

Table #1 - Arc Flash Values Summary Table (Primary)

Primary Equipment Type	Voltage (kV)	3ft. Racking Cal/cm ²	8ft. ^{^^} Hot Stick Cal/cm ²	Subst. / OH Switching ^{^^} Cal/cm ²	15 in. Gloving Cal/cm ²	MAD ^{**} Cal/cm ²	2 Cal/cm ² Boundary ft.
Switchgear *	4.16	40.0	25.0	NA	NA	NA	30.0
Switchgear *	12.47	25.0	12.0	NA	NA	NA	15.0
Switchgear *	13.8	25.0	12.0	NA	NA	NA	15.0
Switchgear *	34.5	Unsafe [^]	25.0	NA	NA	NA	20.0
OH Substation	4.16	NA	4.0	4.0	NA	20.0	8.0
OH Substation	12.47	NA	4.0	4.0	NA	8.0	8.0
OH Substation	13.8	NA	4.0	4.0	NA	8.0	8.0
OH Substation	34.5	NA	4.0	4.0	NA	12.0	8.0
OH Substation	69	NA	4.0	4.0	NA	8.0	8.0
OH Substation	138	NA	4.0	4.0	NA	12.0	8.0
OH Substation	161	NA	4.0	4.0	NA	8.0	8.0
OH Substation	230	NA	NA	4.0	NA	4.0	10.0
OH Substation	345	NA	NA	4.0	NA	4.0	10.0
OH Line	4.16	NA	2.0	2.0	5.0	4.0	5.0
OH Line	12.47	NA	2.0	2.0	5.0	4.0	5.0
OH Line	34.5	NA	2.0	2.0	Unsafe [^]	12.0	5.0
OH Line	69	NA	2.0	2.0	Unsafe [^]	4.0	5.0
OH Line	138	NA	4.0	4.0	NA	8.0	8.0
OH Line	161	NA	4.0	4.0	NA	8.0	8.0
OH Line	230	NA	NA	4.0	NA	4.0	10.0
OH Line	345	NA	NA	4.0	NA	4.0	10.0
UG Pad Mount	4.16	NA	2.0	NA	5.0	4.0	5.0
UG Pad Mount	12.47	NA	2.0	NA	5.0	4.0	5.0
UG Pad Mount	34.5	NA	25.0	NA	Unsafe [^]	Unsafe [^]	20.0
Primary Metered Swgr / Indoor Room	4.16	8.0	4.0	NA	20.0	8.0	8.0
Primary Metered Swgr / Indoor Room	12.47	4.0	2.0	NA	12.0	5.0	5.0

Table #2 - Arc Flash Values Summary Table (Secondary)

Secondary Equipment Type	Voltage	Working Distance (in.)	Cal/cm ² ***	2.0 Cal/cm ² Boundry (ft.)
All Secondary below 250V	<250V	18	4	3.0
Self-contained meters/Cabinets	480	18	20	5.0
Pad-mounted transformers	480	18	4	3.0
CT meters and control wiring	480	18	4	3.0
Metal-clad switchgear	480	24	40	9.0
Pedestals/pull boxes/hand holes	480	18	8	3.0
Open air secondary	480	18	4	3.0
Network at the transformer bushings	480	18	Unsafe [^]	NA
Network at the network protector	480	18	Unsafe [^]	NA
Network at the network protector Cable	480	18	8	3.0

* Default PPE Requirement. Use PPE as labeled in switchgear. Consult an Ameren representative before operation if substation switchgear is unmarked.

** Minimum Approach Distance from LIVE LINE WORK table. For work between 8ft. Hotstick work and MAD, use MAD PPE.

*** Cal/cm² Per NESC Section 41 - Table 410-1

[^] Work De-energized, isolate with engineered work practices

^{^^} Used a working distance of 5ft. to calculated heat incident values

General Notes:

1) Switchgear, Pad Mount, and Indoor Room values calculated values per IEEE-1584

2) OH values per ARCPRO for single-phase to ground faults.

3) NA implies the type of work specified is not permitted or not performed on the specified equipment.