

EE-43C

POWER PANEL, "9912" (EXISTING)			MOUNTING: NEMA 1, SURFACE MOUNTED WITH GRAY POWDER COATED FINISH WITH MULTI-THERMAL BLOCK FOR SOLID GROUNDING AND NEUTRAL, DUE									
LOCATION: EE ROOM			PROTECTION: NUMBER & SIZE OF WIRE & CONDUIT									
QTY.	LOAD DESCRIPTION	VOLT	VOLT AMPERE #W	AMPERE LOAD #W	LOAD #CN	AWG	AT	AF	P	K	MCBS	NUMBER & SIZE OF WIRE & CONDUIT
1	COMMENCEMENT OUTLETS	400/230	900	3.91			20	100	1	10	MCBS	2-3.5mm ² (14W) 18W 19mm
2	COMMENCEMENT OUTLETS	720	3.13									2-3.5mm ² (14W) 18W 19mm
3	COMMENCEMENT OUTLETS	900	3.91									2-3.5mm ² (14W) 18W 19mm
4	MICROWAVE OVEN	1500		6.52								2-5mm ² (16W) 20W 22mm
5	COMMENCEMENT OUTLETS	1800				7.83						2-5mm ² (16W) 20W 22mm
6	PROVISION FOR PROJECTOR	500				2.17						2-5mm ² (16W) 20W 22mm
7	COMMENCEMENT OUTLETS	900	3.91									2-3.5mm ² (14W) 18W 19mm
8	COMMENCEMENT OUTLETS	540	2.35									2-3.5mm ² (14W) 18W 19mm
9	COMMENCEMENT OUTLETS	1440		6.28								2-5mm ² (16W) 20W 22mm
10	HAND DRYER	1000		4.35								2-5mm ² (16W) 20W 22mm
11	HAND DRYER	1000				4.35						2-5mm ² (16W) 20W 22mm
12	PROVISION FOR PROJECTOR	1000				4.35						2-5mm ² (16W) 20W 22mm
13	MICROWAVE OVEN	1500		6.52								2-5mm ² (16W) 20W 22mm
14	COMMENCEMENT OUTLETS	1260	5.48									2-5mm ² (16W) 20W 22mm
15	COMMENCEMENT OUTLETS	360	1.56									2-3.5mm ² (14W) 18W 19mm
16	COMMENCEMENT OUTLETS	1800		7.83								2-5mm ² (16W) 20W 22mm
17	PROVISION FOR PROJECTOR	1000				4.35						2-5mm ² (16W) 20W 22mm
18	COMMENCEMENT OUTLETS	1500				7.04						2-5mm ² (16W) 20W 22mm
19	WATER HEATER @ 11F	3000	15.22			30						2-5mm ² (16W) 20W 22mm
20	MICROWAVE OVEN	1500		6.52		30						2-5mm ² (16W) 20W 22mm
21	WATER HEATER @ 11F	3000	15.22			30						2-5mm ² (16W) 20W 22mm
22	COMMENCEMENT OUTLETS	1440		6.28		30						2-5mm ² (16W) 20W 22mm
			47.04	45.85	30.09							2-5mm ² (16W) 20W 22mm

$I_L = 47.04 \times 705 \text{ D.F.} = 33.93 \text{ MVA}$
 USE: 4-8.0mm² (14W) THIN + 1-5.5mm² (G) TW IN 25mm MC (Y8.0)
 MAIN: 400V, 100AF, 3P, 400V, 10 KVA MCBS

THE DESIGN CONSULTANT SHALL BE HELD RESPONSIBLE FOR THE FAILURE OF THE FACILITY/IES / STRUCTURES DUE TO FAULTY DESIGN EXCEPT FOR THE CHANGES MADE WITHOUT THE CONFORMITY OF THE CONSULTANTS.

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POWER PANEL "PPHAC" (EXISTING)		MOUNTING - NEMA 1, SURFACE MOUNTED WITH GRAY POWDER COATED FINISH WITH MULTI-TERMINAL BLOCK FOR SOLID GROUND AND NEUTRAL BVS.											
LOCATION : EE ROOM		VOLT	VOLT AMPERE	AMPERE LOAD			PROTECTION				NUMBER & SIZE OF WIRE & CONDUIT		
OCT. NO.	LOAD DESCRIPTION			#AN	#CN	AIRC	AT	L F	I P	NAC TYPE			
1	COMMENCEMENT OUTLETS	400/230V	1440	6.26				20	100	1	10	MCCB	3-35mm ² R/W Min + 1-35mm ² BT IN In Street
2	COMMENCEMENT OUTLETS		1440	6.26									
3	COMMENCEMENT OUTLETS		1440		6.26								
4	COMMENCEMENT OUTLETS		1440		6.26								
5	COMMENCEMENT OUTLETS		1440		6.26								
6	COMMENCEMENT OUTLETS		1620										
7	COMMENCEMENT OUTLETS		1440	6.26									
8	COMMENCEMENT OUTLETS		1440	6.26									
9	COMMENCEMENT OUTLETS		900		3.91								
10	COMMENCEMENT OUTLETS		1440		6.26								
11	COMMENCEMENT OUTLETS		1440										
12	COMMENCEMENT OUTLETS		1440		6.26								
13	COMMENCEMENT OUTLETS		900	3.91									
14	COMMENCEMENT OUTLETS		1440	6.26									
15	COMMENCEMENT OUTLETS		1440		6.26								
16	COMMENCEMENT OUTLETS		1440		6.26								
17	COMMENCEMENT OUTLETS		1440										
18	COMMENCEMENT OUTLETS		1440										
19	COMMENCEMENT OUTLETS		360	1.56									
20	SPIARE		250	1.09									
21	CCTV BACK		1000		4.35								
22	SPIARE		250	1.09									
23	SPIARE		250		1.09								
24	SPIARE		250		1.09								
25	SPIARE		250	1.09									
26	SPIARE		250	1.09									
27	SPIARE		250		1.09								
28	SPIARE		250		1.09								
29	SPIARE		250		1.09								
30	SPIARE		250		1.09								
31	SPIARE		250		1.09								
32	SPIARE		250	1.09									
33	SPIARE		250		1.09								
34	SPIARE		250		1.09								
35	SPIARE		250		1.09								
36	SPIARE		250		1.09								
37	SPIARE		250		1.09								
38	SPIARE		250		1.09								
39	SPIARE		250		1.09								
40	SPIARE		250		1.09								
			44.40	17.19	44.88								

15mmMC
 3-35mm² R/W Min +
 1-35mm² BT IN In Street
 15mmMC

POWER PANEL "7918" (EXISTING)			MOUNTING : NEMA 1, SURFACE MOUNTED WITH GRAY POWER COATED FINISH WITH MULTI-TERMINAL BLOCK FOR SOLID GROUND AND NEUTRAL BUS.											
LOCATION : EE ROOM														
QTY. NO.	LOAD DESCRIPTION	VOLT	VOLT AMPERE	AMPERE LOAD				PROTECTION				NUMBER & SIZE OF WIRE & CONDUIT		
			AWN	EN	EN	EN	EN	AT	AF	P	K	KC	TYPE	1-35mm ² (Ø) TW IN 15mm ²
1	CONVENIENCE OUTLETS	400/230	900	3.91					20	100	1	10	KC35	1-35mm ² (Ø) TW IN 15mm ²
2	CONVENIENCE OUTLETS		900	3.91										
3	CONVENIENCE OUTLETS	120	720		3.13									
4	CONVENIENCE OUTLETS	1440	6.26											
5	CONVENIENCE OUTLETS	1800					7.83							
6	PROVISION FOR PROJECTOR	500					2.17							
7	CONVENIENCE OUTLETS	1280	5.48											
8	CONVENIENCE OUTLETS	1440	6.26											
9	SPIRE	250			1.09									15mm ² MC
10	CONVENIENCE OUTLETS	250			5.48									1-35mm ² (Ø) TW IN 15mm ²
11	PROVISION FOR PROJECTOR	1500					6.52							
12	CONVENIENCE OUTLETS	1280					5.48							
13	PROVISION FOR PROJECTOR	500	2.17											
14	CONVENIENCE OUTLETS	1080	4.70											
15	MICROWAVE OVEN	1500			6.52									
16	HAND DRYER	1000			4.35									
17	HAND DRYER	1000					4.35							
18	SPIRE	250					1.09							15mm ² MC
19	SPIRE	250	1.09											
20	SPIRE	250	1.09											
21	SPIRE	250			1.09									
22	SPIRE	250			1.09									
23	SPIRE	250					1.09							
24	SPIRE	250					1.09							
25	SPIRE	250					1.09							
26	SPIRE	250	1.09											
27	SPIRE	250			1.09									
28	SPIRE	250			1.09									
29	SPIRE	250					1.09							
30	WATER HEATER @ 17F	3500					15.22	30						1-50mm ² (Ø) TW IN 15mm ²
					30.79	31.18	45.83							

$I_L = 45.93 \times 80\% D.F. = 36.74 \text{ AMPS}$
 $I_L = 4.8\text{-}8.0\text{mm}^2 (L/N) \text{ THHN} + 1\text{-}5.5\text{mm}^2 (G) \text{ TW IN } 25\text{mm}^2 \text{ MC (18.0)}$
MAIN : 50A, 100A, 3P, 400V, 10 KVA MCCB

LOWER PANEL "TYPE" (EXISTING)			MOUNTING NEW 1, SURFACE MOUNTED WITH GRAY POWDER COATED FINISH WITH MULTI-TERMINAL BLOCK FOR SOLID GROUND AND NEUTRAL BUS.										
LOCATION PANEL = EE ROOM													
OKT.	LOAD DESCRIPTION	VOLT	VOLT AMPERE	PROTECTION								NUMBER & SIZE OF WIRE & CONDUIT	
			#AN	#BN	#CN	#ABC	AF	AP	P	KAC	TYPE		
1	COMMENCEMENT OUTLETS	400/230	720	3.13				20	100	1	10	MCCB	1-3mm ² @ 70 W in 25mm ² MC
2	COMMENCEMENT OUTLETS	720	3.13										
3	COMMENCEMENT OUTLETS	900			3.91								
4	COMMENCEMENT OUTLETS	1440		6.26									
5	COMMENCEMENT OUTLETS	900			3.91								
6	COMMENCEMENT OUTLETS	900			3.91								
7	COMMENCEMENT OUTLETS	1440	6.26										
8	COMMENCEMENT OUTLETS	1080	4.70										
9	MICROWAVE OVEN	1500			6.52								
10	REFRIGERATOR	500			2.17								
11	HAND DRYER	1000										4.35	
12	COMMENCEMENT OUTLETS	1800										7.83	
13	PROVISION FOR PROJECTOR	1000											
14	HAND DRYER	1000	4.35										
15	HAND DRYER	1000										4.35	
16	COMMENCEMENT OUTLETS	1800										7.83	
17	PROVISION FOR PROJECTOR	1000										4.35	
18	MICROWAVE OVEN	1500										6.52	
19	PROVISION FOR PROJECTOR	500	2.17										
20	COMMENCEMENT OUTLETS	1800	7.83										
21	COMMENCEMENT OUTLETS	1440										6.26	
22	COMMENCEMENT OUTLETS	1080	4.70										
23	COMMENCEMENT OUTLETS	1440										6.26	
24	COMMENCEMENT OUTLETS	1440										6.26	
25	COMMENCEMENT OUTLETS	1800	7.83										
26	WATER HEATER @ 18F	3500			15.22			30					1-25mm ² @ 100 W in 1-3mm ² @ 70 W in 25mm ² MC
			43.75	57.22	43.50								

$I_L = 57.22 \times 708 \text{ D.F.} = 40.05 \text{ AMPS}$
USE : 4-8.0mm² (1/2") THHN + 1-5.5mm² (0.75") TW IN 25mm² MC (18.0)
MAIN : 50K, 100K, 3P, 400V, 10 KVAR MCCB

LOCATION : EE ROOM				MOUNTING : NEW 1" SURFACE MOUNTED WITH 90° POWER COATED FINISH WITH MULTI-TERMINAL BLOCK FOR SOLID GROUND AND NEUTRAL BUS.									
CR. NO.	LOAD DESCRIPTION	VOLT	AMPERE	AMPERE LOAD			PROTECTION				NUMBER & SIZE OF WIRE & CONDUIT		
			AN	BN	GN	ANBC	AT	AF	P	KAC	TYPE		
1	CONVENIENCE OUTLETS	400/230	1260	5.48			20	100	1	10	MCCB	1-35mm ² (3) TW IN 15mmID	
2	CONVENIENCE OUTLETS		1440	6.26									
3	CONVENIENCE OUTLETS		1440		6.26								
4	CONVENIENCE OUTLETS		1440		6.26								
5	CONVENIENCE OUTLETS		1440			6.26							
6	CONVENIENCE OUTLETS		1620			7.04							
7	CONVENIENCE OUTLETS		1440	6.26									
8	CONVENIENCE OUTLETS		1440	6.26									
9	CONVENIENCE OUTLETS		1800		7.83								
10	CONVENIENCE OUTLETS		1260		5.48								
11	CONVENIENCE OUTLETS		1080			4.70							
12	CONVENIENCE OUTLETS		1440			6.26							
13	CONVENIENCE OUTLETS		1440	6.26									
14	CONVENIENCE OUTLETS		1440	6.26									
15	CONVENIENCE OUTLETS		1440		6.26								
16	CONVENIENCE OUTLETS		1440		6.26								
17	CONVENIENCE OUTLETS		1440		6.26								
18	CONVENIENCE OUTLETS		1800		7.83								
19	SPARE		250	1.09								15mmID	
20	SPARE		250	1.09									
21	SPARE		250		1.09								
22	SPARE		250		1.09								
23	SPARE		250			1.09							
24	SPARE		250			1.09							
25	SPARE		250	1.09									
26	SPARE		250	1.09									
27	SPARE		250		1.09								
28	SPARE		250		1.09								
29	SPARE		250		1.09								
30	SPARE		250		1.09								
			41.14	42.71	42.71								

$I_L = 42.71 \text{ AMPS}$
USE : 4-14mm² (L/N) THHN + 1-5.5mm² (G) TW IN 25mm ID MC (Y14)
MAN : 60AT, 100KVA, 3P, 400V, 10 KAC MCCB

NOTES:

- REV #1.1 - UTILIZATION OF "SPACE", TO BE PROVIDED WITH CIRCUIT BREAKER FOR TAPPING OF ADDITIONAL LOAD/PANELBOARD. (BREAKER RATING AS INDICATED).
- REV #1.2 - UTILIZATION OF "SPARE" CIRCUIT BREAKER WITH UPGRADED RATING AS INDICATED.
- REV #1.3 - UTILIZATION OF EXISTING PANELBOARD FROM OTHER FLOORS.
- REV #1.4 - UPGRADE/DOWNGRADE OF EXISTING BRANCH CIRCUIT BREAKER RATING AS INDICATED.
- REV #1.5 - EXISTING BRANCH CIRCUIT BREAKER TO "SPARE" BRANCH CIRCUIT BREAKER.
- REV #1.6 - BRANCH LOAD DESCRIPTION.
- REV #1.7 - ADDITIONAL PANELBOARD FOR ADDITIONAL LOADS.
- REV #1.8 - BRANCH CIRCUIT BREAKERS UTILIZED TO "SPARE"