ArcAD

DC Arc Flash Analytic V3.0
User Guide

DC Power System Arc Flash Hazard Analysis and Labeling Software

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About the Program

DC-Arc-Flash-Analytic version 3.0 (DCAFA V3.0) is a powerful and easy to use Windows-based program specifically developed to assist in performing arc flash and shock hazard analysis in DC power systems, including but not limited to battery banks, public transportation, power converters and rectifiers, mining sites, telecommunications equipment, solar and wind farms, etc.

DCAFA V3.0 Key Features & Capabilities

The program takes system voltage, available short circuit fault current, fixed or variable gap between conductors, circuit time constant, equipment configuration, working distance, protection device type and rating, or a preset arc duration value, and determines incident energy released by the arc flash, arc flash and shock protection boundaries and site-specific level of personal protective equipment (PPE). DCAFA V3.0 is applicable for systems with voltages in the range of 180 to 15,000VDC, short circuit currents from 0.4 to 50kA, circuit time constants from 0 to 50 msec.

Among various key capabilities, the DCAFA V3.0 evaluates threshold incident energy for a second degree burn, performs analysis using metric or imperial units, saves input configurations and calculation results for future reference or printing. With DCAFA V3.0, it is also easy to create arc flash warning labels in different electronic formats and languages, thus reducing the cost of obtaining compliance with NFPA 70E and Canadian CSA Z462 standards.

Visit us at www.arcadvisor.com for more on-line resources, PC software programs and mobile apps for short circuit fault current, arc flash hazard analysis and labeling.

Installing DC Arc Flash Analytic version 3.0

DC Arc Flash Analytic (DCAFA V3.0) package comes as a single executable file:

• *Download the .EXE file to your PC or insert the installation disk into CD drive*
• *Double click the EXE file icon to launch the installation wizard*
• *Welcome screen will appear. Click [Next] button and follow the instructions to complete the installation*

Launching and registering the program

• *Click on Windows START button*
• *Select DC-ARC-FLASH-ANALYTIC V3.0 from Program Manager*
• *Click on the program icon to launch DCAFA V3.0*

The first time the program is launched, you will need to unlock the program features that have been deactivated in unregistered / demo version:

• *Click on <u>Help</u> menu*
• *Select <u>Register</u> option*

Registration screen will pop up; please enter your individual DCAFA V3.0 registration credentials including your first and last name, company name and your individual license key exactly as they appear on the letter or email accompanying your DCAFA V3.0 purchase.
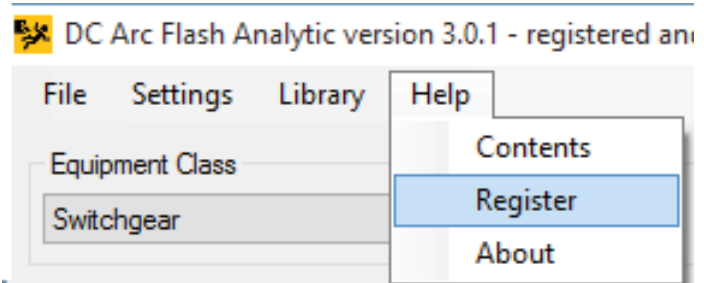
> NOTE: Registration key comes with the purchase of the software. Please contact us for your individual registration key.

Options Menu

Use <u>*Options*</u> to manage units of measurement settings and protection device database.

Units of measurement

• *Click on <u>Options</u> menu and select Units.*

The *Units* screen will pop up showing default units of measurement for input and output data.

This feature allows you to switch units of measurement for a wide variety of input and output data including arc flash and shock protection boundaries, incident energy, working distance etc. The program would also automatically convert all relevant values to the new units of measurement including input, output data and label readings. The DCAFA V3.0 software will memorize the selected units of measurement and apply them next time the program is launched.
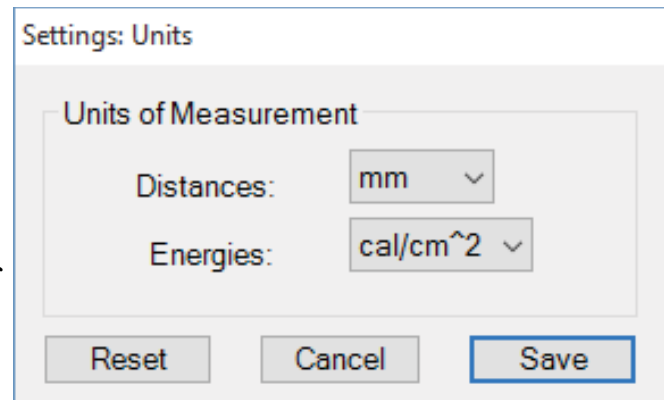
Populating Protection Device Database

• *Click on Library menu and select Fuses or Circuit Breakers*

The selected circuit protection device type maintenance screen will show up. The feature allows you to add new protection devices not published in DCAFA V3.0 built-in circuit protection device database. You can specify manufacturer name, series, current rating, rated voltage, interrupting rating and the device clearing characteristics data for each one of the devices. When finished, close the form to return to the main program screen. You will notice newly entered devices listed under *Upstream Protection Device* drop down list in the main program window.

Saving Labels

From *Label Preview* window, click on *Save as Image* or *Save as PDF* buttons to save the label in any one of the available electronic formats. You will need a standard laser or inc jet printer to produce warning labels created using DC Arc Flash Analytic software.

Saving Calculation Results

By pressing the *Save Results* button from *Calculation Results* screen, the results will be saved to a new or an existing text file for future reference or printing.

Saving Equipment Configuration

• *Click on Save Current Equipment to the Database from File menu*

The program will save your existing equipment configuration including equipment name, available short circuit current, system voltage, gap between conductors, circuit time constant, working distance, equipment class, upstream protection device and arc duration.

Importing Equipment Configuration

• *Click on Browse Saved Records from File menu to import previously saved equipment configuration.*

Use navigation buttons to select a record and click on *Import Record* button to copy the data into the program main window.

Saving and Printing Labels

Te program allows save arc flash & shock hazard warning labels in electronic JPG, GIF, TIF, BMP (BitMap), PDF formats. You can also select label size, type, layout and language and click on *Print Label* button to send the label to print. Click on *Printing* menu item, preview labels, make adjustment to page layout and printer settings setup prior to printing labels directly from the DCAFA V3.0 program.
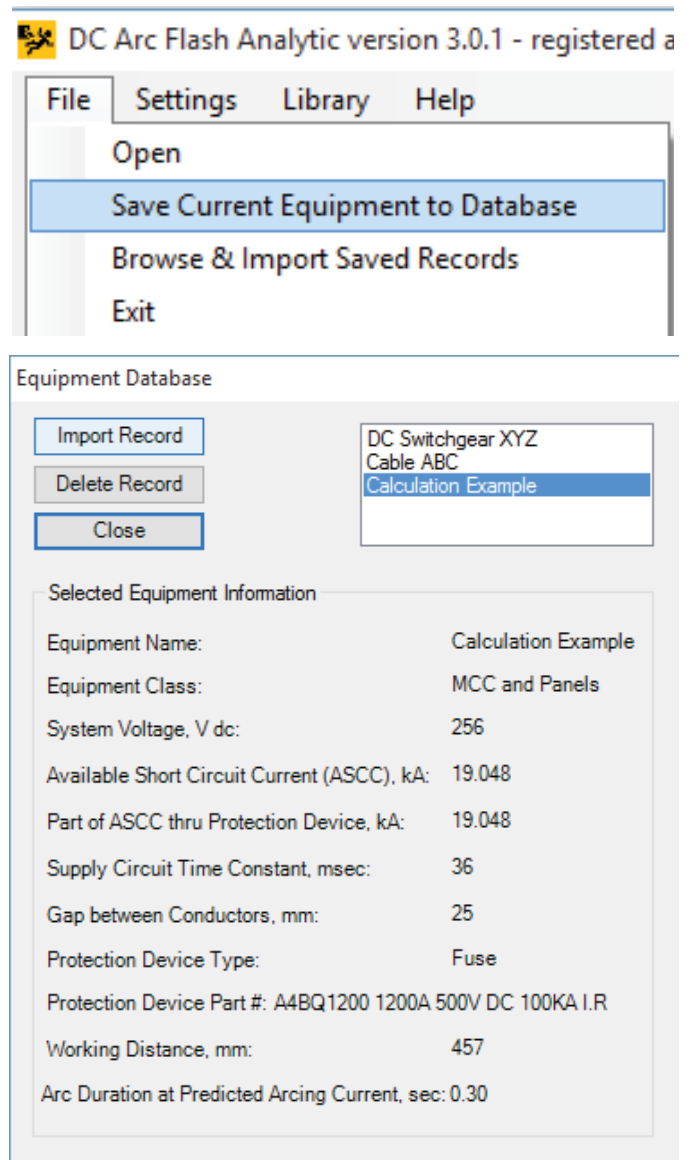
Help With the Program

If you have any question or problems with installation, running the program, arc flash hazard analysis, or creating warning labels using the program tool, please check the program Help or contact us.

Contact Information

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