted pairs in an overall protective jacket. Used for network cabling and many access control data functions.

Circuit The path through which electrical energy flows.

Circuit, closed (1) An electrical circuit in which current normally flows until interrupted by opening of a switch-type electronic component. (2) A circuit or switch in which the contacts are open during normal operations.

Circuit, open (1) An electrical circuit in which current does not flow until permitted by the opening of a switch or a switch-type electronic component. (2) A circuit or switch in which the contacts are closed during normal operations.

Closure The point at which two contacts meet to complete a circuit.

Coil, electric Successive turns of insulated wire that create a magnetic field when an electric current is passed through them.

Conductor Material with the ability to carry electric current. The term is also used for an electric wire.

Conduit A tube or trough for protecting wires and cables. It may be a solid or flexible tube in which insulated electrical wires are run.

Connector Generally, any device used to provide rapid connect/disconnect service for electrical cable and wire terminations.

Contacts electrically conductive points, or sell points, used to make or break an electrical circuit mechanically.

Continuous duty Refers to a device or a control that can operate continuously with no off or rest periods.

Controller, Control Panel A circuit board or group of circuit boards that contain programming for the operation of an access control or other system.

Current The flow of electrons through an electrical conductor. Current is measured in amperes.

Deadbolt A bolt operated manually and not actuated by springs. When locked, the bolt cannot be forced back. A deadbolt is operated (projected and retracted) by a key cylinder or lever handle.

Deadlatch A latch in which the latchbolt is positively held in the projected position by an auxiliary mechanism.

Decibel (dB) An increment of measurement used to compare measured levels of sound energy (intensity) to the apparent level detected by the human ear, expressed as a logarithmic ratio.

Deenergize To remove power.

Delay A period of time before or during an event.

Delay on break A term used to describe a mode of operation relative to timing devices. The delay begins when the initiate switch is opened (delay break of initiate switch).

Delay on energization A term used to describe operation relative to timing devices. The delay begins when the initiate switch is closed or application of power to the input.

Direct current (DC) Electrical current that travels only in one direction and has negative and positive polarity. It may or may not have an AC ripple component. DC sources that are unfiltered should be referred to as full-wave or half-wave rectified circuits.

Door open time The time that an access control device unlocks an opening for entry, usually programmable.

Door status switch A DSS is a switch used to monitor whether a door is in an opened or closed position.

Double pole, double throw, (DPDT) A term used to describe a switch or relay output contact form (2form C) in which two separate switches operating simultaneously, each with a separate normal closed contract and a common connection. This form is used to make and break two separate circuits.

Dry contract Metallic points making (closing) or breaking (opening) a circuit. The switch circuit must have its own source of power and is merely routed through the dry contacts.

Egress Passage through an opening in the exit direction, especially passage that leads out of a structure.

Electric Strike A door unlocking device that is installed in the door jamb and that works in conjunction with a mechanical lock or latch mechanism.

Electrified Lock A mechanical locking device that has been modified to allow an electric circuit to lock or unlock it.

Electromagnetic Lock (Magnetic Lock, Mag Lock) A device that locks/unlocks an opening without moving parts, using pure electro-magnetic attraction.

Energize To apply power.

Exit Switch/Sensor/Bar A type of switch that is designed to facilitate egress through an opening. Usually used with electromagnetic locks, these come in a variety of types.

Facility Code In card access, a portion of the identifying characteristic of an access credential that is common to a group of users in secured facility.

Fail-safe An electric lock that automatically unlocks with any power interruptions.

Fail-secure An electric lock that requires power to unlock. (Most fail secure devices are always unlocked for egress, however.)

Fire door A door that has been certified as a fire and smoke barrier. Special rules govern fire doors, including permissible hardware that can be installed.

Fire door latch A latch that has a 3/4 inch throw and an antifriction retractor.

Form C contact A relay or switch mechanism that contains three terminals (normally open, common, and normally closed).

Fuse A protective device, placed in a circuit as a safeguard, that contains a metal. When the current flow becomes too great, the metal melts, thus breaking the circuit.

Gold A very soft, ductile material that is noted for its resistance to corrosive media. It is used primarily as a coating or plating.

Ground A conducting connection between an electrical circuit and the earth or other large conducting body to serve as an electrical ground, thus making a complete electrical circuit.

Ground, earth The portion of a circuit that is connected to a buried metallic object such as a grounding rod or water pipe.

Input voltage The designed source requirement needed by equipment in order to operate properly.

Inrush The initial surge of current through a load when power is first applied. Lamp loads, inductive motors, solenoids, and capacitive loads all have inrush or surge current. Resistive loads, such as heater elements, have no inrush.

Interlock A system of multiple doors with controlled interaction. Interlocks are also known as light-traps, air-traps, man-traps, and sally-ports (see security interlock).

Intermittent duty solenoid A solenoid designed to be energized for short periods of time. Continuous operation may damage an intermittent duty solenoid.

Keypad In access control, usually refers to a numeric input device used to identify a user by PIN (personal identification number).

Latch The locking of a circuit by means of a holding contact; used in relay logic when a momentary initiation is required.

Light emitting diode (LED) A diode, a solid-state device, that gives off virtually heatless colored light when electric current is passed through it. LED's are very efficient and long lasting and are often used for digital readouts and annunciators. Common colors include red, green, and amber.

Line drop A voltage loss occurring between any two points in a power or transmission line. Such loss or drop is due to the resistance, reactance, or leakage of the line. (also referred to as line loss).

Line voltage The voltage existing in a main cable or circuit, such as a wall outlet.

Listed Refers to equipment or material included in a list states that the equipment or material met appropriate standard or has been treated for and suited to a specific application.

Load Any device that consumes electrical power; the amount of power required for operation or circuit or device.

Load rating A control specification outlining the type of load the minimum (min) the maximum (max) currents and the voltage.

Local alarm A visual or audible signaling device located at a monitored door, window or other opening.

Lock status sensor (LSS) Relay type to operate the LED with an SPDT switch to indicate low voltage and tampering of the lock face locally or to a remote monitoring location.

Maintained contact switch A switch designed for applications requiring sustained contacts but with provision for resting.

Mode of operation The specified operation condition of a switch, lock, door system, and so forth.

Momentary duty lock An electric lock equipped with a solenoid that is energized only momentarily.

Momentary switch A spring loaded contact that when pressed, closes two contacts. When pressure is removed the contacts open.

Motherboard A master printed circuit board used to interface the activities of individual printed circuit boards and the devices being controlled monitored. The motherboard is usually located on the back of a control panel assembly; individual printed circuit boards plug into it.

National Electrical Code (NEC) A consensus standard published by the National Fire Protection Association (NFPA); commonly called "code".

Noise The unwanted and/or unintelligible signals picked up on a cable circuit.

Normally open (NO) The condition or position of contact prior to initiation or energization, in this case, an open condition.

Normally Closed (NC) The condition or position of contact prior to initiation or energization, in this case, a closed condition.

Ohm The unit of measurement of resistance.

Operating voltage The voltage by which a system operates; a nominal voltage with a specified tolerance applied; the design voltage range necessary to remain within the operating tolerance. For example, for a system specified 120 volts +/- 10 percent of normal, 120 volts is the nominal voltage and the design voltage range is 108 to 132 volts AC.

Output voltage The designed power source produced by a power supply to operate equipment.

Passive Infrared Detector (PIR) A motion sensing device, often used for intrusion detection systems, can also be used to unlock a door as someone wishing to egress approaches.

Potentiometer (pot) Variable resistor, manually adjustable.

Primary The transformer winding that received energy from a supply circuit.

Printed circuit board A means of making electrical interconnections without using insulated wires. Printed circuit boards provide a supporting and insulating medium for component and conductors in a form that is readily adaptable to mat assembly.

Proximity A common access card technology, proximity uses radio frequency to communicate between a card or tag and a reader without physical contact.

Rated voltage The maximum voltage at which electric component can operate for extended periods without undue degradation or safety hazard.

Rectifier A solid-state electrical device that will allow current to flow in one direction only. It is designed to convert alternating current to direct current.

Reader A device that obtains data from an access credential (card, tag, etc.) and send the data to a controller for an access decision. (Some units combine reader and controller in one device.)

Recycle time The time needed to reset and rein the timing function and remain within the specified timing tolerance. Recycle time is generally specific "during timing" or a "after timing".

Regulated power supply A power supply provides a constant output regardless of voltage variation.

Relay An electrically controlled device that opens and closes electrical contacts to effect the operation of other devices in the same or another electrical circuit.

Remote alarm A visual or audibly signaling device used to signal violations at locations removed from the central control station or monitored open. For example, a remote alarm may be placed roof, in a stair tower, or at guard station outside a building.

Remote reset A switch located at a monitored opening. If a violation occurs, the alarm at the control console can not be turned off until the?? is secured and the remote reset is activated. Its purpose is to ensure the inspection of an opening that has been violated or left open.

Reset time The time required to return the output to its original condition.

Resistance The opposition to the flow of an electric current (measured in ohms); the reciprocal of conductance.

Resistor A circuit element whose chief purpose opposes the flow of current, causing a decrease in voltage.

Schedule Programming of an access control system that automatically locks and unlocks doors, or that performs other functions based on day and time.

Secondary The transformer winding that receives energy by electromagnetic induction from primary. Generally the output of the transformer to the low voltage device.

Security condition sensor (scs) A sensitive crystal relay to operate the LED with an SPOT switch indicate low voltage and tampering of the lock locally or to a remote monitoring location. Primarily used in high security applications.

Security interlock A multidoor system in which doors are normally closed and locked; releasing doors disables the releases for release for all other doors until the first door is closed and relocked (see interlock).

Short An improper connection between current-carrying wire and neutral or ground.

Shunt Electrical term for bypassing. In access control it is common to shunt an alarm sensor, such as a door position switch, when a door is about to be opened for valid access or egress.

Single pole, double throw (SPDT) A term used to describe a switch or relay contact from (1form C), that has a normally open and a normally closed contact with a common connection.

Single pole, single throw (SPST) A switch with one moving and one stationary contact, available either normally open (NO) or normal closed.

Solenoid An electro-mechanical device that operates the lockbolt. When electricity is applied, a mechanical motion is obtained that moves the bolt.

Spike A momentary increase in electric current Spikes can damage electronic equipment.

Springlatch A plain latch switch, a beveled latchbolt that is activated by springs.

Standalone In access control, this term usually refers to a device that identifies the user (keypad, reader, etc.) and that makes an access decision. Some standalone units also contain a locking device and/or a power source.

Strike A plate mortised into or mounted on the door jamb to accept and restrain the bolt when the door is closed. In some metal installations of deadlock, the strike may simply be an opening into the jamb. (Synonym: keeper)

Switches Devices that make or break (open or close) connections in electrical or electronic circuit. In computing systems they are also used to make selections (the toggle switch, for example, completes a condition jump). Switches are usually manually operated but can also work by mechanical, barometric, hydraulic, or gravitation means.

Switch, momentary A switch that, when activated, automatically returns to its original position afterwards.

Switch, maintained A switch that, when activated, maintains its activated position until it is unactivated.

Switch, normally open A switch that, when not energized, is open and does not permit current to flow.

Switch, normally closed A switch that, when not energized, is closed to form a path for current.

Time-and-Attendance A system for recording worker arrival and departure times for the purpose of payroll or other management functions.

Time Zone A period of time that has been programmed into an access control system during which authorized users either can or cannot gain access.

Transformer An electric device that changes voltage in direct proportion to current and in inverse proportion to the ratio of the number of turns of primary and secondary windings. The output low-voltage side is called the transformer secondary.

Transient Any increase or decrease in the excursion of voltage, current, power, heat and so forth, above or below a nominal value that is not normal to the source.

Twisted Pair A cable that consists of one or more pairs of insulated wires that are twisted around one another. Twisted pair is often specified for circuits carrying data.

Volt (V) A unit of electromotive force, It is the difference of potential required to make a current of one ampere through a resistance of one ohm.

Voltage The term most often used (in place of electromotive force, potential, potential difference or voltage drop) to designate electrical pressure that exists between two points and is capable of producing between the two points.

Voltage drop Voltage loss experience by electric circuit due to two principal factors: (1) wire size and (2) length of wire runs.

Volt/amp (VA) rating The product of rated input voltage multiplied by the rated current. This establishes "apparent energy" available accomplish work.

Watt The common unit of electrical power. A watt is dissipated by a resistance of one ohm through which one-ampere flows.

Zone A specific of protections; a portion of a large protected area.