Slidell Little Theatre

Dammon Engineering

Available Fault Current Calculation

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Yellow cells are fields for data input, Use the TAB button to move from field to field. See example sheet tab at the lower left corner of this sheet. Place cursor over this message for further information.

Utility Fault Current 17,556 amperes kVA = E = 240

I = kVA x 1000 / E = trans. FLA 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 — Single Phase 240/120

Length (distance) FEET L = 50 — Aluminum in Nonmetallic Raceway

'f ' factor = 2 x L x I / N x C x E L-N (ASC) I_{sca} = 17,556

conductors per phase N = 2

Phase conductor constant C = 21,391 **Phase Conductor** 500 kcmil

Volt Line to Line E_{L-L} = **240** Volt

f = 0.171

Neutral conductor constant C = 19,948 **Neutral Conductor** 400 kcmil

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

f = 0.550

M = 1 / 1 + f

Line to Line M = 0.854

Line to Neutral M = 0.645

Fault Current at Service Equipment

I_{sca} x M = fault current at terminals of main disconnect **L- L =** → **14,993 amperes**

I_{sca} x M = fault current at terminals of main disconnect **L- N =** → **16,989 amperes**

Fault Current from **Service Disconnect to MDP Panel** — Copper in Nonmetallic Raceway — Single Phase

Single Phase Feeder

Length (distance) L = 25

'f ' factor = 2 x L x I / N x C x E L-N (ASC) I_{sca} = 14,993 Phase 16,989 Neutral

conductors per phase N = 1

Phase conductor constant C = 26,706 **Phase Conductor** 500 kcmil

Volt Line to Line E_{L-L} = **240** Volt

f = 0.117

Neutral conductor constant C = 25,502 **Neutral Conductor** 400 kcmil

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

Multiplier f = 0.278

M = 1 / 1 + f

Line to Line M = 0.895

Line to Neutral M = 0.783

Isca x M = fault current at terminal of the panel L- L **13,423 amperes**

Isca x M = fault current at terminal of the panel L- N **13,298 amperes**

Calculation does not include motor contribution

Branch Circuit Fault from **FROM MDP PANEL TO LIGHTING PANEL #1** — Copper in Nonmetallic Raceway — Single Phase

Single Phase Branch

Length (distance) L = 125

'f ' factor = 2 x L x I / N x C x E L-N (ASC) I_{sca} = 13,423 Phase 13,298 Neutral

conductors per phase N = 1

Phase conductor constant C = 6,044 **Phase Conductor** 2

Volt Line to Line E_{L-L} = **240** Volt

f = 2.313

Neutral conductor constant C = 6,044 **Neutral Conductor** 2

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

Multiplier f = 4.584

M = 1 / 1 + f

Line to Line M = 0.302

Line to Neutral M = 0.179

Isca x M = fault current at terminal of the panel L- L **4,051 amperes**

Isca x M = fault current at terminal of the panel L- N **2,382 amperes**

Calculation does not include motor contribution