

# SCHEDULE OF LOADS

SHEET NO.		SHEET TITLE	
1		3P-150KV/20MVA COMMERCIAL BLDG ON TYPE I CB, 230kV	
ENCLOSURE		SHEET NO.	
ENCLOSURE		SHEET TITLE	

  

CMT NO	LOAD DESCRIPTION	VOLTS	AMPERE				VOLT-AMPS	P	AT	CIRCUIT BREAKER				W/RS	GROUND	CONDUIT
			AB	BC	CA	GA				4P	6kV	TYPE	TYPE			
1	Panel GFR	230	42.91	43.25	43.27	2594	3	125	230	10	INDUSTRIAL	THRN	248 mm <sup>2</sup>	134 mm <sup>2</sup>	40 mm <sup>2</sup> x 4	PVC
2	Panel SFR	230	35.62	35.96	35.74	2096	3	125	230	10	INDUSTRIAL	THRN	248 mm <sup>2</sup>	134 mm <sup>2</sup>	40 mm <sup>2</sup> x 4	PVC
3	Panel GFR	230	25.30	25.04	25.91	1500	3	100	100	10	INDUSTRIAL	THRN	150 mm <sup>2</sup>	80.0 mm <sup>2</sup>	40 mm <sup>2</sup> x 4	PVC
4	Panel SFR	230	11.61	10.90	11.62	550	3	100	100	10	INDUSTRIAL	THRN	150 mm <sup>2</sup>	80.0 mm <sup>2</sup>	40 mm <sup>2</sup> x 4	PVC
5	SPACE	230					3	100	100	10						
6	SPACE	230					3	100	100	10						
			121.47	118.36	119.83						8750					

COMPARISON: TRANSFORMER  
 IT = (121.47 x 1.732) x 0.85 DF = (103.02) = 110.01 A  
 MAIN CB  
 USE 3P-300kV/20MVA COMMERCIAL BLDG ON TYPE I CB, 230kV  
 MAIN WIRES  
 USE 4-80 mm<sup>2</sup> THRN - 1-25 mm<sup>2</sup> THRN (ROUND)  
 14.80 mm<sup>2</sup> PVC

TRANSFORMER  
 USE 100kV/17.5kV PHASE, 230V (SECONDARY) DISTRIBUTION TYPE  
 NOTE: PRIMARY VOLTAGE DEPENDS ON UTILITY COMPANY

SHEET NO.		SHEET TITLE	
1		3P-100KV/20MVA COMMERCIAL BLDG ON TYPE I CB, 230kV	
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CMT NO	LOAD DESCRIPTION	VOLTS	AMPERE				VOLT-AMPS	P	AT	CIRCUIT BREAKER				W/RS	GROUND	CONDUIT
			AB	BC	CA	GA				4P	6kV	TYPE	TYPE			
1	Lighting & Ceiling Fan	230	4.78			1100	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
2	Lighting & Ceiling Fan	230	5.22			1200	2	20	100	10	COMMERCIAL	THRN	253 mm <sup>2</sup>	125 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
3	Lighting & Ceiling Fan	230		4.78		1100	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
4	Lighting & DF-1	230		5.22		1200	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
5	Lighting & Ceiling Fan	230		3.81		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
6	Lighting & Ceiling Fan	230		3.81		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
7	Lighting & Ceiling Fan	230	5.48			800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
8	Lighting & Ceiling Fan	230	3.48			800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
9	Lighting & Ceiling Fan	230		3.81		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
10	Lighting	230		8.00		1800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
11	Lighting & Ceiling Fan	230		3.48		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
12	Lighting	230		8.28		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
13	Space	230	2.17			500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
14	Space	230	2.17			500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
15	Space	230		2.17		500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
16	Space	230		2.17		500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
17	Space	230		2.17		500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
18	Space	230		2.17		500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
			21.30	25.08	25.91						8700					

COMPARISON: TRANSFORMER  
 IT = (23.91 x 1.732) = 41.41 A  
 MAIN CB  
 USE 3P-100kV/20MVA COMMERCIAL BLDG ON TYPE I CB, 230kV  
 MAIN WIRES  
 USE 4-80 mm<sup>2</sup> THRN - 1-25 mm<sup>2</sup> THRN (ROUND)  
 14.80 mm<sup>2</sup> PVC

SHEET NO.		SHEET TITLE	
1		3P-100KV/20MVA COMMERCIAL BLDG ON TYPE I CB, 230kV	
ENCLOSURE		SHEET NO.	
ENCLOSURE		SHEET TITLE	

  

CMT NO	LOAD DESCRIPTION	VOLTS	AMPERE				VOLT-AMPS	P	AT	CIRCUIT BREAKER				W/RS	GROUND	CONDUIT
			AB	BC	CA	GA				4P	6kV	TYPE	TYPE			
1	Lighting & Ceiling Fan	230	4.78			1100	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
2	Lighting & Ceiling Fan	230	6.12			1400	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
3	Lighting & Ceiling Fan	230		4.78		1100	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
4	Lighting & DF-1	230		5.22		1200	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
5	Lighting & Ceiling Fan	230		3.81		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
6	Lighting & Ceiling Fan	230		3.81		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
7	Lighting & Ceiling Fan	230	5.48			800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
8	Lighting & Ceiling Fan	230	3.48			800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
9	Lighting & Ceiling Fan	230		3.81		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
10	Lighting	230		8.28		1800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
11	Lighting & Ceiling Fan	230		3.48		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
12	Lighting	230		8.28		800	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
13	Space	230	2.17			500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
14	Space	230	2.17			500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
15	Space	230		2.17		500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
16	Space	230		2.17		500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
17	Space	230		2.17		500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
18	Space	230		2.17		500	2	20	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
			22.61	26.00	27.65						8500					

COMPARISON: TRANSFORMER  
 IT = (22.61 x 1.732) = 39.36 A  
 MAIN CB  
 USE 3P-100kV/20MVA COMMERCIAL BLDG ON TYPE I CB, 230kV  
 MAIN WIRES  
 USE 4-80 mm<sup>2</sup> THRN - 1-25 mm<sup>2</sup> THRN (ROUND)  
 14.80 mm<sup>2</sup> PVC

SHEET NO.		SHEET TITLE	
1		3P-150KV/20MVA COMMERCIAL BLDG ON TYPE I CB, 230kV	
ENCLOSURE		SHEET NO.	
ENCLOSURE		SHEET TITLE	

  

CMT NO	LOAD DESCRIPTION	VOLTS	AMPERE				VOLT-AMPS	P	AT	CIRCUIT BREAKER				W/RS	GROUND	CONDUIT
			AB	BC	CA	GA				4P	6kV	TYPE	TYPE			
1	CO	230	3.43			790	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
2	CO	230	6.26			1440	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
3	CO	230		2.35		540	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
4	CO	230		2.35		540	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
5	CO	230		3.91		900	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
6	CO	230	5.48			1260	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
7	CO	230	5.48			1260	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
8	CO	230	6.26			1440	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
9	CO	230		3.91		900	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
10	CO	230		3.91		900	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
11	CO	230		4.70		1090	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
12	CO	230		4.70		1090	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
13	CO	230	3.91			900	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
14	CO	230	4.70			1090	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
15	WAC Provision	230		10.00		2300	2	30	100	10	COMMERCIAL	THRN	243 mm <sup>2</sup>	123 mm <sup>2</sup>	20 mm <sup>2</sup> x 4	PVC
16	WAC Provision</															