

SECTION 16140

WIRING DEVICES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Wall switches.
- C. Receptacles.
- D. Device plates and decorative box covers.

1.2 REFERENCES

- A. NECA - Standard of Installation.
- B. NEMA WD 1 - General Requirements for Wiring Devices.
- C. NEMA WD 6 - Wiring Device -- Dimensional Requirements.
- D. NFPA 70 - National Electrical Code/California Electrical Code.

1.3 SUBMITTALS

- A. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.
- B. Submit manufacturer's installation instructions.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum five years documented experience.

1.6 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Provide Products listed and classified by Underwriters Laboratories, Inc., or testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.1 WALL SWITCHES

- A. Single Pole Switch:
 - 1. Hubbell, Model 1221
 - 2. Pass & Seymore, Model #20AC1
 - 3. Arrow Hart, Model #1991
- B. Double Pole Switch:
 - 1. Hubbell, Model 1222
 - 2. Pass & Seymore, Model #20AC2
 - 3. Arrow Hart, Model #1992

- C. Three-way Switch:
 - 1. Hubbell, Model 1223
 - 2. Pass & Seymore, Model #20AC3
 - 3. Arrow Hart, Model #1993
- D. Four-way Switch:
 - 1. Hubbell, Model 1224
 - 2. Pass & Seymore, Model #20AC4
 - 3. Arrow Hart, Model #1994
- E. Description: NEMA WD1, heavy-duty specification grade, AC only general-use quiet type snap switch, UL approved for tungsten lamp loads or inductive loads without derating.
- F. Device Body: Plastic with toggle switch.
- H. Ratings:
 - 1. Voltage: 120/277 Volts AC
 - 2. Current: 20 amperes

2.2 RECEPTACLES

- A. Single Convenience Receptacle:
 - 1. Hubbell, Model 8310.
 - 2. Pass & Seymour, Model 5361.
- B. GFCI Receptacle:
 - 1. Hubbell, Model GF8300-I.
 - 2. Pass & Seymour
- C. Substitutions: Under provisions of Division 1.
- D. Description: NEMA WD 1; heavy-duty general-use receptacle.
- E. Device Body: Ivory plastic for normal power source, red plastic for emergency power source.
- F. Configuration: NEMA WD 6; type as specified and indicated.
- G. Convenience Receptacle: NEMA, Type 5-20.
- H. GFCI Receptacle: Convenience receptacle with integral ground fault circuit interrupter to meet regulatory requirements.
- I. All receptacles in all patient care areas, rooms and public areas shall be listed, hospital grade receptacle. In all other areas use hospital grade receptacle.

2.4 WALL PLATES

- A. Device plates shall be stainless steel, for the number of gangs and type of openings necessary.
- B. Weatherproof Cover Plate: Gasketed cast metal with hinged gasketed device cover.
- C. Plates shall be engraved and fitted, when specified for:
 - 1. Switches.
 - 2. Equipment that cannot be seen from the locations.
 - 3. All lock type switches.

4. All receptacles other than 120 volts.
 5. Emergency circuits, switches and receptacles and devices shall be RED in color.
- D. Plates for switches and receptacles on normal and emergency power shall be engraved in black with the panel and circuit number feeding it.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Division 1 - Coordination and Meetings: Verification of existing conditions prior to beginning work.
- B. Verify that outlet boxes are installed at proper height.
- C. Verify that wall openings are neatly cut and will be completely covered by wall plates.
- D. Verify that floor boxes are adjusted properly.
- E. Verify that branch circuit wiring installation is completed, tested, and ready for connection to wiring devices.
- F. Verify that openings in access floor are in proper locations.

3.2 PREPARATION

- A. Provide extension rings to bring outlet boxes flush with finished surface.
- B. Clean debris from outlet boxes.

3.3 INSTALLATION

- A. Install in accordance with NECA "Standard of Installation."
- B. Install devices plumb and level.
- C. Install switches with OFF position down.
- D. Install wall dimmers to achieve full rating specified and indicated after derating for ganging as instructed by manufacturer.
- E. Do not share neutral conductor on load side of dimmers.
- F. Install receptacles with grounding pole on top.
- G. Connect wiring device grounding terminal to branch circuit equipment grounding conductor.
- H. Install decorative plates on switch, receptacle, and blank outlets in finished areas.
- I. Connect wiring devices by wrapping conductor around screw terminal.
- J. Use jumbo size plates for outlets installed in masonry walls.
- K. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted outlets.

3.4 INTERFACE WITH OTHER PRODUCTS

- A. Coordinate locations of outlet boxes provided under Section 16130 to obtain mounting heights specified and indicated on drawings.
- B. Install wall switch 48 inches above finished floor.
- C. Install convenience receptacle 18 inches above finished floor.
- D. Install convenience receptacle 6 inches above counter or backsplash of counter.
- E. Install dimmer 48 inches above finished floor.
- F. Coordinate installation of access floor boxes with access floor system.
- G. Coordinate the installation of wiring devices with under floor duct service fittings.

3.5 FIELD QUALITY CONTROL

- A. Quality Control and Starting of Systems: Field inspection, testing, adjusting, and balancing.
- B. Inspect each wiring device for defects.
- C. Operate each wall switch with circuit energized and verify proper operation.
- D. Verify that each receptacle device is energized.
- E. Test each receptacle device for proper polarity.
- F. Test each GFCI receptacle device for proper operation.

3.6 ADJUSTING

- A. Contract Closeout and Starting of Systems: Adjusting installed work.
- B. Adjust devices and wall plates to be flush and level.

3.7 CLEANING

- A. Contract Closeout: Cleaning installed work.
- B. Clean exposed surfaces to remove splatters and restore finish.

END OF SECTION