SECURITY AND LAW ENFORCEMENT

1. REASON FOR ISSUE: This incremental update replaces Appendix B, "Physical Security Requirements and Options," VA Directive and Handbook 0730/1, dated August 24, 2004. This version updates and improves physical security requirements, and implements recommendations in the Office of Inspector General's "Audit of the Veterans Health Administration's Domiciliary Safety, Security, and Privacy" Report No. 08-01030-05, Issued October 9, 2008.

2. SUMMARY OF CONTENTS/MAJOR CHANGES: VA Directive 0730/1, "Security and Law Enforcement," Appendix B, "Physical Security Requirements and Options" is revised and updated as follows:

    a. Added special security requirements for VA domiciliaries and long-term care facilities (paragraph 6);

    b. Updated security requirements and options for pharmacies and consolidated mail-out pharmacies (matrix, page B-1)

    c. Added and revised security requirements for Child Care Facilities, Electronic Fingerprint Capture/PIV ID Production Equipment (matrix, page B-1, also paragraph 3);

    d. Added mail room security requirements (paragraph 7);

    e. Added Space Key Control requirements (paragraph 8)

    f. Updated Physical Access Control System Requirements (Item Q)

3. RELATED HANDBOOK: VA Handbooks 0730 and 0730/1, "Security and Law Enforcement."

4. RESPONSIBLE OFFICE: Infrastructure Protection and Policy Division, Office of Security and Law Enforcement, Office of Operations, Security and Preparedness, is responsible for the material contained in this Appendix.

5. RESCISSION: Appendix B of VA Directive and Handbook 0730/1 is rescinded.

CERTIFIED BY: **BY DIRECTION OF THE SECRETARY**
                 OF VETERANS AFFAIRS

/s/   /s/
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PHYSICAL SECURITY REQUIREMENTS AND OPTIONS

(X) - Applicable Requirements,   (O) - Optional Measures

Location	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Canteen Retail Store	X	O	X	X	X					X	X					X	X	X	
Canteen Storage Area	X	O	X	X	X					X	X				O	X	X	X	O
Canteen Office	X	O	X	X	X		X			O	X					X	X	X	X
Agent Cashier	X		X	X	X		X			O	X					X		X	X
Pharmacy Drug Storage Room	X	X	X	X	X			X	X	O	X		X				X	O	
Pharmacy Operations Area (within pharmacy perimeter)	X		X	X	X	X				O							O	X	
Consolidated mail out Pharmacies (CMOP)	X	O	X	X	X				X	O	X						X	X	
Veteran Records-Long Term Storage	O	X	X	X	X						X						Q O		
Warehouse Storage/ Bulk	O	X	X	X	X						X				O		X	O	
Primary Inventory (Medical Supplies)	O	X	O	O	O					O	X				O		O	O	
Laundry Plant	O		X	O	O						X						X		
Central Linen Issue	O		X	X	X						X						X		
New Linen Storage	X		X	X	X						X						X		
IRM	X		X	X	X					O	X						X	X	
Telephone Equipment Room	X		X	X	X					O	X						X		
Animal Research Facility	X		X	X	X				O	O	X				O		O	O	X
Ward and Treatment Rooms												X	X	X	O		O	O	
Medical Media Equipment Rooms	X	X	X	X	X					O	X					X	X		
Evidence Storage	O	O	X	X	O					O	X				O	O	X		
Weapon Storage/Armory	X	X	X	X	X					O	X				O	O	X		
Research/Clinical Labs[1]	O	O	O	O	O						X	X	X				X	O	
Radiation-High-risk[2]	O		O	O	O					O	X						X		
Radiation-Low-risk[3]	O		O	O							X						X		
Commercial Electrical Power Connections[4]	X	O	X	X	O					O	X								X
Commercial Telecommunication and Data Connections[4]	X	X	X	X	X					O	X						X		O
Compressed Medical Gas Bulk Storage (including LOX or propane)[4]	X	X	X	X						O	X						O		X
Child Care Facilities	X		X		X					X				X			X	O	X
Electronic Fingerprint Capture/PIV ID Production Equipment			X	X							X						X		

[1]Where substances on the CDC or VA watch list are stored, maintained or produced

[2]Location or room where the total activity of a single radionuclide with a half-life of more than three days or is more than one Curie is received or stored.

[3]Any location other than defined as "radiation high-risk" where radioactive materials and/or radiation sources are received, stored or used.

[4]Where located outside of buildings, will have a seven foot tall (minimum) fence and be well lit during hours of darkness.

1.   REQUIREMENTS AND OPTIONAL MEASURES DEFINED. The following are minimum acceptable standards. These standards may be exceeded if indicated by a risk assessment. Facilities should consult with the OS&LE when planning major security projects. Requests for waivers from these standards may be addressed to the Infrastructure Protection and Policy Division of OS&LE (07B1C). Such requests will include:

   a. Facility or other VA activity identification

   b. Full description of the project, with a VA point of contact

   c. Specific standard for which the waiver is requested

   d. Suggested alternative mitigation for the project

   e.   Please note any Federal or other standard that addresses the alternative mitigation.

   f. Expected benefit of the alternative mitigation, including cost savings (if any.) An assessment of whether the alternative mitigation will meet the Department's requirement to protect people, property and assets.

   g. OS&LE will review the request and return a response within 14 calendar days of receipt.

2. PHYSICAL SECURITY REQUIREMENTS AND OPTIONS MATRIX GUIDE

   a. Windows. When below 12 m (40 ft.) from ground level or the roof of a lower abutment, or less than 7.5 m (25 ft.) from windows of an adjoining building, or accessible by a building ledge leading to windows of other floor rooms, security mesh, screening for windows is required. Security measures that exceed these requirements may be authorized in writing by OS&LE. Required specifications for stainless steel security mesh screening are:

   (1) All #304 stainless steel woven mesh 0.7 mm (.028 in.) wire diameter, with tensile strength of 15 kg/mm (800 pounds per linear inch).

   (2) Mesh 12x12 per 25 mm (1 in.) with main and sub frames of 2.7 mm (12 gauges) carbon steel with baked enamel finish and internal key locking slide bolts.

   b. Walls. Exterior walls of brick and masonry construction are acceptable. Exterior walls which are composed of wood frame and siding require an interior backing of steel security screen mesh or sheet partition. Pharmacy and Agent Cashiers perimeter walls shall be full height, floor to underside of slab above. Interior walls containing dispensing windows shall be a minimum of 100 mm (4 in.) solid concrete

masonry units to ceiling height with either masonry or gypsum wallboard to underside of slab above. Bulk control substance storage vaults require perimeter walls of brick or masonry construction full height.

Exception: For CMOPs that are located in a leased warehouse setting without brick or masonry construction, walls may be of drywall construction built slab to slab (no up and over access). Passive infrared motion sensors will be placed every 50 feet and doors protected with access control systems (Q on the requirements matrix, page B-1)

    c. Doors and Door Locks. The locking requirements (including access-controlled egress doors) outlined in National Fire Protection Association (NFPA) Life Safety Code standard, latest edition, 101-7.2.1.5 and 7.2.1.6 must be followed.

    (1) Door Construction: Doors are of 45 mm (1-3/4 in.) solid core hardwood or hollow steel construction. Dutch or half doors are unacceptable. Removable hinge pins on door exteriors must be retained with set pins or spot welded, preventing their removal. This applies only if the hinge pins are on the outside of the doors and door frames. Hinge pins will be on the outside if the door opens outward.

    (2) Mechanical locking systems.   Where mechanical lock systems are used, installed lock sets must allow for single motion egress. The installation of high security exit devices meeting NFPA Life Safety Code standards is appropriate**.**

    (a) Glass doors or doors with glass panes must have one lock set that is key operated from the interior of the protected area.

  Note: Fire code prohibits locks from being locked from the inside that require a key to exit The intent is that there must be two locks, one of which must be key operated. The other lock can be key, combination or electronic.   (NFPA 101, 7.2.1.5.2) locks, if provided, shall not require the use of a key, a tool or special knowledge or effort for the operations from the egress side.

    (b) Steel doors will not be set into wooden frames.

    (c) Doors set in steel frames must be fitted with a mortise lock with a deadlock feature. IAW ANSI/BHMA A156.13 American National Standards for Mortise Locks.

    (d) The day lock on the main door must be automatically locking, with a minimum 19 mm (3/4 in.) dead bolt and inside thumb latch. Access to electronic locking systems, combinations or keys to day locks will be restricted to service employees and electronic access and/or combinations changed immediately on the termination or reassignment of an employee. See paragraph 8 of this appendix for a detailed description of key control systems.

(3) Electronic/Magnetic locking systems. Where installed, electronic locking systems will include an automatic "request to exit" sensor and a "push to exit" manual lock release switch. Refer to the NFPA Life Safety Code for details.

d. Other Room Access Means. Interstitial overhead areas which enable entry into a secure room from an unsecured room must be barricaded by the installation of a suitable partition in the interstitial space which prevents "up and over" access. Openings in construction above ceilings or below raised access floors shall be protected as below requirement.

 All vents, ducts, and similar openings in excess of 96 square inches (620 cm2) that enter or pass through space shall be protected with either bars or grills. If one dimension of the duct measures less than six inches (150 mm) or duct is less than 96 square inches (620 cm2), bars are not required; however, all ducts must be treated to provide sufficient sound attenuation. If bars are used, they must be 1/2 inch (12.7 mm) diameter steel welded vertically and horizontally six (6) inches (150 mm) on center; if grills are used, they must be of 9-gauge expanded steel.

e. Motion Intrusion Detectors. An intrusion detection alarm system which detects entry into the room and which broadcasts a local alarm of sufficient volume to cause an illegal entrant to abandon a burglary attempt. Intrusion detector equipment which operates on the principle of narrow beam interception, door contacts, microwave, or photoelectric eyes are unacceptable as the primary means of detection. Intrusion detectors must have the following essential features.

(1) An internal, automatic charging DC standby power supply and a primary AC power operations.

(2) A remote, key operated activation/deactivation switch installed outside the room and adjacent to the room entrance door frame and/or a central alarm ON-OFF control in the Police office or other monitoring location. For personal safety reasons, alarm switches and panels will be located outside of the protected space.

(3) An automatic reset capability following intrusion detection.

(4) A local alarm level of 80 dB (min) to 90 dB (max) within the configuration of the protected area.

(5) An integral capability for the attachment of wiring for remote alarm and intrusion indicator equipment (visual or audio).

(6) A low nuisance alarm rate as defined in VA Master Specifications, Division 28 - Electronic Safety and Security "28 16 11 INTRUSION DETECTION SYSTEM."

(7) Installation Notes

(a) A locally sounding alarm should not be installed in a room which is close to an ICU, cardiac care, or other special treatment areas where a loud alarm would have an injurious effect on patients.

(b) In addition to the locally sounding alarm, remote visual and/or audio annunciators must be at a location within the facility which ensures 24 hour monitoring. These annunciators will have the capability of identifying individually protected zones.

(c) In protected rooms of outpatient clinics not on facility grounds, intrusion detector alarms will be routed to a commercial security alarm monitoring firm, a local police department, or a security office charged with building security. The remote alarms will be in addition to locally broadcast alarms in the protected areas.

(d) Remote bulk storage warehouse facilities will have one or more local broadcasting alarms inside and outside of the protected area.

(e) When replacing existing systems, or purchasing new, consideration will be given to intrusion detection equipment that integrates with CCTV and physical access control systems.

f. Pharmacy Dispensing Counter. Windows and walls of pharmacy dispensing must meet the U.L. Standard 752 for Class III Ballistic Level. VA Architectural Standard Detail 67 B applies to pharmacy dispensing windows but the window should be set in a minimum 100 mm (4 in.) solid concrete masonry units to ceiling height with either masonry or gypsum wallboard to underside of slab above. Pharmacy may have dispensing areas located outside the secure perimeter of the pharmacy. These locations may have open windows and wallboard construction. Drugs and completed prescriptions cannot be stored in these locations unless kept in a locked cabinet as described in L. This is to reduce the attractiveness of the space as a robbery risk. The drugs/prescriptions cannot be stored in this area when the pharmacy is closed)

g. Agent Cashier Counter. Bullet resistive service windows must meet the U.L. Standard 752 for Class III Ballistic Level. VA Architectural Standard Detail 67 applies to cashier counter construction. Applicable also to other cash transaction facilities. The windows should be set in a minimum 100 mm (4 in.) solid concrete units to ceiling height with either masonry or gypsum wallboard to underside of slab above.

h. Bulk Drug Storage Safes and Vaults. Drugs classified as schedule I, II, or III (narcotic controlled substances under the Controlled Substance Act of 1970) must be stored in safes or vaults which conform to the following specifications:

(1) Safes will be GSA class 5 security containers weighing no less than 340 kg (750 pounds).

(2) Where bulk quantities or controlled substance handling requirements deem safes impractical, vaults must be used. Specifications for two types of vaults are given:

(a) Type I for outpatient clinic or center use, and type II for construction in medical centers only. The type I vault is not as formidable and permanent a structure as the type II concrete vault and, therefore, schedule I, II, and III (narcotic) controlled substances may not be stored on open shelving within the type I vault. To compensate for the lower security of type I vaults lockable steel cabinets installed within the vault must be used for schedule I, II, and III (narcotic) substances. Vault specifications are as follows:

(b) Type I Vault. Enclosure constructed of steel security screen, woven mesh, 1.2 mm (.047 in.) wire diameter alloy #304 stainless steel, with tensile strength of 29 kg/mm (1,600 pounds per linear inch). Mesh 10 x 10 per 25 mm (1 inch) with main frame and sub frames of 2.4 mm (13 gauge) alloy #304 steel. In rooms with dropped ceilings, the vertical frames and mesh walls must meet the actual ceiling or a security mesh ceiling installed below the false ceiling. In lieu of security mesh screening enclosures, type I vaults may be constructed of 2.4 mm (13 gauge) steel wall partition material with corner brackets welded and floor/ceiling anchors firmly set to prevent disassembly. Mesh vaults may be enclosed with drywall or paneling with appropriate ventilation openings.

(c) Type II Vault. Constructed of walls, floors, and ceilings of minimum of 200 mm (8 in.) reinforced concrete or other substantial masonry, reinforced vertically and horizontally with 13 mm (1/2 in.) steel rods tied 150 mm (6 in.) on center. Doors and day gates must meet GSA class 5 criteria. Vault ventilation and utility ports may not exceed 0.06 m^2 (100 square in.) in area.

(d) CMOPs only: CMOPs located in non-VA owned leased space will meet the minimum requirements of the U.S. Drug Enforcement Administration for protecting the pharmaceuticals stored there.

i. Bulk Drug Storage Cabinets. Steel cabinets with adjustable shelving and built in locking devices are required for the storage of bulk supplies of schedule III, Non-Narcotic, to V controlled substances. While not required, these cabinets may be used in Type 1 vaults at the choice of the facility.

j. Closed Circuit TV. Security Surveillance TV camera with motion detector feature on cameras and at monitor location. Telecommunications Support Service (197) may be contacted for obtaining technical assistance. See VA Handbook 0730, Part E for further details and considerations.

k. Special Key Control. Room door lock keys and day lock combinations, where applicable, are Special Keys as defined in paragraph 8.d. (10) of this appendix.

l. Drug Cabinets. Key locked, all steel cabinets, firmly anchored in place are required for ward, emergency room or treatment room storage of small quantities of

controlled substances. Locked unit dose carts are acceptable; but must be positioned in a supervised area when not in use. Glass front drug cabinets are not acceptable for controlled substance storage. Plexiglas front cabinets 10 mm (3/8 in.) or greater in thickness, are acceptable.

m. Refrigerators. To be equipped with a built in lock mechanism or hasp with padlock when used to store controlled substances (all schedules) and other potentially dangerous drugs and when located outside a locked or attended drug storage room.

n. Medical Supply Rooms and Closets. Service key control and accountability are required in accordance with paragraph 8. "Space Key Control" of this Appendix.

o. Cash Safes, Cabinets, and Lockers. For the security of cash deposits and valuables, safes, cabinets, or lockers meeting the following criteria should be used. The size and configuration of commercially available safes, cabinets, and lockers are optional.

(1) The minimum requirement for the storage of currency or negotiable instruments is a container that is resistant to 20 man-hours surreptitious entry, 30 man-minutes covert entry and 10 man-minutes forced entry or greater. Commercial burglary resistant safes meeting this requirement and approved for use are certified by Underwriters' Laboratories, according to the following classifications:

(a) Tool-Resistant Safe - TL-30

(b) Torch and Tool-Resistant Safe - TRTL-30

(c) Torch and Tool-Resistant Safe - TRTL-60

(d) Torch, Tool & Explosive Resistant Safe – TXTL-60

(e) Safes rated as Tool-Resistant Safe- TL-15 are not acceptable.

p. Secure Property Storage Containers. For bulk retail merchandise, medical supplies and other items requiring off-shelf protection, steel storage cabinets with adjustable shelving are available through the Federal supply service, group 71, class 7125.

q. Electronic Physical Access Control Systems (PACS). For monitoring and controlling access to areas identified as requiring high or medium levels of assurance.) PACS systems are not used for recording employee time and attendance.

(1) For pharmacies and similar Services, PACS will be used to protect the perimeter of operations areas. In the case of pharmacies, this refers to spaces where pharmaceuticals are mixed, packaged, assembled or otherwise prepared for distribution

to patients. Administrative offices and similar spaces do not need to be protected with PACS, unless indicated by a local vulnerability assessment.

      (a) Access Safeguard. To prevent learning codes through keypad observations or use of stolen or found access cards.

      (b) Time Sensitive. The ability to program access by user, by shift and day.

      (c) Area Sensitive. The ability to program access by door and area for each individual user.

      (d) Fail-Safe. The ability to maintain access security if the system goes down (i.e. bypass key).

      (e) Access Record/Audit Trail. The ability to provide for periodic or on demand print-out of names and time/dates of individual accessing. Records of access or audit trails will not be used for employee time and attendance purposes.

      (f) User Coverage. The number of individual access codes that the system will accommodate.

      (g) Personal Identifier Number (PIN) Codes. Access control systems protecting PACS high security areas, such as controlled substance storage, primary computer and communications rooms, research or clinical laboratories that store, use or develop biohazardous materials, require a PIN number as a secondary personal authentication to be used in addition to card readers. "Scramble Pad" type PIN readers are recommended when PIN systems are installed. See the table below for specific VA-identified required locations. .

      (h) Biometric Systems. Biometric security systems are those that use a personal measurement, such as fingerprints, hand geometry, facial geometry or iris scans, as authentication. Biometric devices can be used in lieu of PIN systems in PACS high protected spaces, but only as a secondary form of authentication. Biometric measurements may also be used in addition to a PIN in high security applications.

      (i) Compliance with Federal Standards. New installations or retrofitted access control systems will be compliant with technology described in Federal Information Processing Standard (FIPS) Publication 201, Personal Identity Verification of Federal Employees and Contractors, and the document "PACS Implementation Guidance, Version 2.2 (July 30, 2004), published by the Physical Access Interagency Interoperability Working Group of the GSA Government Smart Card Interagency Advisory Board. This requires that such systems will meet the ISO/IEC 14443 a/b, Parts 1-4 standard for contactless (proximity) card systems, or the ISO/IEC 7816 Standard for contact-type cards. Facilities may continue to use existing PACS that operate on older technology (Magnetic Stripe, 2nd Generation bar code, etc.) as an interim measure until replacement systems are acquired and installed as part of normal equipment lifecycles.

Further information on VA Smart Card operated PACS requirements can be found in the most recent edition of the document: "Physical Access Control Recommendations for the Department of Veterans Affairs." Guidance and assistance with the standards can be obtained from the OS&LE.

      (j) PACS Assurance Level Designations

      <u>1.</u> PACS provide a level of assurance regarding the identity of persons entering a protected space. The levels of assurance required are determined as a result of vulnerability or risk assessments and physical security surveys. In addition, the following chart indicates minimum requirements for specified VA protected activities. For purposes of this policy, levels of assurance are defined as:

      <u>**High**</u> - Entry requires a valid access card used in conjunction with a secondary form of authentication. Either a Personal Identification Number (PIN) known only to the card holder, or a biometric measurement, or both, is used as the secondary authenticator.

      <u>**Medium**</u> - Entry requires the use of a valid access card.

      <u>**Low**</u> - Entry requires the visual authentication of a valid access card or facility identification card. The card may be inspected by a police officer or other designated staff upon entry into the protected space, or may just require that it is worn at all times in a visible manner; see VA Directive 0730, paragraph 2.n.

Facilities may choose to use a more stringent protection level for any of these locations. In addition, facilities may choose to protect other activities with PACS. Further information on PACS Assurance level designations is found in VA Handbook 0730, Part E, Paragraph 1.g. (5). The following are minimum protection and assurance levels for facilities that have installed PACS:

Location	PACS Assurance Level
Canteen Retail Store	Medium (during hours of closure)
Canteen Storage Area	Medium
Canteen Office	High
Agent Cashier	High
Pharmacy Drug Storage Room (Vault)	High
Pharmacy Operations Area	Medium
CMOP	Medium (High for Controlled Substances)
Veterans Records-Long Term Storage	High
Warehouse Storage/Bulk	Medium
Primary Inventory (Medical Supplies)	Medium
Laundry Plant	Medium
Central Linen Issue	Medium
New Linen Storage	High
IRM (server rooms/mainframes)	High
Telephone Equipment Room	High
Animal Research Facility	High
Ward and Treatment Rooms	Low
Medical Media Equipment rooms	Medium
Evidence Storage	High
Weapon Storage/Armory	High
Research/Clinical Labs	Medium/High (see footnotes on page B1)
Radiation-High Risk	High
Radiation-Low Risk	Medium
Commercial Electrical Power Connections	High
Commercial Telecomm/Data Connections	High
Child Care Facilities	High
Electronic Fingerprint Capture Systems	Medium

r. Robbery/Panic/Duress Alarms. These types of alarm systems are used to provide rapid notification of police during an actual incident. The alarm may be activated by a covertly placed switch or button. Once activated, the switch or button can only be re-set by a key or other special tool that is in the possession of the VA police unit or other responder. The alarm annuniciator will be monitored by police whenever the protected area is operational. The exact location of panic/duress alarm switches will be determined by a physical security survey of the protected area.

Panic/Duress alarms must always be installed in the interior of pharmacy controlled substance or other Type I or Type II vaults.

s. Perimeter Barriers. Perimeter barriers are defined as concrete bollards; concrete filled steel bollards; or concrete planters. Appropriate fencing may also be a perimeter barrier, depending on the application. Barriers must be of sufficient strength/weight to stop a passenger-car sized vehicle from breaching the protected space. For Child Care Centers, a minimum 7 foot height vinyl coated 6 gauge core steel fence will be erected around all playground areas and around areas containing multiple non-primary entrance doors.

3. SPECIAL SECURITY REQUIREMENTS: BIOHAZARDOUS OR RADIOACTIVE MATERIALS IN RESEARCH OR CLINICAL LABORATORIES.

a. Police Chiefs will conduct vulnerability assessments of any clinical or research laboratory under VA Police jurisdiction. Records of the assessments will be maintained in Police administrative files (RCS-10). This includes any such laboratory in VA owned or leased space that is not located on or contiguous to the main facility campus. This also includes laboratory facilities physically located on VA owned or operated property, but that are leased to outside entities, such as universities, non-profit organizations and others.

(1) Initial assessments will be focused on determining whether materials are present that have been identified by the Centers for Disease Control and Prevention (CDC) or VA as potential biohazards. Descriptions of these materials are found at Title 42 Code of Federal Regulations (CFR), Part 73. An updated listing of select biological and chemical hazardous agents is maintained by the CDC and is located at: http://www.bt.cdc.gov/agent/agentlist.asp.

(2) As part of the assessment, Chiefs of Police will carefully review memoranda of understanding, contracts or other agreements related to the use of Department properties by non-VA entities. The document review is focused on assuring the careful delineation of security responsibilities for the laboratory space. The intent is to ensure that VA security policies, practices, and procedures are applied and followed.

b. If the initial assessment finds that such materials, or radioactive materials, are, or may be, present in VA laboratories, the assessment will then be focused on

determining vulnerabilities in physical security and recommended corrective actions. Corrective actions will be consistent with the physical security matrix in this appendix, but more stringent measures may be adopted where necessary. In addition, the laboratory will be added to the facility annual physical security survey program, and surveyed once every 12 months.

c. When the listed materials are found, or isolated from a patient, and appear to be evidence of potential criminal activity, e.g., anthrax threats, etc., the local VA Police unit will be contacted and an evidentiary chain of custody established. The investigating VA Police officer will initiate appropriate reporting and notification actions.

d. The facility Director will ensure that security training, appropriate to facility security systems, is provided for all employees, without compensation employees, and volunteers working in clinical or research laboratories.

4. SPECIAL SECURITY REQUIREMENTS: ELECTRONIC FINGERPRINT CAPTURE SYSTEMS.

a. Electronic fingerprint capture equipment is used to digitally obtain fingerprint images. Typically, these systems are used to transmit fingerprints to other Federal agencies for either employee background or criminal investigation purposes.

b. Generally, fingerprint capture systems consist of a laptop or desktop computer that has a secure data connection to the Internet. Fingerprint collection platens and other equipment are connected to the computer.

c. All of the components of the fingerprint system will be stored in locked rooms or cabinets when not in use. Locks will be Special Keyed (See paragraph 1 K) or protected by a PACS under the Medium level. Access will be strictly limited to authorized system operators.

5. SPECIAL SECURITY REQUIREMENTS: STORAGE AND CONTROL OF RADIOACTIVE MATERIALS.

a. The VA Police Chief must coordinate with the Radiation Safety Officer and Radiation Safety Committee to implement procedures to preclude unauthorized removal or access to stored radioactive materials.

b. The VA Police Chief must coordinate with the Radiation Safety Officer and Radiation Safety Committee to implement procedures to control and maintain continuous surveillance of radioactive materials that are not in storage.

6. SPECIAL SECURITY REQUIREMENTS: BULK STORAGE MEDIA.

a. All physical input and output products of VA systems that contain privacy protected data, to include papers, disks, computer drives, and other mediums of

storage that contain information, must be protected against misuse and unauthorized access, disclosure, modification, or destruction and stored in a controlled area.

b. A controlled area is generally defined as an area or space that has a minimum of single-barrier protection. Physical security requirements C, D, and K from above are recommended. Requirement Q, PACS, should be considered. The establishment of controlled areas and their physical security requirements is a risk based decision.

7. SPECIAL SECURITY REQUIREMENTS: DOMICILIARY AND LONG-TERM CARE

a. Domiciliary, Nursing Home Care units and other long-term residential care facilities are subject to existing VA physical security standards for the storage of DEA Schedule II through V drugs. Such units will be surveyed annually as part of the facility physical security survey program. The physical security requirements for Pharmacy Drug Dispensing Area, as outlined in this Appendix will be followed.

b. The VA Chief of Police will consult regularly with the Chiefs of these units, and with the facility official responsible for narcotic inventories.

c. The Office of Security and Law Enforcement will review records of these surveys during routine program inspections.

8. MAIL ROOMS.

a. For the purposes of this policy, Mail rooms are defined as rooms, buildings or other enclosed locations within a facility or campus that are used solely for receiving, sorting and distribution of mail and small packages.

b. Potential threats to VA mailrooms can include mailed explosive devices, chemical or biological agents. Theft of mailed materiel is also a potential threat.

c. Mail rooms should be located away from other high risk activities, and, to the extent possible, on independent air handling or ventilation systems. Mail rooms are an appropriate location for package and mail screening equipment.

d. Mail rooms will be special keyed, as defined in paragraph eight of this Appendix. Consistent with local facility vulnerability assessments, mail rooms may also be protected with PACS.

e. Mail rooms must have a secure area to store mailout prescriptions prior to pick up by USPS, FedEx, etc.

9. SPACE KEY CONTROL.

a. The development, refinement and maintenance of a lock key production, issuance, inventory, accountability, and rapid key change system is a responsibility of

each facility. Traditionally, this responsibility has been placed under the Engineering Service, but it may be more appropriate at some facilities to place the key control function within the VA Police unit. The facility Director will determine the appropriate organizational location of the lock shop.

b. In buildings operated by the Administrator of General Services, space lock key service is provided by the GSA Building Manager. However, special lock and key controls for high risk areas (pharmacies, clinical and research laboratories, server and telecommunications rooms etc.) will be determined by the facility Director or designee, who will establish and maintain a key control system for these spaces.

c. Objectives of Space Key Control Systems

(1) Maximum zone security with a minimum of room and area door locks;

(2) A centralized and rigid control of key production;

(3) Decentralized responsibility for keys in use within service zones to respective service chiefs;

(4) A recorded chain of accountability for each room and area key to key users, directly to or through the user's service chiefs;

(5) The elimination of hybrid key lock hardware and key inventory systems; and

(6) Attaining the capability for rapid room and area lock and key changes for restoring security following the loss or theft of keys..

d. Key Control Systems Definitions.

(1) Space - denotes fixed and permanent property with areas and rooms having doors or passive barriers, as distinguished from storage compartments or other movable containers.

(2) Room - a permanent structural compartment, defined by walls and doors.

(3) Area - two or more contiguous rooms distinguishable from other spaces by common functional activities.

(4) Zone - space containing rooms and/or areas designated for the primary use of a particular service or element to carry out its functional activities. Establishment of keying or alarm zones should be one result of physical security surveys conducted as described in VA Handbook 0730, Part E.

(5) Common Space - Rooms or areas contiguous to service zones, but neither included in a service zone nor exclusively controlled by a particular service or other chief.

(6) Great Grand Master Key - A key which is capable of operating most or all lock devices within a key system, except for locks operable by special keys.

(7) Grand Master Key - One which is capable of operating only a segment of all locks within a key system.

(8) Master Key - A key that is capable of operating only a portion of that segment of locks in a system that may be opened by a grand master key.

(9) Individual Key - A key which can only operate one lock.

(10) Special Key - A key which can only open a lock in a high risk or sensitive area (locally determined), and which cannot be opened by a great grand master, grand master, master or any other individual key. Special keys may also include those that can only open certain doors for cleaning, maintenance, construction, mental health units, etc.

e. Key Issuance Procedures.

(1) All facilities will use a 4 control level keying system as described:

(a) Great grand master key level operating all space doors except those to special key areas;

(b) Grand master key level for each service zone;

(c) Master key level for use with service zones as needed. Use of this level will be minimized; and

(d) Individual key level. The special key is not considered to be a distinct keying level.

(2) Outpatient and other facilities that are not located on VAMC campuses will use a 2 control level system of master, individual and special keys.

(3) Great grand master keys will operate all space door locks of a facility except for those indicated in the security matrix in this appendix as requiring special keys. In addition, other areas that require this special protection may be identified by facility managers and specially keyed locks may be installed. Examples of other special key locations are, but are not limited to residential quarters, post office facilities, police operations room, etc. A duplicate special key to each of these areas will be kept in separate sealed envelopes in a locked cabinet in the VA Police unit. Envelopes will be

sealed in a manner which precludes being opened without detection. Use of these keys is limited to emergencies, and will be authorized by the appropriate official such as a service chief or previously designated official responsible for the specially locked area. Any use of special keys, as defined in this paragraph, will be recorded in the VA Form 1433, VA Police Daily Operations Journal. On the next business day following an emergency use of a duplicate special key, the employee who requested the emergency use will provide a written report to the official in charge of the protected area, setting forth the circumstances that led to the key use.

        (4) The number of great grand master keys at a facility will not exceed five and these will receive special protection in recognition of their potential for neutralizing the entire locking system of a facility if stolen or reproduced without authorization. Great grand master keys will be authorized for issuance, with the limit of 5, on an actual need basis. Normally, a facility Director, Associate or Assistant Director and Chief of Staff should possess great grand master keys. The Chief Engineer or equivalent facility manager and the Chief of VA Police will also be issued a great grand master key each. The key assigned to VA Police will be available to the on-duty police supervisor on a 24 hour daily basis. The use of this key by a VA Police Supervisor will be recorded in the VA Form 1433. Procedures will be established for the temporary use of the great grand master key under the control of the Chief Engineer or equivalent facility manager by other service chiefs on those occasions when unlimited space access is required.

        (5) It is the responsibility of service chiefs to determine keying needs for their zones of responsibilities, originate all key requests, receipt for keys issued, and maintain intra-service key issue receipt records. Each service chief will be issued no more than three grand master keys (service grand masters) which operate all room and area door locks in his/her zone or control. Master keying within a service zone and the designation of rooms within each zone for which individual keys are required will be outlined by each service chief in a service zone keying plan. In developing service zone key requirements, the service chief will consider which secured space will require after hours access by housekeeping personnel and to group these spaces under a single master key for issue to Housekeeping or Facilities Management, as appropriate.

        (6) Quantitative requirements for service master and individual keys will be kept to a minimum with particular attention given to minimizing requirements for individual keys to rooms located within areas that are secured or attended 24 hours daily. Facility and service clearance procedures will include the requirement that Department employees return issued keys to the issuing service prior to clearance approval.

        (7) The manager of the key production operation who may be either the Chief Engineering or facility equivalent or Chief of Police, as appropriate, will accept only those requests for key reproduction which have been approved by the service chief having zone responsibility. The Request and Engineering Work Order, VA Form 3213b, is prescribed for key issue or lock change requests. Service requested keys will be delivered either to the service chief originating the request or to a designated service key control representative.

(8) The facility is responsible for the establishing a keying plan for rooms, areas and zones falling into the category of common space. Building common space hardware may be grand master keyed, or master keyed by floor level or function. However, lock hardware on building entrance doors will not be master keyed with any service zone or common space master(s) within the building. Building entrance doors should be keyed to the great grand master key only; however, these doors can be keyed for an individual key on an actual need basis. These common space keying plans will be used by the facility to maintain space key control and overall accountability.

f. Basic Lock Hardware Specifications

(1) All space lock hardware will meet the appropriate requirements outlined in the security matrix of this appendix.

(2) Space door locks will have interchangeable cores that can be removed from the locking mechanism only by the use of a special control key or tool. The control key or tool will fit all interchangeable core hardware, including those operated by special keys. All cores are to be so constructed that they will be instantly interchangeable into the core housings of all mortise locks, rim locks, cylindrical locks, and any other type of lock included in the great grand master key system.

(3) All cores will be of 6 or 7 pin construction, depending on facility size and projected combination code requirements, and will be constructed so that the mortise cylinder cam or rim cylinder spindle is not directly attached to the core. Spindles and cams will be a part of the construction of the cylinders so that cores need not be altered in any way when they are interchanged from one type of lock to another. All cores will therefore be instantly and completely interchangeable.

g. Basic Key Production and Control System Requirements

(1) Key Production

(a) A commercially provided combinating code pattern listing.

(b) A key making machine for the cutting of keys by code rather than from pattern keys.

(c) A hand combination kit with precision pins so that cores may be recombinated with the necessity of filing pins to fit shear lines.

(d) A set of letter and number dies for core and key marking and needed core installation tools.

(2) A file system for accountability, reproduction and change of issued keys. May either be a cross index file card (hardcopy) or electronically automated system, which records, at minimum, the following information:

(a) Lock cores to doors by room or area door numbers.

(b) Room or area door numbers by lock core numbers.

(c) Service chiefs or individuals holding keys in an alphabetical employee file which lists all keys issued to each person by key number.

(3) To ensure the integrity of the lock key system, the following steps will be taken:

(a) Pattern keys will not be used, and turned-in keys will be destroyed rather than maintained. Duplicates of issued keys, except special keys in secured and sealed envelopes, will not be maintained.

(b) Keys produced will not bear identifying markings, such as "VA" and/or "US Government."

(c) The loss or theft of VA space keys will be reported as soon as noticed to the servicing VA Police unit. If the VA police investigation does not immediately result in the recovery of the key, or a positive determination is made that the loss occurred off of facility property, the key cores operable by the lost key will be changed and all affected keys replaced within five days.

(d) Persons found to be in unauthorized possession of VA keys, or in possession of unauthorized reproductions of such keys, will be cited by VA Police for the appropriate violation of Title 38 CFR 1.218.

(e) The interchangeable core system control key, key cutting machine, all lock service and combining kits, and combining records will be secured in a locked cabinet or room. This is an appropriate application for a special key. The functions of lock core combining, key production and record maintenance will be performed by a qualified locksmith, or a maintenance employee qualified by the lock system manufacturer in their products.

(f) Key issuance and control procedures are:

<u>1</u> General

Guidance on procedures for keys, locks, and locking devices. Directors will establish procedures for the protection of locks, keys, and combinations used to secure facilities, vaults, and containers in which controlled medical substances and VA sensitive items

are stored. The number of people with access to keys and combinations will be the minimum necessary for efficient operations.

      2 Key custodian and alternate custodian
A primary or alternate key custodian is the person who will—

      a. Be appointed, in writing, to issue and receive keys and maintain accountability for facility keys and locks.

      b. Ensure that individuals designated to issue, receive, and account for keys and locks in his or her absence, clearly understand local key control procedures.

      c. Maintain a key control register at all times to ensure continuous accountability for keys.

      d. Be listed on an access roster.

      3 Access roster
The names and duty positions of personnel authorized unaccompanied access to the key depository will be posted on or in the vicinity of the key depository. Access roster will be signed by the appointing authority.

      4 Key control register:
Keys will be signed out to only authorized personnel, as needed, on a key control register. The key control register (Key Control Register and Inventory) will be used for the purpose. When not in use, the key control register will be kept in a locked container with controlled access.

      5 Key depository

      a. A lockable container, such as a safe or filing cabinet, or a key depository made of at least 26–gauge steel, equipped with a tumbler–type locking device and permanently affixed to a wall, will be used to secure keys.

      b. The key depository will be located in a room where it is kept under 24–hour surveillance or in a room that is locked when unoccupied.

      6 Key and lock accountability

      a. Keys and combinations to locks will be accounted for at all times. Keys to locks in use which protect the property of the facility will be checked at the end of each duty day. Differences between keys on hand and the key control register will be reconciled.

      b. Keys will be inventoried by serial number semiannually. A written record of the inventory will be retained until the next inventory is conducted.

_c._ When a key is lost or missing, an inquiry will be conducted. The lock will be replaced or re-cored at the decision of the Director.

_d._ A key and lock inventory will be maintained which includes a list of all of the following:

(1) _Keys._

(2) _Locks._

(3) _Key serial numbers._

(4) _Lock serial numbers._

(5) _Location of locks._

(6) _The number of keys maintained for each lock._ This list will be secured in the key depository.

_e._ Keys and locks which do not have a serial number will be given one. This number will be inscribed on the lock or key as appropriate.

(1) Combinations to locks will be recorded sealed in the envelope and stored in a locked container with controlled access. A signature or seal will be placed over the envelope flap to identify tampering.

Department of Veterans Affairs

KEYS CONTROL, REGISTER AND INVENTORY

ORGANIZATION/ACTIVITY	FROM	TO	PERIOD COVERED

KEY CONTROL, NUMBERS(S) *(Insert serial number or other identifying number from the key)*			
1.	11.	21.	31.
2.	12.	22.	32.
3.	13.	23.	33.
4.	14.	24.	34.
5.	15.	25.	35.
6.	16.	26.	36.
7.	17.	27.	37.
8.	18.	28.	38.
9.	19.	29.	39.
10.	20.	30.	40.

KEY ISSUE AND TURN IN

KEY NUMBER	ISSUED *(Date/Time)*	ISSUED BY *(Printed Name/Signature)*	FROM	RECEIVED BY *(Printed Name/Signature)*

VA FORM
APR 2010 **0930**

IMV1-1/3 and IMV1-1/3NI
360° Panomorph Lenses

IMV1-1/3

DC-Iris

IMV1-1/3NI

No Iris

31.19mm

Ø54mm

46.16mm

260mm

IRIS CONTROL CABLE
(CONNECTOR : 4-PIN PLUG)
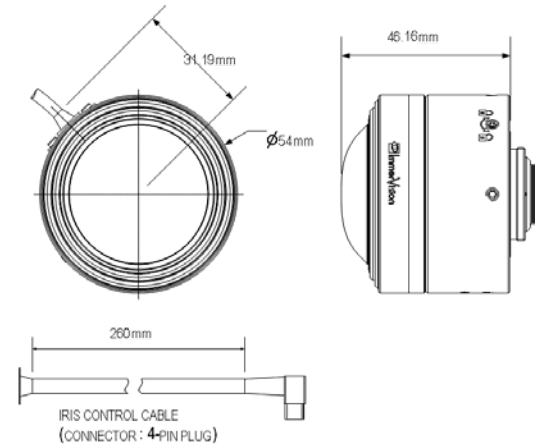
SPECIFICATIONS

FOV	182°
Focal Length	0.9mm (short axis)
	1.15mm (long axis)
Anamorphic Ratio	1.3 (4:3)
Spectral Passband	400nm to 700nm
Focal Ratio	F/1.9 (short axis)
	F/2.4 (long axis)
Focus	Infinity to 20mm
Focal Plane Field	3.4mm X 4.6mm (oval footprint)
MTF Performance	at 70 cycle/mm (640x480)

- On Axis >60%
- 80% diagonal >50%
- Corner >35%

Relative Illumination	Not less than 50% including $\cos^4$ fall off
Mount	CS (Metal Mount)
Elements	10 groups (12 elements)
Elements Material	High Quality Glass (All Elements)
Imager Size	True 1/3 inch

- Diagonal   6.00 mm
- Width   4.80 mm
- Height   3.60 mm

Sensor Centering Adjustment	3 Axes	
Iris	IMV1-1/3	Auto DC Iris
	IMV1-1/3NI	No Iris
Weight	180 g	
Operating Temperature	-20°C to +60°C	

- Super wide angle of 182° x 360° that eliminates blind spots.
- Optimized design for VGA to 1.3MPx sensors, both Analog and IP cameras.
- Standard CS Metal Mount.
- Equipped with 3 Axes Sensor Centering Adjustment.
- All High Quality Glass elements.
- *ImmerVision Enables*® SDK available for DVR/NVR/VMS integration.
- Patented Panomorph Optical Technology.
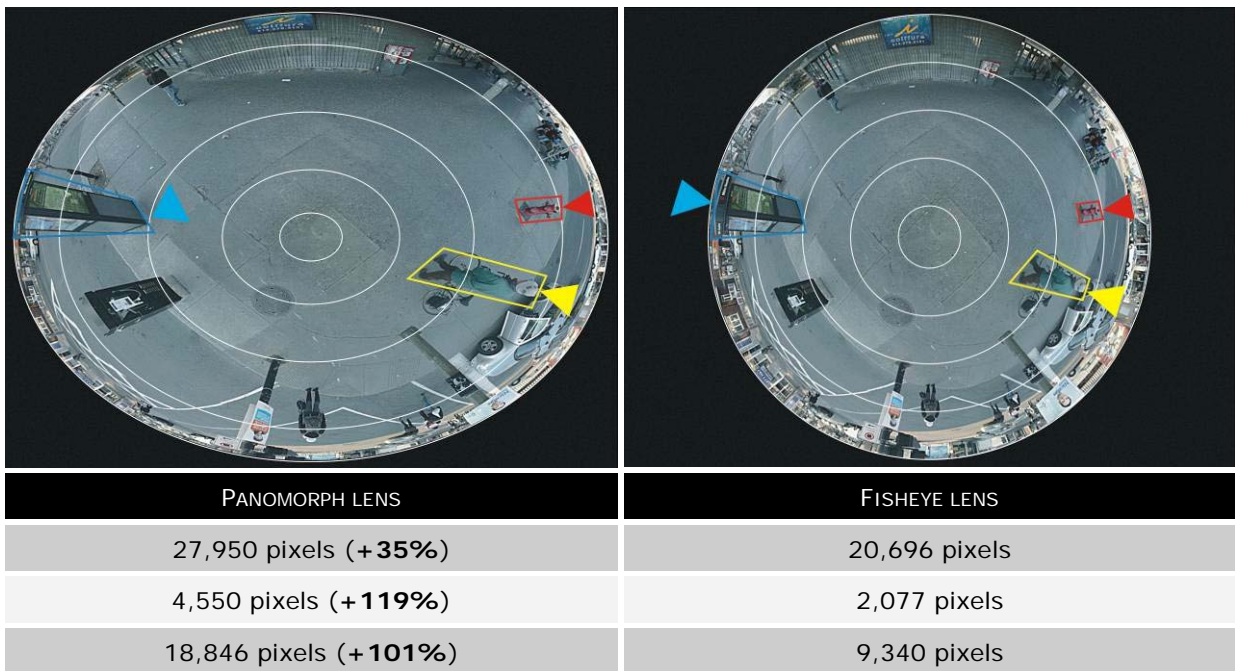

PANOMORPH LENS IMAGE

www.immervision.com

The IMV1-1/3 is a panomorph lens dedicated to Video Surveillance Applications. This series of immersive lenses from ImmerVision have been developed using advance panomorph technology for optimal and efficient total 360° coverage.

Panomorph lenses are known to outperform older panoramic technologies such as mirror lens and fisheye lenses in regards to image quality and adaptability.

Fisheye lenses, compared to panomorph lenses, have smaller optical image sensor coverage. Furthermore fisheye lenses have a constant angular resolution rapidly decreasing the size of distant objects on the sensor (in the periphery). Like in the "ceiling mount" example below, panomorph lenses have an increased resolution on the periphery (magnification factor) increasing the size on the sensor of distant objects.

PANOMORPH VS. FISHEYE COMPARISON USING A 1.2 MEGA-PIXELS CAMERA

	PANOMORPH LENS	FISHEYE LENS
Blue Area	27,950 pixels (**+35%**)	20,696 pixels
Red Area	4,550 pixels (**+119%**)	2,077 pixels
Yellow Area	18,846 pixels (**+101%**)	9,340 pixels

IMV1-1/3 series of panomorph lenses are certified ImmerVision *Enables*®. This means that Digital Video Recorders, Network Video Recorders and Video Management Systems integrating ImmerVision *Enables* viewing functionality, offer live and playback image correction (dewarping) and digital Pan, Tilt, and Zoom in a multi windows/multi operators environment.

AXIS P33 Network Camera Series — Indoor models

Fixed domes for any environment with remote focus and zoom.

> **Exceptional image quality including 5MP and HDTV**

> **WDR with dynamic capture**

> **Lightfinder technology**

> **Built-in IR illumination**

> **Remote focus and zoom**

> **P-Iris control**

AXIS P33 Network Cameras constitute a series of indoor and outdoor-ready fixed domes. These cameras are ideal for unobtrusive video surveillance, day and night, in exposed areas such as city surveillance, airports, railway stations, retail stores, office buildings, museums, schools and university campuses.

AXIS P33 Series offers models with exceptional image quality from SVGA resolution up to 5 megapixel, including SMPTE-compliant HDTV 720p and 1080p video. AXIS P33 Series provides multiple, individually configurable H.264 and Motion JPEG video streams.

The SVGA and HDTV 720p/1MP models support Axis' Lightfinder technology, which makes these cameras extremely sensitive to low light. AXIS P3384-V that additionally supports wide dynamic range (WDR) with 'dynamic capture', provides outstanding video quality in the most demanding conditions with strong variations in light. The 5 megapixel model, AXIS P3367-V, can cover a large area with exceptional detail and light sensitivity. All AXIS P33 models support P-Iris control for optimal image clarity.

AXIS P3364-LV incorporates new long-life LED technology that is highly power-efficient. Adjustable in angle and intensity, the built-in IR solution offers easy configuration optimizing for the scene.

All AXIS P33 cameras support the remote focus capability that eliminates hands-on focusing at the camera, and remote zoom that allows the camera's angle of view to be optimized.

All AXIS P33 cameras offer digital pan/tilt/zoom and the 3-megapixel and 5-megapixel models additionally provide multi-view streaming. AXIS P33 Series has low, environmental-friendly power consumption, supplied by standard Power over Ethernet (IEEE 802.3af).

HDTV NETWORK VIDEO

ONVIF

Fixed domes designed for efficient installation

Indoor models of AXIS P33 Series are the perfect choice for a wide range of demanding video applications. AXIS P33 Network Cameras are designed for professional video surveillance with easy and reliable installation in focus.

Lightfinder technology

The SVGA and HDTV 720p/1MP models of AXIS P33 Series incorporate Axis' unique Lightfinder technology. The outstanding light sensitivity, with maintained colors even in very poor lighting conditions, is obtained by a combination of Axis' expertise in image processing, system-on-chip development and selection of the best optical components.
For more on Lightfinder technology, go to:
www.axis.com/corporate/corp/tech_papers.htm

Wide dynamic range – dynamic capture

AXIS P3384-V that supports WDR with 'dynamic capture' is ideal for surveillance in areas with strong variations in light, for instance close to large windows and entrances, where the sunlight creates both very bright zones and dark shadows. AXIS P3384-V enables easy and clear identification of people and objects both in bright and dark areas.

Built-in IR illumination

AXIS P3364-LV features built-in IR illumination based on new, long-life LED technology that is highly power-efficient. This results in high-quality, low-noise video also when the environment is completely dark.

P-Iris control

AXIS P33 Series features the advanced precise iris control that comprises a special P-Iris lens, together with dedicated software in the camera, to set the best iris position for optimal depth of field, resolution, image contrast and clarity. Good depth of field implies that objects at different distances from the camera are in focus simultaneously.
For more on P-Iris and iris control, go to:
www.axis.com/corporate/corp/tech_papers.htm

Easy installation

AXIS P33 Network Cameras offer unique installation capabilities including remote focus and zoom. The remote focus feature enables convenient focusing over the network, eliminating the need for hands-on fine-tuning at the camera. The remote zoom functionality ensures that the camera's angle of view is optimized for the area to be monitored. The pixel counter assures that the required pixel resolution is met. The built-in IR solution in AXIS P3364-LV automatically adapts the illumination angle with the zoom level, which simplifies installation.

Mounting options

AXIS P33 Series offers a wide range of optional kits for indoor installations, for example, for mounting on a wall, pole or corner. The IP51-rated drop ceiling mount kit protects the camera from condensation and dust that may exist in the plenum space above the drop ceiling.

Technical specifications – AXIS P33 Network Camera Series, indoor models

Camera

Indoor models	**AXIS P3353:** SVGA, Lightfinder, tamper resistance **AXIS P3354:** 1 MP, Lightfinder, tamper resistance **AXIS P3363–V:** SVGA, Lightfinder, vandal resistance, audio, I/O ports **AXIS P3364–V:** 1 MP, Lightfinder, vandal resistance, audio, I/O ports **AXIS P3364–LV:** 1 MP, IR illumination, Lightfinder, vandal resistance, audio, I/O ports **AXIS P3384–V:** 1 MP, WDR - dynamic capture, Lightfinder, vandal resistance, audio, I/O ports **AXIS P3346:** 3 MP, multi-view, audio, I/O ports **AXIS P3346–V:** 3 MP, multi-view, vandal resistance, audio, I/O ports **AXIS P3367–V:** 5 MP, multi-view, vandal resistance, audio, I/O ports *Note: 6 mm and 12 mm as suffix refers to lens model* *AXIS P3301/-V and AXIS P3304/-V are not part of AXIS P33 Series*
Image sensor	AXIS P3353/P3363–V: Progressive scan RGB CMOS 1/3" AXIS P3354/P3364–V/P3364–LV: Progressive scan RGB CMOS 1/3" AXIS P3384–V: Progressive scan RGB CMOS 1/3" AXIS P3346/–V: Progressive scan RGB CMOS 1/3" (effective) AXIS P3367–V: Progressive scan RGB CMOS 1/3.2"
Lens	Varifocal, remote focus and zoom, P-Iris control, IR corrected, megapixel resolution AXIS P3353/P3354/P3363–V/P3364–V 6 mm: 2.5-6 mm, 105° - 49° view*, F1.2 AXIS P3353/P3354/P3363–V/P3364–V/P3364–LV: 3.3-12 mm, 82° - 24° view*, F1.4 AXIS P3384–V: 3-9 mm, 84° - 30° view*, F1.2 AXIS P3346/–V: 3-9 mm, 84° - 30° view*, F1.2 AXIS P3367–V: 3-9 mm, 84° - 30° view*, F1.2 *horizontal angle of view
Day and night	Automatically removable infrared-cut filter
Minimum illumination	AXIS P3353/P3354/P3363–V/P3364–V 6 mm: Color: 0.1 lux, F1.2, B/W: 0.02 lux, F1.2 AXIS P3353/P3354/P3363–V/P3364–V 12 mm: Color: 0.15 lux, F1.4, B/W: 0.03 lux, F1.4 AXIS P3364–LV12 mm: Color: 0.18 lux, F1.4, B/W: 0 04 lux, 0 lux with IR illumination on AXIS P3384–V: Color: 0.5 lux, F1.2, B/W: 0.08 lux, F1.2 with dynamic capture Color: 0.15 lux, F1.2, B/W: 0.03 lux, F1.2 with Lightfinder AXIS P3346/–V: Color: 0.5 lux, F1.2, B/W: 0.08 lux, F1.2 AXIS P3367–V: Color: 0.2 lux, B/W: 0.04 lux, F1.2
Shutter time	AXIS P3353/P3354/P3363–V/P3364–V/P3364–LV: 1/24500 s to 2 s with power line frequency 50 Hz, 1/29500 s to 2 s with power line frequency 60 Hz AXIS P3384–V: Dynamic capture: 1/192 s to 1/37 s with power line frequency 50 Hz, 1/231 s to 1/44 s with power line frequency 60 Hz; Lightfinder: 1/24500 s to 2 s with power line frequency 50 Hz, 1/29500 s to 2 s with power line frequency 60 Hz AXIS P3346/–V: 1/35500 s to 1/6 s AXIS P3367–V: 1/28000 s to 2 s
Camera angle adjustment	AXIS P3353/P3354/P3363–V/P3364–V/P3364–LV: Pan 360°, tilt 170°, rotation 340° AXIS P3384–V/P3346/P3346–V/P3367–V: Pan 360°, tilt 160°, rotation 340°

Video

Video compression	H.264 Baseline and Main Profile (MPEG-4 Part 10/AVC) Motion JPEG
Resolutions	AXIS P3353/P3363–V: 800x600 (SVGA) to 160x90 AXIS P3354/P3364–V/P3364–LV/P3384–V: 1280x960* (approx. 1.3 MP) to 160x90 AXIS P3346/–V: 2048x1536 (3 MP) to 160x90 AXIS P3367–V: 2592x1944 (5 MP) to 160x90 *1400x1050 (1.4 MP) scaled resolution available via VAPIX®
Frame rate H.264/ Motion JPEG	AXIS P3353/P3354/P3363–V/P3364–V/P3364–LV/P3384–V: 25/30 fps with power line frequency 50/60 Hz AXIS P3346/–V: 3 MP capture mode: 20 fps in all resolutions, HDTV 1080p (1920x1080) and 2 MP 4:3 (1600x1200) capture modes: 30 fps in all resolutions AXIS P3367–V: 5 MP capture mode: 12 fps in all resolutions; and capable of all AXIS P3346/–V capture modes

Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Controllable frame rate and bandwidth VBR/CBR H.264
Multi-view streaming	AXIS P3346/P3346–V/P3367–V: Up to 8 individually cropped out view areas AXIS P3346/–V: When streaming 4 view areas and 1 overview in VGA resolution, the frame rate is 20 fps per stream (3 MP capture mode) AXIS P3367–V: When streaming 4 view areas and 1 overview in VGA resolution, the frame rate is 12 fps per stream (5 MP capture mode) or 20 fps per stream (3 MP capture mode)
Pan/Tilt/Zoom	Digital PTZ, preset positions, guard tour
Image settings	Compression, color, brightness, sharpness, contrast, white balance, exposure control, exposure zones, backlight compensation, WDR - dynamic contrast, fine tuning of low light behavior Rotation: 0°, 90°, 180°, 270°, including Corridor Format AXIS P3384–V: WDR - dynamic capture: Up to 120 dB (0.5 - 500,000 lux) depending on scene

Audio (all models except AXIS P3353/P3354)

Audio streaming	Two-way
Audio compression	AAC LC 8/16 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz Configurable bit rate
Audio input/ output	External microphone input or line input, line output Built-in microphone (can be disabled)

Network

Security	Password protection, IP address filtering, digest authentication, user access log, IEEE 802.1X** network access control, HTTPS** encryption
Supported protocols	IPv4/v6, HTTP, HTTPS**, SSL/TLS**, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP™, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS

System integration

Application Programming Interface	Open API for software integration, including the ONVIF specification available at www.onvif.org, as well as VAPIX® and AXIS Camera Application Platform from Axis Communications, specifications available at www.axis.com Support for AXIS Video Hosting System (AVHS) with One-Click Camera connection
Intelligent video	Video motion detection, active tampering alarm Support for AXIS Camera Application Platform enabling installation of additional applications All models except AXIS P3353/P3354: Audio detection
Event triggers	Intelligent video, edge storage events All models except AXIS P3353/P3354: External input
Event actions	File upload: FTP, HTTP, network share and email Notification: email, HTTP and TCP Video recording to edge storage Pre- and post-alarm video buffering PTZ preset, guard tour All models except AXIS P3353/P3354: External output activation, audio recording to edge storage, play audio clip AXIS P3364–LV: Activation of IR illumination
Data streaming	Event data
Built-in installation aids	Remote zoom, remote focus, pixel counter AXIS P3364–LV: adjustable IR illumination angle and intensity

** This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org)

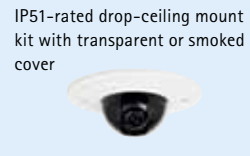## Technical Specifications (cont.) – AXIS P33 Network Camera Series, indoor models

General	
Casing	Polycarbonate transparent cover Aluminum inner camera module with encapsulated electronics Color: White NCS S 1002-B **AXIS P3353/P3354/P3346:** Tamper-resistant polycarbonate casing **AXIS P3363–V/P3364–V/P3364–LV/P3384–V/P3346–V/P3367–V:** IK10 impact-resistant casing with aluminum base
Memory	256 MB RAM, 128 MB Flash **AXIS P3367–V:** 512 MB RAM, 128 MB Flash
Power	Power over Ethernet IEEE 802.3af **AXIS P3353/P3354/P3363–V/P3364–V:** Class 2; max 5.9 W **AXIS P3364–LV:** IR illumination on: Class 3; max 12.1 W; IR illumination off: max 5.9 W **AXIS P3384–V:** Class 2; max 5.9 W **AXIS P3346/-V:** Class 2; max 6.4 W **AXIS P3367–V:** Class 2; max 6.2 W
Connectors	RJ-45 10BASE-T/100BASE-TX PoE **All models except AXIS P3353/P3354:** Terminal block for 1 alarm input and 1 output, 3.5 mic/line in, 3.5 mm line out
IR illumination	**AXIS P3364–LV:** Power-efficient, long-life IR LED's with adjustable angle of illumination and intensity. Range of reach up to 30 m (100 ft.) depending on scene

Edge storage	SD/SDHC/SDXC slot supporting memory cards up to 64 GB (card not included) Support for recording to network share (network-attached storage or file server)
Operating conditions	0 °C to 50 °C (32 °F to 122 °F) Humidity 10 - 85% RH (non-condensing)
Approvals	EN 55022, EN 55024, EN 61000-6-1, EN 61000-6-2, IEC/EN/UL 60950-1, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-64, IEC 60068-2-78, FCC Part 15, Subpart B Class B, ICES-003 Class B digital, VCCI, ITE, C-tick AS/NZS CISPR 22, KCC AS/NZS CISPR 22, KN 22, KN 24 **AXIS P3364–LV:** EN 62471 **AXIS P3363–V/P3364–V/P3364–LV/P3384–V/P3346–V/P3367–V:** IEC 62262 IK10
Included accessories	Installation Guide, Installation and Management Software CD, Windows decoder 1-user license **All models except AXIS P3364–LV:** Smoked transparent cover **All models except AXIS P3353/P3354:** Connector kit

More information is available at www.axis.com

Dimensions and weight – AXIS P33 Network Camera Series, indoor models

AXIS P3353 and AXIS P3354
Weight: 430 g (0.9 lb.)
AXIS P3363–V/P3364–V
Weight: 650 g (1.4 lb.)
AXIS P3364–LV
Weight: 670 g (1.5 lb.)

148 mm (5.8")
96 mm (3.8")
⌀ 96 mm (3.8")

AXIS P3346
Weight: 490 g (1.1 lb.)
AXIS P3384–V/P3346–V/P3367–V
Weight: 700 g (1.6 lb.)

148 mm (5.8")
AXIS P3346: 101 mm (3.8")
Vandal-resistant models: 104 mm (4.1")
⌀ 96 mm (3.8")

Accessories – AXIS P33 Network Camera Series, indoor models

Optional accessories for indoor models

IP51-rated drop-ceiling mount kit with transparent or smoked cover

Pendant adapter kit

AXIS T91A Brackets

Mounting bracket

Video management software

AXIS Camera Companion (included), AXIS Camera Station and video management software from Axis' Application Development Partners (not included). For more information, see www.axis.com/products/video/software

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AXIS P33 Network Camera Series — Outdoor models

Fixed domes for any environment with remote focus and zoom.

> **5MP and HDTV**

> **WDR and Lightfinder**

> **Built-in IR illumination**

> **Remote focus and zoom**

> **P-Iris control**

> **IK10 impact-resistant, outdoor-ready models**

AXIS P33 Network Cameras constitute a series of indoor and outdoor-ready fixed domes. These cameras are ideal for unobtrusive video surveillance, day and night, in exposed areas such as city surveillance, airports, railway stations, retail stores, office buildings, museums, schools and university campuses.

AXIS P33 Series offers models with exceptional image quality from SVGA resolution up to 5 megapixel, including SMPTE-compliant HDTV 720p and 1080p video. AXIS P33 Series provides multiple, individually configurable H.264 and Motion JPEG video streams.

The SVGA and HDTV 720p/1MP models support Axis' Lightfinder technology, which makes these cameras extremely sensitive to low light. AXIS P3384-VE that additionally supports wide dynamic range (WDR) with 'dynamic capture', provides outstanding video quality in the most demanding conditions with strong variations in light. The 5 megapixel model, AXIS P3367-VE, can cover a large area with exceptional detail and light sensitivity. All AXIS P33 models support P-Iris control for optimal image clarity.

AXIS P3364-LVE incorporates new long-life LED technology that is highly power-efficient. Adjustable in angle and intensity, the built-in IR solution offers easy configuration optimizing for the scene. All AXIS P33 cameras support the remote focus capability that eliminates hands-on focusing at the camera, and remote zoom that allows the camera's angle of view to be optimized.

All AXIS P33 cameras offer digital pan/tilt/zoom and the 3-megapixel and 5-megapixel models additionally provide multi-view streaming. The weatherproof AXIS P33-VE/-LVE cameras have low, environmental-friendly power consumption supplied by standard Power over Ethernet (IEEE 802.3af), and operate in a wide temperature range from -40 °C to 55 °C (-40 °F to 131 °F).

HDTV NETWORK VIDEO

ONVIF

Fixed domes designed for efficient installation

Outdoor-ready models of AXIS P33 Series are the perfect choice for a wide range of demanding video applications. AXIS P33 Network Cameras are designed for professional video surveillance with easy and reliable installation in focus.

Outdoor-ready installation for tough climates

The outdoor models of AXIS P33 Series are specially designed for reliable, vandal-resistant and weather-proof installation, with pre-installed heater and fan, and an integrated dehumidifying membrane eliminating any humidity caught in the camera casing during installation. These cameras come with a 5 m (16 ft.) Ethernet cable with a pre-mounted, specially designed gasket, enabling flush wall mounting and requiring no additional sealant. A weather shield is also included for effective protection against reflections from sunlight, or build-ups of rain or snow; except for the AXIS P3364-LVE model, for which the shield could interfere with the built-in IR illumination. A wide range of optional mounting kits are available, for example for mounting on a wall, pole or corner.

Lightfinder technology

The SVGA and HDTV 720p/1MP models of AXIS P33 Series incorporate Axis' unique Lightfinder technology. The outstanding light sensitivity, with maintained colors even in very poor lighting conditions, is obtained by a combination of Axis' expertise in image processing, system-on-chip development and selection of the best optical components.
For more on Lightfinder technology, go to:
www.axis.com/corporate/corp/tech_papers.htm

Wide dynamic range – dynamic capture

AXIS P3384-VE that supports WDR with 'dynamic capture' is ideal for surveillance in areas with strong variations in light, for instance in tunnel passages, and other areas where the sunlight creates both very bright zones and dark shadows. AXIS P3384-VE enables easy and clear identification of people and objects both in bright and dark areas.

Built-in IR illumination

AXIS P3364-LVE features built-in IR illumination based on new, long-life LED technology that is highly power-efficient. This results in high-quality, low-noise video also when the environment is completely dark.

P-Iris control

AXIS P33 Series features the advanced precise iris control that comprises a special P-Iris lens, together with dedicated software in the camera, to set the best iris position for optimal depth of field, resolution, image contrast and clarity. Good depth of field implies that objects at different distances from the camera are in focus simultaneously.
For more on P-Iris and iris control, go to:
www.axis.com/corporate/corp/tech_papers.htm

Easy installation

AXIS P33 Network Cameras offer unique installation capabilities including remote focus and zoom. The remote focus feature enables convenient focusing over the network, eliminating the need for hands-on fine-tuning at the camera. The remote zoom functionality ensures that the camera's angle of view is optimized for the area to be monitored. The pixel counter assures that the required pixel resolution is met. The built-in IR solution in AXIS P3364-LVE automatically adapts the illumination angle with the zoom level, which simplifies installation.

Technical Specifications – AXIS P33 Network Camera Series, outdoor models

Camera

Outdoor models	AXIS P3363-VE: SVGA, Lightfinder AXIS P3364-VE: 1 MP, Lightfinder AXIS P3364-LVE: 1 MP, IR illumination, Lightfinder AXIS P3384-VE: 1 MP, WDR - dynamic capture, Lightfinder AXIS P3346-VE: 3 MP, multi-view streaming AXIS P3367-VE: 5 MP, multi-view streaming *Note: All models are vandal resistant and support audio and I/O ports 6 mm and 12 mm as suffix refer to lens model*
Image sensor	AXIS P3363-VE: Progressive scan RGB CMOS 1/3" AXIS P3364-VE/-LVE: Progressive scan RGB CMOS 1/3" AXIS P3384-VE: Progressive scan RGB CMOS 1/3" AXIS P3346-VE: Progressive scan RGB CMOS 1/3" (effective) AXIS P3367-VE: Progressive scan RGB CMOS 1/3.2"
Lens	Varifocal, remote focus and zoom, P-Iris control, IR corrected, megapixel resolution **AXIS P3363-VE/P3364-VE 6 mm:** 2.5-6 mm, 105° – 49° view*, F1.2 **AXIS P3363-VE/P3364-LVE 12 mm:** 3.3-12 mm, 82° – 24° view*, F1.4 **AXIS P3384-VE:** 3-9 mm, 84° – 30° view*, F1.2 **AXIS P3346-VE:** 3-9 mm, 84° – 30° view*, F1.2 **AXIS P3367-VE:** 3-9 mm, 84° – 30° view*, F1.2 *horizontal angle of view
Day and night	Automatically removable infrared-cut filter
Minimum illumination	AXIS P3363-VE/P3364-VE 6 mm: Color: 0.1 lux, F1.2, B/W: 0.02 lux, F1.2 AXIS P3363-VE/P3364-VE 12 mm: Color: 0.15 lux, F1.4, B/W: 0.03 lux, F1.4 AXIS P3364-LVE 12 mm: Color: 0.18 lux, F1.4, B/W: 0.04 lux, 0 lux with IR illumination on AXIS P3384-VE: Color: 0.5 lux, F1.2, B/W: 0.08 lux, F1.2 with dynamic capture Color: 0.15 lux, F1.2, B/W: 0.03 lux, F1.2 with Lightfinder AXIS P3346-VE: Color: 0.5 lux, F1.2, B/W: 0.08 lux, F1.2 AXIS P3367-VE: Color: 0.2 lux, F1.2, B/W: 0.04 lux, F1.2
Shutter time	AXIS P3363-VE/P3364-VE/P3364-LVE: 1/24500 s to 2 s with power line frequency 50 Hz, 1/29500 s to 2 s with power line frequency 60 Hz AXIS P3384-VE: Dynamic capture: 1/192 s to 1/37 s with power line frequency 50 Hz, 1/231 s to 1/44 s with power line frequency 60 Hz; Lightfinder: 1/24500 s to 2 s with power line frequency 50 Hz, 1/29500 s to 2 s with power line frequency 60 Hz AXIS P3346-VE: 1/35500 s to 1/6 s AXIS P3367-VE: 1/28000 s to 2 s
Camera angle adjustment	AXIS P3363-VE/P3364-VE/P3364-LVE: Pan 360°, tilt 170°, rotation 340° AXIS P3384-VE/P3346-VE/P3367-VE: Pan 360°, tilt 160°, rotation 340°

Video

Video compression	H.264 Baseline and Main Profile (MPEG-4 Part 10/AVC) Motion JPEG
Resolutions	AXIS P3363-VE: 800x600 (SVGA) to 160x90 AXIS P3364-VE/P3364-LVE/P3384-VE: 1280x960* (approx. 1.3 MP) to 160x90 AXIS P3346-VE: 2048x1536 (3 MP) to 160x90 AXIS P3367-VE: 2592x1944 (5 MP) to 160x90 *1400x1050 (1.4 MP) scaled resolution available via VAPIX®
Frame rate H.264/ Motion JPEG	AXIS P3363-VE/P3364-VE/P3364-LVE/P3384-VE: 25/30 fps with power line frequency 50/60 Hz AXIS P3346-VE: 3 MP capture mode: 20 fps in all resolutions; HDTV 1080p (1920x1080) and 2 MP 4:3 (1600x1200) capture modes: 30 fps in all resolutions AXIS P3367-VE: 5 MP capture mode: 12 fps in all resolutions; and capable of all AXIS P3346-VE capture modes

Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Controllable frame rate and bandwidth VBR/CBR H.264
Multi-view streaming	AXIS P3346-VE/P3367-VE: Up to 8 individually cropped out view areas AXIS P3346-VE: When streaming 4 view areas and 1 overview in VGA resolution, the frame rate is 20 fps per stream (3 MP capture mode) AXIS P3367-VE: When streaming 4 view areas and 1 overview in VGA resolution, the frame rate is 12 fps per stream (5 MP capture mode) or 20 fps per stream (3 MP capture mode)
Pan/Tilt/Zoom	Digital PTZ, preset positions, guard tour
Image settings	Compression, color, brightness, sharpness, contrast, white balance, exposure control, exposure zones, backlight compensation, WDR - dynamic contrast, fine tuning of low light behavior Rotation: 0°, 90°, 180°, 270°, including Corridor Format Text and image overlay, privacy mask, mirroring of images AXIS P3384-VE: WDR - dynamic capture: Up to 120 dB (0.5 - 500,000 lux) depending on scene

Audio

Audio streaming	Two-way
Audio compression	AAC LC 8/16 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz Configurable bit rate
Audio input/ output	External microphone input or line input, line output

Network

Security	Password protection, IP address filtering, digest authentication, user access log, IEEE 802.1X** network access control, HTTPS** encryption
Supported protocols	IPv4/v6, HTTP, HTTPS**, SSL/TLS**, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, Bonjour, UPnP™, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS

System integration

Application Programming Interface	Open API for software integration, including the ONVIF specification available at www.onvif.org, as well as VAPIX® and AXIS Camera Application Platform from Axis Communications, specifications available at www.axis.com Support for AXIS Video Hosting System (AVHS) with One-Click Camera connection
Intelligent video	Video motion detection, active tampering alarm, audio detection Support for AXIS Camera Application Platform enabling installation of additional applications
Event triggers	Intelligent video, external input, edge storage events
Event actions	File upload: FTP, HTTP, network share and email Notification: email, HTTP and TCP External output activation Video and audio recording to edge storage Pre- and post-alarm video buffering Play audio clip PTZ preset, guard tour AXIS P3364-LVE: Activation of IR illumination
Data streaming	Event data
Built-in installation aids	Remote zoom, remote focus, pixel counter AXIS P3364-LVE: adjustable IR illumination angle and intensity

** This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org)

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Technical Specifications (cont.) – AXIS P33 Network Camera Series, outdoor models

General

Casing	Polycarbonate transparent cover Aluminum inner camera module with encapsulated electronics Color: white NCS S 1002-B IP66- and NEMA 4X-rated, IK10 impact-resistant casing with aluminum base and dehumidifying membrane
Memory	256 MB RAM, 128 MB Flash **AXIS P3367-VE:** 512 MB RAM, 128 MB Flash
Power	Power over Ethernet IEEE 802.3af **AXIS P3363-VE/P3364-VE/P3364-LVE/P3384-VE/P3367-VE:** Class 3; max 12.1 W **AXIS P3346-VE:** Class 3; max 12.8 W
Connectors	RJ-45 10BASE-T/100BASE-TX PoE Terminal block for 1 alarm input and 1 output 3.5 mm mic/line in, 3.5 mm line out
IR illumination	**AXIS P3364-LVE:** Power-efficient, long-life IR LED's with adjustable angle of illumination and intensity. Range of reach up to 30 m (100 ft.) depending on scene

Edge storage	SD/SDHC/SDXC slot supporting memory cards up to 64 GB (card not included) Support for recording to network share (network-attached storage or file server)
Operating conditions	-40 °C to 55 °C (-40 °F to 131 °F) Humidity 10 - 100% RH (condensing)
Approvals	EN 50121-4, EN 55022, EN 55024, EN 61000-6-1, EN 61000-6-2, IEC/EN/UL 60950-1, IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-64, IEC 60068-2-78, IEC 60529 IP66, NEMA 250 Type 4X, IEC 62236-4, IEC 62262 IK10, FCC Part 15, Subpart B Class B, ICES-003 Class B digital, VCCI, ITE, C-tick AS/NZS CISPR 22, KCC AS/NZS CISPR 22, KN 22, KN 24 **AXIS P3364-LVE:** EN 62471
Included accessories	Installation Guide, Installation and Management Software CD, Windows decoder 1-user license, connector kit, mounting bracket, 5 m (16 ft.) network cable with pre-mounted gasket **AXIS P3363-VE/P3364-VE/P3384-VE/P3346-VE/P3367-VE:** Weather shield, smoked transparent cover

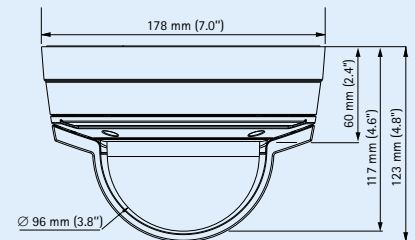More information is available at www.axis.com

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Dimensions and weight – AXIS P33 Network Camera Series, outdoor models

AXIS P3363-VE, P3364-VE
Weight: 1.5 kg (3.3 lb.), with weather shield
AXIS P3364-LVE:
Weight: 1.4 kg (3.1 lb.), weather shield not included
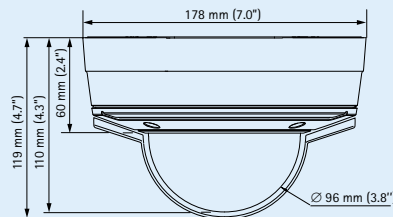
AXIS P3384-VE, AXIS P3346-VE, AXIS P3367-VE
Weight: 1.7 kg (3.7 lb.), with weather shield

Accessories – AXIS P33 Network Camera Series, outdoor models

Optional accessories for outdoor models

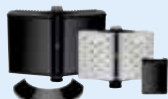Pendant adapter kit including weather shield

AXIS T91A Brackets

Wall   Corner

I/O audio cable, 5 m (16 ft.)

Axis illuminators

Cable shield, optionally including AXIS P33-VE 3/4" NPS adapter

Video management software

AXIS Camera Companion (included), AXIS Camera Station and video management software from Axis' Application Development Partners (not included). For more information, see www.axis.com/products/video/software

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