Dr. Soileau - 3634 Coliseum Street

Dammon Engineering

Available Fault Current Calculation

Utility Fault Current 7,335 amperes

kVA =

E = 208

I = kVA x 1000 = trans. FLA
E x 1.732

trans. FLA = 0

I_{sca} = trans. FLA x 100 x PF / transformer Z =

PF =

Z =

I_{sca} = ampere short-circuit current RMS symmetrical.

I_{sca} = 0 amperes

Point to Point Method

Three Phase 208/120

Length (distance) FEET — L = 40 — Aluminum in Nonmetallic Raceway

'f ' factor = **1.732 x L x I / N x C x E_{L-N}** (ASC) — I_{sca} = 7,335

conductors per phase — N = 1

Phase conductor constant — C = 12,862 **Phase Conductor** 250 kcmil

Volt Line to Line — E_{L-L} = **208** Volt

f = 0.190

Neutral conductor constant — C = 12,018 **Neutral Conductor** 4/0

Multiplier Volt Line to Neutral — E_{L-N} = **120** Volt

f = 0.529

M = 1 / 1 + f

Line to Line — M = 0.840

Line to Neutral — M = 0.654

Fault Current at Service Equipment

I_{sca} x M = fault current at terminals of main disconnect L- L = → **6,164 amperes**

I_{sca} x M = fault current at terminals of main disconnect L- N = → **4,799 amperes**

Fault Current from **Service Equipment to MDP Panel** — Copper in Nonmetallic Raceway

Three Phase

Three Phase Feeder

Length (distance) — L = 10

'f ' factor = **1.732 x L x I / N x C x E_{L-N}** (ASC) — I_{sca} = 6,164 Phase 4,799 Neutral

conductors per phase — N = 1

Phase conductor constant — C = 16,673 **Phase Conductor** 4/0

Volt Line to Line — E_{L-L} = **208** Volt

f = 0.031

Neutral conductor constant — C = 14,048 **Neutral Conductor** 2/0

Volt Line to Neutral — E_{L-N} = **120** Volt

Multiplier

f = 0.049

M = 1 / 1 + f

Line to Line — M = 0.970

Line to Neutral — M = 0.953

I_{sca} x M = fault current at terminal of the panel L- L = **5,980 amperes**

I_{sca} x M = fault current at terminal of the panel L- N = **4,573 amperes**

Calculation does not include motor contribution