



Designation: F967 – 03

# Standard Practice for Security Engineering Symbols<sup>1</sup>

This standard is issued under the fixed designation F967; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This practice utilizes symbols to depict security systems and equipment requirements for architectural or engineering drawings that are produced either manually or by computer aided design (CAD). The symbols depicted include some symbols that have already been somewhat universally accepted or that have already been adopted by a standards-writing body, such as by the National Fire Protection Association.

1.2 It is not proposed that all of the symbols need to be utilized since the level of detail required for drawings is likely to vary. Generic symbols of a class of security device may be sufficient in some instances. Moreover, the need to provide a measure of security in the actual drawing may also suggest a need to utilize a generic symbol rather than to depict the exact device being installed.

1.3 In the event that a greater level of detail is required, it is possible to combine many of the symbols to create new symbols that achieve the desired level. While some combinations of symbols are shown, it would be impractical to attempt to depict every conceivable combination of symbols. It is also the intent of this practice that the symbols be capable of being continuously expanded and modified as the industry state of the art changes or as emphasis varies. For example, little attention is given to document security in the security symbols since such requirements are not generally fully met during construction periods but are rather developed and provided for subsequently. Since much of this equipment is not installed but is “placed,” such as furniture, there is only one symbol proposed (for example, for document shredders).

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*



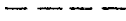



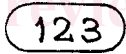
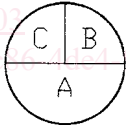





<sup>1</sup> This practice is under the jurisdiction of ASTM Committee F12 on Security Systems and Equipment and is the direct responsibility of Subcommittee F12.10 on Systems Products and Services.



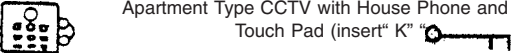



















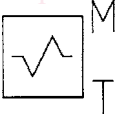

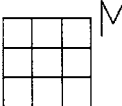

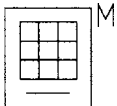

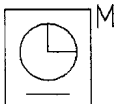





Current edition approved Sept. 10, 2003. Published October 2003. Originally approved in 1986. Last previous edition approved in 1995 as F967 – 95. DOI: 10.1520/F0967-03.


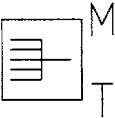


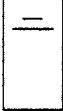

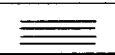

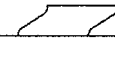





## 2. Keywords

2.1 computer aided design; security engineering; symbols






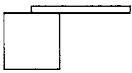

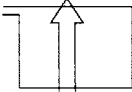

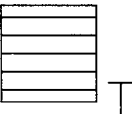

### 1. ANNOTATION

	Existing Equipment
	Point and Zone Indicator
	Connection Between Devices (for example, button and lock)
	Detail and Reference Drawing
	Door Number (if more than one door in room, use sub-letter)
	Room or Space Number
	Device Number (reference device schedule)
	Device Reference A = Drawing Sheet B = Detail C = Device/Zone Number
<b>2. ACCESS CONTROL</b>	
	Generic Card Reader (reference door schedule or specifications for type): P = pedestal mount
	Card Reader with Touch Pad
	Token-Type Access Control
	CCTV and Card Reader
	CCTV and Intercom

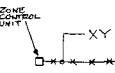


	Split Lens CCTV with ID Card Receptacle		<b>3. ANNUNCIATION: CONSOLE/PANEL</b> Strip (Tallyroll) Printer
	Apartment Type CCTV with House Phone and Touch Pad (insert "K" key, as appropriate for key switch)		Printer
	Biometric Access Control Device (reference door schedule or specifications for type)		Time Clock with Card Reader
	Touch Pad Lock or Device, Mechanical or Electronic (reference door schedule for type)		Central Processing Unit
	Turnstile (reference door schedule for type and function)		CRT (cathode ray tube/display)
	Post and Rail (rope)		Static Map Display (for dynamic map display, use CRT symbol)
	Generic Screening Device X: M = Metal Detector E = Explosive Detector X = X-ray T = Tag Detector (EAS)		Keyboard
	Sally Port		Jeweled Signal Light
	Indicating Interlocking Doors		Panel Light Indicator (R = Red, A = Amber, W = White, V = Violet, G = Green, Y = Yellow, B = Blue, O = Orange)
	Indicating Space is a "Man-Trap"		Multiplex Panel
	Card Access Reader B = Barcode W = Wiegand P = Proximity M = Mag Stripe F = Elevator Floor Call H = Elevator Hall Call T = Token S = Smart Card		Panel Sound Indicator
	Biometrics Access Control Device H = Hand Geometry F = Finger Print V = Voice R = Eye Retina I = Eye Iris		Panel Sound and Light Indicator
	Keypad Device		Reset
	Card Reader with Keypad		Push-Button, Momentary/Make (circuit closing)
	Card Reader with Time and Attendance		Time Delay Module
			Control Device Module, Door Release
			End-of-Line Device Module
		10K Ω	Resistance (Ohms) (indicate value; that is, 10 000 Ω)
		K	Thousands
			Dry Contacts, Set
			Contacts with Current

	Power Switch		Ditch and Berm Barrier
	Field Panel T: C = Card Reader A = Alarm		Roll-Up Gate
	Control Panel T: B = Burglar F = Fire P = Perimeter D = Door		Sliding Gate
	Central Processing Unit		Swing Gate
	Keyboard		Traffic Arm
	Printer		Traffic Lights (use "M" for miniature)
	Power Supply T: L = Lock C = Camera P = Panel I = Intercom		Generic Vehicle Sensor (reference specification or schedule for type)
			Tire Treadle
			Security Grill with Emergency Release
			Security Grill
			Generic Security Screen
			Repair/Secure Window Operator (use "R" for repair, "S" for security)




**4. ANNUNCIATION: DEVICES**















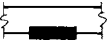

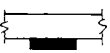

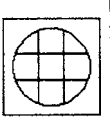

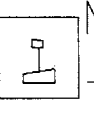

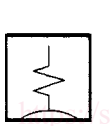

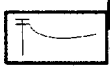

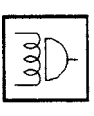



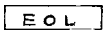











	Annunciation Device, Generic		Turnstile
	Buzzer		Revolving Door
	Generic Bell		Traffic Arm
	Generic Chime		Vehicle Loop Detector
	Generic Security Horn (differentiate from fire horn; use also for local alarm)		Security Window Screen T: S = Shade B = Blind (see Section 10 for alarm screen)
	Audio Device T: L = Lock C = Camera I = Intercom		



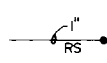

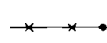

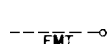








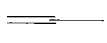




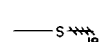



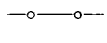



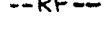









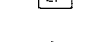

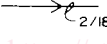


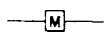



**5. BARRIERS AND VEHICLE CONTROLS**




















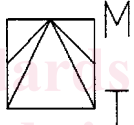

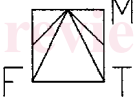

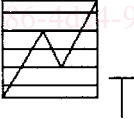









	Generic Fence (reference type in specification or schedule) X: (Fence Type) Y: (Sensor Type, see below)
	Generic Masonry (reference type in specification or schedule) X: C = Chain Link; W = Welded Mesh; B = Barbed Top; R = Razor Ribbon Y: E = Electrostatic; T = Taut Wire; V = Vibration
	Ditch Barrier

**6. COMMUNICATIONS**

	Telephone Handset
	Intercom, Master, Hands-Free (use "S" for slave or sub)
	Intercom, Push-to-Talk

	Generic Speaker (reference specification or schedule for type)		Battery
	Nurse Station, Master, Wall Mount (use "D" for desk mount)		Stand-By Battery
	Nurse Call System Device, Generic		Capacitor
	Paging System Device, Generic		Circuit Breaker
	Private Telephone System Device, Generic		Ground
	Public Telephone System Device, Generic		Circuit Return, Common
	Two-Way Radio Base Station		Circuit Return, Frame
	Flush Mount Panel Board/Cabinet		Relay, Normally Open
	Surface Mount Panel Board/Cabinet		Relay, Normally Closed
	Intercom T: M = Master S = Substation		Relay
	Two-Way Radio Microphone		Transformer
	Cellular Transmitter		Transformer (on floor plan)
	Telephone Dialer T: D = Digital Communicator V = Voice Dialer		Rectifier
	Fiber Optic Module T: Tx = Transmitter R = Receiver T = Transceiver		Diode
	<b>7. ELECTRICAL</b> Resistor		Visual Signaling Device
	End-of-Line Device		Fuse
	Amplifier		Motor
	Antenna		Generator
	Antenna, Loop		Junction Box, in Ceiling
			Junction Box, Wall
			Electrical Outlet, Wall, Duplex
			Triplex Receptacle
			Intersection, No Connection

	Intersection, Connection		Form A, SPST, N.O.
	Conduit Run, Exposed, Turn Down (rigid steel—1 in.)		Form B, SPST, N.C.
	Conduit Run, Exposed, Armored		Form C, SPDT
	Conduit Run, Concealed, Turn Up (EMT)		SPST (Single-Pole, Single-Throw)
	Conduit Run, Exposed, Turn Up (PVC)		SPDT (Single-Pole, Double-Throw)
	Booster		DPST (Double-Pole, Single-Throw)
	Shielded Cable		DPDT (Double-Pole, Double-Throw)
	Coaxial Cable		
	Conductor, Twisted Pair		
	Conductor, Security System (4 conductors, No. 18 AWG)		8. LIGHTING Incandescent Light Fixture, Flush, Ceiling Mount
	Fiber Optic Cable		Incandescent Light Fixture, Flush, Wall Mount
	Local Radio Signal Link		Incandescent Light Fixture, Surface, Ceiling Mount
	Long Range Radio Signal Link		Incandescent Light Fixture, Surface, Wall Mount
	Power Panel		Fluorescent Fixture, Ceiling Mount
	Home Run, 2 Conductors, 18 AWG (number of arrows indicates number of circuits)		Dedicated Security Lighting, Low Pressure Sodium (use other designators for other types, that is, MV = mercury vapor)
	Feeder		Minimum Foot-Candles or Lamberts this Area
	Manhole		Spotlight/Floodlight
	Rotary Switch		Outdoor Strobe Light
	Toggle Switch, SPST		Illuminate this Area
	Toggle Switch, SPDT		Infrared Illuminator
	Nonlocking, Momentary Circuit Closing (make)		Street Light, Pole-Mounted
	Nonlocking, Momentary Circuit Opening (break)		
	Transfer		
	Locking, Circuit Closing (make)		
	Locking, Circuit Opening (break)		
			9. MISCELLANEOUS Security Container; Safe; File Cabinet
			Document Destroyer
			Safe, Tack-Welded to Structural Member

	Signage		Radar
	Bar/Grill/Seal this Location		Sonar
	Timer		Seismic Sensor (local stimuli, point type)
	Gun Port		Strong Motion Seismic Sensor (earthquake)
<b>10. SENSORS</b>			
	Generic Volumetric Motion Sensor (Mono) X: M = Microwave I = Passive IR U = Ultrasonic D = Dual Tech		Electronic Tag Sensor
	Generic Volumetric Beam Sensor (Bi-Static) X: M = Microwave I = Infrared P = Photo-cell		Local Control Unit for Sensors
	Generic Glass Breakage Sensor T: A = Audio S = Shock		Explosive Dye-Pack Antenna
	Capacitance Sensor		Break-Dowell Grid
	Temperature Sensor		Indicates "Lace this Partition"
	Pad/Mat Switch		Motion Detector T: M = Microwave IR = Infrared U = Ultrasonic X = Request-for-Exit D = Dual Technology
	Bullet-Resistant Polycarbonate Glazing with Alarmed Conductive Layer		Bi-Static Beam Sensor T: M = Microwave I = Infrared F: TX = Transmit RX = Receive
	Water Sensor		Security Screen with Alarm T: S = Shade B = Blind
	Water Motion Sensor		Screening Device T: M = Metal Detector E = Explosives Detector X = X-Ray T = Tag Detector (EAS) A = Access
	Generic Buried Sensor X: S = Seismic L = Leaky Coax M = Magnetic		<b>11. CCTV</b> Generic Camera X: P = Pan; A = Auto-Pan; PT = Pan/Tilt; C = Concealed Y: F = Fixed; Z = Zoom; S = Split
	Strain Sensor	Refer to camera schedule and specification for:	
	Vibration/Shock Sensor (nonfence type)	<ul style="list-style-type: none"> <li>· Type (CCD, film, intensified)</li> <li>· Size (1/8 in.; 1/2 in.)</li> <li>· Enclosure (environmental, explosion proof, "scoop")</li> <li>· Mount (wall, ceiling, pole)</li> <li>· Lens (type, size)</li> <li>· Pan Pre-Sets</li> <li>· Associated Alarm Switching</li> <li>· Signal Transmission</li> </ul>	
	Sonic Sensor (audible, doppler shift)		
	Sound Discriminator (responds to frequencies) (see also glass break sensor)		
	Listen-in Audio Sensor		