SECTION 28 23 29

PERFORMANCE SERIES 420 TVL INDOOR/OUTDOOR IR BULLET CAMERA, HB74

1. GENERAL
	1. SECTION INCLUDES
		1. Provide an indoor and outdoor 420 TVL IR fixed lens bullet camera system for video surveillance; including design, supply, installation and commissioning.
	2. RELATED SECTIONS

NOTE TO SPECIFIER: Include related sections as appropriate if video surveillance system is integrated to other systems.

* + 1. Section 26 05 00 – Common Work Results for Electrical, for interface and coordination with building electrical systems and distribution.
		2. Section 28 05 13 – Conductors and Cables for Electronic Safety and Security, for cabling between system servers, panels, and remote devices.
		3. Section 28 05 28 – Pathways for Electronic Safety and Security, for conduit and raceway requirements.
		4. Section 28 23 23 – Video Surveillance Systems Infrastructure.
		5. Section 28 23 29 – Video Surveillance Remote Devices and Sensors.
	1. REFERENCES
		1. Reference Standards: Provide systems that meet or exceed the requirements of the following publications and organizations as applicable to the work of this Section:
			1. Canadian ICES-003
			2. Canadian Standards Association (CSA)
			3. Federal Communications Commission (FCC)
			4. Joint Photographic Experts Group (JPEG)
			5. National Television Systems Committee (NTSC)
			6. Underwriters Laboratories Inc. (UL)
	2. SYSTEM DESCRIPTION
		1. The Performance Series IR bullet camera shall use a flexible indoor/outdoor enclosure that can be mounted quickly with the supplied mounting bracket and secured to a ceiling or wall.
		2. The Performance Series IR bullet camera shall capture video in 420 TV lines standard resolution and with a wide field of view range. As a Day/Night solution, the bullet camera uses IR illumination that activates at a factory-defined light level to capture clear black and white images at night, as well as perfect color pictures by day with IR illumination disabled.
	3. SUBMITTALS
		1. General: Submittals shall be made in accordance with the Conditions of the Contract and Submittal Procedure Section.
		2. Manufacturer’s Product Data: Submit manufacturer’s data sheets indicating systems and components proposed for use, including instruction manuals.
		3. Shop Drawings: Submit complete shop drawings including connection diagrams for interfacing equipment, list of connected equipment, and locations for major equipment components.
		4. Record Drawings: During construction maintain record drawings indicating location of equipment and wiring. Submit an electronic version of record drawings not later than Substantial Completion of the project.
		5. Operation and Maintenance Data: Submit manufacturer’s operation and maintenance data, customized to the system installed. Include system and operator manuals.
		6. Field Tests: Submit results of field testing of every device including date, testing personnel, retesting date (if applicable), and confirmation that every device passed field testing.
		7. Maintenance Service Agreement: Submit a sample copy of the manufacturer’s maintenance service agreement, including cost and services for a one year period for Owner’s review. Maintenance shall include, but not be limited to, labor and materials to repair the system, tests and adjustments, and regular inspections.
	4. QUALITY ASSURANCE
		1. Manufacturer: Minimum ten years experience in manufacturing and maintaining video surveillance systems. Manufacturer shall provide toll-free technical assistance and support available 24/7.
		2. Manufacture Location: Provide equipment assembled in China.
		3. Installer: Minimum two years experience installing similar systems, and acceptable to the manufacturer of the video surveillance system.
		4. Regulatory Requirements:
			1. Emissions: FCC, Part 15B, Class A.
		5. Environmental Requirements:
			1. Operating temperatures shall be between −10° C (14° F) and 50° C (122° F).
			2. Storage temperatures shall be between −20° C (−4° F) and 60° C (140° F).
		6. Power Requirements: Input voltage shall be 12 V DC.
	5. DELIVERY, STORAGE, AND HANDLING
		1. Deliver materials in manufacturer’s labeled packages. Store and handle in accordance with manufacturer’s requirements, in a facility with environmental conditions within recommended limits.
	6. WARRANTY
		1. Manufacturer’s Warranty: Submit manufacturer’s warranty of three (3) years from the manufacture date code under normal use and service for the video surveillance system.
1. PRODUCTS
	1. MANUFACTURER
		1. Performance Series Camera Manufacturer: Honeywell HB74 Performance Series indoor/outdoor 420 TVL Day/Night IR bullet camera, [www.honeywellvideo.com](http://www.honeywellvideo.com) or [www.honeywellintegrated.com](http://www.honeywellintegrated.com).
	2. SYSTEM COMPONENTS
		1. Bullet camera and cabling.
	3. OPERATIONAL REQUIREMENTS
		1. The indoor/outdoor IR bullet camera system shall meet or exceed the following camera specifications:
			1. Image Sensor: 1/3-inch Interline Transfer CCD
			2. Total Pixels: 510 (H) × 492 (V)
			3. Horizontal Resolution: 420 TVL
			4. Lens Type: built-in fixed (f=3.8 mm)
			5. IR LEDs: 850 nm, 12 LEDs
			6. IR Illumination Distance: ~45 ft. (13.7 m), depending on scene reflectance
			7. Minimum Illumination: 0.0 lux (IR LED On)
			8. Shutter Speed: 1/60–1/120,000 seconds
			9. Video Output: Composite, 1.0 Vp-p, 75 ohms
			10. White Balance: Auto
			11. Signal-to-Noise Ratio: 50 dB or more (AGC Off)
			12. Synchronization: 12 V DC, Internal
		2. The indoor/outdoor IR bullet camera shall provide day/night functionality with IR illumination. When ambient light drops below the factory-defined threshold, the 12 IR LEDs activate, a mechanical IR cut filter within the camera switches and the camera changes automatically from color to black and white.
		3. The indoor/outdoor IR bullet camera shall use smart infrared technology. Auto LED brightness adjustment provides even distribution of the IR, eliminating excessive illumination and washed out video.
		4. The indoor/outdoor bullet camera shall provide automatic gain control.
		5. The indoor/outdoor bullet camera shall provide automatic white balance.
		6. The indoor/outdoor bullet camera system shall provide 12 V DC operation.
		7. The indoor/outdoor bullet camera shall have a 3D axis bracket for precise camera positioning.
		8. The indoor/outdoor bullet camera housing shall consist of brushed, anodized aluminum with brushed, anodized aluminum coating finish and the dome shall consist of impact-resistant polycarbonate material.
		9. The indoor/outdoor bullet camera housing shall be waterproof, rated to IP66.
		10. The indoor/outdoor bullet camera shall include an equalization valve to prevent the vacuum effect caused by sudden changes in barometric pressure.
	4. SYSTEM HARDWARE
		1. The indoor/outdoor bullet camera shall have the following mechanical specifications:
			1. Unit Dimensions (L x H x D): 4.84” x 5.40” x 2.58” (123.0 mm x 137.2 mm x 65.6 mm). Measurements include mounting bracket and sunshield.
			2. Unit Weight: 1.3 lb (0.6 kg)
			3. Video Output: BNC connector (75 ohms)
			4. Power Input: 2.1 mm plug
		2. The indoor/outdoor bullet camera shall have the following electrical specifications:
			1. Voltage: 12 V DC
			2. Input Range: 12 V DC ± 10%
			3. Power Consumption: 3.6 W maximum (IR on)
		3. The indoor/outdoor bullet camera shall be designed to meet the following environmental conditions:
			1. Operating Temperature: 14°F to 122°F (-10°C to 50°C)
			2. Storage Temperature: -4°F to 140°F (-20°C to 60°C)
			3. Relative Humidity: 0-90%, non-condensing
			4. Emissions: FCC, Part 15B, Class A
	5. MANUFACTURER SUPPORT
		1. Manufacturer shall provide customer service, pre-sales applications assistance, after-sales technical assistance, access to online technical support, and online training using Web conferencing.
		2. Manufacturer shall provide 24/7 technical assistance and support by means of a toll-free telephone number at no extra charge.
2. EXECUTION
	1. EXAMINATION
		1. Examine site conditions prior to installation. Notify Architect and Owner in writing if unsuitable conditions are encountered. Do not start installation until site conditions are acceptable.
	2. INSTALLATION
		1. All components of the camera system shall be thoroughly tested before shipping to the project location.
		2. Camera system shall be installed, programmed, and tested in accordance with manufacturer’s installation instructions.
			1. Coordinate interfaces with Owner’s representative where appropriate.
			2. Provide conduit, cable and wire for a complete and reliable installation. Obtain Owner’s approval for exact location of the camera and all boxes, conduit, cable, and wiring runs prior to installation.
			3. Install conduit, cable, and wire parallel and square with building lines, including raised floors areas. Do not exceed 40 percent fill in conduits. Gather wires and tie to create an orderly installation.
			4. Coordinate with other trades to provide proper sequencing of installation.
	3. FIELD COMMISSIONING AND CERTIFICATION
		1. Field Commissioning: Test bullet camera system as recommended by manufacturer, including the following:
			1. Conduct complete inspection and testing of equipment, including verification of operation with connected equipment.
			2. Test devices and demonstrate operational features for Owner’s representative and authorities having jurisdiction, as applicable.
			3. Correct deficiencies until satisfactory results are obtained.
			4. Submit written copies of test results.
	4. TRAINING
		1. Conduct on-site system administrator and security/surveillance operator training, with the number of sessions and length of sessions as recommended by the video surveillance system manufacturer. Training shall include, but not limited to camera administration, provisioning, configuration, operation, and diagnostics.

 END OF SECTION