

LOAD CALCULATIONS FOR "PANEL CP1"
BASED ON THE 2026 NEC

	L1	L2
CALCULATED LOAD - NEC 215	12,720 VA	12,720 VA
CALCULATED LOAD WITH DEMAND FACTORS		
GENERAL LOAD	0 VA	0 VA
RECEPTACLE LOAD - NEC TABLE 120.47		
1ST 10,000W	4,320 VA	4,320 VA
CONTINUOUS LOAD - NEC 215.4(A)(1)	6,600 VA	6,600 VA
PLUS 25%	1,650 VA	1,650 VA
MOTOR LOAD - NEC 430.24	1,800 VA	1,800 VA
PLUS 25% OF LARGEST MOTOR	450 VA	450 VA
6 - KITCHEN LOADS - NEC 120.56		
L1 (0 VA X 0.65) =	0 VA	
L2 (0 VA X 0.65) =		0 VA
TOTAL BALANCED LOAD (1-PHASE)	14,820 VA	14,820 VA
TOTAL UNBALANCED LOAD (1-PHASE)	0 VA	0 VA
NEUTRAL LOAD		
LINE AMPS BALANCED (1-PHASE)	123.5 A	123.5 A
LINE AMPS UNBALANCED (1-PHASE)	0.0 A	0.0 A
TOTALS	123.5 A	123.5 A
ADJUSTMENT FACTOR	0.0 A	0.0 A
TOTAL DESIGN LOAD	123.5 A	123.5 A

VOLTAGE DROP CALCULATIONS

Single Phase $(2 \times 25' L \times 0.1540 R \times 123.5 A \div 1,000) = 1.0 \text{ VD}$
Voltage Drop % $(1.0 \text{ VD} \div 240 \text{ V} \times 100) = 0.4 \% \text{ VD}$

FAULT CURRENT CALCULATIONS

Available Fault Current at Starting Point $((34,944 \text{ AFC} \times 1.00 \text{ UA}) + 92 \text{ MC}) = 35,036 \text{ AFC}$
Conductor Factor CF - Formula $(2 \times 25 \text{ L} \times 35,036 \text{ AFC}) \div (7,293 \text{ C} \times 1 \text{ N} \times 240 \text{ V}) = 1.001 \text{ CF}$
Conductor Multiplier CM - Formula $(1) \div (1 + 1.001 \text{ CF}) = 0.500 \text{ CM}$
Conductor Let-Through Current CLC - Formula $(35,036 \text{ AFC} \times 0.500 \text{ CM}) = 17,518 \text{ CLC}$

A - Amps
AFC - Available Fault Current
C - Conductor Constant
CF - Conductor Factor
CLC - Conductor Let-Through Current
CM - Conductor Multiplier
L - Length of Conductor
MC - Motor Contribution
N - Number of Conductors Per Phase
R - Resistance
UA - Utility Adjustment 1.1
V - Voltage
VA - Volt Amps
VD - Voltage Drop