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| Version | Date | Description of Revisions |
| 1 | August 30, 2006 | Approved final document. |
| 2 | February 19, 2010 | Modified ‘Related Sections’ |
| 3 | June 3, 2013 | Final Draft – Consolidated Comments Spec Update Project |
| 4 | June 18, 2013 | Incorporation of new Commissioning Specification cross references. |
| 5 | July 29, 2014 | Changes to reflect renaming of commissioning specification and final review (AV) |
| **6** | **February 4, 2015** | **Updated, Finalized Specification – Reference eDOCS #5630491 v7 (AV)** |
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NOTE:

This is a CONTROLLED Document. Any documents appearing in paper form are not controlled and should be checked against the on-line file version prior to use.

**Notice:** This Document hardcopy must be used for reference purpose only.

**The on-line copy is the current version of the document.**

# GEneral

## Related Sections

### *[Under "Related Sections", identify other Sections that are related to, and/or dependent on, the work results or information specified elsewhere. The list should be limited to Sections with specific information that the reader might expect to find in this Section, but is specified elsewhere. For example, if hardware for aluminum entrances is specified in the aluminum entrance Section, a cross-reference would be appropriate in the finish hardware Section. The purpose of this cross-referencing is for information only, to aid in finding those other requirements—not to define the scope of the Section.*

### *Cross-referencing here may also be used to coordinate assemblies or systems whose components may span multiple Sections and which must meet certain performance requirements as an assembly or system.*

### *Contractor is responsible for coordination of the Work. Contractor is responsible for being familiar with and incorporating all required elements of cross-referenced Specifications cited.*

### *This Section is to be completed/updated during the design development by the Consultant. If it is not applicable to the section for the specific project it may be deleted.]*

### *[List Sections specifying installation of products supplied but not installed under this Section and indicate specific items.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Execution requirements for ...[item]... specified under this Section.

### *[List Sections specifying products installed but not supplied under this Section and indicate specific items.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: Product requirements for ...[item]... for installation under this Section.

### *[List Sections specifying related requirements.]*

### Section [\_\_\_\_\_\_ – \_\_\_\_\_\_\_\_\_\_\_\_]: [Optional short phrase indicating relationship].

### Sections:

#### Section 01300 – Submittals

#### Section 01810 – Equipment Testing and Facility Commissioning

#### [Division 13 – SCADA and Instrumentation - insert applicable specifications]

#### Section 16010 – Electrical General Requirements

#### Product requirements for [item]... for installation under this Section.

## References

*[Delete .1 if Section 01060 – Regulatory Requirements is included in Contract Documents.]*

### CSA:

#### CSA 22.2 No. 51-14 (AC90).

## Shop Drawings

### Submit shop drawings to the Consultant for review and approval.

### Shop drawings and specifications shall include but not be limited to the following:

#### Complete assembly.

#### Contact surfaces.

#### Construction features.

#### Wiring diagrams.

#### Catalogue information.

## Delivery

### Deliver to the designated fixture or equipment manufacturer the required quantity of interceptors, receptacles and/or plugs necessary for the installation and connection of the fixture or equipment.

# PRODUCTS

## Components

### Designed for up to and including 600 V, 20 A lighting and branch wiring installations.

### Integrally molded thermoplastic, colour coded black for normal and red for emergency circuits. Use special colours for system identification (for example, blue, grey, yellow, white).

### Certified to make or break under full rated load.

## Cable Sets

### Cable sets shall be c/w factory molded male and/or female terminals with the number and size of conductors in accordance with the wiring system requirements.

### Factory assembled and integrally molded.

### All cable sets/harnesses shall be CSA certified.

### Cables shall allow the relocation of fixtures and equipment up to two metres.

### Starter cables: complete with one end prepared for field installation and other end complete with molded female terminal. Field prepared end: armour removed 150 mm and complete with locknutless connector and suitable for circuit connection to standard outlet box.

### Joiner cables: one end c/w integrally molded male terminal and other end c/w female terminal.

### Switch drop cables: c/w one end prepared for field installation and other end c/w integrally molded switch terminal. Field prepared end: armour stripped 150 mm and c/w locknutless connector suitable for circuit connection to a standard outlet box or equipment.

### Feed drop cables: c/w one end prepared for field installation and other end c/w integrally molded switch terminal. Field prepared end: armour stripped 150 mm and c/w locknutless connector suitable for circuit connection to a standard outlet box or equipment

## Interceptors and Receptors

### Designed for flush mounting in fixtures or equipment to afford low profile connection with cable sets.

### Slip lock fit design for securing interceptor to fixtures or equipment.

## Switch Kits

### Switch kits are designed for circuit switching and include switch adaptor, crossover cable and switching cable. Switch adaptor provides power-in recessed plug, power-out receptacle, switch drop cable receptacle, and switched power-out receptacle.

### Switch kits: shall be approved by the Consultant as portable equipment and shall be capable of connection or disconnection under full rated load.

## Multi-tap Adaptors

### Designed for circuit splitting. Multi-tap adaptor provides power in recessed plug and three power out receptacles.

## Phase-tap Adaptors

### Designed for splitting of 3 phase power supply into 3 single phase power receptacles. Phase-tap adaptor provides power-in recessed plug and 3 power-out receptacles. First power-out receptacle is connected and identified as phase "A"; second power-out is connected and identified as phase "B"; and third power-out receptacle is connected and identified as phase "C". All three power-out receptacles shall allow the connection of a single phase power drop cable.

## Wall Assemblies

### Wall assemblies shall be completely pre-wired in gangs of 1, 2, 4 or 6 as required.

### Wall assemblies shall be connected with armoured cables in accordance with CSA 22.2 No. 51-14 (AC90) c/w locknutless connectors and molded plugs. The wall assemblies shall be ready for connection to the ceiling or under floor distribution boxes with matching receptacles.

### Wall assemblies shall have adjustable wall supports for 12.5 mm or 15.5 mm drywall. Supports shall have fastening holes for mounting to studs or level for block walls.

### Use factory installed receptacles, barriers and cover plates (one per gang).

### Use factory installed armoured cables in accordance with CSA 22.2 No. 51-14 (AC90) flexible type raceway with internal throat connectors for telephone, data, communications etc.

### Use snap in style finishing plates and rings for the overlapping to drywall, block etc.

## Branch Feeders

### Armoured cables in accordance with CSA 22.2 No. 51-14 (AC90) or Approved Equivalent feeders for connection from the electrical panel to ceiling, wall or under-floor outlet/distribution assemblies as indicated on the Drawings.

# EXECUTION

## Installation

### Install the system and components in accordance with the manufacturer's instructions.

### Install and connect the branch feeders from the electrical panel to the circuit ceiling outlet/distribution assemblies as indicated on the Drawings.

### Install starter cables to circuit outlet boxes and connect to power circuit and energize.

### Install multi tap adaptors and phase tap adaptors for circuit switching and splitting as required.

### Install joiner cables between interceptors in fixtures or equipment. Allow extra cable to facilitate removal and relocation of fixtures or equipment.

### Install blanking plugs in unconnected receptacles.

### Install wall assemblies as shown on the Drawings and connect to designated circuits.

### Integrally molded thermoplastic components shall match the colour identification system (for example, black for normal power, red for emergency power).

### On completion of the installation, the manufacturer’s representative shall be notified to carry out a Site inspection and report any inconsistencies to the Consultant. The Contractor shall perform any corrective work required for compliance with the requirements of the manufacturer’s report.

## Commissioning

### For all commissioning activities on systems where components of this Section are integral to functionality, refer to Section 01810 – Equipment Testing and Facility Commissioning. All inspection and testing activities shall be completed in accordance with the documentation required as part of the commissioning plan that shall be provided to the Consultant prior to the commencement of commissioning activities.

**END OF SECTION**