

Table 3—Equations for Calculating the Surge Factor, *a*

Phase-to-Ground Exposures			
$V_{Peak} = T_{L-G}V_{L-G}\sqrt{2}$	635 kV or less	635.1 to 915 kV	915.1 to 1,050 kV
<i>a</i>	0	$(V_{Peak}-635)/140,000$	$(V_{Peak}-645)/135,000$
$V_{Peak} = T_{L-G}V_{L-G}\sqrt{2}$	More than 1,050 kV		
<i>a</i>	$(V_{Peak}-675)/125,000$		
Phase-to-Phase Exposures¹			
$V_{Peak} = (1.35T_{L-G} + 0.45)V_{L-G}\sqrt{2}$	630 kV or less	630.1 to 848 kV	848.1 to 1,131 kV
<i>a</i>	0	$(V_{Peak}-630)/155,000$	$(V_{Peak}-633.6)/152,207$
$V_{Peak} = (1.35T_{L-G} + 0.45)V_{L-G}\sqrt{2}$	1,131.1 to 1,485 kV	More than 1,485 kV	
<i>a</i>	$(V_{Peak}-628)/153,846$	$(V_{Peak}-350.5)/203,666$	

¹Use the equations for phase-to-ground exposures (with V_{Peak} for phase-to-phase exposures) unless the employer can demonstrate that no insulated tool spans the gap and that no large conductive object is in the gap.