

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

PANEL "L3M"

Copper Bus Rating 150 AMP
Main Rating (M.L.O.) 150 AMP
1 in. of 4810, 1 #5 G, 3" C
Feeder Ampacity = 150A

MCB: X MLO, X Feed Thru Lugs, Shunt-Trip MCB
New Panel: Isolated Ground Bus, Location, Mounting
SEE PLAN, Surface, Enclosure (NEMA) 1

LOAD DESCRIPTION	TYPE	LOAD KVA	LOAD AMP	WIRE/CONDUIT SIZE (Note 1)	TRIPPOLE (Note 2)	CKT # (Note 2)	PH # (Note 2)	TRIPPOLE (Note 2)	WIRE/CONDUIT SIZE (Note 1)	LOAD AMP	LOAD KVA	TYPE	LOAD DESCRIPTION
CU-17	C	2.4	23.5	2#8, 1#10G, 3/4" C (Note 3)	40 / 2	1 A	2	20 / 1	2#12, 1#12G, 1/2" C	10.0	1.20	MIS	AQUARIUM 117A
**23.5 FLA-Disc30A2P240VINFNR	C	2.4	23.5		3 B	4	20 / 1	2#12, 1#12G, 1/2" C	10.0	1.20	MIS	WASHER 141A	
CU-18	C	2.4	23.5	2#8, 1#10G, 3/4" C (Note 3)	40 / 2	5 C	6	30 / 2	2#10, 1#10G, 1/2" C	20.0	2.11	MIS	DRYER
**23.5 FLA-Disc30A2P240VINFNR	C	2.4	23.5		7 A	8			20.0	2.11	MIS	**30A-125250V-3P-4W-G.NEMA 14-30R	
CU-19	C	2.7	26.2	2#8, 1#10G, 3/4" C (Note 3)	40 / 2	9 B	10	20 / 1	2#12, 1#12G, 1/2" C	10.0	1.20	MT	FOUNTAIN
**28.2 FLA-Disc30A2P240VINFNR	C	2.7	26.2		11 C	12	20 / 1	2#12, 1#12G, 1/2" C	10.0	1.20	MT	FOUNTAIN	
CU-20	C	1.7	16.8	2#8, 1#10G, 1/2" C (Note 3)	25 / 2	13 A	14	20 / 1	2#12, 1#12G, 1/2" C	5.2	0.62	MT	EF-22,23,24,25,26,27,28
**16.8 FLA-Disc30A2P240VINFNR	C	1.7	16.8		15 B	16	20 / 1	2#12, 1#12G, 1/2" C	3.0	0.36	R	EXTERIOR RECS (2)	
CU-16	C	3.6	34.2	2#8, 1#10G, 3/4" C (Note 3)	50 / 2	17 C	18	20 / 1	2#12, 1#12G, 1/2" C	4.5	0.54	R	EQPT RECS
**34.2 FLA-Disc30A2P240VINFNR	C	3.6	34.2		19 A	20	20 / 1	2#12, 1#12G, 1/2" C	4.2	0.50	MIS	BAS	
FCU-17.34HP Disc30A2P240VINFNR	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 / 1	21 B	22	20 / 1	2#12, 1#12G, 1/2" C	2.1	0.25	MIS	DAMPER
FCU-18.34HP Disc30A2P240VINFNR	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 / 1	23 C	24	20 / 1	2#12, 1#12G, 1/2" C	5.0	0.59	L	MECH/L LIGHTING
FCU-19.34HP Disc30A2P240VINFNR	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 / 1	25 A	26	20 / 1					SPARE
FCU-20.34HP Disc30A2P240VINFNR	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 / 1	27 B	28	20 / 1	2#12, 1#12G, 1/2" C	2.1	0.25	MIS	FIRE ALARM PANEL
FCU-26.34HP Disc30A2P240VINFNR	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 / 1	29 C	30	20 / 1					SPARE
MAF-5.12HP Disc30A2P240VINFNR	MT	1.2	9.8	2#12, 1#12G, 3/4" C	20 / 1	31 A	32	1/1					SPACE
KEF-2.34HP Disc30A2P240VINFNR	MT	1.7	13.8	2#12, 1#12G, 3/4" C	20 / 1	33 B	34	1/1					SPACE
GENERATOR LTG	MIS	0.05	0.5	2#12, 1#12G, 1/2" C	20 / 1	35 C	36	1/1					SPACE
GENERATOR CHARGING	MIS	0.25	2.1	2#12, 1#12G, 1/2" C	20 / 1	37 A	38	60 / 3	4#6, 1#10G, 1 1/4" C	0.0	0.0	MIS	SPD (Externally Mounted Surge-Protective Device)
GENERATOR HEATER	MIS	1.2	11.5	2#10, 1#10G, 1/2" C (Note 3)	30 / 2	39 B	40			0.0	0.0	MIS	***
2.4KW-Disc30A2P240VINFNR	MIS	1.2	11.5		41 C	42				0.0	0.0	MIS	*

PANEL "L3M" LOAD ANALYSIS

LOAD DESCRIPTION	TYPE	DEMAND FACTOR	LOAD (KVA)		NEC CALCULATION REFERENCE
			CONNECTED	CALCULATED	
LIGHTING	L	1.25	0.8	0.7	125% of connected loads
RECEPTACLES	R	1	0.9	0.9	
COOLING LOADS	C	1	25.8	25.8	Cooling loads larger than heating
HEATING LOADS (non-coincident w/cooling)	H				
MOTOR	MT	1	14.1	14.1	
MISC. NON-CONTINUOUS LOADS	MIS	1	10.3	10.3	
2% LARGEST MOTOR (1.7 KVA)		0.25		0.4	
TOTAL LOAD (KVA)			51.7 KVA	52.3 KVA	
TOTAL LOAD (AMP AVG)			143.6 AMP	145.1 AMP	Calc Amps: PNA=164A, PNB=145A, PNC=185A, Neut=23A

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

PANEL "L3A"

Copper Bus Rating 225 AMP
Main Rating (M.L.O.) 225 AMP
1 in. of 4840, 1 #4 G, 3 1/2" C
Feeder Ampacity = 230A

MCB: X MLO, X Feed Thru Lugs, Shunt-Trip MCB
New Panel: Isolated Ground Bus, Location, Mounting
SEE PLAN, Surface, Enclosure (NEMA) 1

LOAD DESCRIPTION	TYPE	LOAD KVA	LOAD AMP	WIRE/CONDUIT SIZE (Note 1)	TRIPPOLE (Note 2)	CKT # (Note 2)	PH # (Note 2)	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 / 1	1 A	2	20 / 1	2#12, 1#12G, 1/2" C	6.0	0.72	MIS	TV REC (2) 120B
GF RR (2) 122A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 / 1	3 B	4	20 / 1	2#12, 1#12G, 1/2" C	3.0	0.36	MIS	TV REC (1) 127B
BEDROOM REC (4) 123A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	5 C	6	20 / 1	2#12, 1#12G, 1/2" C	6.0	0.72	MIS	TV REC (2) 116B
GF & (3) REC 123A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	7 A	8	20 / 1	2#12, 1#12G, 1/2" C	6.0	0.72	MIS	TV REC (2) 128B
BEDROOM REC (2) 127A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 / 1	9 B	10	20 / 1	2#12, 1#12G, 1/2" C	6.0	0.72	MIS	GREAT ROOM TV REC (2) 117B
BEDROOM REC (4) 116A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	11 C	12	20 / 1	2#12, 1#12G, 1/2" C	4.2	0.50	MIS	PCS (2) 117B & 125B
GF RR (2) 115A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 / 1	13 A	14	20 / 1	2#12, 1#12G, 1/2" C	7.3	0.88	L	LIGHTING 124B
BEDROOM REC (4) 128A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	15 B	16	20 / 1	2#12, 1#12G, 1/2" C	10.6	1.28	L	LIGHTING 128B
BEDROOM REC (4) 128A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	17 C	18	20 / 1	2#12, 1#12G, 1/2" C	0.8	0.10	L	LIGHTING 128B
GREAT ROOM REC (9) 117A	R	1.26	9.0	2#12, 1#12G, 1/2" C	20 / 1	19 A	20	20 / 1	2#12, 1#12G, 1/2" C	9.8	1.18	L	LIGHTING 137B
GREAT ROOM REC (5) 117A	R	0.90	7.5	2#12, 1#12G, 1/2" C	20 / 1	21 B	22	20 / 1	2#12, 1#12G, 1/2" C	4.4	0.53	L	LIGHTING 117B
GREAT ROOM REC (2) 117A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 / 1	23 C	24	20 / 1	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 / 1	25 A	26	20 / 1					SPARE
CORRIDOR REC (4) 118A	R	0.72	6.0	2#12, 1#12G, 1/2" C	20 / 1	27 B	28	20 / 1					SPARE
CONVENIENCE REC (2) 117A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 / 1	29 C	30	20 / 1					SPARE
GF & (2) REC 116A	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 / 1	31 A	32	1/1					SPACE
EXTERIOR REC (2)	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 / 1	33 B	34	1/1					SPACE
EXTERIOR REC (2)	R	0.36	3.0	2#12, 1#12G, 1/2" C	20 / 1	35 C	36	1/1					SPACE
EXTERIOR REC (1)	R	0.18	1.5	2#12, 1#12G, 1/2" C	20 / 1	37 A	38	60 / 3	4#6, 1#10G, 1 1/4" C	0.0	0.0	MIS	SPD (Externally Mounted Surge-Protective Device)
EXTERIOR LTG	OL	0.51	4.3	2#12, 1#12G, 1/2" C	20 / 1	39 B	40			0.0	0.0	MIS	***
SPARE					1/1	41 C	42			0.0	0.0	MIS	***

PANEL "L3A" LOAD ANALYSIS

LOAD DESCRIPTION	TYPE	DEMAND FACTOR	LOAD (KVA)		NEC CALCULATION REFERENCE
			CONNECTED	CALCULATED	
LIGHTING	L	1.25	4.0	4.9	125% of connected loads
RECEPTACLES	R	1	10.1	10.0	NEC2011 Art. 220.44, First 100kVA @ 100%, Remainder @ 50%
MISC. NON-CONTINUOUS LOADS	MIS	1	3.7	3.7	
OUTSIDE LIGHTING	OL	1.25	0.5	0.6	
TOTAL LOAD (KVA)			18.3 KVA	19.4 KVA	
TOTAL LOAD (AMP AVG)			50.8 AMP	53.7 AMP	Calc Amps: PNA=162A, PNB=141A, PNC=184A, Neut=18A

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

PANEL "K2"

Copper Bus Rating 100 AMP
Main Rating (M.C.B.) 100 AMP
1 in. of 4830, 1 #5 G, 3" C
Feeder Ampacity = 200A

MCB: X MLO, X Feed Thru Lugs, Shunt-Trip MCB
New Panel: Isolated Ground Bus, Location, Mounting
SEE PLAN, Surface, Enclosure (NEMA) 1

LOAD DESCRIPTION	TYPE	LOAD KVA	LOAD AMP	WIRE/CONDUIT SIZE (Note 1)	TRIPPOLE (Note 2)	CKT # (Note 2)	PH # (Note 2)	TRIPPOLE (Note 2)	WIRE/CONDUIT SIZE (Note 1)	LOAD AMP	LOAD KVA	TYPE	LOAD DESCRIPTION
RANGE RECL (SHUT TRIP)	R	0.18	1.5	2#12, 1#12G, 1/2" C	20 / 1	1 A	2	20 / 1	2#12, 1#12G, 1/2" C	7.1	0.85	K	FREEZER
SOLENOID POWER	MIS	0.15	1.3	2#12, 1#12G, 1/2" C	20 / 1	3 B	4	20 / 1	2#12, 1#12G, 1/2" C	7.1	0.85	K	FREEZER
SUPPRESSION SYSTEM	MIS	0.15	1.3	2#12, 1#12G, 1/2" C	20 / 1	5 C	6	20 / 1	2#12, 1#12G, 1/2" C	5.4	0.65	K	REFRIGERATOR
SPARE					20 / 1	7 A	8	20 / 1	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 / 1	9 B	10	20 / 1	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
DISH WASHER	K	1.80	15.0	2#12, 1#12G, 1/2" C	20 / 1	11 C	12	20 / 1	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SPARE					20 / 1	13 A	14	20 / 1	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SPARE					20 / 1	15 B	16	20 / 1	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SPARE					20 / 1	17 C	18	20 / 1	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SPACE					1/1	19 A	20	20 / 1	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SPACE					1/1	21 B	22	20 / 1	2#12, 1#12G, 1/2" C	3.0	0.36	K	KITCHEN RECEPTACLES
SPACE					1/1	23 C	24	20 / 1	2#12, 1#12G, 1/2" C	2.1	0.25	MIS	PC
SPACE					1/1	25 A	26	20 / 1					SPARE
SPACE					1/1	27 B	28	20 / 1					SPACE
SPACE					1/1	29 C	30	1/1					SPACE
SPACE					1/1	31 A	32	1/1					SPACE
SPACE					1/1	33 B	34	1/1					SPACE
SPACE					1/1	35 C	36	1/1					SPACE
SPACE					1/1	37 A	38	1/1					SPACE
SPACE					1/1	39 B	40	1/1					SPACE
SPACE					1/1	41 C	42	1/1					SPACE

PANEL "K2" LOAD ANALYSIS

LOAD DESCRIPTION	TYPE	DEMAND FACTOR	LOAD (KVA)		NEC CALCULATION REFERENCE
			CONNECTED	CALCULATED	
RECEPTACLES	R	1	0.2	0.2	
MISC. NON-CONTINUOUS LOADS	MIS	1	0.6	0.6	
KITCHEN LOADS	K	0.85	9.1	5.9	NEC2011 Art. 220.56
TOTAL LOAD (KVA)			9.9 KVA	6.7 KVA	
TOTAL LOAD (AMP AVG)			27.3 AMP	18.5 AMP	Calc Amps: PNA=25A, PNB=18A, PNC=21A, Neut=18A

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

OPTIMUM CARE, HOUSTON TX

DIST. PANELBOARD - "DPE2"

Copper Bus Rating: 400 Amp
Main Rating (MCB): 400 Amp
1 in. of 4800 KCM, 1 #3 G, 4" Conduit
Feeder Ampacity = 420A
(All wires shall have THHN/THWN insulation unless noted otherwise)

OPTIONAL STANDBY ELECTRICAL SYSTEM

MCB: X
MLO: X
Status: NEW
Isolated Ground Bus: X
Enclosure (NEMA): 3R
A.I.C. (KVA): 22 KVA
Mounting: Concrete Pad

CKT.	LOAD DESCRIPTIONS	Load Type	CONN. KVA	CONN. AMP	Cont. Load	O.C. Amp	BRK. Type	POLES	Phase	PHASE WIRES, NEUTRAL & GRO & CONDUIT SIZE	FEEDER AMPACITY
1	SPD (Externally Mounted Surge-Protective Device)	MIS	---	---	---	---	CB 100	3P	A B C	1 run 4#3, 1#6G, 1 1/2" C	100 Amp
2	Panel "L3A"	---	19.4	53.7	---	---	CB 225	3P	A B C	1 run 4#4, 1#4 G, 3 1/2" C	230 Amp
3	Panel "L3M"	---	52.3	145.1	---	---	CB 150	3P	A B C	1 run 4#10, 1#6 G, 3" C	150 Amp
4	Panel "K2"	---	6.7	18.5	---	---	CB 100	3P	A B C	1 run 4#3, 1#6 G, 3" C	200 Amp
5	SPACE				Y	CB 100	3P	A B C			
6	SPACE				Y	CB 100	3P	A B C			
7	SPACE				Y	CB 225	3P	A B C			
8	SPACE				Y	CB 225	3P	A B C			

DIST. PANELBOARD - "DPE2" LOAD ANALYSIS

LOAD DESCRIPTION	Load Type	DEMAND FACTOR	LOAD (KVA)		NEC CALCULATION REFERENCE
			CONNECTED	CALCULATED	
LIGHTING	L	1.25	4.5	5.7	125% of connected loads
RECEPTACLES	R	1	11.2	10.6	NEC2011 Art. 220.44
COOLING LOADS	C	1	25.8	25.8	Cooling loads larger than heating