

**SECTION 13850
UNCLEARED VISITOR WARNING SYSTEM**

PART 1.0 - GENERAL

1.1. SUMMARY:

- A. This section of the specification includes the furnishing, installation, connection, testing and maintenance of the Uncleared Visitor Warning System equipment required to form a complete, operative, coordinated system. It shall include, but not be limited to, initiating devices, notification appliances, control panel, raceway and wiring as shown on the drawings and specified herein.
- B. The Uncleared Visitor Warning System shall comply with requirements of DCID 6/9, JFAN and TEMPEST except as modified and supplemented by this specification.
- C. The Uncleared Visitor Warning System shall be manufactured 100% by a single U.S. manufacturer (or division thereof). Acceptable manufacturers are:
 - 1. Sciftronics
www.sciftronics.com
312 West Hampton Ave
Sumter, SC 29150
803-236-9899

1.2. REFERENCES:

- A. National Fire Protection Association (NFPA)
 - 2. NFPA 70 National Electrical Code
- B. Underwriters Laboratories (UL):
 - 1. UL 5C - Standard for Surface Raceways and Fittings for Use with Data, Signal, and Control Circuits
 - 2. UL 50 - Cabinets and Boxes
 - 3. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations
UL 294 Access Control System Units
 - 4. UL 1638 - Standard for Visual Signaling Appliances - Private Mode
Emergency and General Utility Signaling
 - 5. UL 1977 - Component Connectors for Use in Data, Signal, Control and Power
Applications
 - 7. UL 2017 - General-Purpose Signaling Devices and Systems

1.3. TERMS:

- A. UVWS – Uncleared Visitor Warning System
- B. SCIF – Sensitive Compartmented Intelligence Facility
- C. MCP – Main Control Panel
- D. IAC – Indicating Appliance Circuit
- E. MSI – Master System Initiating Device
- F. CSI – Compartment Shunt Initiating Device
- G. AHJ – Authority Having Jurisdiction

1.4. SCOPE:

- A. UVWS shall be installed in accordance to the project specifications and drawings.
- B. COMPONENTS
 - 1. Main Control Panel
 - 2. Initiating Devices
 - 3. Indicating Devices
 - 4. Raceway
 - 5. Wiring
- C. BASIC SYSTEM FUNCTIONAL OPERATION
 - 1. When an activation signal is initiated by an MSI, the following functions shall immediately occur:
 - a. The MSI shall visually indicate it is latched in the activated position.
 - b. The MCP shall command all IAC throughout the protected premises to exit standby mode and enter indication mode.
 - c. The MCP shall supervise a preset indicating cycle duration.
 - 2. When a signal is initiated by a CSI within a protected compartment of the protected premises, the following function shall immediately occur:
 - a. The MCP shall command all IAC only assigned within that specific protected compartment to exit indication mode and enter standby mode.

3. When a deactivation signal is initiated by an MSI, the following functions shall immediately occur:
 - a. The MSI shall visually indicate it is latched in the deactivated position.
 - b. The MCP shall command all IACs throughout the protected premises to exit indication mode and enter standby mode.
4. When the MCP has determined that the preset indicating cycle duration has expired, the following functions shall immediately occur:
 - a. The MSI shall visually indicate it is latched in the activated position.
 - b. The MCP shall command all IACs throughout the protected premises to exit indication mode and enter standby mode.

1.3. SUBMITTALS

A. General:

1. Two copies of all submittals shall be submitted to the Architect/Engineer for review.
2. All references to manufacturer's model numbers and other pertinent information herein is intended to establish minimum standards of performance, function and quality. Equivalent compatible UL-listed equipment from other manufacturers may be substituted for the specified equipment as long as the minimum standards are met.
3. Control Manufacturers' published Compatibility Listings showing control equipment is compatible with the indicating, MSI and CSI devices to be used shall be included.
3. For equipment other than that specified, the contractor shall supply proof that such substitute equipment equals or exceeds the features, functions, performance, and quality of the specified equipment.

B. Shop Drawings:

1. Sufficient information, clearly presented, shall be included to determine compliance with drawings and specifications.
2. Include manufacturer's name(s), model numbers, ratings, power requirements, equipment layout, device arrangement, complete wiring point-to-point diagrams, riser diagrams, and conduit layouts.
3. Riser Diagrams shall indicate no less than one Corridor IAC and corresponding MSI. If Compartment IAC are required, indicate corresponding CSI.
4. Show all power, control panel, MSI, CSI and IAC layout and terminations.

C. Manuals:

1. Submit simultaneously with the shop drawings, complete operating and maintenance manuals listing the manufacturer's name(s), including technical data sheets and published compatibility listings.
2. Wiring diagrams shall indicate internal wiring for each device and the interconnections between the items of equipment.
3. Provide a clear and concise description of operation that gives, in detail, the information required to properly operate the equipment and system.

D. Software Modifications

1. Provide the services of a qualified technician to perform all system software modifications, upgrades or changes.
2. Provide all hardware, software, programming tools and documentation necessary to modify the UVWS on site. Modification includes addition and deletion of devices, circuits, zones and changes to system operation and custom label changes for devices or zones. The system structure and software shall place no limit on the type or extent of software modifications on-site. Modification of software shall not require power-down of the system or loss of system operation while modifications are being made.

1.4. GUARANTY:

- A. All work performed and all material and equipment furnished under this contract shall be free from defects and shall remain so for a period of at least one (1) year from the date of acceptance. The full cost of maintenance, labor and materials required to correct any defect during this one year period shall be included in the submittal bid.

1.5. MAINTENANCE:

- A. Factory-Authorized Maintenance and Testing shall be on an annual schedule or as required by the local AHJ. A preventive maintenance schedule shall be provided by the contractor describing the protocol for preventive maintenance. The schedule shall include:
1. Systematic examination, adjustment and cleaning of all MSI, CSI, control panel housings, power supplies, control components, IAC devices, and all accessories of the UVWS.
 2. Each device tied to each IAC in the UVWS shall be functionally tested and such testing documented on a monthly (minimum) basis.
 3. Each device tied to the IAC shall be functionally tested and cleared of any inner or outer obscurations and such actions documented on a monthly (minimum) basis.

- B. As part of the bid/proposal, include a quote for a maintenance contract to provide all maintenance, tests, and repairs described below. Include also a quote for unscheduled maintenance/repairs, including hourly rates for technicians trained on this equipment, and response travel costs for each year of the maintenance period. Submittals that do not identify all post contract maintenance costs will not be accepted. Rates and costs shall be valid for the period of five (5) years after expiration of the guaranty.

1.6. POST CONTRACT EXPANSIONS:

- A. The contractor shall have the ability to provide parts and labor to expand the system specified, if so requested, for a period of five (5) years from the date of acceptance.
- B. As part of the submittal, include a quotation for all parts and material, and all installation and test labor as needed to increase the number of indicating or initiating devices by ten percent (10%). This quotation shall include CSI, MSI, control components, power supplies and indicating devices equal in number to one tenth of the number required to meet this specification (list actual quantity of each type).
- C. The quotation shall include installation, test labor, and labor to reprogram the system for this 10% expansion. If additional UVWS hardware is required, include the material and labor necessary to install this hardware.
- D. Do not include cost of conduit or wire or the cost to install conduit or wire except for labor to make final connections at the MCP and at each CSI, MSI and indicating devices.
- E. Submittals that do not include this estimate of post contract expansion cost will not be accepted.

1.7. APPLICABLE STANDARDS AND SPECIFICATIONS:

The specifications and standards listed below form a part of this specification. The system shall fully comply with the latest issue of these standards, if applicable.

- A. The system and its components shall be compatible with all requirements for SCIF construction, to include DCID 6/9, JFAN, TEMPEST, or any other facility security standards as deemed required.
- B. Local and State Building Codes.
- C. All requirements of the AHJ.
- D. All Department, Agency, Base, Command or Branch regulations.

PART 2.0 PRODUCTS

2.1. EQUIPMENT AND MATERIAL, GENERAL:

- A. All equipment and components shall be new, and the manufacturer's current model.
- B. All equipment and components shall be installed in strict compliance with manufacturers' recommendations. Consult the manufacturer's installation manuals for all wiring diagrams, schematics, physical equipment sizes, etc., before beginning system installation.
- C. All equipment shall be attached to walls and ceiling/floor assemblies and shall be held firmly in place (e.g., Indicating Appliances shall not be supported solely by suspended ceilings). Fasteners and supports shall be adequate to support the required load.
- D. All equipment must be installed by a factory-trained and authorized firm.

2.2. CONDUIT AND WIRE:

- A. Conduit:
 - 1. Conduit shall be in accordance with The National Electrical Code (NEC), local and state requirements.
 - 2. Where required, all wiring shall be installed in conduit or raceway. Conduit fill shall not exceed 40 percent of interior cross sectional area where three or more cables are contained within a single conduit.
 - 3. All circuit cable shall be installed per NEC Article 725. Non-power limited IAC circuits shall be installed in conduit separate from the power limited MSI and CSI circuits. The 120V supply circuit shall enter the UVWS in a dedicated raceway as per manufacturer's instructions.
 - 4. Conduit shall not enter the MCP, except where conduit entry is factory-specified by the UVWS manufacturer. Creating additional entries into the UVWS control cabinet shall void both the UL listing of the cabinet and the manufacturer's warranty on the control components housed within.
 - 5. Conduit shall be 3/4-inch (19.1 mm) minimum.
- B. Wire:
 - 1. All UVWS wiring shall be new.
 - 2. Wiring shall be in accordance with local, state and national codes and as recommended by the manufacturer of the UVWS. Number and size of conductors shall be as recommended by the UVWS manufacturer, but not less than 18 AWG (1.02 mm) for MSI and CSI circuits, and 14 AWG (1.63 mm) for IACs.

3. All wire and cable shall be listed and/or approved by a recognized testing agency for use with a protective signaling system.
 4. Wire and cable not installed in conduit shall have a fire resistance rating suitable for the installation as indicated in NEC 725 (e.g., CL2P).
 5. Wiring shall be color-coded per the local standards for MSI, CSI and IAC circuits. If no local color-code standard exists, the manufacturer shall indicate color-coding for the installation on the project-specific riser and point-to-point drawings to be submitted.
- C. Terminal Boxes, Junction Boxes and Cabinets:
- All boxes and cabinets shall be UL listed for their use and purpose.
- D. The MCP shall be connected to a separate dedicated branch circuit, maximum 30 amperes. This circuit shall be labeled at the main power distribution panel as UVWS. MCP primary power wiring shall be 12 AWG. The control panel cabinet shall be grounded securely to either a cold water pipe or grounding rod. The control panel enclosure shall feature a four-bolt removable chassis to facilitate replacement of the UVWS electronics.

2.3. MCP:

- A. The MCP shall be a Sciftronics brand series ScifAlert.
- B. Details:
 1. The MCP shall come factory-configured with the project-specific number of IAC, MSI, and CSI. The configuration shall allow for future expansion.
 2. Internal Green Timer feature shall limit through programming all IAC cycle ranges to lengths variable from a 1 second minimum to a maximum of sixty minutes. Installer shall coordinate with Owner to determine the desired setting standard and program this feature prior to final acceptance.
 3. The MCP shall internally convert supplied building power from 120VAC/60hz to 24VAC/100VA by an integrated, UL-recognized open-frame transformer, which shall provide all necessary power for proper operation.
 4. The MCP integrated main power supply board shall be UL 294-recognized for Access Control Systems and capable of converting a 24VAC/40VA input into two 24VDC/1.75A class 2, power-limited, continuous supply outputs.
 5. Power conditions shall be independently indicated by on-board colored LED indicators. Red shall indicate AC power and green shall indicate DC power. Non-illumination shall indicate a failure of power supply.
 6. Output voltage shall be electronically filtered and regulated. Outputs shall be PTC protected. Short circuit and thermal overload protection shall be

manufactured within the integrated MCP component boards.

7. An auxiliary form C output rated at 1A at 28VDC shall be provided on the MCP main power supply board.
8. The MCP shall have an integrated timer module that shall have a red colored LED to indicate when energized.
9. All integrated timer modules shall be DIN-rail mountable.
10. An internal reset feature shall cancel the timing features.
11. Relay activation shall be programmable for the start or end of timing cycle.
12. The MCP shall incorporate integrated relay modules that shall be UL-recognized components.
13. All integrated relay modules shall be DIN-rail mountable.
14. Two 28VDC DPDT contacts shall be provided on each relay module, with a total current draw of 43mA.
15. The housing shall be UL 50 and UL 50E listed, suitable for surface or semi-flush mounting.
16. The housing shall be a NEMA/EEMAC Type 1 housing composed of 14 and 16 gauge steel with a 16 gauge steel removable perforated panel.
17. Coating shall be an ANSI 61 gray polyester powder paint finish inside and out over phosphatized surfaces.
18. The housing shall be locking. Two keys shall be provided to the Owner upon system acceptance.
19. The MCP should be installed in a temperature- and humidity-controlled area, to ensure the life of the components. The MCP should be installed in an easily accessible location for maintenance and inspection purposes. Where the MCP is installed in a hidden location (e.g., above drop-ceiling), it shall be indicated on the as-built drawings. Signage in a form acceptable to the Owner should be placed below or near the location announcing the MCP's presence.

2.4. FIELD DEVICES:

- A. The field devices shall be of Sciftronics brand series SanitizeAlert.
- B. Indicating Appliance
 1. Appliance shall be a UL-listed component, utilizing a parabolic reflector rotating 360-degrees around an incandescent lamp.

2. The flash rate of the appliance shall be 60 per minute in all directions.
3. Appliance lens shall be available in amber, blue, green, red and clear.
4. Appliance shall be able to be mounted on a 1/2" pipe or be surface-mounted.
5. Appliance housing shall be rated Type 4x for water tight and dust tight seal.
6. Appliance shall utilize a twist and lock style attaching system to allow fast and easy access to inspect and replace the lamp.
7. Appliance shall operate properly on a 120VAC 50 or 60Hz power supply, drawing 0.36A.
8. Appliance shall provide 2,100 candella under normal operation.
9. Appliance brackets shall be Type 3R, for indoor or outdoor use, and for either walls or corners.
10. Appliance brackets shall be of cast aluminum with gray powder coat finish.
11. Appliances shall be labeled "UVWS Indicating Appliance" during manufacture.

B. Master System Initiation Device

1. MSI devices shall have a backplate available in stainless steel, polished brass, bronze, white, red, ivory, or lexan.
2. MSI devices shall be latching, have a positive, visual indication of operation and utilize a second-push type reset.
3. MSI device circuitry shall be rated at 2A.
4. MSI device shall be labeled "UVWS Master System Initiation" during manufacture.

C. Compartment Shunt Initiation Device

1. CSI devices shall have a backplate available in stainless steel, polished brass, bronze, white, red, ivory, or Lexan.
2. CSI device circuitry shall be rated at .75A at 125v.
3. CSI device shall be labeled "UVWS Compartment Shunt Initiation" during manufacture.

PART 3.0 EXECUTION

3.1. FINAL INSPECTION:

- A. At the final inspection, a minimum NTS Level II technician shall demonstrate that the system functions properly in every respect.

3.2. INSTRUCTION:

- A. Instruction shall be provided as required for operating the system. Hands-on demonstrations of the operation of all system components and the entire system including program changes and functions shall be provided.
- B. The contractor or installing dealer shall provide a user manual indicating "Sequence of Operation."