

Appendices

Appendix A : Table of 3-and 4- core - insulated, 600/1000v Copper cable.

Appendix B : Gezira university compass plan.

Appendix C : single line diagrams of present main switches of Compass Buildings.

Appendix D : single line diagrams of present distribution connections of other four transformers.

Appendix E : The program.

Appendix A: Table of 3-and 4- core - insulated, 600/1000v Copper cable.

Electrical Properties							Physical Properties	
Cable Size (mm ²)	Current Rating			Impedance (Ω/Km)	Voltage drop (mv/A/m)	I Short Circuit rating (KA)	3C (Kg/Km)	4C (Kg/Km)
	Ground (Amp)	Ducts (Amp)	Air (Amp)					
1.5	23	18	18	14.48	25.080	0.17	448	501
2.5	30	24	24	8.87	15.363	0.28	522	597
4	38	31	32	5.52	9.561	0.46	667	762
6	48	39	40	3.69	6.391	0.69	790	910
10	64	52	54	2.19	3.793	1.15	996	1169
16	82	67	72	1.38	2.390	1.84	1293	1765
25	126	101	113	0.8749	1.515	2.87	1838	2196
35	147	120	136	0.6335	1.097	4.02	2215	2732
50	176	144	167	0.4718	0.817	5.75	2871	3893
70	215	175	207	0.3325	0.576	8.05	3617	4837
95	257	210	253	0.2460	0.427	10.92	4901	6115
120	292	239	293	0.2012	0.348	13.80	5720	7269
150	328	269	336	0.1698	0.294	17.25	6905	9250
185	369	303	384	0.1445	0.250	21.27	8640	11099
240	422	348	447	0.1220	0.211	27.60	10767	13726
300	472	397	509	0.1090	0.189	34.50	12950	16544