

Complete Electrical Power Design and Analysis Platform

Paladin®
DesignBase™ 3.0



New Features

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What's New in Paladin DesignBase 3.0

Paladin DesignBase 3.0 – EDSA's first release available via direct user download – sets a new standard in power systems modeling, in terms of advanced features, functions, and ease-of-use. By incorporating feature requests from our growing user base, we've created the most powerful modeling environment ever... resulting in unprecedented on-the-job user productivity and overall software management.

And of course, any model created using Paladin DesignBase 3.0 can be redeployed in on-line mode, using EDSA's Paladin Live, the only power systems platform that keeps your know-how on the job after the facility is constructed.

The Paladin family of products is proven in some of the world's most mission-critical facilities... and we thank you for adding your project to our expanding list of customer successes.

Our most productive modeling environment, ever

- Power without complexity: the industry's broadest range of packages, features, and functions... all harnessed by an easy-to-use modeling interface that resembles familiar products like AutoCAD or Visio.
- Up to 10x the speed of earlier Paladin DesignBase versions
- Simplifies the creation of Paladin Live-ready power system models... ensuring the most accurate, most detailed design imaginable, while keeping your options open for the future. This also lays the foundation for users wishing to deploy on-line applications, such as the popular Paladin Live Real-Time Arc Flash Advisor.
- Allows user to optimize power system designs not just for reliability, but energy efficiency, as well.
- Support for a wide range of operating systems, including Microsoft Windows 7.0 (32- and 64-bit versions)

Additions to DesignBase libraries

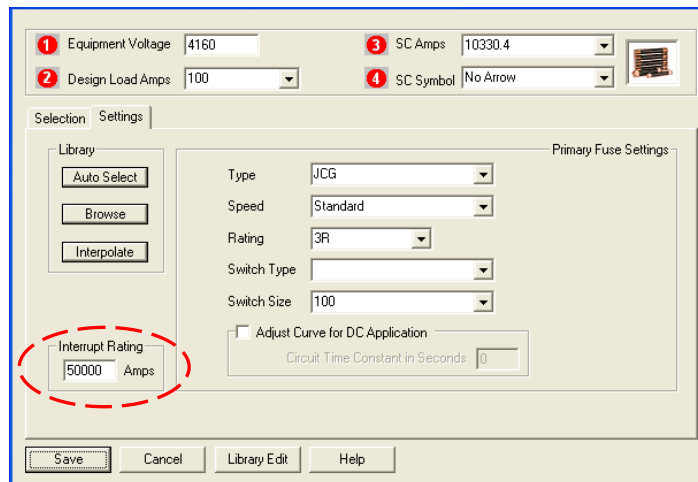
- New spreadsheet implementation of DesignBase Library Manager
 - Greatly simplifies data entry and editing
 - New copy, cut, paste, and other functionality

- Simple data transfer in and out of Microsoft Excel



Name	Size	Description	Source	Cooling Type	Primary	Secondary	R	X	RO	XO	G
1	10000-3L	10000 10000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.53000	7.98000	0.53000	7.98000	0.000
2	1000-3L	1000 1000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.89000	5.10000	0.89000	5.10000	0.000
3	12500-3L	12500 12500 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.50000	7.98000	0.50000	7.98000	0.000
4	15000-3L	15000 15000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.48000	8.98000	0.48000	8.98000	0.000
5	1500-3L	1500 1500 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.83000	5.10000	0.83000	5.10000	0.000
6	150-3L	150 150 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	1.23000	4.00000	1.23000	4.00000	0.000
7	20000-3L	20000 20000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	05 - DA	0.000	0.000	0.46000	9.98000	0.46000	9.98000	0.000
8	2000-3L	2000 2000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.77000	5.10000	0.77000	5.10000	0.000
9	225-3L	225 225 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	1.19000	4.00000	1.19000	4.00000	0.000
10	25000-3L	25000 25000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.44000	9.98000	0.44000	9.98000	0.000
11	2500-3L	2500 2500 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.81000	5.88000	0.81000	5.88000	0.000
12	30000-3L	30000 30000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.42000	9.98000	0.42000	9.98000	0.000
13	3000-3L	3000 3000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.86000	6.19000	0.86000	6.19000	0.000
14	300-3L	300 300 KVA 3-Phase Transformer	EDSA Oil Cooled	07 - FDA	0.000	0.000	1.14000	4.00000	1.14000	4.00000	0.000
15	3500-3L	3500 3500 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.64000	6.46000	0.64000	6.46000	0.000
16	41700-3L	41700 41700 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.04000	7.72000	0.04000	7.72000	0.000
17	43700-3L	43700 43700 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.04000	6.00000	0.04000	6.00000	0.000
18	5000-3L	5000 5000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.40000	11.99000	0.40000	11.99000	0.000
19	5000-3L	5000 5000 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.60000	6.97000	0.60000	6.97000	0.000
20	500-3L	500 500 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	1.04000	4.00000	1.04000	4.00000	0.000
21	7500-3L	7500 7500 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.57000	7.47000	0.57000	7.47000	0.000
22	750-3L	750 750 KVA 3-Phase Liquid Type	EDSA Oil Cooled	07 - FDA	0.000	0.000	0.94000	5.10000	0.94000	5.10000	0.000

- New ANSI generator generic library with hundreds of new devices
- Enhanced GE transformer library with hundreds of new additions
- Upgraded PDC libraries with interrupt ratings for fuses and the addition of thousands of new curves



Equipment Voltage: 4160 SC Amps: 10330.4

Design Load Amps: 100 SC Symbol: No Arrow

Library: Auto Select, Browse, Interpolate

Type: JCG Speed: Standard Rating: 3R Switch Type: Switch Size: 100

Interrupt Rating: 50000 Amps

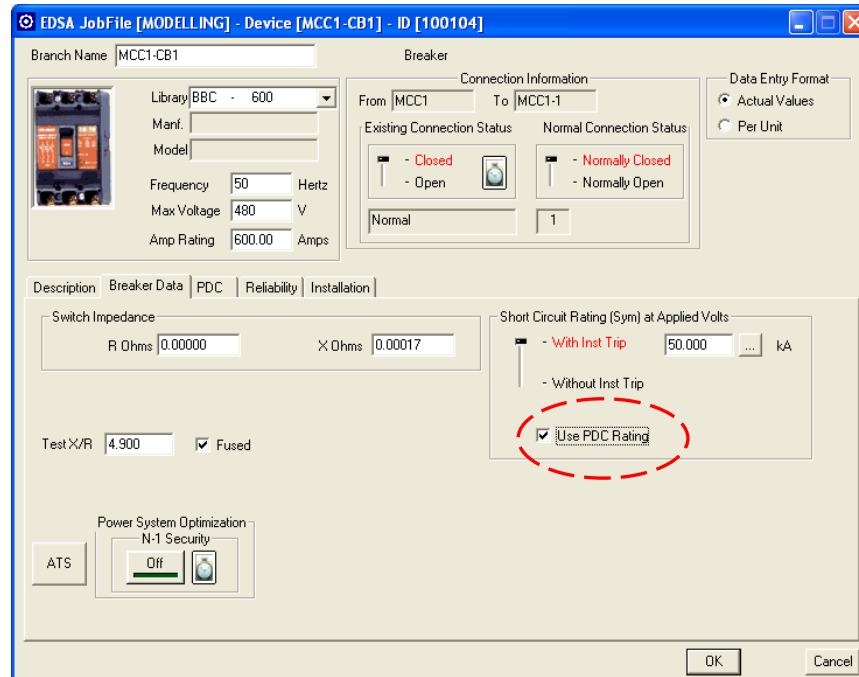
Adjust Curve for DC Application: Circuit Time Constant in Seconds: 0

Buttons: Save, Cancel, Library Edit, Help

Improvements to PDC program

- PDC interrupting ratings available in Editor for short circuit calculation
- Enhanced ties between standalone PDC program and models developed in the Paladin DesignBase modeler
 - Standalone program works directly on Actrix network
 - User can alternate between regular and standalone PDC program without leaving the job file and interchangeably use the functions of both PDC programs
- Simplified user interface with new streamlined PDC screens

- New spreadsheet interface for complex multi-segment relay curves (e.g. G&W fault interrupters)

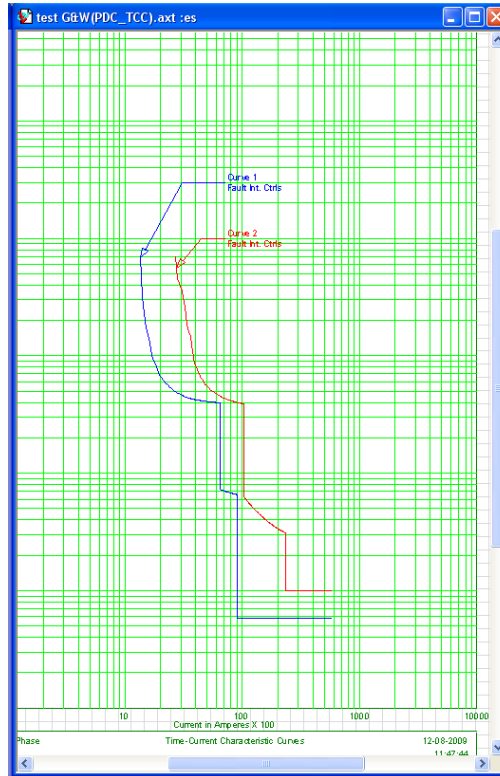


Fault Interrupting Controls at Middle of Branch: 1

1 Equipment Voltage: 13800
 2 SC Amps: 25000
 3 SC Symbol: No Arrow
 Curve Label: Curve 1

Manufacturer: G&W
 Relay Type:
 Extend Relay to Short Circuit:
 Curve Color: Blue

	CT Ratio [Amps]	Min Trip [Seconds]	Ground Fault [% as decimal]	Curve [Seconds]	Phase Time Delay [Seconds]	Inrush Restraint Multiplier	Inrush Restraint Time Delay [Seconds]	Instantaneous Multiplier	Min Response Time [Seconds]	Total [Amps]
1	500:1 CT	45	0.25	GE IAC53	0.4	5	3.25	7	0.05	
2	15.000	45.000	11.250							
3	15.652	46.957	11.739	65.535	65.585	65.985	69.235		69.235	69.235
4	16.304	48.913	12.228	28.150	28.200	28.600	31.850		31.850	31.850
5	16.957	50.870	12.717	18.955	19.005	19.405	22.655		22.655	22.655
6	17.609	52.826	13.207	13.567	13.617	14.017	17.267		17.267	17.267
7	18.261	54.783	13.696	11.149	11.199	11.599	14.849		14.849	14.849
8	18.913	56.739	14.185	9.130	9.180	9.580	12.830		12.830	12.830
9	19.565	58.696	14.674	6.342	6.392	6.792	10.042		10.042	10.042
10	20.217	60.652	15.163	5.291	5.341	5.741	8.991		8.991	8.991
11	20.870	62.609	15.652	4.985	5.035	5.435	8.685		8.685	8.685
12	21.522	64.565	16.141	4.285	4.335	4.735	7.985		7.985	7.985
13	22.174	66.522	16.630	3.543	3.593	3.993	7.243		7.243	7.243
14	22.826	68.478	17.120	3.164	3.214	3.614	6.864		6.864	6.864
15	23.478	70.435	17.609	2.908	2.958	3.358	6.608		6.608	6.608
16	24.130	72.391	18.098	2.660	2.710	3.110	6.360		6.360	6.360
17	24.783	74.348	18.587	2.419	2.469	2.869	6.119		6.119	6.119
18	25.435	76.304	19.076	2.210	2.260	2.660	5.910		5.910	5.910
19	26.087	78.261	19.565	2.067	2.117	2.517	5.767		5.767	5.767
20	26.739	80.217	20.054	1.927	1.977	2.377	5.627		5.627	5.627
21	27.391	82.174	20.543	1.790	1.840	2.240	5.490		5.490	5.490
22	28.043	84.130	21.033	1.657	1.707	2.107	5.357		5.357	5.357
23	28.696	86.087	21.522	1.548	1.598	1.998	5.248		5.248	5.248
24	29.348	88.043	22.011	1.463	1.513	1.913	5.163		5.163	5.163



New Short Circuit Features

- Dramatically improved the speed of protective device evaluation algorithm
- Integrated “Crystal Reports” to organize and display results

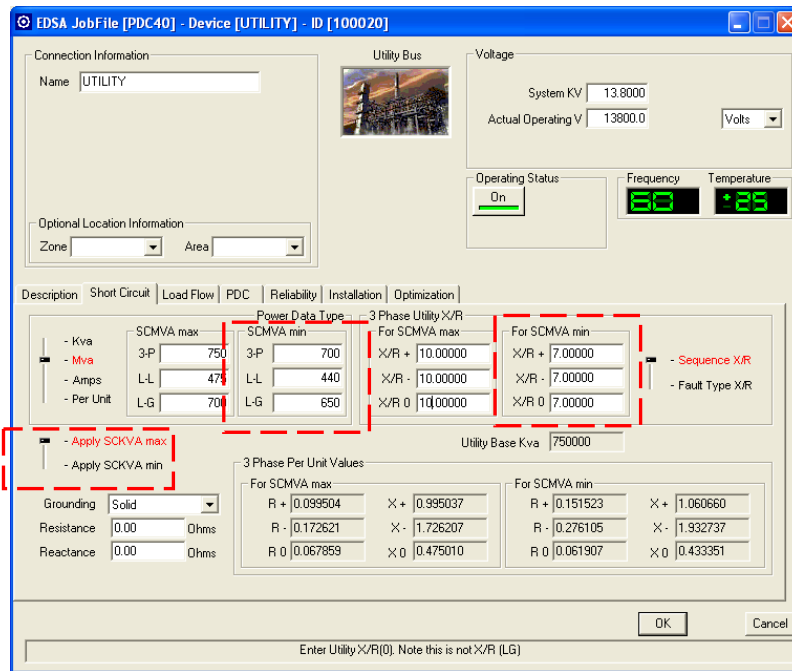
Crystal Report

Jobfile Name: IEEE999 Page 2 of 3

Bus Results: 0.5 Cycle-Symmetrical

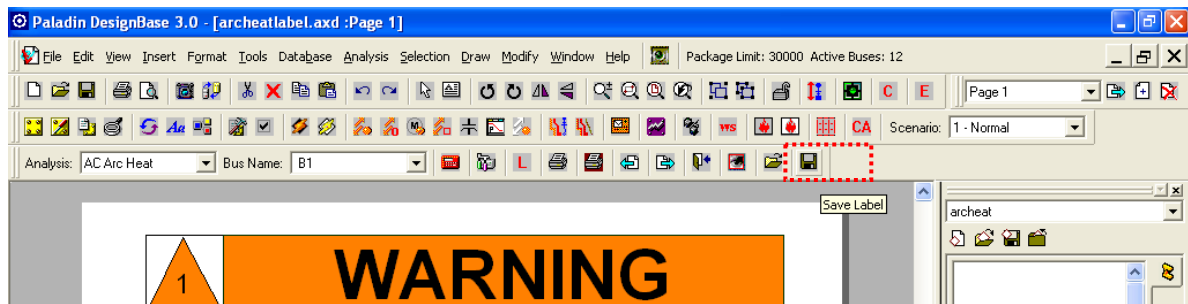
Bus Name	Pre-FR		3P FR.	LL FR.	LG FR.	LLG FR.	Thevenin Imped.		Complex 3P X/R
	V	A	A	A	A	A	Z _{1pu}	Z _{2pu}	
BUS10	13900	11120	9637	9996	11289	0.3762	0.5268	1.9478	
BUS17	480	32920	28630	32000	32504	3.6538	3.9997	8.4581	
BUS18	480	33340	28989	34159	34036	3.6077	3.2779	7.0178	
BUS19	2400	16346	14011	17505	16699	1.0676	1.1508	8.9936	
BUS20	2400	10024	8681	9759	10509	2.3999	2.6400	5.1976	
BUS24	13900	13256	11488	12587	13189	0.3156	0.3669	28.5000	
BUS27	13900	12887	11170	12120	13048	0.3247	0.2994	4.6888	
BUS28	480	64844	56292	66139	66722	1.0549	1.7574	6.1591	
BUS29	480	62287	54050	63654	63907	1.9311	1.8160	7.2760	
Bus3	13900	12792	11132	12643	12723	0.3270	0.3418	17.5170	
BUS30	480	42193	28848	40982	42605	2.6807	3.1373	7.6453	
BUS37	480	24980	21706	25458	25254	4.8131	4.5759	7.4538	
BUS38	480	64863	56306	66137	66559	1.8544	1.7593	6.1519	
Bus4	13900	14396	12479	14134	14273	0.2956	0.3072	15.9190	
BUS6	13900	12306	10712	11981	12400	0.3400	0.3717	8.1114	
BUS7	13900	13828	11988	13382	13858	0.3028	0.3237	7.6486	
BUS9	13900	12587	10959	12357	12580	0.3321	0.3546	22.1380	
GEN24	13900	13248	11479	12678	13180	0.3168	0.3870	28.6280	
GEN25	13900	12590	10952	12350	12582	0.3323	0.3547	22.1810	
MOT11	2400	7745	6393	7552	7687	3.1060	3.0208	8.6228	
MOT17-01	480	32815	28626	31985	32499	3.0543	4.0004	8.4592	
MOT17-2	480	32914	28625	31994	32498	3.0545	4.0003	8.4595	
MOT18-01	480	33335	28985	34154	34032	3.6082	3.2784	7.0187	
MOT18-02	480	33334	28983	34152	34030	3.6084	3.2786	7.0190	
MOT19-01	2400	16339	14005	17497	16882	1.9682	1.1513	8.9877	
MOT19-02	2400	16340	14005	17497	16882	1.9682	1.1514	8.9874	
MOT20-01	2400	10022	8680	9758	10507	2.4003	2.6403	5.2000	

- Minimum short-circuit utility contribution, UPS bypass function and VFD motor feed options added:

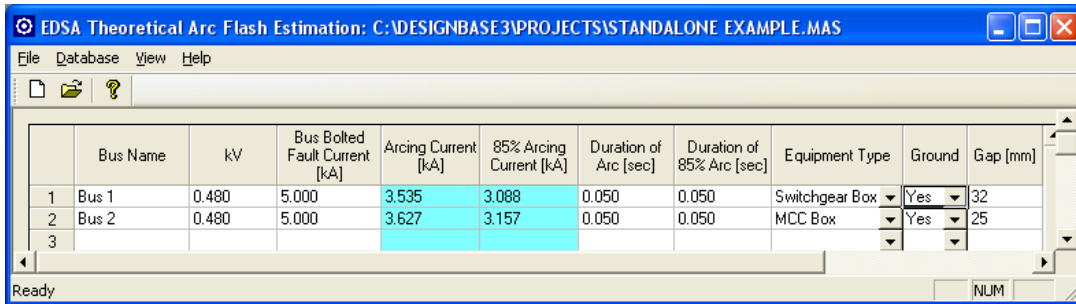


New Arc Flash Functions

- Ability to save Arc Flash labels:



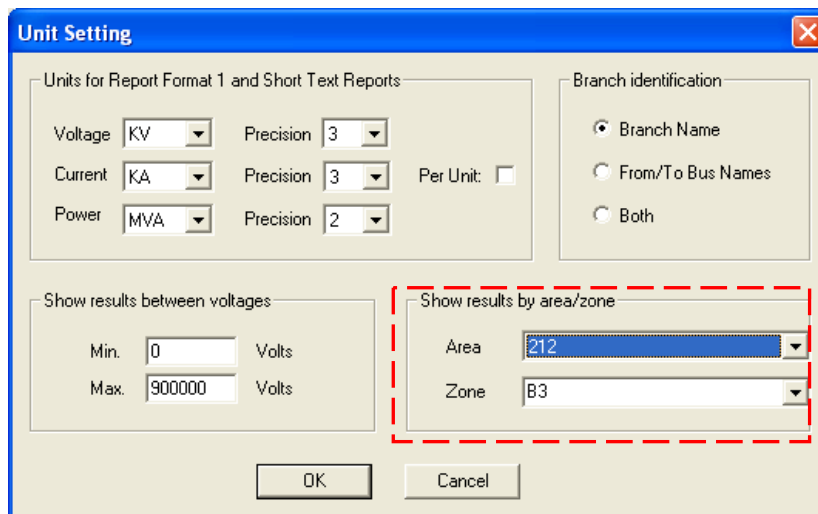
- New Spreadsheet interface for Standalone Arc Flash program:



	Bus Name	kV	Bus Bolted Fault Current [kA]	Arcing Current [kA]	85% Arcing Current [kA]	Duration of Arc [sec]	Duration of 85% Arc [sec]	Equipment Type	Ground	Gap [mm]
1	Bus 1	0.480	5.000	3.535	3.088	0.050	0.050	Switchgear Box	Yes	32
2	Bus 2	0.480	5.000	3.627	3.157	0.050	0.050	MCC Box	Yes	25
3										

New Power Flow Functions

- Enhanced reporting functionality with new user selectable parameters. Ability to print reports by areas and/or zones (the option can be utilized to print the results per page/drawing):



Unit Setting

Units for Report Format 1 and Short Text Reports:

Voltage: KV Precision: 3 Per Unit:

Current: KA Precision: 3

Power: MVA Precision: 2

Branch identification:

Branch Name

From/To Bus Names

Both

Show results between voltages:

Min: 0 Volts

Max: 900000 Volts

Show results by area/zone:

Area: 212

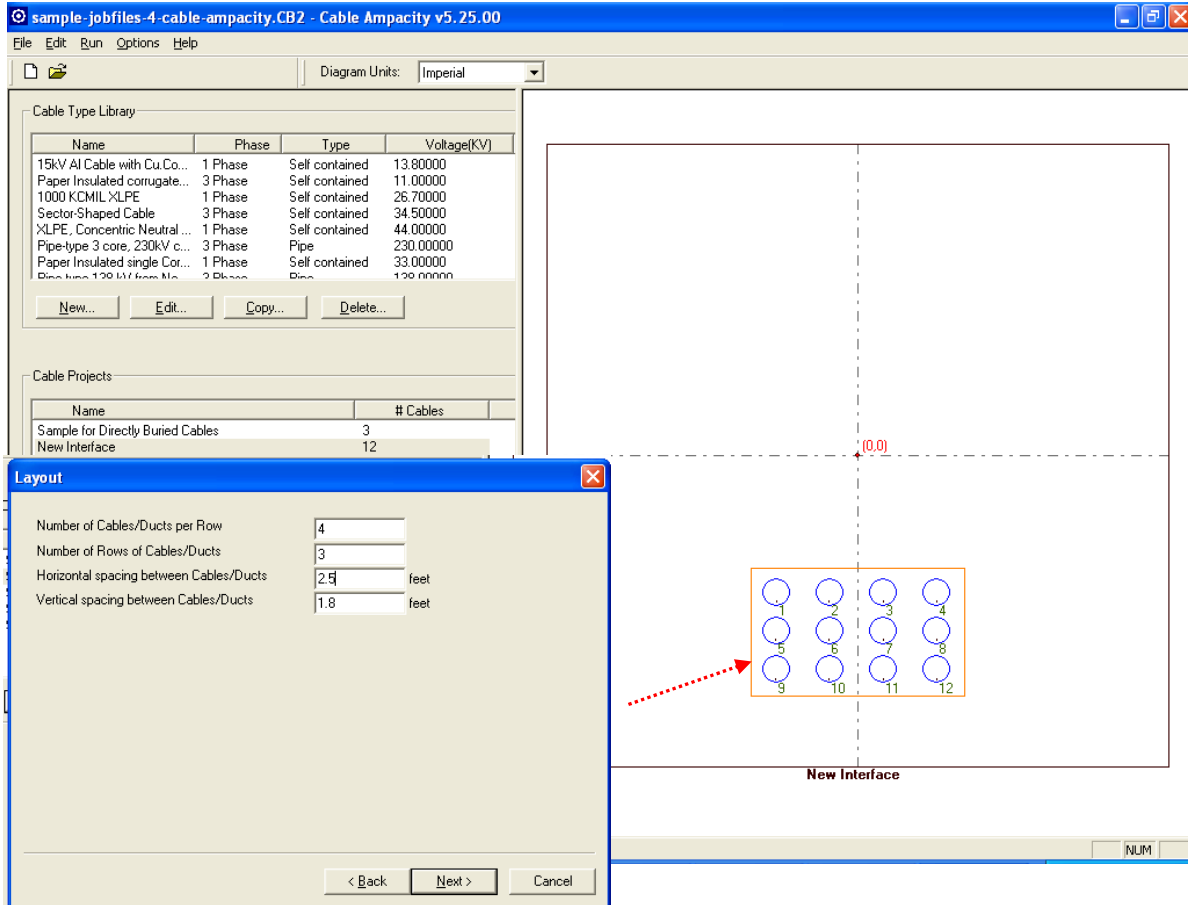
Zone: B3

OK Cancel

- Introduction of losses from transformers, lines and UPS's in the summary report

New Functions in Cable Ampacity Program

Improved/simplified data entry and display options



License Management

New user selectable packaging of analytics modules – buy only the software you need, Basic package or a premium package, and add any number of *a la carte* options. See installation guide for more information.