



# DraftLogic Electrical Features

DraftLogic Electrical has been designed from the ground up by building electrical systems design engineers working with software engineers. Herein we list our robust feature set & the benefits to you. Please contact us to get further detail on any of these features or to discuss how DraftLogic Electrical can help your company.



## Automated Circuiting

The designer decides which areas of their project will be serviced by which panel rooms or specific panels of their choosing. DraftLogic Electrical will automatically place panels as needed to service lights, receptacles, and motors.

Circuits will be assigned using a shortest path algorithm and will share into neighboring rooms if the designer allows and there is sufficient capacity remaining on the circuit. Circuits are assigned in phase groups to encourage neutral sharing and efficient branch circuit wiring. Circuit ordering is optimized for efficient branch circuit wiring, i.e. reducing construction materials and labor.

### *Intuitive & Comprehensive Manual Circuiting Tool*

DraftLogic Electrical includes the Circuit Manager dialog, which gives you complete control over the circuits in your project. You can individually add and remove objects to circuits, select protection sizes, select protection types, and create parent / child relationships between power tree members.



## Automated Distribution Device & Motors Protection and Conductor Calculations

DraftLogic Electrical's patent-pending Automated Distribution & Motors Protection and Conductor Calculations provide building systems designers completely automatic, quick, and accurate selection of protection and conductors for their entire project. DraftLogic Electrical removes the tedious table-searching part of protection/conductor/kVA selection but still gives the designer complete control over the protection and conductors used throughout the distribution network of their project.

### *Suite Derating and Reporting Automatically Occurs*

When the project includes apartments or suites, the suite derating rules for each of CEC and NEC are applied; complete suite derating schedules are produced as part of the panel schedules reporting (suite load calculator, meter center schedule, suite derating schedule for any new aggregation of suites).

### *User Overrides to Exercise Your Design Discretion*

Every distribution device (panels, transformers, etc.) and motor has attributes on it that allow you to exercise ultimate control over the protection and conductors that are selected for it, regardless of what DraftLogic Electrical calculates. This complete set of overrides allows the designer to specify protection amperage, protection type, conductors, bonding/ground, bus, and kVA of their liking to be used instead of calculated values.



## Automated Fault Levels Calculation

The term "fault level" refers to what magnitude of current (amps) will flow in an electrical circuit under the worst conditions i.e., a short is created between phase wires or phase to neutral or phase to ground. Usually the worst case is phase to phase which can result in the largest current flowing. Your organization may refer to these calculations as 'fault current calculations'.

Whenever a schedule or diagram that displays the fault levels for any distribution devices or branch circuit panels is requested by the user, the fault levels are automatically freshly calculated by DraftLogic Electrical.

## Automated Branch Circuit Wiring

DraftLogic Electrical Automated Branch Circuit Wiring quickens project completion by saving users hundreds to thousands of both clicks to place lines/wire count objects and repetitive low value decisions. The automation further makes certain branch circuit wiring is accurate by carrying out thousands of repetitive engineering calculations error free, no human error factor creeping in. DraftLogic Electrical uses the circuiting information from the devices in your drawing to perform all the steps of Branch Circuit Wiring (BCW) that you would normally have to do yourself: deciding on circuit grouping for home runs, drawing connecting lines between objects to represent your choice of conduit & wire or cable, place wire count symbols on lines, and add data to the lines to provide detail for a complete Bill Of Materials report that includes branch circuit wiring.

### **Tools To Make Adjustments or Perform Branch Circuit Wiring Tasks Manually**

In most cases, the expert system automation will serve your purposes as-is. In situations where you need to branch circuit wire an object in a special manner, or to branch circuit wire an object that is not supported for automatic branch circuit wiring in this version, DraftLogic Electrical provides semi-automated and manual tools for adding and removing branch circuit wiring lines. To add or modify conductor details on each branch circuit wiring line, we provide the Branch Circuit Wire Manager.

## Automated Generation of Schedules and Floor Plans

The days of taking as long to create the panel schedule as you took to do the circuiting are over! In mere seconds, DraftLogic Electrical creates your floor plans and schedules completely automatically.

DraftLogic Electrical never counts wrong, never adds wrong, and never plugs the numbers into a formula the wrong way. Your schedules will always be accurate, complete, and professional...and better yet, they will take seconds to generate instead of hours! DraftLogic Electrical generates eleven types of electrical design schedules fully automatically, including: Single Line Diagrams, Panel Schedules, Luminaire Schedule, Floor Plans, Bill of Materials, Suite Loads & Derating, and Lighting Wattage Per Square Foot.

## Automated Systems Placement

DraftLogic Electrical will place fixtures in rooms based on user specified foot-candles requirements and fixture types, and/or by user-selected rules that place lights in relation to objects in rooms (like workbenches or tables) or content elements (like room center). The lights will be assigned switch groups in patterns that you control, and switches will be placed by the doors in each room.

DraftLogic Electrical will place receptacles around the perimeter walls of each room based on user specified spacing requirements and/or by user-selected rules that place receptacles in relation to objects in rooms (like counters or desks) or content elements (like beside the doorway).

For both luminaires and receptacles Automated Placement, DraftLogic Electrical looks to the Room Library expert systems databases for detail on how you want that type of room serviced.



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