

SECTION 16143

WIRING DEVICES

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. The work of this section consists of providing labor, materials, tools, appliances and miscellaneous accessories for wiring device work indicated by Drawings and schedules. Wiring devices are defined as single discrete units of electrical distribution systems which are intended to carry but not utilize electric energy.
- B. Types of electrical wiring devices in this section include the following:
 - 1. Receptacles.
 - 2. Ground-fault circuit interrupters.
 - 3. Switches.
 - 4. Wallplates.
 - 5. Dimmers.

1.2 RELATED DOCUMENTS

- A. Drawings.
- B. General Provisions of Contract, including General and Supplementary Conditions.
- C. Division 01 - Specification Sections.
- D. Section 16010 - General Electrical Provisions.

PART 2 - PRODUCTS

2.1 FABRICATED WIRING DEVICES

- A. General: Provide factory-fabricated wiring devices in types, colors, and electrical ratings for applications indicated and complying with NEMA Std. Pub. No. WD 1. Where types and grades are not indicated, provide proper selection as determined by Installer to fulfill wiring requirements. In non-public spaces (equipment rooms, janitor closets, elevator pits and control rooms, etc.) devices shall be brown with brown nylon plates. In all other areas, devices shall be ivory with ivory nylon plates. Color selection of devices and wallplates to be verified by Contractor with Architect prior to purchase.
- B. Receptacles:

1. Duplex: Provide duplex "specification grade" receptacles, 2-pole, 3-wire grounding, with green hexagonal equipment ground screw, ground terminals and poles internally connected to mounting yoke and mounting yoke provided with automatic grounding feature between mounting screws and yoke, 20-amperes, 125-volts, with metal plaster ears, back and side wiring, NEMA configuration 5-20R unless otherwise indicated.
2. Ground-Fault Interrupter: Provide "specification grade" duplex receptacles, ground-fault circuit interrupters (GFCI), feed-thru type, capable of protecting connected downstream receptacles on single-circuit, grounding type UL-rated Class A, 20-amperes rating, 120-volts, 60 Hz, with solid-state ground-fault sensing and signaling, with 5 milliamperes ground-fault trip level; equip with 20-ampere plug configuration, NEMA 5-20R and with local test/reset buttons.
3. Switches:
 - a Single Pole Toggle: Provide "specification grade" flush, quiet, AC-type, single-pole toggle switches, 20-amperes, 277/125 volts AC, with mounting yoke insulated from mechanism; equip with plaster ears, switch handle, side-wired screw terminals (and backwiring with clamp type terminals).
 - b Double-Pole Toggle: Provide "specification grade" flush, quiet, AC type, double-pole toggle switches, 20-amperes, 277/125 volts AC, with mounting yoke insulated from mechanism, equip with plaster ears, switch handle, side-wired screw terminals (and backwiring with clamp type terminals) and ground screw.
 - c Three-Way Toggle: Provide "specification grade" flush, quiet, AC-type, three-way toggle switches, 20-amperes, 277/125 volts AC, with mounting yoke insulated from mechanism, equip with plaster ears, switch handle, side-wired screw terminals (and backwiring with clamp type terminals).
4. Fluorescent Lamp Dimmers: Provide linear slid type wall-mounted, single-pole, semi-conductor modular type AC dimmers for fluorescent fixtures, rated 60 hertz, wattage and voltage as indicated, and with filters to reduce radio frequency noise and interference to minimum. Construct with 500:1 dimming ratio for adjustment and with anodized heat sinks. Provide 5" length wire connecting leads and voltage compensation.

2.2 WIRING DEVICE ACCESSORIES

- A. Wall Plates: Provide wall plates for wiring devices, of types, sizes, and with ganging and cutouts as indicated on drawings (or schedules). Construct with metal screws with countersunk heads for securing plates to devices, screw heads colored to match finish of plates. Plates shall be Nylon with smooth finish, interior locations, ivory color in public spaces, and brown finish in service and equipment areas.
- B. Weatherproof Device Covers: Receptacles in wet locations shall be UL listed, installed with a hinged outlet cover/enclosure clearly marked **"Suitable For Wet Locations While In Use"** and **UL Listed**. Provide weatherproof gasket between the enclosure and the mounting surface, and between the hinged cover and the mounting plate/base to assure proper seal. Covers shall be Specification Grade.

PART 3 - EXECUTION

3.1 INSTALLATION OF WIRING DEVICES/PLATES

- A. Install wiring devices as indicated, in compliance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", and in accordance with recognized industry practices to fulfill project requirements.
- B. Coordinate with other work, including painting, electrical box and wiring work, as necessary to interface installation of wiring devices with other work, furniture locations, and door swings.
- C. Verify location of all devices with Architect before beginning construction.
- D. Install wiring devices only in electrical boxes which are clean, free from excess building materials, dirt, and debris.
- E. Install galvanized steel wall plates in unfinished spaces.
- F. Install weatherproof covers at all damp or exposed locations, as indicated on drawings.
- G. Delay installation of wiring devices until wiring work is completed.
- H. Delay installation of wall plates until after painting work is completed.
- I. Protect wiring devices during painting.
- J. Plates shall be installed with all four edges in continuous contact with finished wall surfaces without the use of mats or similar devices. Plaster fillings will not be permitted. Plates shall be installed with an alignment tolerance of 1/16" from the vertical or horizontal.

3.2 PROTECTION OF WALL PLATES AND RECEPTACLES: Upon installation of wall plates and receptacles, advise Owner regarding proper and cautious use of convenience outlets. At time of Substantial Completion, replace those items which have been damaged, including those burned and scored by faulty plugs.

3.3 GROUNDING: Provide electrically continuous, tight grounding connections for wiring devices, unless otherwise indicated.

3.4 TESTING: Prior to energizing circuitry, test wiring devices for electrical continuity and proper polarity connections. After energizing circuitry, test wiring devices to demonstrate compliance with requirements.

END OF SECTION