

WIRING DEVICES

**PART 1 - General**

**1.1 RELATED SECTIONS**

- .1 Section 26 05 01 - Common Work Results - Electrical.
- .2 Section 26 99 99 – Commissioning.

**1.2 REFERENCES**

- .1 Canadian Standards Association (CSA International)
  - .1 CSA C22.2 No.42-10, General Use Receptacles, Attachment Plugs and Similar Devices.
  - .2 CAN/CSA C22.2 No.42.1-00(R2009), Cover Plates for Flush-Mounted Wiring Devices (Bi-national standard, with UL 514D).
  - .3 CSA C22.2 No.55-M1986(R2008), Special Use Switches.
  - .4 CSA C22.2 No.111-10, General-Use Snap Switches (Bi-national standard, with UL 20).

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit shop drawings and product data in accordance with Section 26 05 01, Item 1.6 Submittals.

**1.4 WASTE MANAGEMENT AND DISPOSAL**

- .1 See Section 01 74 21 Construction Demolition Waste Management.
- .2 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan.
- .3 Fold up metal banding, flatten and place in designated area for recycling.

**PART 2 - Products**

**2.1 SWITCHES**

- .1 Line voltage switches shall be specification grade, toggle type, flush mounted where possible, and C.S.A. approved as general purpose alternating current switches.
- .2 Manually-operated general purpose AC switches with following features:
  - .1 Terminal holes approved for No. 10 AWG wire.
  - .2 Silver alloy contacts.
  - .3 Urea or melamine moulding for parts subject to carbon tracking.

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- .4 Suitable for back and side wiring.
- .5 White toggle.
- .3 Toggle operated fully rated for tungsten filament and fluorescent lamps, and up to 80% of rated capacity of motor loads.
- .4 Switches of one manufacturer throughout project.

### 2.2 RECEPTACLES – 20A

- .1 Duplex receptacles, CSA type 5-20 R, 125 V, 20A, U ground, to: CSA-C22.2 No.42 with following features:
  - .1 Extra heavy duty compact design.
  - .2 White urea moulded housing.
  - .3 Suitable for No. 10 AWG for back and side wiring.
  - .4 Break-off links for use as split receptacles.
  - .5 Eight back wired entrances, four side wiring screws.
  - .6 Triple wipe contacts and riveted grounding contacts.
  - .7 One piece brass grounding strap.
  - .8 USB charger ports for oTENTIKs receptacles.
- .2 Other receptacles with ampacity and voltage as indicated.
- .3 All receptacles of one manufacturer throughout project.

### 2.3 GFCI RECEPTACLES – 20A

- .1 GFCI duplex u-ground receptacles shall be heavy duty grade, A.C. rated 20 amperes at 125 volts, U ground, having parallel slots with double wiping contacts, ground terminal, and one piece body.
- .2 GFCI receptacles shall be white complete with LED indication with coverplates as indicated below.

### 2.4 SPECIAL RECEPTACLES

- .1 Receptacles of specified amperage and voltage shall be supplied and installed where noted on the drawings. Where such units are noted they shall be best quality, specification grade and conform to the noted rating and applicable C.S.A. configuration.
- .2 See below for coverplates for all receptacles noted in .1. Receptacles shall be complete with lamicoid nameplates indicating voltage, amperage, & phase characteristic.

### 2.5 COVERPLATES

- .1 Coverplates for wiring devices to: CSA-C22.2 No.42.1.

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- .2 Coverplates from one manufacturer throughout project.
- .3 Sheet steel utility box cover for wiring devices installed in surface-mounted utility boxes.
- .4 Type 302 stainless steel cover plates, for wiring devices mounted in flush-mounted outlet box.
- .5 Sheet metal utility style cover plates for wiring devices mounted in surface-mounted FS or FD type conduit boxes.
- .6 Weatherproof double lift spring-loaded cast aluminum coverplates, complete with gaskets for duplex receptacles for interior wet locations as indicated.
- .7 Weatherproof spring-loaded cast aluminum coverplates complete with gaskets for single receptacles or switches for interior wet locations as indicated.
- .8 Where devices are indicated for exterior weatherproof construction, they shall include a flush mounting weatherproof enclosure and locking cover where protected by overhead soffits or canopies.
- .9 Where devices are indicated for exterior weatherproof construction and are exposed to weather without protection by overhangs or canopies, they shall include a surface mount cast aluminum lockable in-use cover.

### 2.6 POWER OUTLET BOX

- .1 Provide power outlet box with the following features:
  - .1 Aluminum construction enclosure rated C.S.A. Type 3R.
  - .2 Grey powder coat finish and padlockable cover for maximum security.
  - .3 Bottom feed.
  - .4 Provide unit complete with:
    - .1 One 20A, GFI, 1 pole circuit breaker.
    - .2 One 30A, 1 pole circuit breaker.
    - .3 One 20A, 120V CSA 5-20R duplex receptacle.
    - .4 One 30A, 120V CSA TT-30R RV receptacle.
    - .5 Circuit breaker interrupting capacity 10 kAIC.
    - .6 Ground lugs.
    - .7 Integral splitter blocks suitable to terminate #14 AWG up to #2/0 AWG cables. External splitter blocks will not be accepted.
    - .8 Knockout on unit bottom suitable to terminate 2C #10 Teck 90 up to 2C #2 Teck 90.
  - .5 Dimension 254 mm height x 152.4 mm width x 100 mm depth.
  - .6 Four mounting holes in back complete with stainless steel mounting screw and all required mounting bracket. Unit shall be capable to be surface mounted on a 200 mm x 200 mm pressure treated post.

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- .7 Power outlet box shall be shipped from the factory completely assembled.

### **PART 3 - Execution**

#### **3.1 INSTALLATION**

.1 Switches:

- .1 Install single throw switches with handle in "UP" position when switch closed.
- .2 All switches, and their wall plates, shall be installed plumb, with switch handle in the "up" position when switch is closed. Pigtail branch circuit conductors shall be used for connection to switches in multi-gang outlets. Do not use feed through features on switches. Twist stranded conductors and form under head of screw. Tighten terminal screw to specified torque. Use back wiring feature for conductor sizes #12 and #10.
- .3 Install switches in gang type outlet box when more than one switch is required in one location.
- .4 Mount toggle switches at height in accordance with Section 26 05 01 - Common Work Results - Electrical.

.2 Receptacles:

- .1 Install receptacles in gang type outlet box when more than one receptacle is required in one location.
- .2 Mount receptacle flush mounted in oTENTIKs wood cabinet as indicated on the drawing.
- .3 Mount receptacles at height in accordance with Section 26 05 01 - Common Work Results - Electrical.
- .4 Where split receptacle has one portion switched, mount vertically and switch upper portion.
- .5 All receptacles, and their wall plates, shall be installed plumb, with long axis in the vertical position, U ground terminal on the top. Pigtail branch circuit conductors shall be used for connection to receptacles in cases where more than one phase conductor or neutral conductor exist in the outlet box. Do not use feed through features on receptacles. Twist stranded conductors and form under head of terminal screw. Tighten terminal screw to specified torque.
- .6 Power and neutral conductor terminations shall be made using the back wiring feature on the receptacle for conductor sizes #12 and #10. Where voltage drop considerations require #8 AWG conductors to feed a receptacle, the #8 conductor shall be extended to a surface mounted junction box located in the ceiling space directly above the receptacle. The #8 AWG conductor shall be reduced to #10 AWG in the junction box before extending on down in the vertical drop to the receptacle.
- .7 Install a green insulated bonding conductor, equal in ampacity to the receptacle ampacity, between the grounding terminal of the receptacle and the grounding screw or stud of the outlet box.

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- .8 Receptacles above counters shall be installed above the backsplash to a height as indicated on the drawings and coordinated on the site.
  - .9 All receptacles are to be polarity tested.
  - .10 All receptacles are to be identified with Lamicoid nameplates in accordance with Section 26 05 01 - Common Work Results - Electrical. The nameplate for each receptacle shall indicate the panel from which the receptacle is fed, as well as the branch breaker circuit number(s). In addition, a Ty-Rap identifying tag shall be secured in the outlet box, marked with the same identification and arrange to be visible when the coverplate is removed, without removal of the receptacle.
- .3 Coverplates:
- .1 Protect all cover plates with paper or plastic film until painting and other work is finished.
  - .2 Install suitable common coverplates where wiring devices are grouped.
  - .3 Do not use cover plates meant for flush outlet boxes on surface-mounted boxes.
- .4 Power Outlet Box:
- .1 Install box on campsite power pedestal as shown on the drawing.

**END OF SECTION**