

208Y120V 3PH 4W Full size neutral w/copper ground bus

**PANEL "L1M"**

Copper Bus Rating: 225 AMP  
Mains Rating (M.L.O.): 225 AMP

1 run of #4/0, 1 #3 G, 3 1/2" C.  
Feeder Ampacity = 230A

LOAD DESCRIPTION	TYPE	LOAD KVA	LOAD AMP	WIRE/CONDUIT SIZE (Note 1)	TRIPPOLE (Note 2)	CKT #	PH	TRIPPOLE (Note 2)	WIRE/CONDUIT SIZE (Note 1)	LOAD AMP	LOAD KVA	TYPE	LOAD DESCRIPTION
CU-8	C	2.4	23.5	2#8, 1#10G, 3/4" C (Note 3)	40 IZ	1	A	2	2#12, 1#12G, 1/2" C	10.0	1.20	MIS	AQUARIUM 117A
**23.5 FLA-Disc30A/2P/240VNFNSR	C	2.4	23.5			3	B	4	2#12, 1#12G, 1/2" C	10.0	1.20	MIS	WASHER 141A
CU-9	C	2.4	23.5	2#8, 1#10G, 3/4" C (Note 3)	40 IZ	5	C	6	3#10, 1#10G, 1/2" C	20.0	2.1	MIS	DRYER ***30A-125/250V-3P-4W-G.NEMA 14-30R
**23.5 FLA-Disc30A/2P/240VNFNSR	C	2.4	23.5			7	A	8		20.0	2.1	MIS	FOUNTAIN *
CU-10	C	2.7	26.2	2#8, 1#10G, 3/4" C (Note 3)	40 IZ	9	B	10	2#12, 1#12G, 1/2" C	10.0	1.20	MT	FOUNTAIN *
**16.8 FLA-Disc30A/2P/240VNFNSR	C	2.7	26.2			11	C	12	2#12, 1#12G, 1/2" C	10.0	1.20	MT	FOUNTAIN *
CU-11	C	1.7	16.8	2#10, 1#10G, 1/2" C (Note 3)	25 IZ	13	A	14	2#12, 1#12G, 1/2" C	5.2	0.62	MT	EF-7, 11, 12, 13, 14, 15, 16
**16.8 FLA-Disc30A/2P/240VNFNSR	C	1.7	16.8			15	B	16	2#12, 1#12G, 1/2" C	5.1	0.61	R	EXTERIOR REC (2)
CU-7	C	4.5	43.2	2#8, 1#10G, 3/4" C (Note 3)	50 IZ	17	C	18	2#12, 1#12G, 1/2" C	3.0	0.36	R	EQUIP RECS
**43.2 FLA-Disc30A/2P/240VNFNSR	C	4.5	43.2			19	A	20	2#12, 1#12G, 1/2" C	4.2	0.50	MIS	BAS
FCU-8.34HP Disc30A/2P/240VNI	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 IZ	21	B	22	2#12, 1#12G, 1/2" C	2.1	0.25	MT	DAMPERS
FCU-9.34HP Disc30A/2P/240VNI	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 IZ	23	C	24	2#12, 1#12G, 1/2" C	5.0	0.59	L	MECH/LIGHTING
FCU-10.34HP Disc30A/2P/240VNI	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 IZ	25	A	26	2#12, 1#12G, 1/2" C	2.1	0.25	MIS	WATER HEATER CONTROLS
FCU-11.34HP Disc30A/2P/240VNI	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 IZ	27	B	28	2#12, 1#12G, 1/2" C	2.1	0.25	MIS	FIRE ALARM PANEL
FCU-12.34HP Disc30A/2P/240VNI	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 IZ	29	C	30					SPARE
MAF-1.12HP Disc30A/2P/240VNSR	MT	1.2	9.8	2#12, 1#12G, 3/4" C	20 IZ	31	A	32					SPACE
KEF-1.34HP Disc30A/2P/240VNSR	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 IZ	33	B	34					SPACE
GENERATOR LIGHTING	MIS	0.05	0.5	2#12, 1#12G, 1/2" C	20 IZ	35	C	36					SPACE
GENERATOR GATTERY CHARGER	MIS	0.25	2.1	2#12, 1#12G, 1/2" C	20 IZ	37	A	38					SPACE
GENERATOR HEATER	MIS	1.2	11.5	2#10, 1#10G, 1/2" C (Note 3)	30 IZ	39	B	40					SPD (Surge-Protective Device)
**2.4K-Disc30A/2P/240VNFNSR	MIS	1.2	11.5			41	C	42					*** (Externally Mounted)

PANEL "L1M" LOAD ANALYSIS

LOAD DESCRIPTION	TYPE	DEMAND FACTOR	CONNECTED	CALCULATED	REFERENCE
LIGHTING	L	1.25	0.6	0.7	125% of connected loads
RECEPTACLES	R	1	1.0	1.0	
COOLING LOADS	C	1	27.7	27.7	Cooling loads larger than heating
HEATING LOADS (non-coincident w/cooling)	H				
MOTOR	MT	1	14.4	14.4	
MISC. NON-CONTINUOUS LOADS	MIS	1	10.3	10.3	
2% LARGEST MOTOR (1.7 KVA)		0.25		0.4	
TOTAL LOAD (KVA)			53.9 KVA	54.5 KVA	
TOTAL LOAD (AMP AVG)			149.7 AMP	151.2 AMP	

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208Y120V 3PH 4W Full size neutral w/copper ground bus

**PANEL "L1A"**

Copper Bus Rating: 225 AMP  
Mains Rating (M.L.O.): 150 AMP

1 run of #4/0, 1 #3 G, 3" C.  
Feeder Ampacity = 150A

LOAD DESCRIPTION	TYPE	LOAD KVA	LOAD AMP	WIRE/CONDUIT SIZE (Note 1)	TRIPPOLE (Note 2)	CKT #	PH	TRIPPOLE (Note 2)	WIRE/CONDUIT SIZE (Note 1)	LOAD AMP	LOAD KVA	TYPE	LOAD DESCRIPTION
EXTERIOR REC (2)	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	1	A	2	2#12, 1#12G, 1/2" C	6.0	0.72	MIS	TV REC (2) 123A
GF RR (2) 122A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	3	B	4	2#12, 1#12G, 1/2" C	3.0	0.36	MIS	TV REC (1) 127A
BEDROOM REC (4) 123A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 IZ	5	C	6	2#12, 1#12G, 1/2" C	6.0	0.72	MIS	TV REC (2) 118A
GF & (3) REC 123A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 IZ	7	A	8	2#12, 1#12G, 1/2" C	6.0	0.72	MIS	TV REC (2) 128A
BEDROOM REC (2) 127A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	9	B	10	2#12, 1#12G, 1/2" C	6.0	0.72	MIS	GREAT ROOM TV REC (2) 117A
BEDROOM REC (4) 118A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 IZ	11	C	12	2#12, 1#12G, 1/2" C	4.2	0.50	MIS	PCS (2) 117A & 125A
GF RR (2) 115A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	13	A	14	2#12, 1#12G, 1/2" C	7.3	0.88	L	LIGHTING 124A
BEDROOM REC (4) 128A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 IZ	15	B	16	2#12, 1#12G, 1/2" C	10.6	1.28	L	LIGHTING 128A
BEDROOM REC (4) 128A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 IZ	17	C	18	2#12, 1#12G, 1/2" C	0.8	0.10	L	LIGHTING 128A
GREAT ROOM REC (6) 117A	R	1.08	9.0	2#12, 1#12G, 1/2" C	20 IZ	19	A	20	2#12, 1#12G, 1/2" C	9.8	1.18	L	LIGHTING 137A
GREAT ROOM REC (5) 117A	R	0.90	7.5	2#12, 1#12G, 1/2" C	20 IZ	21	B	22	2#12, 1#12G, 1/2" C	4.4	0.53	L	LIGHTING 177A
GREAT ROOM REC (2) 117A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	23	C	24	2#12, 1#12G, 1/2" C	7.5	0.90	M	FANS
GREAT ROOM REC (2) 117A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	25	A	26	2#12, 1#12G, 1/2" C				SPARE
CORRIDOR REC (4) 118A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 IZ	27	B	28	2#12, 1#12G, 1/2" C	2.1	0.25	MIS	FIRE ALARM
CONVENIENCE REC (2) 125A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	29	C	30	2#12, 1#12G, 1/2" C	4.2	0.50	M	GATE OPERATOR
GF & (2) REC 110A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	31	A	32					SPACE
EXTERIOR REC (2)	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	33	B	34					SPACE
EXTERIOR REC (2)	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 IZ	35	C	36					SPACE
EXTERIOR REC (1)	R	0.18	1.5	2#12, 1#12G, 1/2" C	20 IZ	37	A	38					SPACE
EXTERIOR LTG	MIS	1.17	9.7	2#12, 1#12G, 1/2" C	20 IZ	39	B	40					SPD (Surge-Protective Device)
SPARE						41	C	42					*** (Externally Mounted)

PANEL "L1A" LOAD ANALYSIS

LOAD DESCRIPTION	TYPE	DEMAND FACTOR	CONNECTED	CALCULATED	REFERENCE
LIGHTING	L	1.25	4.0	4.9	125% of connected loads
RECEPTACLES	R	1	10.1	10.0	NEC2011 Art. 220.44, First 10KVA @ 100%, Remainder @ 80%
MISC. NON-CONTINUOUS LOADS	MIS	1	5.2	5.2	
TOTAL LOAD (KVA)			19.2 KVA	20.1 KVA	
TOTAL LOAD (AMP AVG)			53.3 AMP	55.9 AMP	

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208Y120V 3PH 4W Full size neutral w/copper ground bus

**PANEL "K1"**

Copper Bus Rating: 100 AMP  
Mains Rating (M.C.B.): 100 AMP

1 run of #4/0, 1 #3 G, 2" C.  
Feeder Ampacity = 100A

LOAD DESCRIPTION	TYPE	LOAD KVA	LOAD AMP	WIRE/CONDUIT SIZE (Note 1)	TRIPPOLE (Note 2)	CKT #	PH	TRIPPOLE (Note 2)	WIRE/CONDUIT SIZE (Note 1)	LOAD AMP	LOAD KVA	TYPE	LOAD DESCRIPTION
RANGE RECL (SHUNT TRIP)	R	0.18	1.5	2#12, 1#12G, 1/2" C	20 IZ	1	A	2	2#12, 1#12G, 1/2" C	7.1	0.85	K	FREEZER
SOLENOID POWER (SHUNT TRIP)	MIS	0.15	1.3	2#12, 1#12G, 1/2" C	20 IZ	5	C	6	2#12, 1#12G, 1/2" C	5.4	0.65	K	REFRIGERATOR
SPARE						7	A	8	2#12, 1#12G, 1/2" C	5.4	0.65	K	REFRIGERATOR
DISH WASHER	K	1.80	15.0	2#12, 1#12G, 1/2" C	20 IZ	9	B	10	2#12, 1#12G, 1/2" C	2.9	0.35	K	ICE MAKER
DISH WASHER	K	1.80	15.0	2#12, 1#12G, 1/2" C	20 IZ	11	C	12	2#12, 1#12G, 1/2" C	10.0	1.20	K	MICROWAVE
HOOD	MIS	0.25	2.1	2#12, 1#12G, 1/2" C	20 IZ	13	A	14	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
3 D.R.	R	0.54	4.5	2#12, 1#12G, 1/2" C	20 IZ	15	B	16	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SUPPRESSION SYSTEM	MIS	0.15	1.3	2#12, 1#12G, 1/2" C	20 IZ	17	C	18	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SPACE						19	A	20	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SPACE						21	B	22	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SPACE						23	C	24	2#12, 1#12G, 1/2" C	2.1	0.25	MIS	PC
SPACE						25	A	26					SPARE
SPACE						27	B	28					SPARE
SPACE						29	C	30					SPARE
SPACE						31	A	32					SPACE
SPACE						33	B	34					SPACE
SPACE						35	C	36					SPACE
SPACE						37	A	38					SPACE
SPACE						39	B	40					SPACE
SPACE						41	C	42					SPACE

PANEL "K1" LOAD ANALYSIS

LOAD DESCRIPTION	TYPE	DEMAND FACTOR	CONNECTED	CALCULATED	REFERENCE
RECEPTACLES	R	1	0.7	0.7	
MISC. NON-CONTINUOUS LOADS	MIS	1	0.8	0.8	
KITCHEN LOADS	K	0.85	10.0	8.5	NEC2011 Art. 220.58
TOTAL LOAD (KVA)			11.5 KVA	8.0 KVA	
TOTAL LOAD (AMP AVG)			31.8 AMP	22.2 AMP	

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208Y120V 3PH 4W Full size neutral w/copper ground bus

**OPTIMUM CARE, HOUSTON TX**

**DIST. PANELBOARD - "DPE1"**

Copper Bus Rating: 400 Amp  
Mains Rating (M.C.B.): 400 Amp

1 run of #400 KCMIL, 1 #3 G, 4" conduit  
Feeder Ampacity = 400A

(All wires shall have THHN/THWN insulation unless noted otherwise)

CKT.	LOAD DESCRIPTIONS	Load Type	DMND KVA	CONN. AMP	CONN. AMP	Cont. Amp	O.C. Amp	BKR Amp	POLES	Phase	PHASE WIRES, NEUTRAL & GRD & CONDUIT SIZE	FEEDER AMPACITY
1	SPD (Externally Mounted Surge-Protective Device)	MIS							CB	100	3P A B C	100 Amp
2	Panel "L1A"		20.1	55.9					CB	150	3P A B C	150 Amp
3	Panel "L1M"		54.5	151.2					CB	225	3P A B C	230 Amp
4	Panel "K1"		8.0	22.2					CB	100	3P A B C	100 Amp
5	Panel "L5A"		57.3	159.1					CB	225	3P A B C	380 Amp
6	SPACE								Y	CB	100	3P A B C
7	SPACE								Y			