

PROGETTO

SVILUPPO PROGETTO TERMINALE GNL NEL PORTO DI MONFALCONE

UBICAZIONE

MONFALCONE, ITALIA

PROPONENTE

SMART GAS S.p.A



UNITA' FUNZIONALE

DOCUMENTI PER AUTORIZZAZIONE





TITOLO DOCUMENTO

RELAZIONE TECNICA DI CALCOLO IMPIANTI ELETTRICI



CONSULENZA

consulting, design, operation & maintenance engineering

DATA	DESCRIZIONE	ESEGUITO	CONTROLL.	APPROVATO	SOTT.
30/06/2014	Emissione per approvazione	 CGA	 MFC ALS	 DIL	 SSA

DATA	SCALA	CODIFICA INTERNA	DOC. N.				REV	FG
30/06/2014		14-007-H24	14	007	ELE	C	003	0

Project: TERMINALE GNL MONFALCONE PORTO
Location: MONFALCONE
Contract: SMART GAS MONFALCONE S.R.L.
Engineer: CLAUDIO GAMBARO
Filename: TerminaleGNL-Monfalcone

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Electrical Transient Analyzer Program

Load Flow Analysis

Loading Category (2): Normal

Generation Category (2): Normal

Load Diversity Factor: None

	<u>Swing</u>	<u>V-Control</u>	<u>Load</u>	<u>Total</u>
Number of Buses:	1	0	73	74

	<u>XFMR2</u>	<u>XFMR3</u>	<u>Reactor</u>	<u>Line/Cable</u>	<u>Impedance</u>	<u>Tie PD</u>	<u>Total</u>
Number of Branches:	3	0	0	66	0	4	73

Method of Solution: Adaptive Newton-Raphson Method

Maximum No. of Iteration: 99

Precision of Solution: 0.0001000

System Frequency: 50.00 Hz

Unit System: Metric

Project Filename: TerminaleGNL-Monfalcone

Output Filename: Q:\Proj\2014\14-007-DGN\eng\work\06-ELETTICO\03-CALCOLI\TerminaleGNL-Monfalcone\LF.lfr

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Adjustments

<u>Tolerance</u>	<u>Apply</u> <u>Adjustments</u>	<u>Individual</u> <u>/Global</u>	<u>Percent</u>
Transformer Impedance:	Yes	Individual	
Reactor Impedance:	Yes	Individual	
Overload Heater Resistance:	No		
Transmission Line Length:	No		
Cable Length:	No		

<u>Temperature Correction</u>	<u>Apply</u> <u>Adjustments</u>	<u>Individual</u> <u>/Global</u>	<u>Degree C</u>
Transmission Line Resistance:	Yes	Individual	
Cable Resistance:	Yes	Individual	

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Bus Input Data

Bus			Initial Voltage		Load							
					Constant kVA		Constant Z		Constant I		Generic	
ID	kV	Sub-sys	% Mag.	Ang.	kW	kvar	kW	kvar	kW	kvar	kW	kvar
Bus1	20.000	1	100.0	0.0								
Bus2	6.000	1	100.0	0.0								
Bus3	6.000	1	100.0	0.0								
Bus4	6.000	1	100.0	0.0								
Bus5	6.000	1	100.0	0.0	428.6	177.1						
Bus6	6.000	1	100.0	0.0								
Bus7	6.000	1	100.0	0.0	327.5	139.1						
Bus8	0.400	1	100.0	0.0	67.5	29.4						
Bus9	0.400	1	100.0	0.0	67.5	29.4						
Bus10	0.400	1	100.0	0.0	164.9	71.4						
Bus11	0.400	1	100.0	0.0	164.9	71.4						
Bus12	0.400	1	100.0	0.0	164.9	71.4						
Bus13	0.400	1	100.0	0.0	164.9	71.4						
Bus14	0.400	1	100.0	0.0								
Bus15	0.400	1	100.0	0.0	103.1	45.3						
Bus16	0.400	1	100.0	0.0	51.5	22.6						
Bus17	0.400	1	100.0	0.0	51.5	22.6						
Bus18	0.400	1	100.0	0.0	51.5	22.6						
Bus19	0.400	1	100.0	0.0	58.3	25.5						
Bus20	0.400	1	100.0	0.0	58.3	25.5						
Bus21	0.400	1	100.0	0.0	58.3	25.5						
Bus22	0.400	1	100.0	0.0								
Bus23	0.400	1	100.0	0.0	17.3	8.3						
Bus24	0.400	1	100.0	0.0	17.3	8.3						
Bus25	0.400	1	100.0	0.0	34.7	16.6						
Bus26	0.400	1	100.0	0.0								
Bus27	0.400	1	100.0	0.0								
Bus28	0.400	1	100.0	0.0	4.1	2.5						
Bus29	0.400	1	100.0	0.0	39.0	17.2						
Bus30	0.400	1	100.0	0.0								
Bus31	0.400	1	100.0	0.0	39.0	17.2						
Bus32	0.400	1	100.0	0.0	39.0	17.2						
Bus33	0.400	1	100.0	0.0	39.0	17.2						

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Bus			Initial Voltage		Load							
ID	kV	Sub-sys	% Mag.	Ang.	Constant kVA		Constant Z		Constant I		Generic	
					kW	kvar	kW	kvar	kW	kvar	kW	kvar
QPC1-B	0.400	1	100.0	0.0								
QPMCC-A	0.400	1	100.0	0.0								
QPMCC-B	0.400	1	100.0	0.0								
QSA	0.400	1	100.0	0.0								
QUPS1	0.400	1	100.0	0.0	4.5	2.2						
QUPS2	0.400	1	100.0	0.0	1.6	0.8						
Total Number of Buses: 74					2547.328	1063.126	165.150	0.527	0.000	0.000	0.000	0.000

Generation Bus				Voltage		Generation			kvar Limits	
ID	kV	Type	Sub-sys	% Mag.	Angle	kW	kvar	% PF	Max	Min
Bus1	20.000	Swing	1	100.0	0.0					
						0.000	0.000			

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Line/Cable Input Data

Ohms or Siemens/1000 m per Conductor (Cable) or per Phase (Line)

Line/Cable ID	Library	Size	Length		#/Phase	T (°C)	R	X	Y
			Adj. (m)	% Tol.					
Cavo1	6,0NCUS3	50	200.0	0.0	1	75	0.471165	0.094000	
Cavo2	6,0NCUS3	50	200.0	0.0	1	75	0.471165	0.094000	
Cavo3	6,0NCUS3	50	200.0	0.0	1	75	0.471165	0.094000	
Cavo4	6,0NCUS3	50	200.0	0.0	1	75	0.471165	0.094000	
Cavo5	6,0NCUS3	50	2000.0	0.0	1	75	0.471165	0.094000	
Cavo6	6,0NCUS3	50	200.0	0.0	1	75	0.471165	0.094000	
Cavo7	1,0NCUN3	150	230.0	0.0	2	75	0.145400	0.076700	
Cavo8	1,0NCUN3	400	200.0	0.0	1	75	0.056700	0.074800	
Cavo9	1,0NCUN3	240	120.0	0.0	1	75	0.092000	0.075800	
Cavo10	1,0NCUN3	185	110.0	0.0	1	75	0.118200	0.076300	
Cavo11	1,0NCUN3	185	100.0	0.0	1	75	0.118200	0.076300	
Cavo12	1,0NCUN3	150	90.0	0.0	1	75	0.145400	0.076700	
Cavo13	1,0NCUN3	150	80.0	0.0	1	75	0.145400	0.076700	
Cavo14	1,0NCUN3	95	100.0	0.0	1	75	0.229700	0.077400	
Cavo15	1,0NCUN3	95	100.0	0.0	1	75	0.229700	0.077400	
Cavo16	1,0NCUN3	95	100.0	0.0	1	75	0.229700	0.077400	
Cavo17	1,0NCUN3	95	100.0	0.0	1	75	0.229700	0.077400	
Cavo18	1,0NCUN3	95	50.0	0.0	1	75	0.229700	0.077400	
Cavo19	1,0NCUN3	95	50.0	0.0	1	75	0.229700	0.077400	
Cavo20	1,0NCUN3	95	50.0	0.0	1	75	0.229700	0.077400	
Cavo21	1,0NCUN3	95	50.0	0.0	1	75	0.229700	0.077400	
Cavo22	1,0NCUN3	70	230.0	0.0	1	75	0.310700	0.079200	
Cavo23	1,0NCUN3	70	200.0	0.0	1	75	0.310700	0.079200	
Cavo24	1,0NCUN3	70	200.0	0.0	1	75	0.310700	0.079200	
Cavo25	1,0NCUN3	6	100.0	0.0	1	75	3.621000	0.102400	
Cavo26	1,0NCUN3	6	100.0	0.0	1	75	3.621000	0.102400	
Cavo27	1,0NCUN3	6	80.0	0.0	1	75	3.621000	0.102400	
Cavo28	1,0NCUN3	300	25.0	0.0	2	75	0.074200	0.075400	
Cavo29	1,0NCUN3	95	130.0	0.0	1	75	0.229700	0.077400	
Cavo30	1,0NCUN3	95	130.0	0.0	1	75	0.229700	0.077400	
Cavo31	1,0NCUN3	95	130.0	0.0	1	75	0.229700	0.077400	
Cavo32	1,0NCUN3	95	130.0	0.0	1	75	0.229700	0.077400	
Cavo33	1,0NCUN3	95	130.0	0.0	1	75	0.229700	0.077400	
Cavo34	1,0NCUN3	35	300.0	0.0	1	75	0.619500	0.083000	

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Ohms or Siemens/1000 m per Conductor (Cable) or per Phase (Line)

Line/Cable ID	Library	Size	Length		#/Phase	T (°C)	R	X	Y
			Adj. (m)	% Tol.					
Cavo35	1,0NCUN3	120	300.0	0.0	1	75	0.181900	0.076900	
Cavo36	1,0NCUN3	70	230.0	0.0	1	75	0.310700	0.079200	
Cavo37	1,0NCUN3	50	180.0	0.0	1	75	0.434300	0.081100	
Cavo38	1,0NCUN3	120	300.0	0.0	1	75	0.181900	0.076900	
Cavo39	1,0NCUN3	50	400.0	0.0	1	75	0.434300	0.081100	
Cavo40	1,0NCUN3	10	70.0	0.0	1	75	2.167000	0.095300	
Cavo41	1,0NCUN3	120	25.0	0.0	1	75	0.181900	0.076900	
Cavo42	1,0NCUN3	10	70.0	0.0	1	75	2.167000	0.095300	
Cavo43	1,0NCUN3	50	70.0	0.0	1	75	0.434300	0.081100	
Cavo44	1,0NCUN3	120	50.0	0.0	1	75	0.181900	0.076900	
Cavo45	1,0NCUN3	10	25.0	0.0	1	75	2.167000	0.095300	
Cavo46	1,0NCUN3	6	80.0	0.0	1	75	3.621000	0.102400	
Cavo47	1,0NCUN3	6	50.0	0.0	1	75	3.621000	0.102400	
Cavo48	1,0NCUN3	6	50.0	0.0	1	75	3.621000	0.102400	
Cavo49	1,0NCUN3	6	80.0	0.0	1	75	3.621000	0.102400	
Cavo50	1,0NCUN3	6	80.0	0.0	1	75	3.621000	0.102400	
Cavo51	1,0NCUN3	6	300.0	0.0	1	75	3.621000	0.102400	
Cavo52	1,0NCUN3	6	300.0	0.0	1	75	3.621000	0.102400	
Cavo54	6,0NCUS3	120	30.0	0.0	1	75	0.186940	0.083100	
Cavo55	1,0NCUN3	400	25.0	0.0	6	75	0.056700	0.074800	
Cavo56	6,0NCUS3	50	1500.0	0.0	1	75	0.471165	0.094000	
Cavo57	1,0NCUN3	50	25.0	0.0	1	75	0.434300	0.081100	
Cavo58	1,0NCUN3	6	25.0	0.0	1	75	3.621000	0.102400	
Cavo61	1,0NCUN3	95	100.0	0.0	1	75	0.229700	0.077400	
Cavo62	1,0NCUN3	95	100.0	0.0	1	75	0.229700	0.077400	
Cavo63	1,0NCUN3	95	300.0	0.0	1	75	0.229700	0.077400	
Cavo64	1,0NCUN3	120	25.0	0.0	1	75	0.181900	0.076900	
Cavo65	1,0NCUN3	120	25.0	0.0	1	75	0.181900	0.076900	
Cavo68	1,0NCUN3	6	25.0	0.0	1	75	3.621000	0.102400	
Cavo72	1,0NCUN3	120	25.0	0.0	1	75	0.181900	0.076900	
Cavo74	1,0NCUN3	120	25.0	0.0	1	75	0.181900	0.076900	
Cavo75	1,0NCUN3	6	25.0	0.0	1	75	3.621000	0.102400	

Line / Cable resistances are listed at the specified temperatures.

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2-Winding Transformer Input Data

Transformer		Rating					Z Variation			% Tap Setting		Adjusted	Phase Shift	
ID	Phase	kVA	Prim. kV	Sec. kV	% Z1	X1/R1	+ 5%	- 5%	% Tol.	Prim.	Sec.	% Z	Type	Angle
TR	3-Phase	3000.0	20.000	6.000	6.25	6.00	0	0	0	0	2.500	6.2500	Dyn	0.000
TR1	3-Phase	2000.0	6.000	0.400	6.25	6.00	0	0	0	0	5.000	6.2500	Dyn	0.000
TR2	3-Phase	500.0	6.000	0.400	4.00	1.50	0	0	0	0	2.500	4.0000	Dyn	0.000

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Branch Connections

CKT/Branch		Connected Bus ID		% Impedance, Pos. Seq., 100 MVA Base			
ID	Type	From Bus	To Bus	R	X	Z	Y
TR	2W XFMR	Bus1	QMT1	35.11	210.64	213.54	
TR1	2W XFMR	Bus55	Bus56	53.94	323.66	328.13	
TR2	2W XFMR	Bus57	Bus30	454.85	682.28	820.00	
Cavo1	Cable	QMT1	Bus5	26.18	5.22	26.69	
Cavo2	Cable	QMT1	Bus6	26.18	5.22	26.69	
Cavo3	Cable	QMT1	Bus7	26.18	5.22	26.69	
Cavo4	Cable	QMT1	Bus2	26.18	5.22	26.69	
Cavo5	Cable	QMT1	Bus3	261.76	52.22	266.92	
Cavo6	Cable	QMT1	Bus4	26.18	5.22	26.69	
Cavo7	Cable	QPC1-A	Bus8	1045.06	551.28	1181.55	
Cavo8	Cable	QPC1-A	Bus9	708.75	935.00	1173.27	
Cavo9	Cable	QPC1-A	Bus10	690.00	568.50	894.03	
Cavo10	Cable	QPC1-A	Bus11	812.62	524.56	967.23	
Cavo11	Cable	QPC1-A	Bus12	738.75	476.88	879.30	
Cavo12	Cable	QPC1-A	Bus13	817.88	431.44	924.69	
Cavo13	Cable	QPC1-A	Bus14	727.00	383.50	821.95	
Cavo14	Cable	QPC1-A	Bus15	1435.63	483.75	1514.94	
Cavo15	Cable	QPC1-A	Bus16	1435.63	483.75	1514.94	
Cavo16	Cable	QPC1-A	Bus17	1435.63	483.75	1514.94	
Cavo17	Cable	QPC1-A	Bus18	1435.63	483.75	1514.94	
Cavo18	Cable	QPC1-A	Bus19	717.81	241.88	757.47	
Cavo19	Cable	QPC1-A	Bus20	717.81	241.88	757.47	
Cavo20	Cable	QPC1-A	Bus21	717.81	241.88	757.47	
Cavo21	Cable	QPC1-A	Bus22	717.81	241.88	757.47	
Cavo22	Cable	QMCCI-A	Bus23	4466.31	1138.50	4609.14	
Cavo23	Cable	QMCCI-A	Bus24	3883.75	990.00	4007.94	
Cavo24	Cable	QMCCI-A	Bus25	3883.75	990.00	4007.94	
Cavo25	Cable	QMCCI-A	Bus26	22631.25	640.00	22640.30	
Cavo26	Cable	QMCCI-A	Bus27	22631.25	640.00	22640.30	
Cavo27	Cable	QMCCI-A	Bus28	18105.00	512.00	18112.24	
Cavo28	Cable	Bus30	QPMCC-A	57.97	58.91	82.65	
Cavo29	Cable	QPMCC-A	Bus29	1866.31	628.88	1969.42	
Cavo30	Cable	QPMCC-A	Bus31	1866.31	628.88	1969.42	
Cavo31	Cable	QPMCC-A	Bus32	1866.31	628.88	1969.42	
Cavo32	Cable	QPMCC-A	Bus33	1866.31	628.88	1969.42	
Cavo33	Cable	QPMCC-A	Bus34	1866.31	628.88	1969.42	
Cavo34	Cable	QPMCC-A	Bus35	11615.62	1556.25	11719.41	

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CKT/Branch		Connected Bus ID		% Impedance, Pos. Seq., 100 MVA Base			
ID	Type	From Bus	To Bus	R	X	Z	Y
Cavo35	Cable	QPMCC-A	Bus36	3410.63	1441.88	3702.89	
Cavo36	Cable	QPC1-B	Bus37	4466.31	1138.50	4609.14	
Cavo37	Cable	QPC1-B	Bus38	4885.88	912.38	4970.33	
Cavo38	Cable	QPC1-B	Bus39	3410.63	1441.88	3702.89	
Cavo39	Cable	QPC1-B	Bus40	10857.50	2027.50	11045.18	
Cavo40	Cable	QPC1-B	Bus41	9480.63	416.94	9489.79	
Cavo41	Cable	QPC1-A	QSA	284.22	120.16	308.57	
Cavo42	Cable	QPC1-B	Bus43	9480.63	416.94	9489.79	
Cavo43	Cable	QPC1-B	Bus44	1900.06	354.81	1932.91	
Cavo44	Cable	QPC1-B	Bus45	568.44	240.31	617.15	
Cavo45	Cable	QPMCC-A	Bus60	3385.94	148.91	3389.21	
Cavo46	Cable	QMCCI-B	Bus47	18105.00	512.00	18112.24	
Cavo47	Cable	QMCCI-B	Bus48	11315.63	320.00	11320.15	
Cavo48	Cable	QMCCI-B	Bus49	11315.63	320.00	11320.15	
Cavo49	Cable	QMCCI-B	Bus50	18105.00	512.00	18112.24	
Cavo50	Cable	QMCCI-B	Bus51	18105.00	512.00	18112.24	
Cavo51	Cable	QMCCI-B	Bus52	67893.75	1920.00	67920.89	
Cavo52	Cable	QMCCI-B	Bus53	67893.75	1920.00	67920.89	
Cavo54	Cable	QMT1	Bus55	1.56	0.69	1.70	
Cavo55	Cable	Bus56	QPC1-A	14.77	19.48	24.44	
Cavo56	Cable	QMT1	Bus57	196.32	39.17	200.19	
Cavo57	Cable	QPC1-A	QMCCI-A	678.59	126.72	690.32	
Cavo58	Cable	QPC1-B	QMCCI-B	5657.81	160.00	5660.07	
Cavo61	Cable	QPC1-A	Bus58	1435.63	483.75	1514.94	
Cavo62	Cable	QPC1-A	Bus59	1435.63	483.75	1514.94	
Cavo63	Cable	QPMCC-B	Bus46	4306.88	1451.25	4544.81	
Cavo64	Cable	QPMCC-A	Bus65	284.22	120.16	308.57	
Cavo65	Cable	QPMCC-A	Bus66	284.22	120.16	308.57	
Cavo68	Cable	QPMCC-B	QUPS2	5657.81	160.00	5660.07	
Cavo72	Cable	QSA	Bus73	284.22	120.16	308.57	
Cavo74	Cable	QSA	Bus75	284.22	120.16	308.57	
Cavo75	Cable	QPC1-B	QUPS1	5657.81	160.00	5660.07	
CB13	Tie Breakr	QPC1-B	QPC1-A				
CB71	Tie Breakr	QPMCC-B	QPMCC-A				
UPS1	Tie Switch	QUPS1	QAC1				
UPS2	Tie Switch	QUPS2	QAC2				

Project: TERMINALE GNL MONFALCONE PORTO
Location: MONFALCONE
Contract: SMART GAS MONFALCONE S.R.L.
Engineer: CLAUDIO GAMBARO
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LOAD FLOW REPORT

Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	kW	kvar	kW	kvar	ID	kW	kvar	Amp	% PF	% Tap
* Bus1	20.000	100.000	0.0	2797.0	1408.7	0	0	QMT1	2797.006	1408.654	90.4	89.3	
Bus2	6.000	98.699	-3.1	0	0	0	0	QMT1	0.000	0.000	0.0	0.0	
Bus3	6.000	98.699	-3.1	0	0	0	0	QMT1	0.000	0.000	0.0	0.0	
Bus4	6.000	98.699	-3.1	0	0	0	0	QMT1	0.000	0.000	0.0	0.0	
Bus5	6.000	98.575	-3.1	0	0	428.6	177.1	QMT1	-428.585	-177.105	45.3	92.4	
Bus6	6.000	98.699	-3.1	0	0	0	0	QMT1	0.000	0.000	0.0	0.0	
Bus7	6.000	98.604	-3.1	0	0	327.5	139.1	QMT1	-327.466	-139.105	34.7	92.0	
Bus8	0.400	98.863	-6.4	0	0	67.5	29.4	QPC1-A	-67.468	-29.388	107.4	91.7	
Bus9	0.400	98.978	-6.6	0	0	67.5	29.4	QPC1-A	-67.468	-29.388	107.3	91.7	
Bus10	0.400	98.166	-6.6	0	0	164.9	71.4	QPC1-A	-164.853	-71.414	264.2	91.8	
Bus11	0.400	97.990	-6.5	0	0	164.9	71.4	QPC1-A	-164.853	-71.414	264.6	91.8	
Bus12	0.400	98.152	-6.5	0	0	164.9	71.4	QPC1-A	-164.853	-71.414	264.2	91.8	
Bus13	0.400	98.050	-6.4	0	0	164.9	71.4	QPC1-A	-164.853	-71.414	264.5	91.8	
Bus14	0.400	99.740	-6.3	0	0	0	0	QPC1-A	0.000	0.000	0.0	0.0	
Bus15	0.400	98.007	-6.3	0	0	103.1	45.3	QPC1-A	-103.057	-45.258	165.8	91.6	
Bus16	0.400	98.881	-6.3	0	0	51.5	22.6	QPC1-A	-51.529	-22.629	82.2	91.6	
Bus17	0.400	98.881	-6.3	0	0	51.5	22.6	QPC1-A	-51.529	-22.629	82.2	91.6	
Bus18	0.400	98.881	-6.3	0	0	51.5	22.6	QPC1-A	-51.529	-22.629	82.2	91.6	
Bus19	0.400	99.256	-6.3	0	0	58.3	25.5	QPC1-A	-58.296	-25.497	92.5	91.6	
Bus20	0.400	99.256	-6.3	0	0	58.3	25.5	QPC1-A	-58.296	-25.497	92.5	91.6	
Bus21	0.400	99.256	-6.3	0	0	58.3	25.5	QPC1-A	-58.296	-25.497	92.5	91.6	
Bus22	0.400	99.740	-6.3	0	0	0	0	QPC1-A	0.000	0.000	0.0	0.0	
Bus23	0.400	98.293	-6.2	0	0	17.3	8.3	QMCCI-A	-17.346	-8.288	28.2	90.2	
Bus24	0.400	98.409	-6.2	0	0	17.3	8.3	QMCCI-A	-17.346	-8.288	28.2	90.2	
Bus25	0.400	97.629	-6.1	0	0	34.7	16.6	QMCCI-A	-34.692	-16.575	56.8	90.2	
Bus26	0.400	99.074	-6.2	0	0	0.4	0.3	QMCCI-A	-0.444	-0.320	0.8	81.1	
Bus27	0.400	99.074	-6.2	0	0	0.4	0.3	QMCCI-A	-0.444	-0.320	0.8	81.1	
Bus28	0.400	98.409	-6.0	0	0	4.1	2.5	QMCCI-A	-4.098	-2.550	7.1	84.9	
Bus29	0.400	97.965	-3.8	0	0	39.0	17.2	QPMCC-A	-38.953	-17.233	62.8	91.5	
Bus30	0.400	99.000	-3.8	0	0	0	0	QPMCC-A	229.158	80.545	354.1	94.3	
								Bus57	-229.158	-80.545	354.1	94.3	2.500
Bus31	0.400	97.965	-3.8	0	0	39.0	17.2	QPMCC-A	-38.953	-17.233	62.8	91.5	
Bus32	0.400	97.965	-3.8	0	0	39.0	17.2	QPMCC-A	-38.953	-17.233	62.8	91.5	
Bus33	0.400	97.965	-3.8	0	0	39.0	17.2	QPMCC-A	-38.953	-17.233	62.8	91.5	
Bus34	0.400	98.818	-3.8	0	0	0	0	QPMCC-A	0.000	0.000	0.0	0.0	
Bus35	0.400	98.818	-3.8	0	0	0	0	QPMCC-A	0.000	0.000	0.0	0.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	kW	kvar	kW	kvar	ID	kW	kvar	Amp	%PF	%Tap
Bus36	0.400	98.818	-3.8	0	0	0	0	QMCC-A	0.000	0.000	0.0	0.0	
Bus37	0.400	97.965	-6.1	0	0	34.7	16.6	QPC1-B	-34.692	-16.575	56.6	90.2	
Bus38	0.400	98.299	-6.5	0	0	29.0	0.0	QPC1-B	-28.988	0.000	42.6	100.0	
Bus39	0.400	99.740	-6.3	0	0	0	0	QPC1-B	0.000	0.000	0.0	0.0	
Bus40	0.400	99.740	-6.3	0	0	0	0	QPC1-B	0.000	0.000	0.0	0.0	
Bus41	0.400	98.168	-5.9	0	0	15.9	8.4	QPC1-B	-15.876	-8.443	26.4	88.3	
Bus43	0.400	99.740	-6.3	0	0	0	0	QPC1-B	0.000	0.000	0.0	0.0	
Bus44	0.400	98.338	-6.5	0	0	72.5	0.0	QPC1-B	-72.528	0.000	106.5	100.0	
Bus45	0.400	99.740	-6.3	0	0	0	0	QPC1-B	0.000	0.000	0.0	0.0	
Bus46	0.400	98.053	-3.8	0	0	15.0	7.3	QPMCC-B	-14.960	-7.301	24.5	89.9	
Bus47	0.400	99.543	-6.3	0	0	0	0	QMCC1-B	0.000	0.000	0.0	0.0	
Bus48	0.400	99.387	-6.2	0	0	1.3	0.9	QMCC1-B	-1.340	-0.931	2.4	82.1	
Bus49	0.400	99.543	-6.3	0	0	0	0	QMCC1-B	0.000	0.000	0.0	0.0	
Bus50	0.400	99.353	-6.2	0	0	1.0	0.7	QMCC1-B	-1.022	-0.682	1.8	83.2	
Bus51	0.400	99.543	-6.3	0	0	0	0	QMCC1-B	0.000	0.000	0.0	0.0	
Bus52	0.400	98.827	-6.0	0	0	1.0	0.7	QMCC1-B	-1.022	-0.682	1.8	83.2	
Bus53	0.400	99.543	-6.3	0	0	0	0	QMCC1-B	0.000	0.000	0.0	0.0	
Bus55	6.000	98.665	-3.1	0	0	0	0	QMT1	-1772.631	-805.444	189.9	91.0	
								Bus56	1772.631	805.444	189.9	91.0	
Bus56	0.400	100.131	-6.2	0	0	0	0	QPC1-A	1752.625	685.405	2712.7	93.1	
								Bus55	-1752.625	-685.405	2712.7	93.1	5.000
Bus57	6.000	98.201	-3.1	0	0	0	0	QMT1	-231.965	-84.755	24.2	93.9	
								Bus30	231.965	84.755	24.2	93.9	
Bus58	0.400	98.007	-6.3	0	0	103.1	45.3	QPC1-A	-103.057	-45.258	165.8	91.6	
Bus59	0.400	98.881	-6.3	0	0	51.5	22.6	QPC1-A	-51.529	-22.629	82.2	91.6	
Bus60	0.400	97.216	-3.9	0	0	46.0	0.0	QPMCC-A	-45.989	0.000	68.3	100.0	
Bus65	0.400	98.813	-3.8	0	0	2.0	0.0	QPMCC-A	-1.953	0.000	2.9	100.0	
Bus66	0.400	98.803	-3.8	0	0	4.2	2.6	QPMCC-A	-4.230	-2.621	7.3	85.0	
Bus73	0.400	99.226	-6.5	0	0	79.8	0.0	QSA	-79.753	0.000	116.0	100.0	
Bus75	0.400	99.398	-6.4	0	0	19.8	0.0	QSA	-19.760	0.000	28.7	100.0	
QAC1	0.400	98.919	-6.3	0	0	9.8	0.0	QUPS1	-9.785	0.000	14.3	100.0	
QAC2	0.400	98.612	-3.8	0	0	1.9	0.0	QUPS2	-1.945	0.000	2.8	100.0	
QMCC1-A	0.400	99.177	-6.3	0	0	0	0	Bus23	17.517	8.331	28.2	90.3	
								Bus24	17.494	8.325	28.2	90.3	
								Bus25	35.294	16.729	56.8	90.4	
								Bus26	0.445	0.320	0.8	81.1	
								Bus27	0.445	0.320	0.8	81.1	
								Bus28	4.142	2.551	7.1	85.1	
								QPC1-A	-75.336	-36.577	121.9	90.0	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	kW	kvar	kW	kvar	ID	kW	kvar	Amp	%PF	%Tap
QMCCI-B	0.400	99.543	-6.3	0	0	0	0	Bus47	0.000	0.000	0.0	0.0	
								Bus48	1.343	0.931	2.4	82.2	
								Bus49	0.000	0.000	0.0	0.0	
								Bus50	1.024	0.682	1.8	83.2	
								Bus51	0.000	0.000	0.0	0.0	
								Bus52	1.032	0.682	1.8	83.4	
								Bus53	0.000	0.000	0.0	0.0	
								QPC1-B	-3.399	-2.295	5.9	82.9	
QMT1	6.000	98.699	-3.1	0	0	0	0	Bus5	429.164	177.221	45.3	92.4	
								Bus6	0.000	0.000	0.0	0.0	
								Bus7	327.807	139.173	34.7	92.0	
								Bus2	0.000	0.000	0.0	0.0	
								Bus3	0.000	0.000	0.0	0.0	
								Bus4	0.000	0.000	0.0	0.0	
								Bus55	1773.238	805.714	189.9	91.0	
								Bus57	233.206	85.002	24.2	94.0	
QPC1-A	0.400	99.740	-6.3	0	0	0	0	Bus1	-2763.415	-1207.110	294.0	91.6	2.500
								Bus8	68.048	29.694	107.4	91.7	
								Bus9	67.860	29.905	107.3	91.5	
								Bus10	167.164	73.319	264.2	91.6	
								Bus11	167.585	73.178	264.6	91.6	
								Bus12	167.328	73.012	264.2	91.7	
								Bus13	167.599	72.863	264.5	91.7	
								Bus14	0.000	0.000	0.0	0.0	
								Bus15	104.951	45.896	165.8	91.6	
								Bus16	51.994	22.786	82.2	91.6	
								Bus17	51.994	22.786	82.2	91.6	
								Bus18	51.994	22.786	82.2	91.6	
								Bus19	58.591	25.597	92.5	91.6	
								Bus20	58.591	25.597	92.5	91.6	
								Bus21	58.591	25.597	92.5	91.6	
								Bus22	0.000	0.000	0.0	0.0	
								QSA	99.994	0.203	144.7	100.0	
								Bus56	-1747.409	-678.525	2712.7	93.2	
								QMCCI-A	75.820	36.667	121.9	90.0	
Bus58	104.951	45.896	165.8	91.6									
Bus59	51.994	22.786	82.2	91.6									
QPC1-B	172.362	29.958	253.2	98.5									
QPC1-B	0.400	99.740	-6.3	0	0	0	0	Bus37	35.380	16.751	56.6	90.4	

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Bus		Voltage		Generation		Load		Load Flow				XFMR	
ID	kV	% Mag.	Ang.	kW	kvar	kW	kvar	ID	kW	kvar	Amp	%PF	%Tap
								Bus38	29.413	0.079	42.6	100.0	
								Bus39	0.000	0.000	0.0	0.0	
								Bus40	0.000	0.000	0.0	0.0	
								Bus41	16.194	8.457	26.4	88.6	
								Bus43	0.000	0.000	0.0	0.0	
								Bus44	73.561	0.193	106.5	100.0	
								Bus45	0.000	0.000	0.0	0.0	
								QMCC1-B	3.409	2.295	5.9	83.0	
								QUPS1	14.406	2.183	21.1	98.9	
								QPC1-A	-172.362	-29.958	253.2	98.5	
QPMCC-A	0.400	98.818	-3.8	0	0	0	0	Bus30	-228.809	-80.190	354.1	94.4	
								Bus29	39.305	17.352	62.8	91.5	
								Bus31	39.305	17.352	62.8	91.5	
								Bus32	39.305	17.352	62.8	91.5	
								Bus33	39.305	17.352	62.8	91.5	
								Bus34	0.000	0.000	0.0	0.0	
								Bus35	0.000	0.000	0.0	0.0	
								Bus36	0.000	0.000	0.0	0.0	
								Bus60	46.747	0.033	68.3	100.0	
								Bus65	1.953	0.000	2.9	100.0	
								Bus66	4.230	2.622	7.3	85.0	
								QPMCC-B	18.657	8.127	29.7	91.7	
QPMCC-B	0.400	98.818	-3.8	0	0	0	0	Bus46	15.084	7.342	24.5	89.9	
								QUPS2	3.573	0.785	5.3	97.7	
								QPMCC-A	-18.657	-8.127	29.7	91.7	
QSA	0.400	99.455	-6.4	0	0	0	0	QPC1-A	-99.708	-0.082	144.7	100.0	
								Bus73	79.937	0.078	116.0	100.0	
								Bus75	19.771	0.005	28.7	100.0	
QUPS1	0.400	98.919	-6.3	0	0	4.5	2.2	QPC1-B	-14.285	-2.179	21.1	98.9	
								QAC1	9.785	0.000	14.3	100.0	
QUPS2	0.400	98.612	-3.8	0	0	1.6	0.8	QPMCC-B	-3.565	-0.785	5.3	97.7	
								QAC2	1.945	0.000	2.8	100.0	

* Indicates a voltage regulated bus (voltage controlled or swing type machine connected to it)

Indicates a bus with a load mismatch of more than 0.1 MVA

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Bus			Directly Connected Load								Total Bus Load			Percent Loading
			Constant kVA		Constant Z		Constant I		Generic		kVA	% PF	Amp	
ID	kV	Rated Amp	kW	kvar	kW	kvar	kW	kvar	kW	kvar				
Bus37	0.400		34.7	16.6	0.0	0.0	0.0	0.0	0.0	0.0	38.4	90.2	56.6	
Bus38	0.400		0.0	0.0	29.0	0.0	0.0	0.0	0.0	0.0	29.0	100.0	42.6	
Bus39	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bus40	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bus41	0.400		15.9	8.4	0.0	0.0	0.0	0.0	0.0	0.0	18.0	88.3	26.4	
Bus43	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bus44	0.400		0.0	0.0	72.5	0.0	0.0	0.0	0.0	0.0	72.5	100.0	106.5	
Bus45	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bus46	0.400		15.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	16.6	89.9	24.5	
Bus47	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bus48	0.400		1.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.6	82.1	2.4	
Bus49	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bus50	0.400		1.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.2	83.2	1.8	
Bus51	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bus52	0.400		1.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.2	83.2	1.8	
Bus53	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bus55	6.000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1947.0	91.0	189.9	
Bus56	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1881.9	93.1	2712.7	
Bus57	6.000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	247.0	93.9	24.2	
Bus58	0.400		103.1	45.3	0.0	0.0	0.0	0.0	0.0	0.0	112.6	91.6	165.8	
Bus59	0.400		51.5	22.6	0.0	0.0	0.0	0.0	0.0	0.0	56.3	91.6	82.2	
Bus60	0.400		37.2	0.0	8.8	0.0	0.0	0.0	0.0	0.0	46.0	100.0	68.3	
Bus65	0.400		0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	100.0	2.9	
Bus66	0.400		3.4	2.1	0.8	0.5	0.0	0.0	0.0	0.0	5.0	85.0	7.3	
Bus73	0.400		64.0	0.0	15.8	0.0	0.0	0.0	0.0	0.0	79.8	100.0	116.0	
Bus75	0.400		0.0	0.0	19.8	0.0	0.0	0.0	0.0	0.0	19.8	100.0	28.7	
QAC1	0.400		0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	9.8	100.0	14.3	
QAC2	0.400		0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	1.9	100.0	2.8	
QMCC1-A	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.7	90.0	121.9	
QMCC1-B	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	82.9	5.9	
QMT1	6.000		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3015.6	91.6	294.0	
QPC1-A	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1874.5	93.2	2712.7	
QPC1-B	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	174.9	98.5	253.2	
QPMCC-A	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	242.5	94.4	354.1	
QPMCC-B	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.4	91.7	29.7	
QSA	0.400		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.7	100.0	144.7	
QUPS1	0.400		4.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	14.5	98.9	21.1	
QUPS2	0.400		1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	3.7	97.7	5.3	

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Location: MONFALCONE
Contract: SMART GAS MONFALCONE S.R.L.
Engineer: CLAUDIO GAMBARO
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* Indicates operating load of a bus exceeds the bus critical limit (100.0% of the Continuous Ampere rating).

Indicates operating load of a bus exceeds the bus marginal limit (95.0% of the Continuous Ampere rating).

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Branch Loading Summary Report

CKT / Branch		Cable & Reactor			Transformer				
					Capability (kVA)	Loading (input)		Loading (output)	
ID	Type	Ampacity (Amp)	Loading Amp	%		kVA	%	kVA	%
Cavo1	Cable	172.85	45.27	26.19	0.0	0.0		0.0	
Cavo2	Cable	172.85	0.00	0.00	0.0	0.0		0.0	
Cavo3	Cable	172.85	34.72	20.09	0.0	0.0		0.0	
Cavo4	Cable	172.85	0.00	0.00	0.0	0.0		0.0	
Cavo5	Cable	172.85	0.00	0.00	0.0	0.0		0.0	
Cavo6	Cable	204.52	0.00	0.00	0.0	0.0		0.0	
Cavo7	Cable	672.00	107.44	15.99	0.0	0.0		0.0	
Cavo8	Cable	513.60	107.32	20.89	0.0	0.0		0.0	
Cavo9	Cable	336.00	264.16	78.62	0.0	0.0		0.0	
Cavo10	Cable	336.00	264.63	78.76	0.0	0.0		0.0	
Cavo11	Cable	336.00	264.20	78.63	0.0	0.0		0.0	
Cavo12	Cable	336.00	264.47	78.71	0.0	0.0		0.0	
Cavo13	Cable	336.00	0.00	0.00	0.0	0.0		0.0	
Cavo14	Cable	216.00	165.77	76.74	0.0	0.0		0.0	
Cavo15	Cable	216.00	82.15	38.03	0.0	0.0		0.0	
Cavo16	Cable	216.00	82.15	38.03	0.0	0.0		0.0	
Cavo17	Cable	216.00	82.15	38.03	0.0	0.0		0.0	
Cavo18	Cable	216.00	92.53	42.84	0.0	0.0		0.0	
Cavo19	Cable	216.00	92.53	42.84	0.0	0.0		0.0	
Cavo20	Cable	216.00	92.53	42.84	0.0	0.0		0.0	
Cavo21	Cable	216.00	0.00	0.00	0.0	0.0		0.0	
Cavo22	Cable	187.20	28.23	15.08	0.0	0.0		0.0	
Cavo23	Cable	187.20	28.20	15.06	0.0	0.0		0.0	
Cavo24	Cable	187.20	56.84	30.36	0.0	0.0		0.0	
Cavo25	Cable	30.00	0.80	2.66	0.0	0.0		0.0	
Cavo26	Cable	30.00	0.80	2.66	0.0	0.0		0.0	
Cavo27	Cable	30.00	7.08	23.60	0.0	0.0		0.0	
Cavo28	Cable	825.60	354.14	42.89	0.0	0.0		0.0	
Cavo29	Cable	216.00	62.76	29.05	0.0	0.0		0.0	
Cavo30	Cable	216.00	62.76	29.05	0.0	0.0		0.0	
Cavo31	Cable	216.00	62.76	29.05	0.0	0.0		0.0	
Cavo32	Cable	216.00	62.76	29.05	0.0	0.0		0.0	
Cavo33	Cable	216.00	0.00	0.00	0.0	0.0		0.0	

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CKT / Branch		Cable & Reactor			Transformer				
ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (kVA)	Loading (input)		Loading (output)	
						kVA	%	kVA	%
Cavo34	Cable	124.80	0.00	0.00	0.0	0.0		0.0	
Cavo35	Cable	278.40	0.00	0.00	0.0	0.0		0.0	
Cavo36	Cable	187.20	56.65	30.26	0.0	0.0		0.0	
Cavo37	Cable	163.20	42.56	26.08	0.0	0.0		0.0	
Cavo38	Cable	278.40	0.00	0.00	0.0	0.0		0.0	
Cavo39	Cable	163.20	0.00	0.00	0.0	0.0		0.0	
Cavo40	Cable	72.00	26.44	36.72	0.0	0.0		0.0	
Cavo41	Cable	278.40	144.71	51.98	0.0	0.0		0.0	
Cavo42	Cable	72.00	0.00	0.00	0.0	0.0		0.0	
Cavo43	Cable	163.20	106.45	65.23	0.0	0.0		0.0	
Cavo44	Cable	278.40	0.00	0.00	0.0	0.0		0.0	
Cavo45	Cable	72.00	68.28	94.83	0.0	0.0		0.0	
Cavo46	Cable	30.00	0.00	0.00	0.0	0.0		0.0	
Cavo47	Cable	30.00	2.37	7.90	0.0	0.0		0.0	
Cavo48	Cable	30.00	0.00	0.00	0.0	0.0		0.0	
Cavo49	Cable	30.00	1.78	5.95	0.0	0.0		0.0	
Cavo50	Cable	30.00	0.00	0.00	0.0	0.0		0.0	
Cavo51	Cable	30.00	1.79	5.98	0.0	0.0		0.0	
Cavo52	Cable	30.00	0.00	0.00	0.0	0.0		0.0	
Cavo54	Cable	274.79	189.89	69.10	0.0	0.0		0.0	
Cavo55	Cable	3081.60	2712.70	88.03	0.0	0.0		0.0	
Cavo56	Cable	172.85	24.20	14.00	0.0	0.0		0.0	
Cavo57	Cable	163.20	121.88	74.68	0.0	0.0		0.0	
Cavo58	Cable	30.00	5.95	19.82	0.0	0.0		0.0	
Cavo61	Cable	216.00	165.77	76.74	0.0	0.0		0.0	
Cavo62	Cable	216.00	82.15	38.03	0.0	0.0		0.0	
Cavo63	Cable	216.00	24.50	11.34	0.0	0.0		0.0	
Cavo64	Cable	278.40	2.85	1.02	0.0	0.0		0.0	
Cavo65	Cable	278.40	7.27	2.61	0.0	0.0		0.0	
Cavo68	Cable	30.00	5.34	17.81	0.0	0.0		0.0	
Cavo72	Cable	278.40	116.01	41.67	0.0	0.0		0.0	
Cavo74	Cable	278.40	28.69	10.31	0.0	0.0		0.0	
Cavo75	Cable	30.00	21.09	70.28	0.0	0.0		0.0	
TR	Transformer				5000.0	3131.7	62.6	3015.6	60.3
TR1	Transformer				3000.0	1947.0	64.9	1881.9	62.7

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Filename: TerminaleGNL-Monfalcone		Config.: Normal

CKT / Branch		Cable & Reactor			Transformer				
ID	Type	Ampacity (Amp)	Loading Amp	%	Capability (kVA)	Loading (input)		Loading (output)	
						kVA	%	kVA	%
TR2	Transformer				3000.0	247.0	8.2	242.9	8.1

* Indicates a branch with operating load exceeding the branch capability.

Project: TERMINALE GNL MONFALCONE PORTO
Location: MONFALCONE
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Branch Losses Summary Report

CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	kW	kvar	kW	kvar	kW	kvar	From	To	
TR	2797.0	1408.7	-2763.4	-1207.1	33.6	201.5	100.0	98.7	1.30
Cavo4	0.0	0.0	0.0	0.0			98.7	98.7	0.00
Cavo5	0.0	0.0	0.0	0.0			98.7	98.7	0.00
Cavo6	0.0	0.0	0.0	0.0			98.7	98.7	0.00
Cavo1	-428.6	-177.1	429.2	177.2	0.6	0.1	98.6	98.7	0.12
Cavo2	0.0	0.0	0.0	0.0			98.7	98.7	0.00
Cavo3	-327.5	-139.1	327.8	139.2	0.3	0.1	98.6	98.7	0.09
Cavo7	-67.5	-29.4	68.0	29.7	0.6	0.3	98.9	99.7	0.88
Cavo8	-67.5	-29.4	67.9	29.9	0.4	0.5	99.0	99.7	0.76
Cavo9	-164.9	-71.4	167.2	73.3	2.3	1.9	98.2	99.7	1.57
Cavo10	-164.9	-71.4	167.6	73.2	2.7	1.8	98.0	99.7	1.75
Cavo11	-164.9	-71.4	167.3	73.0	2.5	1.6	98.2	99.7	1.59
Cavo12	-164.9	-71.4	167.6	72.9	2.7	1.4	98.1	99.7	1.69
Cavo13	0.0	0.0	0.0	0.0			99.7	99.7	0.00
Cavo14	-103.1	-45.3	105.0	45.9	1.9	0.6	98.0	99.7	1.73
Cavo15	-51.5	-22.6	52.0	22.8	0.5	0.2	98.9	99.7	0.86
Cavo16	-51.5	-22.6	52.0	22.8	0.5	0.2	98.9	99.7	0.86
Cavo17	-51.5	-22.6	52.0	22.8	0.5	0.2	98.9	99.7	0.86
Cavo18	-58.3	-25.5	58.6	25.6	0.3	0.1	99.3	99.7	0.48
Cavo19	-58.3	-25.5	58.6	25.6	0.3	0.1	99.3	99.7	0.48
Cavo20	-58.3	-25.5	58.6	25.6	0.3	0.1	99.3	99.7	0.48
Cavo21	0.0	0.0	0.0	0.0			99.7	99.7	0.00
Cavo22	-17.3	-8.3	17.5	8.3	0.2	0.0	98.3	99.2	0.88
Cavo23	-17.3	-8.3	17.5	8.3	0.1	0.0	98.4	99.2	0.77
Cavo24	-34.7	-16.6	35.3	16.7	0.6	0.2	97.6	99.2	1.55
Cavo25	-0.4	-0.3	0.4	0.3	0.0	0.0	99.1	99.2	0.10
Cavo26	-0.4	-0.3	0.4	0.3	0.0	0.0	99.1	99.2	0.10
Cavo27	-4.1	-2.5	4.1	2.6	0.0	0.0	98.4	99.2	0.77
Cavo29	-39.0	-17.2	39.3	17.4	0.4	0.1	98.0	98.8	0.85
Cavo28	229.2	80.5	-228.8	-80.2	0.3	0.4	99.0	98.8	0.18
TR2	-229.2	-80.5	232.0	84.8	2.8	4.2	99.0	98.2	0.80
Cavo30	-39.0	-17.2	39.3	17.4	0.4	0.1	98.0	98.8	0.85
Cavo31	-39.0	-17.2	39.3	17.4	0.4	0.1	98.0	98.8	0.85
Cavo32	-39.0	-17.2	39.3	17.4	0.4	0.1	98.0	98.8	0.85
Cavo33	0.0	0.0	0.0	0.0			98.8	98.8	0.00

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CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	kW	kvar	kW	kvar	kW	kvar	From	To	
Cavo34	0.0	0.0	0.0	0.0			98.8	98.8	0.00
Cavo35	0.0	0.0	0.0	0.0			98.8	98.8	0.00
Cavo36	-34.7	-16.6	35.4	16.8	0.7	0.2	98.0	99.7	1.77
Cavo37	-29.0	0.0	29.4	0.1	0.4	0.1	98.3	99.7	1.44
Cavo38	0.0	0.0	0.0	0.0			99.7	99.7	0.00
Cavo39	0.0	0.0	0.0	0.0			99.7	99.7	0.00
Cavo40	-15.9	-8.4	16.2	8.5	0.3	0.0	98.2	99.7	1.57
Cavo42	0.0	0.0	0.0	0.0			99.7	99.7	0.00
Cavo43	-72.5	0.0	73.6	0.2	1.0	0.2	98.3	99.7	1.40
Cavo44	0.0	0.0	0.0	0.0			99.7	99.7	0.00
Cavo63	-15.0	-7.3	15.1	7.3	0.1	0.0	98.1	98.8	0.77
Cavo46	0.0	0.0	0.0	0.0			99.5	99.5	0.00
Cavo47	-1.3	-0.9	1.3	0.9	0.0	0.0	99.4	99.5	0.16
Cavo48	0.0	0.0	0.0	0.0			99.5	99.5	0.00
Cavo49	-1.0	-0.7	1.0	0.7	0.0	0.0	99.4	99.5	0.19
Cavo50	0.0	0.0	0.0	0.0			99.5	99.5	0.00
Cavo51	-1.0	-0.7	1.0	0.7	0.0	0.0	98.8	99.5	0.72
Cavo52	0.0	0.0	0.0	0.0			99.5	99.5	0.00
Cavo54	-1772.6	-805.4	1773.2	805.7	0.6	0.3	98.7	98.7	0.03
TR1	1772.6	805.4	-1752.6	-685.4	20.0	120.0	98.7	100.1	1.47
Cavo55	1752.6	685.4	-1747.4	-678.5	5.2	6.9	100.1	99.7	0.39
Cavo56	-232.0	-84.8	233.2	85.0	1.2	0.2	98.2	98.7	0.50
Cavo61	-103.1	-45.3	105.0	45.9	1.9	0.6	98.0	99.7	1.73
Cavo62	-51.5	-22.6	52.0	22.8	0.5	0.2	98.9	99.7	0.86
Cavo45	-46.0	0.0	46.7	0.0	0.8	0.0	97.2	98.8	1.60
Cavo64	-2.0	0.0	2.0	0.0	0.0	0.0	98.8	98.8	0.01
Cavo65	-4.2	-2.6	4.2	2.6	0.0	0.0	98.8	98.8	0.02
Cavo72	-79.8	0.0	79.9	0.1	0.2	0.1	99.2	99.5	0.23
Cavo74	-19.8	0.0	19.8	0.0	0.0	0.0	99.4	99.5	0.06
Cavo57	-75.3	-36.6	75.8	36.7	0.5	0.1	99.2	99.7	0.56
Cavo58	-3.4	-2.3	3.4	2.3	0.0	0.0	99.5	99.7	0.20
Cavo41	100.0	0.2	-99.7	-0.1	0.3	0.1	99.7	99.5	0.29
Cavo75	14.4	2.2	-14.3	-2.2	0.1	0.0	99.7	98.9	0.82
Cavo68	3.6	0.8	-3.6	-0.8	0.0	0.0	98.8	98.6	0.21
					89.3	345.0			

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Alert Summary Report

	% Alert Settings	
	<u>Critical</u>	<u>Marginal</u>
<u>Loading</u>		
Bus	100.0	95.0
Cable	100.0	95.0
Reactor	100.0	95.0
Line	100.0	95.0
Transformer	100.0	95.0
Panel	100.0	95.0
Protective Device	100.0	95.0
Generator	100.0	95.0
Inverter/Charger	100.0	95.0
<u>Bus Voltage</u>		
OverVoltage	105.0	102.0
UnderVoltage	95.0	97.0
<u>Generator Excitation</u>		
OverExcited (Q Max.)	100.0	95.0
UnderExcited (Q Min.)	100.0	

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SUMMARY OF TOTAL GENERATION, LOADING & DEMAND

	<u>kW</u>	<u>kvar</u>	<u>kVA</u>	<u>% PF</u>
Source (Swing Buses):	2797.0	1408.7	3131.7	89.31 Lagging
Source (Non-Swing Buses):	0.0	0.0	0.0	
Total Demand:	2797.0	1408.7	3131.7	89.31 Lagging
Total Motor Load:	2547.3	1063.1	2760.3	92.29 Lagging
Total Static Load:	160.3	0.5	160.3	100.00 Lagging
Total Constant I Load:	0.0	0.0	0.0	
Total Generic Load:	0.0	0.0	0.0	
Apparent Losses:	89.3	345.0		
System Mismatch:	0.0	0.0		

Number of Iterations: 3

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo1	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	Heesung	Jacket thickness (mm)	
From Bus	QMT1	Insulation	XLPE	Sheath type	Aluminum Sheath
To Bus	Bus5	kV	6,0	Sheath thickness (mm)	2.50
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	200,000	Conductor Type	CU	Shield Grounding	Open

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	25	90	120				
Operating	35	90	90	45,27	187,91	172,85	172,85 (A) Derated

Sizing Constraints

Loading (Amps)	94,5
%Vd	2 @ 6 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	%Vd*	%Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	50	172,85	0,26	0,00		
Optimal Size	1	25	102,00	0,49	0,00		
1 Size Smaller	1	16	78,00	0,77	0,00		

* (%Vd @ 6 kV)

Cable Sizing (A)

Loading Current	94,5
PD Rating	
Overload Setting	
Derated Ampacity	172,85
Base Ampacity	187,91

Operating Current

Average	Phase A	Phase B	Phase C
45,27	45,27	45,27	45,27

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo2	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	Heesung	Jacket thickness (mm)	
From Bus	QMT1	Insulation	XLPE	Sheath type	Aluminum Sheath
To Bus	Bus6	kV	6,0	Sheath thickness (mm)	2.50
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	200,000	Conductor Type	CU	Shield Grounding	Open

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	25	90	120				
Operating	35	90	90	0,00	187,91	172,85	172,85 (A) Derated

Sizing Constraints

Loading (Amps)	94,5
%Vd	2 @ 6 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	%Vd*	%Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	50	172,85	0,26	0,00		
Optimal Size	1	25	102,00	0,49	0,00		
1 Size Smaller	1	16	78,00	0,77	0,00		

* (%Vd @ 6 kV)

Cable Sizing (A)

Loading Current	94,5
PD Rating	
Overload Setting	
Derated Ampacity	172,85
Base Ampacity	187,91

Operating Current

Average	Phase A	Phase B	Phase C
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo3	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	Heesung	Jacket thickness (mm)	
From Bus	QMT1	Insulation	XLPE	Sheath type	Aluminum Sheath
To Bus	Bus7	kV	6,0	Sheath thickness (mm)	2.50
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	200,000	Conductor Type	CU	Shield Grounding	Open

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	25	90	120				
Operating	35	90	90	34,72	187,91	172,85	172,85 (A) Derated

Sizing Constraints

Loading (Amps)	38,04
%Vd	2 @ 6 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	%Vd*	%Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	50	172,85	0,11	0,00		
Optimal Size	1	10	78,00	0,49	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 6 kV)

Cable Sizing (A)

Loading Current	38,04
PD Rating	
Overload Setting	
Derated Ampacity	172,85
Base Ampacity	187,91

Operating Current

Average	Phase A	Phase B	Phase C
34,72	34,72	34,72	34,72

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo4	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	Heesung	Jacket thickness (mm)	
From Bus	QMT1	Insulation	XLPE	Sheath type	Aluminum Sheath
To Bus	Bus2	kV	6,0	Sheath thickness (mm)	2.50
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	200,000	Conductor Type	CU	Shield Grounding	Open

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	25	90	120				
Operating	35	90	90	0,00	187,91	172,85	172,85 (A) Derated

Sizing Constraints

Loading (Amps)	38,04
%Vd	2 @ 6 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	%Vd*	%Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	50	172,85	0,11	0,00		
Optimal Size	1	10	78,00	0,49	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 6 kV)

Cable Sizing (A)

Loading Current	38,04
PD Rating	
Overload Setting	
Derated Ampacity	172,85
Base Ampacity	187,91

Operating Current

Average	Phase A	Phase B	Phase C
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo5	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	Heesung	Jacket thickness (mm)	
From Bus	QMT1	Insulation	XLPE	Sheath type	Aluminum Sheath
To Bus	Bus3	kV	6,0	Sheath thickness (mm)	2.50
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	2000,000	Conductor Type	CU	Shield Grounding	Open

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	25	90	120				
Operating	35	90	90	0,00	187,91	172,85	172,85 (A) Derated

Sizing Constraints

Loading (Amps)	68,59
%Vd	2 @ 6 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	%Vd*	%Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	50	172,85	1,90	0,00		
Optimal Size	1	50	173,00	1,90	0,00		
1 Size Smaller	1	35	133,00	2,55	0,00		

* (%Vd @ 6 kV)

Cable Sizing (A)

Loading Current	68,59
PD Rating	
Overload Setting	
Derated Ampacity	172,85
Base Ampacity	187,91

Operating Current

Average	Phase A	Phase B	Phase C
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo6	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	Heesung	Jacket thickness (mm)	
From Bus	QMT1	Insulation	XLPE	Sheath type	Aluminum Sheath
To Bus	Bus4	kV	6,0	Sheath thickness (mm)	2.50
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	200,000	Conductor Type	CU	Shield Grounding	Open

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	195,00	204,52	204,52 (A) Derated

Sizing Constraints

Loading (Amps)	38,04
%Vd	2 @ 6 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	50	204,52	0,11	0,00		
Optimal Size	1	10	87,00	0,49	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 6 kV)

Cable Sizing (A)

Loading Current	38,04
PD Rating	
Overload Setting	
Derated Ampacity	204,52
Base Ampacity	195,00

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo7	Size (mm2)	150	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus8	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	2	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	230,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		107,44	637,00	672,00	672,00 (A) Derated

Sizing Constraints

Loading (Amps)	236
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	2	150	672,00	1,93	0,00		
Optimal Size	2	150	672,00	1,93	0,00		
1 Size Smaller	2	120	557,00	2,32	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	236
PD Rating	
Overload Setting	
Derated Ampacity	672,00
Base Ampacity	637,00

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
107,4	107,4	107,4	107,4

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo8	Size (mm2)	400	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus9	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	200,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		107,32	486,85	513,60	513,60 (A) Derated

Sizing Constraints

Loading (Amps)	236
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	400	513,60	1,92	0,00		
Optimal Size	1	400	514,00	1,92	0,00		
1 Size Smaller	1	300	413,00	2,16	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	236
PD Rating	
Overload Setting	
Derated Ampacity	513,60
Base Ampacity	486,85

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
107,3	107,3	107,3	107,3

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo9	Size (mm2)	240	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus10	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	120,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		264,16	318,50	336,00	336,00 (A) Derated

Sizing Constraints

Loading (Amps)	288,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	240	336,00	1,78	0,00		
Optimal Size	1	240	336,00	1,78	0,00		
1 Size Smaller	1	185	336,00	2,11	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	288,1
PD Rating	
Overload Setting	
Derated Ampacity	336,00
Base Ampacity	318,50

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
264,2	264,2	264,2	264,2

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo10	Size (mm2)	185	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus11	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	110,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		264,63	318,50	336,00	336,00 (A) Derated

Sizing Constraints

Loading (Amps)	288,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	185	336,00	1,93	0,00		
Optimal Size	1	185	336,00	1,93	0,00		
1 Size Smaller	1	150	336,00	2,26	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	288,1
PD Rating	
Overload Setting	
Derated Ampacity	336,00
Base Ampacity	318,50

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
264,6	264,6	264,6	264,6

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo11	Size (mm2)	185	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus12	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	100,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		264,20	318,50	336,00	336,00 (A) Derated

Sizing Constraints

Loading (Amps)	288,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	185	336,00	1,76	0,00		
Optimal Size	1	185	336,00	1,76	0,00		
1 Size Smaller	1	150	336,00	2,05	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	288,1
PD Rating	
Overload Setting	
Derated Ampacity	336,00
Base Ampacity	318,50

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
264,2	264,2	264,2	264,2

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo12	Size (mm2)	150	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus13	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	90,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90		264,47	318,50	336,00	336,00 (A) Derated
Operating	35	90					

Sizing Constraints

Loading (Amps)	288,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	150	336,00	1,85	0,00		
Optimal Size	1	150	336,00	1,85	0,00		
1 Size Smaller	1	120	278,00	2,22	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	288,1
PD Rating	
Overload Setting	
Derated Ampacity	336,00
Base Ampacity	318,50

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
264,5	264,5	264,5	264,5

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo13	Size (mm2)	150	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus14	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	80,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	318,50	336,00	336,00 (A) Derated

Sizing Constraints

Loading (Amps)	288,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	150	336,00	1,64	0,00		
Optimal Size	1	150	336,00	1,64	0,00		
1 Size Smaller	1	120	278,00	1,97	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	288,1
PD Rating	
Overload Setting	
Derated Ampacity	336,00
Base Ampacity	318,50

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo14	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus15	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	100,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		165,77	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	180,5
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,89	0,00		
Optimal Size	1	95	216,00	1,89	0,00		
1 Size Smaller	1	70	187,00	2,51	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	180,5
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
165,8	165,8	165,8	165,8

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo15	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus16	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	100,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		82,15	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	180,5
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	% Vd*	% Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	95	216,00	1,89	0,00		
Optimal Size	1	95	216,00	1,89	0,00		
1 Size Smaller	1	70	187,00	2,51	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	180,5
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

Average	Phase A	Phase B	Phase C
82,15	82,15	82,15	82,15

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo16	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus17	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	100,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		82,15	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	180,5
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,89	0,00		
Optimal Size	1	95	216,00	1,89	0,00		
1 Size Smaller	1	70	187,00	2,51	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	180,5
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
82,15	82,15	82,15	82,15

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo17	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus18	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	100,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		82,15	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	180,5
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,89	0,00		
Optimal Size	1	95	216,00	1,89	0,00		
1 Size Smaller	1	70	187,00	2,51	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	180,5
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
82,15	82,15	82,15	82,15

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo18	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus19	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	50,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90		92,53	204,75	216,00	216,00 (A) Derated
Operating	35	90					

Sizing Constraints

Loading (Amps)	204,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,07	0,00		
Optimal Size	1	95	216,00	1,07	0,00		
1 Size Smaller	1	70	187,00	1,42	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	204,1
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
92,53	92,53	92,53	92,53

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo19	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus20	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	50,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		92,53	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	204,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,07	0,00		
Optimal Size	1	95	216,00	1,07	0,00		
1 Size Smaller	1	70	187,00	1,42	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	204,1
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
92,53	92,53	92,53	92,53

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo20	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus21	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	50,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		92,53	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	204,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,07	0,00		
Optimal Size	1	95	216,00	1,07	0,00		
1 Size Smaller	1	70	187,00	1,42	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	204,1
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
92,53	92,53	92,53	92,53

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo21	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus22	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	50,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	204,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,07	0,00		
Optimal Size	1	95	216,00	1,07	0,00		
1 Size Smaller	1	70	187,00	1,42	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	204,1
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo22	Size (mm2)	70	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus23	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	230,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		28,23	177,45	187,20	187,20 (A) Derated

Sizing Constraints

Loading (Amps)	61,66
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	70	187,20	1,97	0,00		
Optimal Size	1	70	187,00	1,97	0,00		
1 Size Smaller	1	50	163,00	2,71	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	61,66
PD Rating	
Overload Setting	
Derated Ampacity	187,20
Base Ampacity	177,45

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
28,23	28,23	28,23	28,23

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo23	Size (mm2)	70	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus24	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	200,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		28,20	177,45	187,20	187,20 (A) Derated

Sizing Constraints

Loading (Amps)	61,66
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	% Vd*	% Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	70	187,20	1,71	0,00		
Optimal Size	1	70	187,00	1,71	0,00		
1 Size Smaller	1	50	163,00	2,36	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	61,66
PD Rating	
Overload Setting	
Derated Ampacity	187,20
Base Ampacity	177,45

Operating Current

Average	Phase A	Phase B	Phase C
28,2	28,2	28,2	28,2

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo24	Size (mm2)	70	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus25	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	200,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		56,84	177,45	187,20	187,20 (A) Derated

Sizing Constraints

Loading (Amps)	61,66
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	70	187,20	1,71	0,00		
Optimal Size	1	70	187,00	1,71	0,00		
1 Size Smaller	1	50	163,00	2,36	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	61,66
PD Rating	
Overload Setting	
Derated Ampacity	187,20
Base Ampacity	177,45

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
56,84	56,84	56,84	56,84

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo25	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus26	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	100,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		0,80	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	1,76
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	%Vd*	%Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	6	30,00	0,28	0,00		
Optimal Size	1	6	30,00	0,28	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	1,76
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

Average	Phase A	Phase B	Phase C
0,798	0,798	0,798	0,798

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo26	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus27	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	100,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		0,80	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	1,76
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	%Vd*	%Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	6	30,00	0,28	0,00		
Optimal Size	1	6	30,00	0,28	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	1,76
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

Average	Phase A	Phase B	Phase C
0,798	0,798	0,798	0,798

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo27	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus28	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	80,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
Base	40	90		<u>Operating</u>	<u>Base</u>	<u>Derated</u>	30,00 (A) Derated
Operating	35	90		7,08	36,40	30,00	

Sizing Constraints

Loading (Amps)	7,74
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
Existing Size	1	6	30,00	0,97	0,00	<u>Short-Circuit</u>	<u>Overload</u>
Optimal Size	1	6	30,00	0,97	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	7,74
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
7,08	7,08	7,08	7,08

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo28	Size (mm2)	300	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	Bus30	Insulation	Rubber	Sheath type	None
To Bus	QPMCC-A	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	2	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		354,14	782,60	825,60	825,60 (A) Derated

Sizing Constraints

Loading (Amps)	721,7
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	% Vd*	% Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	2	300	825,60	0,41			
Optimal Size	2	300	826,00	0,41	0,00		
1 Size Smaller	2	240	672,00	0,47	0,00		

* (% Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	721,7
PD Rating	
Overload Setting	
Derated Ampacity	825,60
Base Ampacity	782,60

Operating Current

Average	Phase A	Phase B	Phase C
354,1	354,1	354,1	354,1

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo29	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus29	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	130,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		62,76	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	136,6
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,86	0,00		
Optimal Size	1	95	216,00	1,86	0,00		
1 Size Smaller	1	70	187,00	2,47	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	136,6
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
62,76	62,76	62,76	62,76

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo30	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus31	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	130,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		62,76	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	136,6
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	% Vd*	% Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	95	216,00	1,86	0,00		
Optimal Size	1	95	216,00	1,86	0,00		
1 Size Smaller	1	70	187,00	2,47	0,00		

* (% Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	136,6
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

Average	Phase A	Phase B	Phase C
62,76	62,76	62,76	62,76

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo31	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus32	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	130,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		62,76	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	136,6
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,86	0,00		
Optimal Size	1	95	216,00	1,86	0,00		
1 Size Smaller	1	70	187,00	2,47	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	136,6
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
62,76	62,76	62,76	62,76

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo32	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus33	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	130,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		62,76	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	136,6
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,86	0,00		
Optimal Size	1	95	216,00	1,86	0,00		
1 Size Smaller	1	70	187,00	2,47	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	136,6
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
62,76	62,76	62,76	62,76

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo33	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus34	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	130,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90		0,00	204,75	216,00	216,00 (A) Derated
Operating	35	90					

Sizing Constraints

Loading (Amps)	136,6
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,86	0,00		
Optimal Size	1	95	216,00	1,86	0,00		
1 Size Smaller	1	70	187,00	2,47	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	136,6
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo34	Size (mm2)	35	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus35	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	300,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	118,30	124,80	124,80 (A) Derated

Sizing Constraints

Loading (Amps)	19,07
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	35	124,80	1,55	0,00		
Optimal Size	1	35	125,00	1,55	0,00		
1 Size Smaller	1	25	91,00	2,16	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	19,07
PD Rating	
Overload Setting	
Derated Ampacity	124,80
Base Ampacity	118,30

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo35	Size (mm2)	120	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus36	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	300,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	263,90	278,40	278,40 (A) Derated

Sizing Constraints

Loading (Amps)	65,34
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	120	278,40	1,68	0,00		
Optimal Size	1	120	278,00	1,68	0,00		
1 Size Smaller	1	95	216,00	2,06	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	65,34
PD Rating	
Overload Setting	
Derated Ampacity	278,40
Base Ampacity	263,90

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo36	Size (mm2)	70	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus37	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	230,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		56,65	177,45	187,20	187,20 (A) Derated

Sizing Constraints

Loading (Amps)	61,66
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	% Vd*	% Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	70	187,20	1,97	0,00		
Optimal Size	1	70	187,00	1,97	0,00		
1 Size Smaller	1	50	163,00	2,71	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	61,66
PD Rating	
Overload Setting	
Derated Ampacity	187,20
Base Ampacity	177,45

Operating Current

Average	Phase A	Phase B	Phase C
56,65	56,65	56,65	56,65

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo37	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus38	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	180,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		42,56	154,70	163,20	163,20 (A) Derated

Sizing Constraints

Loading (Amps)	43,3
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	50	163,20	1,49			
Optimal Size	1	50	163,00	1,49	0,00		
1 Size Smaller	1	35	125,00	2,11	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	43,3
PD Rating	
Overload Setting	
Derated Ampacity	163,20
Base Ampacity	154,70

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
42,56	42,56	42,56	42,56

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo38	Size (mm2)	120	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus39	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	300,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	263,90	278,40	278,40 (A) Derated

Sizing Constraints

Loading (Amps)	72,17
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	120	278,40	1,85			
Optimal Size	1	120	278,00	1,85	0,00		
1 Size Smaller	1	95	216,00	2,27	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	72,17
PD Rating	
Overload Setting	
Derated Ampacity	278,40
Base Ampacity	263,90

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo39	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus40	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	400,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	154,70	163,20	163,20 (A) Derated

Sizing Constraints

Loading (Amps)	21,65
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	50	163,20	1,66			
Optimal Size	1	50	163,00	1,66	0,00		
1 Size Smaller	1	35	125,00	2,34	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	21,65
PD Rating	
Overload Setting	
Derated Ampacity	163,20
Base Ampacity	154,70

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo40	Size (mm2)	10	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus41	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	70,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		26,44	68,25	72,00	72,00 (A) Derated

Sizing Constraints

Loading (Amps)	28,84
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	% Vd*	% Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	10	72,00	1,90	0,00		
Optimal Size	1	10	72,00	1,90	0,00		
1 Size Smaller	1	6	30,00	3,17	0,00		

* (% Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	28,84
PD Rating	
Overload Setting	
Derated Ampacity	72,00
Base Ampacity	68,25

Operating Current

Average	Phase A	Phase B	Phase C
26,44	26,44	26,44	26,44

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo41	Size (mm2)	120	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	QSA	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		144,71	263,90	278,40	278,40 (A) Derated

Sizing Constraints

Loading (Amps)	236
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	120	278,40	0,50	0,00		
Optimal Size	1	120	278,00	0,50	0,00		
1 Size Smaller	1	95	216,00	0,62	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	236
PD Rating	
Overload Setting	
Derated Ampacity	278,40
Base Ampacity	263,90

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
144,7	144,7	144,7	144,7

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo42	Size (mm2)	10	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus43	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	70,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90		0,00	68,25	72,00	72,00 (A) Derated
Operating	35	90					

Sizing Constraints

Loading (Amps)	28,84
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	10	72,00	1,90	0,00		
Optimal Size	1	10	72,00	1,90	0,00		
1 Size Smaller	1	6	30,00	3,17	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	28,84
PD Rating	
Overload Setting	
Derated Ampacity	72,00
Base Ampacity	68,25

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo43	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus44	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	70,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		106,45	154,70	163,20	163,20 (A) Derated

Sizing Constraints

Loading (Amps)	108,3
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	50	163,20	1,45			
Optimal Size	1	50	163,00	1,45	0,00		
1 Size Smaller	1	35	125,00	2,05	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	108,3
PD Rating	
Overload Setting	
Derated Ampacity	163,20
Base Ampacity	154,70

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
106,5	106,5	106,5	106,5

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library			Physical	
ID	Cavo44	Size (mm2)	120	Jacket type:	None	
Tag #	N/A	Source	ICEA	Jacket thickness (mm)		
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None	
To Bus	Bus45	kV	1,0	Sheath thickness (mm)		
No./Cable	3/C	% Class	100	Armor type	None	
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)		
Length (m)	50,000	Conductor Type	CU	Shield Grounding		

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	263,90	278,40	278,40 (A) Derated

Sizing Constraints

Loading (Amps)	255,1
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	120	278,40	1,09	0,00		
Optimal Size	1	120	278,00	1,09	0,00		
1 Size Smaller	1	95	216,00	1,34	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	255,1
PD Rating	
Overload Setting	
Derated Ampacity	278,40
Base Ampacity	263,90

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo45	Size (mm2)	10	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus60	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		68,28	68,25	72,00	72,00 (A) Derated

Sizing Constraints

Loading (Amps)	68,28
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	10	72,00	1,60			
Optimal Size	1	10	72,00	1,60	0,00		
1 Size Smaller	1	6	30,00	2,68	0,00		

* (% Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	68,28
PD Rating	
Overload Setting	
Derated Ampacity	72,00
Base Ampacity	68,25

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
68,28	68,28	68,28	68,28

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo46	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus47	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	80,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	7,74
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	0,97	0,00		
Optimal Size	1	6	30,00	0,97	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	7,74
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo47	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus48	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	50,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		2,37	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	2,62
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	0,21	0,00		
Optimal Size	1	6	30,00	0,21	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	2,62
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
2,37	2,37	2,37	2,37

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo48	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus49	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	50,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		0,00	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	2,62
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	% Vd*	% Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	6	30,00	0,21	0,00		
Optimal Size	1	6	30,00	0,21	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (% Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	2,62
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

Average	Phase A	Phase B	Phase C
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo49	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus50	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	80,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		1,78	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	3,94
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	0,49	0,00		
Optimal Size	1	6	30,00	0,49	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	3,94
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
1,78	1,78	1,78	1,78

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo50	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus51	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	80,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	3,94
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	0,49	0,00		
Optimal Size	1	6	30,00	0,49	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	3,94
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo51	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus52	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	300,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		1,79	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	3,94
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	1,85	0,00		
Optimal Size	1	6	30,00	1,85	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	3,94
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
1,79	1,79	1,79	1,79

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo52	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QMCC1-B	Insulation	Rubber	Sheath type	None
To Bus	Bus53	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	300,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		0,00	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	3,94
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	1,85	0,00		
Optimal Size	1	6	30,00	1,85	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	3,94
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
0	0	0	0

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo54	Size (mm2)	120	Jacket type:	None
Tag #	N/A	Source	Heesung	Jacket thickness (mm)	
From Bus	QMT1	Insulation	XLPE	Sheath type	Aluminum Sheath
To Bus	Bus55	kV	6,0	Sheath thickness (mm)	2.90
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	30,000	Conductor Type	CU	Shield Grounding	Open

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	25	90	120	189,89	298,72	274,79	274,79 (A) Derated
Operating	35	90	90				

Sizing Constraints

Loading (Amps)	240,6
%Vd	2 @ 6 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	120	274,79	0,04			
Optimal Size	1	120	275,00	0,04	0,00		
1 Size Smaller	1	95	222,00	0,05	0,00		

* (%Vd @ 6 kV)

Cable Sizing (A)

Loading Current	240,6
PD Rating	
Overload Setting	
Derated Ampacity	274,79
Base Ampacity	298,72

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
189,9	189,9	189,9	189,9

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo55	Size (mm2)	400	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	Bus56	Insulation	Rubber	Sheath type	None
To Bus	QPC1-A	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	6	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		2712,70	2921,10	3081,60	3081,60 (A) Derated

Sizing Constraints

Loading (Amps)	2887
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	6	400	3081,60	0,49			
Optimal Size	6	400	3082,00	0,49	0,00		
1 Size Smaller	6	300	2.477,00	0,55	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	2887
PD Rating	
Overload Setting	
Derated Ampacity	3081,60
Base Ampacity	2921,10

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
2713	2713	2713	2713

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo56	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	Heesung	Jacket thickness (mm)	
From Bus	QMT1	Insulation	XLPE	Sheath type	Aluminum Sheath
To Bus	Bus57	kV	6,0	Sheath thickness (mm)	2.50
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	1500,000	Conductor Type	CU	Shield Grounding	Open

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	25	90	120				
Operating	35	90	90	24,20	187,91	172,85	172,85 (A) Derated

Sizing Constraints

Loading (Amps)	48,11
%Vd	2 @ 6 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	% Vd*	% Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	50	172,85	1,00			
Optimal Size	1	25	102,00	1,85	0,00		
1 Size Smaller	1	16	78,00	2,93	0,00		

* (%Vd @ 6 kV)

Cable Sizing (A)

Loading Current	48,11
PD Rating	
Overload Setting	
Derated Ampacity	172,85
Base Ampacity	187,91

Operating Current

Average	Phase A	Phase B	Phase C
24,2	24,2	24,2	24,2

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo57	Size (mm2)	50	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	QMCC1-A	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90		121,88	154,70	163,20	163,20 (A) Derated
Operating	35	90					

Sizing Constraints

Loading (Amps)	121,9
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	50	163,20	0,58			
Optimal Size	1	35	125,00	0,82	0,00		
1 Size Smaller	1	25	91,00	1,15	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	121,9
PD Rating	
Overload Setting	
Derated Ampacity	163,20
Base Ampacity	154,70

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
121,9	121,9	121,9	121,9

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo58	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None
To Bus	QMCC1-B	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		5,95	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	5,95
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	0,23			
Optimal Size	1	6	30,00	0,23	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	5,95
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
5,95	5,95	5,95	5,95

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo61	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus58	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	100,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		165,77	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	180,5
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,89	0,00		
Optimal Size	1	95	216,00	1,89	0,00		
1 Size Smaller	1	70	187,00	2,51	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	180,5
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
165,8	165,8	165,8	165,8

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo62	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-A	Insulation	Rubber	Sheath type	None
To Bus	Bus59	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	100,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		82,15	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	180,5
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,89	0,00		
Optimal Size	1	95	216,00	1,89	0,00		
1 Size Smaller	1	70	187,00	2,51	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	180,5
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
82,15	82,15	82,15	82,15

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo63	Size (mm2)	95	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-B	Insulation	Rubber	Sheath type	None
To Bus	Bus46	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	300,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		24,50	204,75	216,00	216,00 (A) Derated

Sizing Constraints

Loading (Amps)	53,39
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	95	216,00	1,68	0,00		
Optimal Size	1	95	216,00	1,68	0,00		
1 Size Smaller	1	70	187,00	2,22	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	53,39
PD Rating	
Overload Setting	
Derated Ampacity	216,00
Base Ampacity	204,75

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
24,5	24,5	24,5	24,5

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo64	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus65	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		2,85	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	2,89
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	0,11			
Optimal Size	1	6	30,00	0,11	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	2,89
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
2,85	2,85	2,85	2,85

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo65	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-A	Insulation	Rubber	Sheath type	None
To Bus	Bus66	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		7,27	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	7,27
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	0,29			
Optimal Size	1	6	30,00	0,29	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	7,27
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
7,27	7,27	7,27	7,27

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo68	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPMCC-B	Insulation	Rubber	Sheath type	None
To Bus	QUPS2	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
				<u>Operating</u>	<u>Base</u>	<u>Derated</u>	
Base	40	90					
Operating	35	90		5,34	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	5,34
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
						<u>Short-Circuit</u>	<u>Overload</u>
Existing Size	1	6	30,00	0,21			
Optimal Size	1	6	30,00	0,21	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	5,34
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
5,34	5,34	5,34	5,34

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo72	Size (mm2)	35	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QSA	Insulation	Rubber	Sheath type	None
To Bus	Bus73	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		116,01	118,30	124,80	124,80 (A) Derated

Sizing Constraints

Loading (Amps)	116
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	%Vd*	%Vst	Minimum. Size (mm2)	
						Short-Circuit	Overload
Existing Size	1	35	124,80	0,78			
Optimal Size	1	35	125,00	0,78	0,00		
1 Size Smaller	1	25	91,00	1,10	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	116
PD Rating	
Overload Setting	
Derated Ampacity	124,80
Base Ampacity	118,30

Operating Current

Average	Phase A	Phase B	Phase C
116	116	116	116

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo74	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QSA	Insulation	Rubber	Sheath type	None
To Bus	Bus75	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	<u>Ambient Temperature</u>	<u>Conductor Temperature</u>	<u>RHO</u>	<u>Ampacity / Capacity Result</u>			<u>Allowable Ampacity / Capacity</u>
Base	40	90		<u>Operating</u>	<u>Base</u>	<u>Derated</u>	30,00 (A) Derated
Operating	35	90		28,69	36,40	30,00	

Sizing Constraints

Loading (Amps)	28,87
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	<u>#/Ph</u>	<u>Size</u>	<u>Ampacity</u>	<u>% Vd*</u>	<u>% Vst</u>	<u>Minimum. Size (mm2)</u>	
Existing Size	1	6	30,00	1,13		<u>Short-Circuit</u>	<u>Overload</u>
Optimal Size	1	6	30,00	1,13	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	28,87
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

<u>Average</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>
28,69	28,69	28,69	28,69

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.

Cable Summary Report (NEC)

General		Library		Physical	
ID	Cavo75	Size (mm2)	6	Jacket type:	None
Tag #	N/A	Source	ICEA	Jacket thickness (mm)	
From Bus	QPC1-B	Insulation	Rubber	Sheath type	None
To Bus	QUPS1	kV	1,0	Sheath thickness (mm)	
No./Cable	3/C	% Class	100	Armor type	None
No. Cond/Phase	1	Installation	Non-Mag.	Armor thickness (mm)	
Length (m)	25,000	Conductor Type	CU	Shield Grounding	

Allowable Ampacity - Current Carrying Capacity

	Ambient Temperature	Conductor Temperature	RHO	Ampacity / Capacity Result			Allowable Ampacity / Capacity
				Operating	Base	Derated	
Base	40	90					
Operating	35	90		21,09	36,40	30,00	30,00 (A) Derated

Sizing Constraints

Loading (Amps)	21,09
%Vd	2 @ 0,4 kV
%Vst	
Short-Circuit (kA)	

Protective Device

Overload	None	<u>In(A)</u>	<u>I2(A)</u>
Overcurrent (Phase)	User-Defined	<u>Seconds</u>	<u>kA</u> <u>Rating (A)</u>
RCD/GFCI	None	<u>Trip (mA)</u>	<u>Time (ms)</u>

Optimal Conductors Results

	#/Ph	Size	Ampacity	%Vd*	%Vst	Minimum. Size (mm2)	
Existing Size	1	6	30,00	0,83		<u>Short-Circuit</u>	<u>Overload</u>
Optimal Size	1	6	30,00	0,83	0,00		
1 Size Smaller	0		0,00	0,00	0,00		

* (%Vd @ 0,4 kV)

Cable Sizing (A)

Loading Current	21,09
PD Rating	
Overload Setting	
Derated Ampacity	30,00
Base Ampacity	36,40

Operating Current

Average	Phase A	Phase B	Phase C
21,09	21,09	21,09	21,09

+ The ID/Type field is available only when the Device ID is selected from the Protection page of the Cable Editor.