**SECTION 28 23 29**

**VIDEO SURVEILLANCE REMOTE DEVICES AND SENSORS**

**Advanced Technology Video FD700WDR Interior Dome**

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*This guide specification is intended for use by the design/construction professional and any user of Advanced Technology Video (ATV) products to assist in developing project specifications for security and video surveillance systems.*

*Notes in Italics, such as this one, are explanatory and intended to guide the design professional/specifier and user in the proper selection and use of materials. This specification should be modified where necessary to accommodate individual project conditions.*

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1. **GENERAL**
	1. SUMMARY
		1. Section includes Video Surveillance Remote Devices and Sensors.
		2. Related Sections:
			1. Section 28 23 13 – Video Surveillance Control and Management Systems
			2. Section 28 23 16 – Video Surveillance Monitoring and Supervisory Interfaces
			3. Section 28 23 19 – Digital Video Recorders and Analog Recording Devices
			4. Section 28 23 23 – Video Surveillance Systems Infrastructure
	2. SYSTEM DESCRIPTION
		1. Description: Video surveillance and monitoring at points as indicated on Drawings.
			1. FD700WDR: 7000TVL, True Day/Night, WDR, Interior Dome Camera
		2. Performance Requirements
			1. Color, interior dome camera using a 1/3” Sony 960H Super-HAD II CCD
			2. Produces a minimum of 700TVL of horizontal resolution
			3. TRUE Day/Night functionality
			4. Wide Dynamic Range
			5. Indoor polycarbonate dome.
			6. The camera shall be of manufacturer’s official product line, designed for commercial/industrial continuous 24/7 use.
			7. The camera shall be based upon standard components and proven technology.
	3. SUBMITTALS
		1. Submit under provisions of Section 01 33 00 - Submittal procedures.
		2. Shop Drawings: Indicate electrical characteristics and connection requirements, including system wiring diagram.
		3. Product Data: Submit catalog data showing electrical characteristics and connection requirements for each component.
	4. CLOSEOUT SUBMITTALS
		1. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.
		2. Project Record Documents: Record actual locations of cameras and routing of cabling.
		3. Operation and Maintenance Data: Submit instructions for operating system and performing routine trouble shooting procedures.
	5. QUALIFICATIONS
		1. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
		2. Supplier: Authorized distributor of specified manufacturer with minimum 5 years documented experience.
		3. Installer: Authorized installer of specified manufacturer with 5 years documented experience and with service
	6. ENVIRONMENTAL REQUIREMENTS
		1. Section 01 60 00 - Product Requirements.
		2. Conform to manufacturer’s standard service conditions during and after installation of components.
	7. FIELD MEASUREMENTS
		1. Verify field measurements prior to fabrication.
	8. MAINTENANCE SERVICE
		1. Section 01 70 00 - Execution and Closeout Requirements: Maintenance service.
		2. Furnish service and maintenance of video surveillance system for one year from Date of Substantial Completion.
2. PRODUCTS
	1. CAMERAS
		1. Manufacturers:
			1. Advanced Technology Video
			2. Substitutions: Section 01 60 00 - Product Requirements: Not Permitted.
		2. Model: FD700WDR
		3. Product Description: 7000TVL, True Day/Night, WDR, Interior Dome Camera
		4. Camera Image Sensor: 1/3” Sony 960H Super HAD II CCD.
		5. Lens: 2.8 – 12mm Vari-focal, DC Auto-Iris.
		6. General Requirements:
			1. Scene Illumination: Color / BW: 0.1 / 0.05Lux at F1.2, 50IRE
			2. Resolution: 700 TV lines, minimum.
			3. Signal to noise: 50dB, (AGC off)
			4. Synchronization: Internal
			5. Scanning System: 2:1 Interlace
			6. Video Output: 1.0Vp-p @ 75ohms
			7. True Day / Night with Infrared Cut Filter (ICR) removal function
			8. Wide Dynamic Range: double scan CCD
			9. On Screen Display (OSD) functionality
			10. Polycarbonate dome housing with a polycarbonate clear dome bubble
		7. Video Requirements and Adjustments (minimum):
			1. Effective Pixels: 976(H) x 494(V)
			2. Scanning Frequency: 15.73KHz(H) x 59.94Hz(V)
			3. Day/Night: ICR Filter
			4. White Balance: ATW (1700K11.000K) / Auto /One Push / Manual
			5. Auto Exposure: ELC /ALC
			6. Auto Gain Control (AGC): Off / Low / Middle / High
			7. Shutter Speed NTSC: 1/60 ~ 1/120,000
			8. Back Light Compensation (BLC): Off, BLC, HSBLC, WDR
			9. Privacy Masking: Rectangle: 8 Areas, Circle: 4 Areas, Polygon: 2 Areas
			10. Brightness: 0 ~ 100 steps
			11. Sharpness: 0 ~ 100 steps
			12. Sense-Up: Off, Auto(4x), Manual(2x - 512x)
			13. Wide Dynamic Range (WDR) (Image Enhancement: 68dB
			14. Digital Zoom (D-Zoom): Digital Zoom( ~x16), Defog, Mirror, V-flip, Rotate
			15. Motion Detection: ( 8 areas ) Adjustable Size & Sensitivity
			16. Digital Noise Reduction (DNR): 3D DNR (100 Steps)
			17. Camera Control: OSD (Joystick Switch)
		8. Electrical:
			1. Input Power: 12V DC / 24V AC (+/- 10%), 60Hz.
			2. Power Consumption: 3.5 Watts (300mA)
		9. Mechanical:
			1. Polycarbonate dome housing
			2. Clear, polycarbonate dome bubble
			3. Power Input: 2-Pin Screw Terminal Block
			4. Video Output: BNC Connector
			5. Dimensions (Dia x H): 4.7 x 3.4in (120 x 88mm)
			6. Weight: 0.66lbs (0.3kg)
			7. Operating Temperature: 14ºF ~ 122ºF (-10ºC ~ +50ºC)
			8. Operating Humidity: 0 to 90% RH (non-condensing)
		10. Conformity Certifications:
			1. Federal Communications Commission (FCC)
			2. European Conformity (CE)
		11. Accessories
			1. DB243W2: Wall mount
			2. PDA328: Pendant Mount
3. EXECUTION
	1. EXISTING WORK
		1. Disconnect and remove abandoned video surveillance equipment.
		2. Extend existing video surveillance installations using materials and methods compatible with existing installations as specified.
		3. Clean and repair existing video surveillance equipment remaining or to be reinstalled.
	2. EXAMINATION
		1. Examine areas to receive devices and notify adverse conditions affecting installation or subsequent operation.
		2. Do not begin installation until unacceptable conditions are corrected.
	3. PREPARATION
		1. Protect devices from damage during construction.
	4. INSTALLATION
		1. Install devices in accordance with manufacturer’s instruction at locations indicated on the floor drawings plans.
		2. Perform installation with qualified service personnel.
		3. Install devices in accordance with the National Electrical Code or applicable local codes.
		4. Ensure selected location is secure and offers protection from accidental damage.
			1. Ground and bond video surveillance equipment in accordance with Section 26 05 26.
		5. Location must provide reasonable temperature and humidity conditions, free from sources of electrical and electromagnetic interference.
	5. FIELD QUALITY CONTROL
		1. Test snugness of mounting screws of all installed equipment.
		2. Test proper operation of all video system devices.
		3. Determine and report all problems to the manufacturer’s customer service department.
	6. MANUFACTURER'S FIELD SERVICES
		1. Section 01 40 00 - Quality Requirements: Manufacturer's field services.
		2. Furnish manufacturer’s field representative to supervise final wiring connections and system adjustments.
	7. ADJUSTING
		1. Section 01 70 00 - Execution and Closeout Requirements: Requirements for starting and adjusting.
		2. Make proper adjustment to video system devices for correct operation in accordance with manufacturer’s instructions.
		3. Make any adjustment of camera settings to comply with specific customer’s need.
		4. Adjust manual lens irises to meet lighting conditions.
	8. DEMONSTRATION AND TRAINING
		1. Demonstrate at final inspection that video management system and devices function properly.
		2. Demonstrate at final inspection camera’s functionality and video recording capabilities.

END OF SECTION